Stock Code:3576

United Renewable Energy Co., Ltd.
(Former name：Neo Solar Power Corp.)

2019 Annual Report

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Information website: http://newmops.twse.com.tw

I、 Company Spokesperson：

Spokesman
Name：Laylay,Pan
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Deputy spokesperson
Name：Zabrina Hsu
Position：Legal V.P.
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E-mail：IR@urecorp.com

II、 Address and Telephone Number of The Company Headquarter, Subsidiaries, and Plants：

Name	Address	Tel
Headquarters	No.7, Li-Hsin Rd.III, Hsinchu Science Park, Hsinchu, Taiwan 300, R.O.C.	+886-3-578-0011
Branches and Plant	No. 518, Sec. 2, Bentian Rd., Annan Dist., Tainan City 709, Taiwan (R.O.C.)	+886-6-700-6588
Hukou Branch	No. 16, Guangfu N. Rd., Hukou Township, Hsinchu County 303, R.O.C.	+886-3-578-0011
Hsinchu Plant	No. 16-2, Guangfu N. Rd., Hukou Township, Hsinchu County 303, (R.O.C.)	+886-3-527-6888
Miaoli Plant	No. 21, Kebei 1st Rd., Zhunan Township, Miaoli County 350, (R.O.C.)	+886-37-586-198
Miaoli Plant	No. 66, Keyan Rd., Zhunan Township, Miaoli County 350, Taiwan (R.O.C.)	+886-37-586-198
Branches and Plant	101/32-33 Navanakorn Industrial Estate, Moo 20, Paholyothin Road, Klongneung,Phatumthani 12120,Thailand	+66-2-9090868
Branches and Plant	No. 699, TianXiang Rd., Nanchang Economic and Technological Development Zone, Nanchang city, Jiangxi Province	+86-791-86778558

III、 Stock Transfer Agency：

Company: ChinaTrust Commercial Bank, Transfer Agency Department
Address: 5F, No. 83, Sec. 1, Chungqing S. Rd., Taipei City, Taiwan, R.O.C. 100
Website: https://ecorp.chinatrust.com.tw/cts/en/index.jsp
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IV、 External Auditor：

Name of Accounting Firm：Deloitte Touche Tohmatsu Limited
Name of CPAs：Yi-Hsin Kao、Yu-Feng Huang.
Address：Deloitte Touche Tohmatsu Limited
Website：http://www.deloitte.com.tw
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V、 Overseas Securities Exchange：NA

VI、 Company Website：http://www.urecorp.com

United Renewable Energy Co., Ltd.
(Former name：Neo Solar Power Corporation)
Table of Contents

I. Letter to Shareholders

Dear Shareholders,

On behalf of the Management Team of United Renewable Energy (URE), I would like to thank you all for your continued support.

International Monetary Fund indicated that the growth rate in 2019 was at lowest since 2008-2009 financial crises. However 2019 also see climate catastrophes caused by global warming, countries around world tried to increase the speed of reduction in carbon footprint, increase the utilization of renewable energy and slow the global warming, this lead to continue growth of PV industry. During this challenging time, the consolidated revenue of URE improved 38% from previous year to NT$18 billion. With hard work and dedication from all our employees, the sales volume of solar cell and module increased significantly and URE maintain leadership place in Taiwan market.

At the moment URE mass produce p-Perc monocrystalline solar cell “Black 21”, with conversion efficiency reach 22.1%, the LID and PID outperformed traditional solar cell. The “BiFi” URE proprietary p-PERC monocrystalline bifacial solar cells with conversion efficiency of 22.1%, combined with URE double glass half cut module “Glory Peach” can reach 420W in front which has same efficiency as 470w, 1500VDC design, low LID, PID resistant and passed 10x IEC test. The rear side diffuse and reflection light could produce about 10-15% of the light produce by the front of panel; this could lower the cost of Balance of System. For n-type cell, URE have “HELLO” product with bifacial solar cell HJT technology, the conversion efficiency can reach 24.5%, power output 340W equivalent to module conversion efficiency of 20.8%, and right now it’s in production.

URE solar cell and module was awarded Taiwan Excellent PV award by Bureau of Energy, Ministry of Economic Affairs in 2019, and its seven consecutive years that URE has the honor of receiving this award. URE module passes the newest and most strict testing by organizations such as TUV Rheinland and IEC, and was certified by the organizations, at same time URE product also certified as clean energy product by organizations from numerous countries. URE was also on the list of Bloomberg New Energy Finance Tier 1 Module Manufacturer List in 2019, further recognized URE’s excellence in the PV field.

URE expands downstream solar system project business actively. URE has built up its core competences in development, construction, sales, and financing for global solar system projects. As well as providing O&M service for solar system. URE is largest developer of PV systems in Taiwan, with accumulated installed capacity and project under development/construction over 1.5GW. In 2019, URE sold largest solar farm on airport real estate in the world for US$24.2 million, and Group subsidiary CFY sold over 200MW of solar projects to a well-known large international energy investment fund. The deal included over 300 projects in 15 states, many of which have long term PPAs with Fortune 40 clients. This successful deal shows URE possessed the comprehensive ability to develop, construct and sell solar projects all over the world. In the domestic market, URE provided module to Taiwan largest PV power plant with over 100MW in Changhua Coastal Industrial Park. System business continued to win PV projects, most significant win is the naval port rooftop project. URE sold development right for a system project in Changhua, Taiwan to an International Investment Fund, and currently are developing second phase of the project with size around 50MW. According to Bloomberg New Energy Finance, in 2020 newly added solar capacity will grow around 14% from same period 2019. Global Market Outlook for Solar Power estimate accumulated solar capacity will reach 1,296GW in 2023. Due to the future potential and stable income from solar system, URE will aggressively develop global solar system business which can also create demand for solar cell and module products and driving future growth.

In order to provide total solutions for the renewable energy, URE invested in design and development of Energy Storage System (ESS) products for different situations, such as small and medium household units, large industrial storage units, and UPS battery systems. All types of ESS products are now available in US, European and Australian markets. URE’s industrial ESS is the first in Taiwan to achieve UL9540 certification by UL laboratory and can stabilize the intermittent renewable power, in the future URE will develop PV system project with Industrial ESS product. To save energy and reduce carbon footprint, the small and medium household ESS products will help household to shift the peak of electricity usage and thus significantly reduce electricity cost. The household ESS has UPS function and can be connected to mobile via APP to monitor electricity usage anytime and anywhere. The URE’s UPS battery system has already been shipped to Europe, it can stabilize electricity supply, and URE already see strong demand from customers for this product. Right now we see China and United State of America encourage the PV system projects to include ESS. Bloomberg New Energy Finance predicted there will be around US$ 500 billion worth of projects include ESS in 2020, and energy storage products will increase usage of renewable energy.

URE successfully developed the first hydrogen fuel cell heavy scooter, equivalent to 125cc fossil fuel motorcycle. The hydrogen fuel cell electric scooter is environmental-friendly and emit only water. Moreover, URE also has hydrogen fuel cell scooters for urban areas. With zero emission, the hydrogen fuel cell electric scooter is the first choice to reduce air pollution. Hydrogen fuel cells technology provided people an alternative for clean energy. In January 2020, Taiwan government announced new regulation for Vehicle Safety Testing Directions on hydrogen fuel vehicles, URE is aggressively planning production of hydrogen fuel vehicles and apply for related certifications.

As leader in the Solar industry and outstanding Corporate Citizen, URE feels oblige to promote clean energy, energy conservation to our customers, user, partner and general public around the world, URE feels it's our duty to care for the environment and make contribution to society. URE will continue to focus on module brand and solar system business, improve competitiveness of Taiwan solar industry. With the support from government fund and policy, URE will strive to assist Taiwan energy supply sector complete transformation, and reached government target of cumulated installed solar PV capacity of 20GW by 2025.

The following are highlight of 2019 performance and business plan for the 2020:

1.The report on 2019 business result

1.1.2019 Financial Performance

Unit：In thousands of New Taiwan Dollars

Item	2019	2018(Audited after restatement)
Consolidated Net Sales	18,139,112	13,137,025
Consolidated Gross Loss	(982,531)	(892,446)
Consolidated Loss from Operation	(5,221,950)	(2,863,361)
Consolidated Loss After Income Tax	(5,769,189)	(605,168)
Net Loss Attributable to Shareholders of the Parent	(5,686,065)	(577,240)

1.2.Budget Implementation

URE did not provide nor disclose any budget forecast to the public.

1.3Analysis of Receipts, Expenditures, and Profitability

(1)Analysis of Receipts and Expenditures

In 2019, the net cash used in operating activities amount to NT$1.2 billion, net cash generated from investing activities amount to NT$3.7 billion, the net cash used in financing activities amount to NT$5.6 billion. URE will continue to maintain sufficient cash position and finance operation will continue to be conservative and prudent.

(2)Analysis of Profitability

The consolidated revenue increased by 38% from previous year to NT$18 billion, which was mainly due to the strategic transformation that lead to increase in module shipment and solar system business. The gross margin improved by 20.1%% from previous year to -5%, the operating expenses percentage to revenue remains flat, the operating loss comes to NT$5.2 billion, the increase was result of asset impairment loss, the net loss for the year was NT$5.8 billion. URE's finance is stable and sound, cash and cash equivalents amount to NT$6.4 billion by the end of 2019, URE will continue to maintain sufficient cash position and finance operation will continue to be conservative and prudent.

1.4.Examine Research and Development Work

At the moment URE mass produce p-Perc monocrystalline solar cell "Black 21", with conversion efficiency reach 22.1%, the LID and PID outperformed traditional solar cell. The "BiFi" URE proprietary p-PERC monocrystalline bifacial solar cells with conversion efficiency of 22.1%, combined with URE double glass half cut module "Glory Peach" can reach 420W in front which has same efficiency as 470w, 1500VDC design, low LID, PID resistant and passed 10x IEC test. The rear side diffuse and reflect light could produce about 10-15% of the light produce by the front of panel; this could lower the cost of Balance of System. For n-type cell, URE have "HELLO" product with bifacial solar cell HJT technology, the conversion efficiency can reach 24.5%, power output 340W equivalent to module conversion efficiency of 20.8%, and right now it's in production.

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2.2020 Business Plan and Future Developmental Strategy

Business Policy, Sales Volume Forecast and Other Important Production and Sales Policies

2.1.Production Policies

Total production capacity of solar cell is about 2.5GW, the module production capacity will reach 3GW in 2-3 years with vertical integration, and downstream system business will reach 1.5GW per year within next 5 years.

2.2.Research and Development

URE will use technological advantage accumulated in the past to establish itself as Flagship Company with largest high end PERC (Passivated Emitter Rear Cell) production capacity, and develop next generation solar cell such as HJT (HeteroJunction Technology), HJBC (HeteroJunction Back Contact) and other related module products, to build up entry barrier; N-TopCon: URE will invest in N-type solar cell, the conversion efficiency expect to be higher than 23%, module power expect to be over 350W (M2.5/HCC120) in 2021.

2.3.Sales Policies

In order to keep up with growing global demand for renewable energy, URE will continue to expand in existing market and improve penetration to the newly developed market for customers. At same time, utilized growth potential in Taiwan domestic market, expand module production capacity and develop high end module brand. URE will build a strong system sales team in order to develop global system business and sales channel.

2.4.System Business

In domestic market, with URE premium quality solar cell and module products, and Taiwan Government’s short term goal of 6.5GW accumulated PV capacity by 2020, and long term goal of 20GW accumulated PV capacity by 2025, URE will continue to expand domestic system business. And use experience accumulated in domestic market to aggressively develop international system business. In the future, with vertical integration of solar industry, URE will be able to provide total solution to our customers.

2.5.New Business Development

Energy Storage Systems must have international organization certified level of safety and stability, at same time, technology of improving system efficiency and conversion efficiency are also equally important. URE will provide solution which is cost effective and grid scale ESS for clients who is major user of electricity. In January 2020, Taiwan government announced new regulation for Vehicle Safety Testing Directions on hydrogen fuel vehicles, URE is aggressively planning production of hydrogen fuel vehicles and apply for related certifications.

3.Effect of External Competition, the Legal Environment and the Overall Business Environment

3.1.Taiwan government promote carbon reduction and increase in renewable energy, the green energy industry is one of the “5+2” innovative industries plan and 20GW PV installed target still on track for 2025, URE will aggressively develop and construct solar system business in order to achieve target set by government.

3.2.The amendments to Renewable Energy Development Act has been pass by Legislative Yuan, in which user of electricity exceeds a certain capacity shall install or provide space to install renewable energy power generation and storage facilities or purchase a certain amount of electricity generated from renewable energy and a certificate, it is expected to come into effect by mid of 2020. This will increase the investment in renewable energy generation and storage by corporations, URE will aggressively work with our clients to total provide solution for renewable energy generation and storage, and achieve the target set by government of renewable energy to total energy generated ratio of 20% by 2025.

3.3.URE keep close watch on the foreign exchange risk control as our products tend to export to overseas market, URE monitor foreign exchange fluctuation and utilize hedge instrument to lower the risk of foreign exchange fluctuation.

3.4.URE will continue to diversify and expand system investment to gain global market share in response to the trade war, it is expect to low the risk of international trade dispute.

3.5.Many countries have reach grid parity, the outlook for solar industry are optimistic. URE implement strategic transformation to compete in the global market, URE will also maintain competitive advantage in terms of cost and R&D, URE will continue to achieve the annual target in terms of business plan.

3.6.URE will focus on strength module brand and increase solar system business, and hope to integrate the green energy supply chain to provide more added values, at same time regain profitability and growth for our shareholders.

HONG, CHUM-SAM
Chairman

II. Company Profile

2.1.Date of Incorporation： August,26,2005

2.1.1.Address and Telephone Number of The Company Headquarter, Subsidiaries, and Plants：

Name	Address	Tel
Headquarters	No.7, Li-Hsin Rd.III, Hsinchu Science Park, Hsinchu, Taiwan 300, (R.O.C.)	+886-3-578-0011
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Branches and Plant	No. 699, TianXiang Rd., Nanchang Economic and Technological Development Zone, Nanchang city, Jiangxi Province	+86-791-86778558

2.2.Company History

August, 2005	Neo Solar Power Energy Corp was officially established.
March, 2006	The company designated the address of Hukou factory (FAB 1), started the construction of its facilities.
September, 2006	The first production line of Hukou factory (FAB 1) was finished, and began to pilot run.
December, 2006	The first production line of Hukou factory (FAB 1) began to thoroughly and massively produced 24 hours, its annual production productivity was 30MW, the profit and loss was equivalent per month.
February, 2007	Obtained the permission of entering Hsinchu Science-based Park.
September, 2007	Stock issuance went public. The utilization rate of productivity of the first production line of Hukou factory (FAB 1) reached 120%.
October, 2007	The company registered emerging stock. Groundbreaking ceremony of Hsinchu Science-based Park Headquarters and Hsinchu Industrial Park Factory (FAB2), the planning annual productivity of whole factory was 600MW.
January, 2008	Hsinchu Science-based Park Headquarters and Hsinchu Industrial Park Factory (FAB2) was under construction. The second production line of Hukou factory (FAB 1) mass produced, the annual productivity increased to 60 MW.
February, 2008	The company obtained the opinion form “was related to technology business, and the development of products was successful and marketable” that issued by the Industrial Development Bureau MOEA.
April, 2008	The third production facility of Hukou factory (FAB 1) mass produced, the annual productivity increased to 90 MW.
May, 2008	The company established the Audit Committee.
June, 2008	The utilization rate of productivity of the whole first production line of Hukou factory (FAB 1) reached 120%. The company applied for stock listing to the Taiwan Stock Exchange.
August, 2008	Hsinchu Industrial Park Factory (FAB2) was officially functioned, added two production lines, the annual productivity increased to 150 MW.
September, 2008	Hsinchu Industrial Park Factory (FAB2) further added two production lines, the annual productivity increased to 210 MW.

October, 2008	The Financial Supervision and Administration Commission of the Executive Yuan approved the listing.
January, 2009	Listed on the Taiwan Stock Exchange.
May, 2009	The polycell battery "Super Cell," with a conversion efficiency of 16.8% was released.
October, 2009	The company published the new generation of right-angle monocrystalline battery "Perfect Cell," with an average efficiency of 17.8%.
March, 2010	The new added equipment of 180 MW productivity of Hsinchu Industrial Park Factory (FAB2) was completed. The total annual productivity increased to 420 MW.
August, 2010	The company established the South Taiwan operation center (FAB3) in Tainan Science Industrial Park.
October, 2010	The company published the new generation of multi-cell battery "Super17," with an average conversion efficiency of more than 17%, and the single crystal cell "Perfect18," with an average conversion efficiency of more than 18%.
December, 2010	The annual productivity was expanded to 800 MW (million watts).
March, 2011	The company published the high conversion efficiency single crystal battery "Black18," with an average conversion efficiency of more than 18%.
April, 2011	The primary product, polycrystalline solar cells, passed the examination of International Carbon Footprint, and complied with the International Carbon Footprint standard "PAS2050".
June, 2011	The company was ranked as 8th place in the Taiwan Science and Technology Top 100 by the Digital Age.
July, 2011	The company successfully issued overseas depositary receipts (GDR), and completed fundraising.
August, 2011	General manager Dr. Hong, Chum-Sam was elected the chairman of the third Taiwan Photovoltaic Industry Association.
September, 2011	The company released the "Black19" single crystal battery with a conversion efficiency of over 19%. Being awarded the “Outstanding Enterprise Class” and “Best Product Category” by the National Brand Yushan Award.
October, 2011	The company released the new generation of 19% high conversion efficiency single crystal battery, "Perfect19", the power generation area was 2% more than the traditional angled single crystal battery.
December, 2011	The annual total equipment productivity increased to 1.3 GW (billion watts).
February, 2012	The company introduced the new generation of high-reliability, high-efficiency battery, "NeoMono".
April, 2012	General manager Dr. Hong, Chum-Sam was elected as Distinguished Alumni of Interdisciplinary Program of Electrical Engineering and Computer Science of National Tsing Hua University.。
May, 2012	The company developed the battery with a maximum efficiency of 19.81% with the customers jointly.
September, 2012	The company introduced the new generation of polycrystalline product, "Super18," with an efficiency of 18.3%, and a single crystal product, "Black19+," with an efficiency of 19.4%. The company had optimized production productivity, and moved Hukou factory to Hsinchu Industrial Park factory and Tainan Factory.
December, 2012	NSP and delta electronics inc cooperatively promoted Taiwan's largest solar cell company, and signed a merger contract with DelSolar Co., Ltd., a subsidiary of delta electronics inc
February, 2013	The shareholders' meeting decided to merge DelSolar Co., Ltd. by issuing new shares with capital increase on February 6, 2013. The consolidation date was temporarily scheduled for May 31, 2013.
May, 2013	NSP officially merged with DelSolar Co., Ltd. on May 31, 2013, and had become the world's largest professional solar cell company.
October, 2013	NSP module was awarded the "Golden Energy Award" from the Energy Bureau of the Ministry of Economic Affairs. The merge of NSP and DelSolar Co., Ltd. had been awarded the Taiwan M&A and Private Equity Council as the “Best Corporate Social Responsibility” for the 2013 M&A gold medal. The company introduced the new generation of multi-cell battery "Super19," with an efficiency of 19.5%, the single-cell battery "Black20," with an efficiency of 20.6%, and the double-sided power module, "BiFi". The company successfully issued convertible corporate bonds and cash capital increase, and completed fundraising. NSP established 4500 rooftop solar systems in the UK, which made it the first Taiwanese manufacturer to build solar systems on a large scale in the UK.
December, 2013	The annual total plant battery productivity increased to 2.12 GW (billion watts).
June, 2014	The company introduced three high-efficiency module products, including Super Crystal Super19

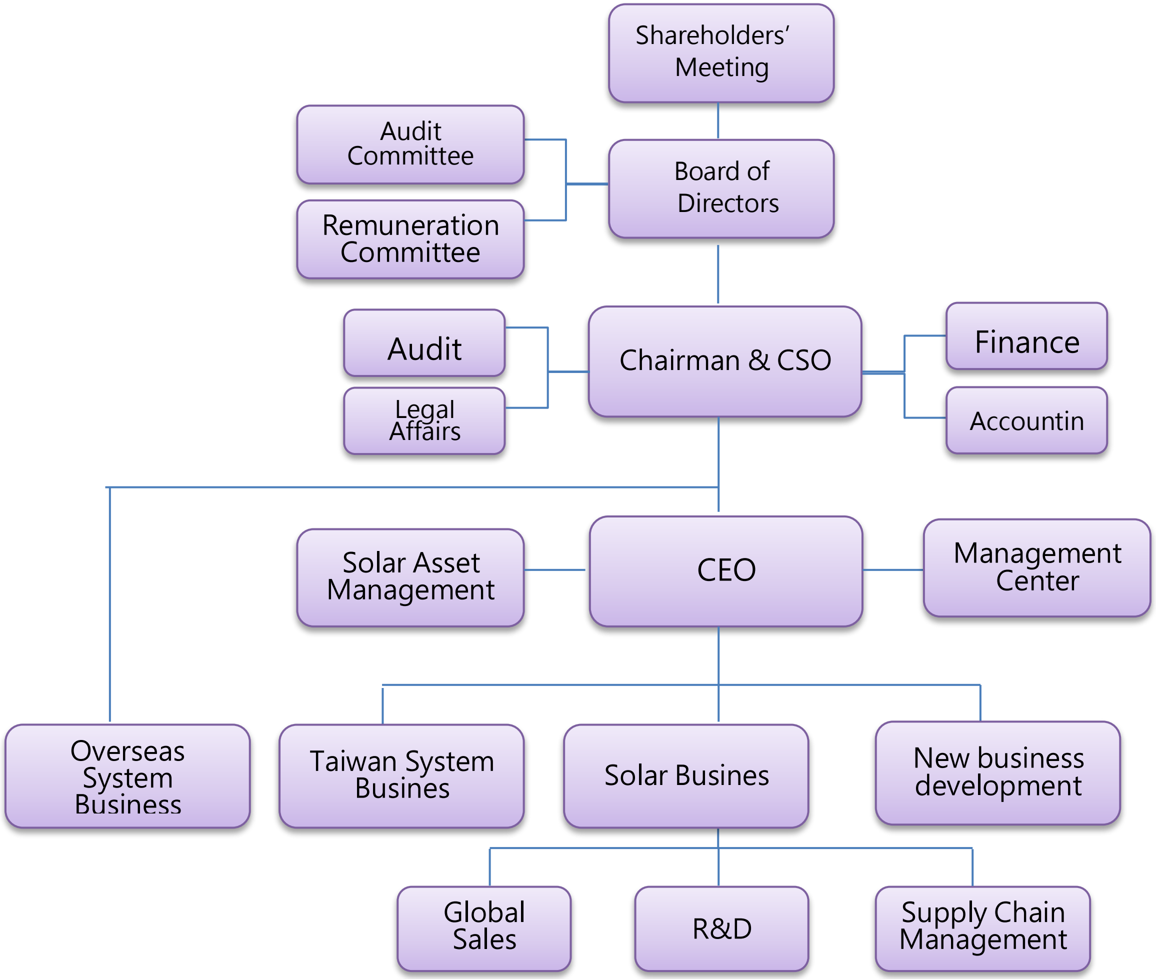
	battery, single crystal Black20 battery, and half-cut Black20 battery, Super, Power, and PowerH.
July, 2014	The new convertible corporate bond (ECB) issued by NSP, which was denominated in Taiwanese dollars, was the first solar manufacturer to be successfully issued in Taiwan.
September, 2014	The new solar cell and module products of NSP were both awarded the Gold Energy Award of the Energy Bureau of the Ministry of Economic Affairs for two consecutive years.
December, 2014	The cumulative shipments of NSP products were over 6.1 GW (billion watts). NSP was awarded "Excellent Health Workplace – Health Pilot Award" by Health Promotion Administration, MOHW. NSP received budget supplement of the Ministry of Economic Affairs, Energy Bureau to conduct research and development of high-efficient products. NSP established the world's largest airport solar power plant in Indianapolis, USA.
March, 2015	The N-type double-sided light-absorbing double glass module of NSP was officially installed in Japan.
April, 2015	NSP signed a technical cooperation agreement with dupont.
July, 2015	NSP's cumulative product shipments were over 7 GW (billion watts).
October, 2015	The company released the new generation of single-crystal PERC high-efficiency products, "Black 21," with a maximum conversion efficiency of 21.1% The new solar cell and module products of NSP were both awarded the Gold Energy Award of the Ministry of Economic Affairs, Energy Bureau, for three consecutive awards.
December, 2015	NSP's 2014 CSR Report was awarded the Bronze Award by the TAISE. NSP had leading Taiwan's solar energy industry, it was the first company that obtained the Clean Production Assessment System Certification from the Ministry of Economic Affair, Industrial Bureau. NSP's module products were awarded the 24th "Taiwan Excellence Award" in 2016.
March, 2016	NSP completed the first phase 34MW of the "Monte Plata" project in the Dominican Republic and, became the largest solar power plant in the Caribbean.
April, 2016	The company successfully completed the cash increase and raised NT$2,880,000,000, it was the first Taiwan Solar Company in 2016.
June, 2016	The company respectively released three new solar cell products, the "Hello 22," with N-type HJT battery, the "Black 21," with P-type PERC battery, and the P-type PERC double-sided solar cell, "Black 21 -BiFi".
August, 2016	NSP signed a syndicated loan contract of US$123.6 million with the banking group. NSP established a joint venture with Cathay Life Insurance, expanded the investment in solar power plants in Taiwan.
October, 2016	NSP introduced two new single crystal module products, the PEGA PEC tandem battery's ultra-high wattage solar module, "PEACH" series, and P-type PERC solar double glass module, "Glory" series." NSP successfully issued the third overseas guaranteed convertible corporate bond (ECB) and received over two times over-subscription.
November, 2016	NSP .had the first precedent of the Taiwan solar industry, completed the investment to set up a solar IPP company. NSP's 2015 CSR Report was awarded the Silver Award by the TAISE.
December, 2016	The battery and module products of NSP were once again awarded the Gold Energy Award of the Ministry of Economic Affairs, Energy Bureau. It had been awarded four consecutive years, and the module was the only one of the annual Golden Energy Awards that exceeded 300Wp.
March, 2017	NSP ;GES received NT$800,000,000 syndicated loan of the bank and would continue to expand the construction of solar power plants worldwide.
June, 2017	NSP ;GES's solar power plant of Monte Plata, was awarded highest honor in the Dominican Republic environmental award "PREMIOS ATABEY".
July, 2017	The high-efficiency module factory of NSP dedicated to Taiwan's solar energy solutions was officially launched. Japan's Fukushima of NSP ;GES 14.68MW solar power plant was bid with a high price, and the Taiwan factory sold the first case of a massive solar power station in Japan.
August, 2017	NSP US Team completed the development of the US power plant 225MW total investment of US$ 435,000,000, created a new milestone in Taiwan's solar photovoltaic.
October, 2017	NSP ;GES constructed the first 40MW UHV largest solar power plant in Taiwan. The company implemented the national energy policy and created a new "win" operational mode. NSP, GIN and SEC took the lead in signing the merge intent letter, established United Renewable Energy Co., Ltd
January, 2018	The Board of Directors of NSP, GIN and SEC respectively passed the signing of merger contract.
February, 2018	Taiwan's first P-type double-sided double-glass module roof-type solar power station of NSP was officially opened at the Yunjianan Branch of the Labor Development Department of the Ministry of

	Labor.
April, 2018	The Dominican Solar Power Station of GES received a long-term project financing of US$380,000 from the Dutch and German bank.
September, 2018	The battery and module products of NSP were once again awarded the Gold Energy Award of the Ministry of Economic Affairs, Energy Bureau. It had been awarded six consecutive years.
October, 2018	NSP, GIN and SEC officially completed the merger, and changed the name to United Renewable Energy Co., Ltd. URE successfully completed the private equity common stock, and introduced the Strategic Investor, National Development Dund, Executive Yuan, and United Renewable Energy Co., Ltd's Management Committee.
November, 2018	URE signed a new credit contract of NT$10.13 billion with a banking group such as First Commercial Bank URE's 2017 CSR Report was awarded the Golden Award of TAISE.
January, 2019	URE GES sold out the world's largest airport solar power plant, the transaction amount exceeded NT$700,000,000. URE signed a memorandum of cooperation on power plants of approximately NT$10,000,000,000 to NT$15,000,000,000 jointly with Vena Energy Sign.
February, 2019	In order to consolidate resources, improve operation efficiency, Company and wholly owned subsidiary GES merged as per Article 19 of Business Mergers and Acquisitions Act and other relevant regulations on 31 March 2019.
May, 2019	United Renewable Energy Announce New ESS Product United Renewable Energy Introduces New Solar Module Products – Peach Solar Module Series
October, 2019	United Renewable Energy announce new ESS products and Hydrogen Fuel Cell Electric Scooters
December, 2019	URE won orders for 193MW solar project in Tainan Completed raising NT $ 978 million in cash capital increase.
January, 2020	United Renewable Energy announced that its subsidiary, NSP BVI executed its redemption right with regard to its shares of Clean Focus Yield (CFY), the deal is worth about NT$1.7 billion
March, 2020	United Renewable Energy and Ye Heng Power Signed MOU for 120MW Module Order

III. Corporate Governance

3.1.Organization Structure

3.1.1.Organization Chart (March,.31,2020)



3.1.2.Responsibilities of Major Departments

Department	Responsibilities
Chairman & CSO	1.To set company operational goals and future development directions 2.To manage the company's development strategy, set the policy and target.
CEO	1.To set the company's overall operating strategy, plans and budget, supervise and coordinate the various departments to achieve the set goals 2.To execute and manage the company's operations, business and projects.
Cell Business Module Business	1. Solar cell production 2. Solar module production 3. Distribution productivity and chip scheduling 4. Analysis of production performance 5. Research and development of manufacture process and technique 6. Improve conversion efficiency and reduce costs 7. Process of quality control, maintenance of quality system 8. To ensure product quality and improve customer satisfaction 9. Repair and maintenance of factory environmental facilities 10 Maintenance and management of production equipment 11. Execution of production plan, scheduling planning, and management of work order 12. To establish an occupational safety and health system 13. Risk control to provide a safe workplace 14. Import and export operation management 15. Plan of material demand and inventory control 16. Final product shipment and packaging operations, warehouse storage and entry management
Taiwan System Business Overseas System Business	Development and Investment, transportation and construction of solar power plants at home and abroad
New business development	1. Energy conservation, new process of hydrogen energy or new technology development 2. Assist in the introduction of new products into mass production 3. Provide complete solutions of renewable energy
Supply Chain Management	1. Supplier management 2. Raw material procurement 3. General material, spare parts, production equipment procurement 4. Information, general affairs, factory supplies procurement, project outsourcing
Global Sales	1. Customer development and service 2. Order acceptance and collection operations 3. Delivery and payment follow up handling 4. Coordination and arrangement of after-sales service
R&D	1. Development of new manufacturing process and technology in order to improve conversion efficiency and lower cost 2. Mass production of new product, maintain technological leadership. 3. IP application and maintain
Solar Asset Management	In charge of Sales of company's global solar system assets, and strengthen solar system management function
Management Center	1. Human resources operation 2. Administration operation 3. Development, management and maintenance of various information demand projects 4. Planning and management of internet technology operation 5. Company management and cost analysis
Finance	1. Finance and fund management, planning and management of shareholder service 2. Implementation of corporate governance, maintain relationship with investors 3. Investment planning and risk management
Accounting	1.Planning and management of Accounting operation 2.Budget planning and review 3.Company management and cost analysis
Legal Affairs	1. To plan, execute and control the company's legal risks 2. To provide legal related consultation and review work
Audit	1. Establishment and audit of internal control system 2. To ensure the effective implementation of the internal control system

3.2.Information on the Company's Directors, Independent Directors, President, and Vice President, Assistant Vice President of All The Company's Divisions and Branch Units

3.2.1.Directors and Independent Directors

(1) Directors' and Independent Directors' Information

April 24, 2020

itle	Nation-ality	Name	Gender	Date Elected	Duration	Date First Elected	Shareholding When Elected		Current Shareholding		Spouse & Minor Shareholding		Shareholding in Other Persons' Names		Principal Work Experiences and Academic Qualifications	Positions Held Concurrently in The Company and/or in Any Other Company	Executives, Directors or Supervisors Who are Spouses or within Two Degrees of Kinship			Note
							Shares	%	Shares	%	Shares	%	Shares	%			Title	Name	Relation	
Chairman & CSO	Taiwan	Hong, Chum-Sam	Male	Nov.20,2018	3	Dec.30,2005	1,315,945	0.05%	2,411,945	0.09%	–	–	–	–	1.Ph.D of Electrical Engineering (National Tsing Hua University) 2.Director of Solar Cell Laboratory, Industrial Technology Research Institute 3. Neo Solar Power Corp Chairman & CEO	Notes1	N/A	N/A	N/A	–
Director&CEO	Taiwan.	Pan,Wen-Whe	Male	Nov.20,2018	3	Nov.20,2018	3,747,754	0.15%	3,888,476	0.15%	225,517	0.01%	–	–	1.Department of Fiber and Composite Materials, Feng Chia University 2.PhD. Fiber & Polymer Eng., North Carolina State University 3.Gintech Energy Corporation. Director&General Manager	Notes2	Vice President	Ben Pan	father and son	–
Director	Taiwan	Lin, Kun-Si	Male	Nov.20,2018	3	Dec.30,2005	3,371,763	0.13%	3,675,187	0.14%	917,587	0.03%	–	–	1.Ph.D., Business Administration, University of Kentucky, USA 2.MBA, National Chiao Tung University, Taiwan 3.Bachelor, Electronic Engineering, National Chiao Tung University, Taiwan 4.Senior Vice President, TSMC	Notes3	N/A	N/A	N/A	–
Director	Taiwan	Lin,Wen-Yuan	Male	Nov.20,2018	3	Nov.20,2018	–	–	–	–	–	–	–	–	1.Master of Graduate School of Civil Engineering,University of Hawaii, USA 2.Vice Chairman, Commission of National Corporations, Ministry of Economic Affairs 3.Chairman,Taiwan Power Company 4.Chairman,Taiwan Cogeneration Corporation 5.Chairman,China Steel Corporation	Notes4	N/A	N/A	N/A	–
Director	Taiwan	Chiang, Wen-Hsing	Male	Nov.20,2018	3	Nov.20,2018	–	–	–	–	–	–	–	–	1.National Chung Cheng University Department of Finance Master's degree 2.National Tsing Hua University Department of Materials Science and Engineering Bachelor's degree 3.Delta Electronics, Inc. Power and system BG DC power BU Sr. Director 4.Taiwan Optoelectronic Semiconductor Industry Association Vice-Chairman	Notes5	N/A	N/A	N/A	–
Director	Taiwan	Long deed corporation	–	Nov.20,2018	3	Nov.20,2018	1,541,625	0.06%	1,765,165	0.07%	–	–	–	–						–
		Delegate: Liu,Kong-Hsin	Male				2,207,057	0.08%	2,207,057	0.08%	–	–	–	–	1.National Taiwan Ocean University Department of Shipping & Ttansportation Management 2. Assistant Vice President, Formosa Plastics Group 3. Director, Formosa Chenicals & Fibre Corporation 4. Chairman ,Solartech Energy Corp.	Notes6	N/A	N/A	N/A	–
Director	Taiwan	National Development Fund, Executive Yuan	–	Nov.20,2018	3	Nov.20,2018	167,145,851	6.64%	175,119,300	6.57%	–	–	–	–			N/A	N/A	N/A	–
		Delegate: Chiou Yih-Peng	Male				–	–	–	–	–	–	–	–	1.BS and PhD degrees in Electrical Engineering, National Taiwan University 2.Taiwan Semiconductor Conductor Company Limited 3.RSoft Design Group (New York)	Notes7	N/A	N/A	N/A	–
Director	Taiwan	Yaohua Glass Co., Ltd. Management Committee	–	Nov.20,2018	3	Nov.20,2018	167,145,851	6.64%	167,145,851	6.27%	–	–	–	–			N/A	N/A	N/A	–
		Delegate: Chiou Yih-Peng	Male				–	–	–	–	–	–	–	–	1.Master of Industrial Management , National Taiwan University of Science and Technology 2.Section Chief/ Deputy Director of Information Technology Industries Division , Industrial Development Bureau Ministry of Economic Affairs 3.Deputy Director/Director of Industrial Policy Division, Industrial Development Bureau Ministry of Economic Affairs	Notes8	N/A	N/A	N/A	–
Independent Director	Taiwan	Weng, Ming-Jeng	Male	Nov.20,2018	3	Nov.20,2018	–	–	–	–	–	–	–	–	1.MBA, University of Southern California 2.Vice President of Citi Bank 3.General Manager of Salomon Smith Barney Inc. Taipei Branch, Citi Group 4.Chairman of Lehman Brothers Securities Taiwan Ltd. 5.Managing Director of Nomura International (Hong	Notes9	N/A	N/A	N/A	–

itle	Nation-ality	Name	Gender	Date Elected	Duration	Date First Elected	Shareholding When Elected		Current Shareholding		Spouse & Minor Shareholding		Shareholding in Other Persons' Names		Principal Work Experiences and Academic Qualifications	Positions Held Concurrently in The Company and/or in Any Other Company	Executives, Directors or Supervisors Who are Spouses or within Two Degrees of Kinship			Note
							Shares	%	Shares	%	Shares	%	Shares	%			Title	Name	Relation	
															Kong) Limited, Taipei Branch					
Independent Director	Taiwan	Andrew C. Hsu	Male	Nov.20,2018	3	Nov.20,2018	–	–	–	–	–	–	–	–	1.National Chung Cheng University (Ph.D. 2005) 2.University of California at Berkeley (LL.M. 2007) 3.Judge, Taiwan Chiayi District Court 4.Partner of Baker & McKenzie Taipei Office 5.Visiting Scholar, Law Department of Duke University	Notes10	N/A	N/A	N/A	–
Independent Director	Taiwan	Tsai,Ming-Fang	Male	Nov.20,2018	3	Nov.20,2018	–	–	–	–	–	–	–	–	1.PhD degrees,Graduate Institute of Industrial Economics, National Central University 2.Professor, Department of International Business Soochow University 3.Independent Director ,First Life Insurance Co.,Ltd. 4. Independent Director BankTaiwan Securities Co.,Ltd.	Notes11	N/A	N/A	N/A	–

Notes：The company held a regular shareholders's meeting and a resolution of the Board of Directors on June 30, 2008, to approve the establishment of the Audit Committee to replace the supervisor's functions.

Notes1：1.Chairman,NSP System Development Corp.2.Chairman, Si Two Corp. 3. Chairman ,Yong Zhou Ltd. 4.Chairman ,Yong Liang Inc. 5.Chairman, Zhongyang Corporation. 6.Director, Sion-American Silicon Products lns. 7.Director,United Renewable Energy Engineering Co. , Ltd. 8.Director,V5 Technologies Co., Ltd.

Notes2：1.Chairman, United Renewable Energy Engineering Co. , Ltd. 2.Chairman, United ecological agriculture Co., Ltd. 3. Chairman , Yanshan Energy Co., Ltd. 4. Chairman , Daxiangying Energy Co., Ltd. 5.Chairman, Xinkai Energy Co., Ltd. 6.Chairman, Dongshi Energy Co., Ltd. 7.Chairman, Shanshang Energy Co., Ltd. 8.Chairman, Jiangong Energy Co., Ltd. 9.Director ,Zhong Yang Corp. 10 Director ,Zhongwei Investment Energy Co., Ltd. 11. Director , ECOVE Environment Corporation 12. Director , Utech Solar Corporation.

Notes3：1.Chairman, Rafael Microelectronics, Inc.2.Chairman, V5 Technologies.3.Independent Board Director, Powertech Technology Inc.4.Independent Board Director, Chroma ATE Inc.

Notes4：1.Chairman, Eastern Broadcasting Co., Ltd. 2.Chairman, OVERSEAS INVESTMENT & DEVELOPMENT CORP. 3.Chairman,Taiwan Styrene Monomer Corporation. 4.Chairman, Yangmingshan Tien Lai Resort & Spa. 5.Director , Bank Of Kaohsiung Co., Ltd. 6.Independent Director ,Taroko Textile Corporation. 7. Director ,Nam ho industrial co., Ltd. 8. Director ,Gloria Material Technology Corp.

Notes5：1.Delta Electronics, Inc.Building Automation Solutions Business Department Sr. Director

Notes6：1. President ,Long Deed Corporation 2. Independent director,Keysheen (Cayman)Holdings., co.,Limited 3. Director,Taiwan Speciality Chemicals coreoration.

Notes7：1.Professor, Graduate Institute of Photonics and Optoelectronics, Graduate Institute of Communication Engineering, and Department,of Electrical Engineering, National Taiwan University. 2. Director, TacBright Optronics orporation.

Notes8：1.Director of Industrial Policy Division, Industrial Development Bureau Ministry of Economic Affairs. 2.Director of Taiwan Electrical and Mechanical Engineering Services, Inc.

Notes9：1.Senior partner, Millerful Capital Partners Inc 2.Director of Lion Travel Service Co., Ltd. 3. Independent Director of TPK Holding Co., Ltd. 4. Independent Director of Egis Technology Inc. 5. Independent Director of Clientron Corp.

Notes10：1.Managing Partner, LexPro Attorneys -at-Law. 2. Director,Yung Tay Engineering Co., Ltd. 3. Independent Director , Syneurx International Corp.

Notes11：1.Professor ,Industrial Economics, Tamkang University. 2.Professor ,Graduate Institute of Industrial Economics,National Central University. 3.Director ,Grand Carhay Venture Capital Co., Ltd. 4.Independent Director ,Taiwan Financial Holding Co.,Ltd. 5.Independent Director ,Bank of Taiwan.6. Director ,Eminent II Venture Capital Corporation

(2) Major shareholders of the institutional shareholders

Name of Institutional Shareholders	Major Shareholders of Institutional Shareholders
National Development Fund, Executive Yuan	Government of the Republic of China (Taiwan)
Yaohua Glass Co., Ltd. Management Committee	The Yaohua Glass Co., Ltd. Management Committee is a management committee managed by the Ministry of Economic Affairs. The management committee currently includes 2 to 6 private stock representatives and 8 official stock representatives.
Delta Electronics Inc.	Deico International Ltd.(10.30%)、Deltron Holding Ltd.(8.40%)、Government Of Singapore(3.20%) 、Chung-Hua Cheng(3.15%) 、 New Labor Retirement Pension Fund(2.72%)、Chung-Ping(2.14%) 、 Chung-An(1.94%)、Labor Insurance Fund(1.88%)、Nan Shan Life Insurance Co., Ltd.(1.73%)、 Vanguard Total International Stock Index Fund(1.46%)。
Long Deed Corporation	Liou,Mei-Jyun(21.25%)、Cai,Meng-Sia(18.25%)、Liou,Kang-Sin(18%)、Liou,Huang-Cing(21.25%)、Liou,Syuan-Hao(21.25%)

(3)Major Shareholder(s) to The Company Listed in The Right Hand Column of The Above Table:

Name of Institutional Shareholders	Major Shareholders of Institutional Shareholders
Nan Shan Life Insurance Co., Ltd	First Commercial Bank Trustee Account For Representative of Ruen Chen Investment Holding Co., Ltd. (60.01%)、Representative of Ruen Chen Investment Holding Co., Ltd. (29.54%)、Y. T. Du (2.89%)、Ruentex Xing Co., Ltd.(0.29%)、Ruentex Development Co., Ltd (0.23%)、Ruentex Industries Limited (0.21%)、Taishin Bank Is Entrusted With A Special Account Of Nanshan Life Securities Trust (0.20%)、Yuanxin Investment Co., Ltd.(0.15%)、Ruentex Leasing Co., Ltd.(0.13%)。

(4)Professional qualifications and independence analysis of directors and Independent Directors：

Criteria / Name	Meet One of the Following Professional Qualification Requirements, Together with at Least Five Years Work Experience			Independence Criteria(Note)												Number of Other Public Companies in Which the Individual is Concurrently Serving as an Independent Director
	An Instructor or Higher Position in a Department of Commerce, Law, Finance, Accounting, or Other Academic Department Related to the Business Needs of the Company in a Public or Private Junior College, College or University	A Judge, Public Prosecutor, Attorney, Certified Public Accountant, or Other Professional or Technical Specialist Who has Passed a National Examination and been Awarded a Certificate in a Profession Necessary for the Business of the Company	Have Work Experience in the Areas of Commerce, Law, Finance, or Accounting, or Otherwise Necessary for the Business of the Company	1	2	3	4	5	6	7	8	9	10	11	12	
Hong, Chum-Sam	—	—	✓	—	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
Lin, Kun-Si	✓	—	✓	—	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	2
Pan,Wen-Whe	—	—	✓	—	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
Lin,Wen-Yuan	—	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	2
Liu,Kong-Hsin	—	—	✓	—	—	✓	✓	—	✓	✓	✓	✓	✓	✓	—	1
Chiou, Yih-Peng	✓	—	—	✓	✓	✓	✓	—	✓	✓	✓	✓	✓	✓	—	—
Chou, Chung-Pin	—	—	✓	✓	✓	✓	✓	—	✓	✓	✓	✓	✓	✓	—	—
Chiang, Wen-Hsing	—	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
Weng, Ming-Jeng	—	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	3
Andrew C. Hsu	—	✓	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1
Tsai,Ming-Fang	✓	—	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	2

1. Not an employee of the Company or any of its affiliates.
2: Not a director or supervisor of the company or any of its associates. The same does not apply, however, in cases where the person is an independent director of the company concurrently, its parent company, or any subsidiary in which the company holds in accordance with the Act or local state laws.
3: Not a natural-person shareholder who holds shares, together with those held by the person's spouse, minor children, or held by the person under any other's name, in an aggregate amount of 1 percent or more of the total number of issued shares of the company or ranking in the top 10 in shareholding.
4: Not a manager mentioned in Notes 1, a spouse, relative within the second degree of kinship, or lineal relative within the third degree of kinship, of any of the persons in the preceding Notes 2 and 3.
5: Not a director, supervisor, or employee of a corporate shareholder that directly holds 5 percent or more of the total number of issued shares of the company, ranks in the top 5 in shareholding, or being designated according to Article 27, Section 1 or 2 of the Company Act. The same does not apply, however, in cases where the person is an independent director of the company concurrently, its parant company, or any subsidiaries established in accordance with the Act or local state laws.
6: Not a director, supervisor, or employees of other companies who are not controlled by the same person as more than half of the shares or voting rights. The same does not apply, however, in cases where the person is an independent director of the company concurrently, its parant company, or any subsidiaries established in accordance with the Act or local state laws.
7: Not a director, supervisors, or employee of other companies or organizations who are not the same person or spouse with the chairman, general manager, or equivalent of the company. The same does not apply, however, in cases where the person is an independent director of the company concurrently, its parant company, or any subsidiaries established in accordance with the Act or local state laws.
8: Not a director, supervisor, managerial officer, or shareholder holding 5 percent or more of the shares, of a specified company or institution that has a financial or business relationship with the company. The same does not apply, however, in cases where a particular company or institution holds more than 20% and less than 50% of the company 's total issued shares,, and the person is an independent director of the company concurrently, its parant company, or any subsidiaries established in accordance with the Act or local state laws.
9: Not a professional individual who, or an owner, partner, director, supervisor, or managerial officer of a sole proprietorship, partnership, company, or institution that, provides audits or commercial, legal, financial, or accounting services in which the accumulated remuneration in the past two years did not exceed NTD 500,000, to the company or to any associate of the company, or a spouse thereof. The same does not apply, however, in cases where a person is a member of the Remuneration and Compensation Committee, Public Acquisition Audit Committee, or M&A Special Committee performing their duties under the relevant regulations of the Securities Exchange Act and the Business M&A.
10. Not having a marital relationship, or a relative within the second degree of kinship to any other director of the Company.
11. Not been a person of any conditions defined in Article 30 of the Company Law.
12. Not a governmental, juridical person or its representative as defined in Article 27 of the Company Law.

3.2.2.Management Team

April 24, 2020

Title	Name	Nationality	Gender	Date Effective	Shareholding		Spouse & Minor Shareholding %		Shareholding by Nominee Arrangement Shares		Experience（Education）	Other Position	Managers who are Spouses or Within Two Degrees of Kinship			Note
					Shares	%	Shares	%	Shares	%			Title	Name	Relation	
Chairman & CSO	Hong, Chum-Sam	Taiwan	Male	Oct. 01, 2005	2,411,945	0.09%	–	–	–	–	1.Ph.D of Electrical Engineering (National Tsing Hua University) 2.Director of Solar Cell Laboratory, Industrial Technology Research Institute	Notes1	N/A	N/A	N/A	–
CEO	Pan,Wen-Whe	Taiwan	Male	Oct. 01, 2018	3,888,476	0.15%	255,517	0.01%	–	–	1. Ph.D of Fiber Polymers, North Carolina State University, USA 2.Sumitomo Electronics Chief Engineer, Laboratory Manager 3.Supervisor of cyuan mao jingmi 4.General Manager of suyangci ye ji tuan 5.Directors and General manager of GIN	Notes2	Global Sales Vice President	Ben Pan	father and son	–
Business President of New business development	Zeng,sheng-cheng	Taiwan	Male	Oct. 01, 2018	835,796	0.03%	1,238,896	0.05%	–	–	1.Vice President of SEC 2.Vice President of Nan ya plastics Corporation 3.Vice President of Formosa Automobile Corporation 4. Director,MC UT The University	Notes3	N/A	N/A	N/A	–
Business President of Solar Business	Shen,Wei-Jiun	Taiwan	Male	May 05, 2008	1,124,740	0.04%	–	–	–	–	1.Master of Business Administration, Santa Clara University, USA 2.Master of Electrical Engineering, Case Western eserve University, USA 3.Bachelor of Physics, National Taiwan University 4.General Manager and Chief Operating Officer of NSP 5.Senior Director of TSMC 6.General Manager of the Subsidiary of TSMC in Europe	Notes4	N/A	N/A	N/A	–
Senior Vice President of Solar Asset Management	Thomas Hsu	Taiwan	Male	Jun 01, 2020	87,000	0.00%	–	–	–	–	1.Western Michigan University, MBA 2.Vice Chairman of JPMorgan Chase Bank, N.A 3.CFO of Innolux Corporation 4.CFO of Tatung Company	Notes5	N/A	N/A	N/A	–
Vice President of Finance	Pan,lay-lay	Taiwan	Femal	Oct. 01, 2018	99,872	0.00%	–	–	–	–	1.Master of Marketing, Saint John's University 2.Financial Vice President and Chief financial officerGIN 3.Manager of Malabs 4.Assistant Manager of CITI Bank	Notes6	N/A	N/A	N/A	–
Vice President of Legal	Zabrina Hsu	Taiwan	Femal	May.06.2019	146,356	0.01%	–	–	–	–	1.LL.M of Duke University 2.GM of Celestica Inc 3.Chief of Justice NSP Corp. 4.Chief of Justice ADATA Technology 5.Grand china Chief of Justice of Hon Hai Precision 6.Legal Manage of Acer Incorporated	Notes7	N/A	N/A	N/A	–
Senior Vice President of Management Center	Marco Hu	Taiwan	Male	Oct. 01, 2018	–	–	–	–	–	–	1. Bachelor, National TsingHua University. 2. Neo Solar Power Energy Corp 3.Delta Electronics, Inc 4.Hewlett-Packard Company 5.USA Texas Instruments Incorporated	Notes8	N/A	N/A	N/A	–
Senior Vice President of Solar Business	Liou,Ming-Zong	Taiwan	Male	Oct. 01, 2018	226,270	0.01%	–	–	–	–	1. Bachelor, National TsingHua University. 2. Senior Vice President of GIN Production Department 3. United Microelectronics Corp.	Notes9	N/A	N/A	N/A	–
Vice President of Taiwan System	Simon Li	Taiwan	Male	Dec. 01, 2005	268,370	0.01%	197,099	0.01%	–	–	1. Ph.D of Universoty of Leeds, UK 2. Vice President of NSP 3. Sales Manager of Great China Area and Application Technical Manager of Ferro Corporation 4.R&D Manager and Project Manager of Holy Stone Enterprise Co.	Notes10	N/A	N/A	N/A	–
Vice President of Overseas System Business	Jack Chen	Taiwan	Male	June 13, 2018	–	–	–	–	–	–	1. Ph.D of Mechanical Engineering, Case Western Reserve University 2. General President of GES US branch 3. Director of Hon Hai Precision Ind. Co., Ltd. US branch 4. Professor of Department of Mechanical Engineering, National Ocean University	–	N/A	N/A	N/A	–
Vice President of Global Sales	Ben Pan	Taiwan	Male	Oct. 01, 2018	136,584	0.01%	73,009	0.00%	–	–	1. Bachelor, University of Wisconsin-Madison 2. Vice President of GIN 3. Vice President of Utech Solar Corporation 4. Execution Vice President of Dongguan So Yang Enterprise Co., Ltd	Director,solartech materials corporation	CEO	Pan,Wen-Whe	father and son	

Vice President o f BESS Business Unit	Jorge Tseng	Taiwan	Male	Oct. 01, 2018	127,611	0.00%	7,020	0.00%	–	–	1. Master of Cornell University 2. Senior Vice President of SEC 3. Project Manager of Phison Electronics Corporation	–	N/A	N/A	N/A	–
Vice President of Solar Business	Ms.Yen	Taiwan	Male	Oct. 01, 2018	6,768	0.00%	–	–	–	–	1. Master of National ChiaoTung Unniversity 2. Assistant Vice President of GIN 3. Deputy Director of Shiwei Technology Co., Ltd. 4. Manager of TSMC	Director and General Manager of Gintech (Thailand) Limited	N/A	N/A	N/A	–
Assistant Vice President of Sales Division I	Chienping.Hsieh	Taiwan	Male	Oct. 01, 2018	88,837	0.00%	–	–	–	–	1. Master of Cornell University 2. Gintech Energy Orporation 3.Maxim Integrated Products 4.Vanguard International Semiconductor Corporation	–	N/A	N/A	N/A	–
Assistant Vice President of R&D	Adam.Hsu	Taiwan	Male	May.06.2019	142,148	0.02%	–	–	–	–	1.Ph.D of National Cheng Kung University 2. Postdoctoral Research Fellow, National University of Singapore 3. Postdoctoral Research Fellow, The University of New South Wales 4. Procurement Strategy Officer, REC Solar 5. Vice President, (Nanjing)China Sunergy Co., Ltd 6. Chief Technology Officer, Jiangsu Linyang Energy Co.,Ltd.	Notes11	N/A	N/A	N/A	–
Assistant Vice President of Accounting	Rita Yang	Taiwan	Femal	Oct. 01, 2018	–	–	–	–	–	–	1.Department of Business Administration, Fu Jen Catholic University 2. Accounting Manager of SEC	Notes12	N/A	N/A	N/A	–
Assistant Vice President of Supply Chain Management	Hf.Hsieh	Taiwan	Male	Jun.14.2019	–	–	–	–	–	–	1.Master degree of Chemical Engineering of Tamkang University. 2.Purchasing manager of HannStar Display Corp.	–	N/A	N/A	N/A	–

Notes1：1.Chairman,NSP System Development Corp.2.Chairman, Si Two Corp. 3. Chairman ,Yong Zhou Ltd.4. Chairman ,Yong Liang Inc.5.Chairman, Zhongyang Corporation.6.Director, Sion-American Silicon Products lns.7.Director,United Renewable Energy Engineering Co. , Ltd.8.Director,V5 Technologies Co., Ltd.

Notes2：1.Chairman, United Renewable Energy Engineering Co. , Ltd.2.Chairman, United ecological agriculture Co., Ltd.3. Chairman , Yanshan Energy Co., Ltd.4. Chairman , Daxiangying Energy Co., Ltd.5.Chairman, Xinkai Energy Co., Ltd.6.Chairman, Dongshi Energy Co., Ltd.7.Chairman, Shanshang Energy Co., Ltd.8.Chairman, Jiangong Energy Co., Ltd.9.Director ,Zhong Yang Corp.10 Director ,Zhongwei Investment Energy Co., Ltd.11. Director , ECOVE Environment Corporation12. Director , Utech Solar Corp.

Notes3：1.Director,Solartech Materials Corp.2. Director,Apex Solar corporation .3. Independent Director,Medfirst Healthcare Services, Inc .4. Director,TS Solartech 5. Director,Top Green Energy Technologies Inc

Notes4：1.Chairman, DelSolar(Wu Jiang) Ltd.2. Chairman, New Ray Investment Corp.3.Chairman,Best Power Service Corp.4.Chairman,Solartech Materials Corp.5.Chairman, Apex Solar Corp.6..Director,Si Two Corp.7. Director,V5 Technologies Co., Ltd

Notes5：1.Director,Si Two Corp.2.Director,Hsin Jin Optoelectronics.3. Director, Hsin Jin Solar Energy Co., Ltd.4.Supervisor,Neo Cathy Power Corp.5. Supervisor,Si One Corp.6. Supervisor, Da Li Energy Corp.7.Supervisor, Yong Han Corp.8.Supervisor, Yong Yeh Corp.9.Supervisor, Neo Cathy Electric Power Corp.

Notes6：1.Director, NSP System Development Corp.2.Director, Best Power Service Corp.3.Supervisor,UREE.4.Supervisor,Solartech Materials Corp.5.Supervisor, Apex Solar Corp.6. Supervisor, Zhong Yang Corp.7. Supervisor,Utech Solar Corporation.8. DS Energy Technology Co., Ltd

Notes7：1.Supervisor, NSP System Development Corp. 2 Supervisor,.Si Two Corp.

Notes8：1.Director,New Ray Investment Corp.2.Supervisor,Chairman, V5 Technologies

Notes9：1.Director,Utech Solar Corporation.2. Director,Gintech (Thailand) Limited

Notes10：1.Chairman,Tienyang Green Power Ltd. Co.2.Chairman,Deyang Green Power Ltd. Co.3.Chairman,Shanyang Green Power Ltd. Co4.Chairman,Jeyang Green Power Ltd. Co.5.Chairman,Hsin Jin Optoelectronics 6.Chairman,Hsin Jin Solar Energy Co., Ltd. 7.Chairman,Lien,Chang Energy Co., Ltd.8.Chairman,LIEN,CHENG Energy Co., Ltd.9.Chairman,LIEN,HIS Energy Co., Ltd.10.Director, NSP System Development Corp.11.Director, Best Power Service Corp12.Director, Thintech Materials Technology Co., Ltd13.Director, Apex Solar Corporation14.Director, DS Energy Technology Co., Ltd.15.Director, Zhong Yang Corp.16.Director, UREE17.Director, Neo Cathy Power Corp.18.Director, Si One Corp. (“Si One”)19.Director, Da Li Energy Corp.20.Director, Yong Han Corp.21.Director, Yong Yeh Corp.22.Director, Neo Cathy Electric Power Corp.

Notes11：1.Convener, SEMI PV Technology Symposium Special Interest Group.2. Committee member, International Technology Roadmap for hotovoltai

Notes12：1.Supervisor,Best Power Service Corp.2. Director,Taihe Construction Co., Ltd.

3.2.3.Remuneration of Directors, Independent Directors, President, and Vice Presidents

(1)Remuneration of Directors and Independent Director

Dec 31, 2019 /Unit: In thousand of NT$

Title	Name	Remuneration								Ratio of Total Remuneration (A+B+C+D) to Net Income (%)		Relevant Remuneration Received by Directors Who are Also Employees								Ratio of Total Compensation (A+B+C+D+E+F+G) to Net Income (%)		Compensation Paid to Directors from an Invested Company Other than the Company's Subsidiary
		Base Compensation (A)		Severance Pay (B)		Directors Compensation(C)		Allowances (D)				Salary, Bonuses, and Allowances (E)		Severance Pay (F)		Employee Compensation (G)						
		The company	All companies in the consolidated financial statements	The company	All companies in the consolidated financial statements	The company	All companies in the consolidated financial statements	The company	All companies in the consolidated financial statements	The company	All companies in the consolidated financial statements	The company	All companies in the consolidated financial statements	The company	All companies in the consolidated financial statements	The company		All companies in the consolidated financial statements		The company	All companies in the consolidated financial statements	
																Cash	Stock	Cash	Stock			
Chairman & CSO	Hong, Chum-Sam	–	–	–	–	–	–	360	360	(0.006%)	(0.006%)	8,406	8,406	–	–	–	–	–	–	(0.154%)	(0.152%)	N/A
Director	Lin, Kun-Si	–	–	–	–	–	–	360	360	(0.006%)	(0.006%)	–	–	–	–	–	–	–	–	(0.006%)	(0.006%)	N/A
Director	Pan,Wen-Whe	–	–	–	–	–	–	360	360	(0.006%)	(0.006%)	8,278	8,278	108	108	–	–	–	–	(0.154%)	(0.152%)	N/A
Director	Lin,Wen-Yuan	–	–	–	–	–	–	360	360	(0.006%)	(0.006%)	–	–	–	–	–	–	–	–	(0.006%)	(0.006%)	N/A
Director	Chiang, Wen-Hsing	–	–	–	–	–	–	360	360	(0.006%)	(0.006%)	–	–	–	–	–	–	–	–	(0.006%)	(0.006%)	N/A
Director	Long deed corporation	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	N/A
	Liu,Kong-Hsin	–	–	–	–	–	–	360	360	(0.006%)	(0.006%)	–	–	–	–	–	–	–	–	(0.006%)	(0.006%)	N/A
Director	National Development Fund, Executive Yuan	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	N/A
	Delegate: Chiou, Yih-Peng	–	–	–	–	–	–	360	360	(0.006%)	(0.006%)	–	–	–	–	–	–	–	–	(0.006%)	(0.006%)	N/A
Director	Yaohua Glass Co., Ltd. Management Committee	–	–	–	–	–	–	264	264	(0.004%)	(0.004%)	–	–	–	–	–	–	–	–	(0.004%)	(0.004%)	N/A
	Delegate: Chou, Chung-Pin	–	–	–	–	–	–	96	96	(0.002%)	(0.002%)	–	–	–	–	–	–	–	–	(0.002%)	(0.002%)	N/A
Independent Director	Weng, Ming-Jeng	1,800	1,800	–	–	–	–	–	–	(0.032%)	(0.031%)	–	–	–	–	–	–	–	–	(0.032%)	(0.031%)	N/A
Independent Director	Andrew C. Hsu	1,800	1,800	–	–	–	–	–	–	(0.032%)	(0.031%)	–	–	–	–	–	–	–	–	(0.032%)	(0.031%)	N/A
Independent Director	Tsai,Ming-Fang	1,800	1,800	–	–	–	–	–	–	(0.032%)	(0.031%)	–	–	–	–	–	–	–	–	(0.032%)	(0.031%)	N/A

1.Please explain the policy, system, standard, and structure of the remuneration of the independent directors, and describe the relevance to the amount of remuneration in accordance with the responsibilities, risks, and, time invested: The remuneration of Independent Directors based on Company's Board Performance Evaluation Regulation, and depends on participation of Independent Directors in operation of the Company, as well as value of their contribution. The remuneration of Independent Directors of the relevant listed companies will also be taken into consideration, the final decision is subject to approval of Remuneration Committee and Board of Directors.

2.In addition to the above remuneration, director remuneration shall be disclosed as follows when received from companies included in the consolidated financial statements in the most recent year to compensate directors for their services, such as being independent contractors.：n/a。

(2)Remuneration of the President and Vice Presidents

Dec 31, 2019 /Unit: In thousand of NT$

Title	Name	Salary(A)		Severance Pay (B)		Employee Compensation (D)		Employee Compensation (D)				Ratio of total compensation (A+B+C+D) to net income (%)		Compensation Paid to the President and Vice Presidents from an Invested Company Other than the Company's Subsidiary
		The company	Companies in the consolidated financial statements	The company	Companies in the consolidated financial statements	The company	Companies in the consolidated financial statements	The company		Companies in the consolidated financial statements		The company	Companies in the consolidated financial statements	
								Cash	Stock	Cash	Stock			
Chairman & CSO	Hong, Chum-Sam	51,698	56,080	1,402	1,402	8,914	8,914	—	—	—	—	(1.09%)	(1.15%)	N/A
Director&CEO	Pan,Wen-Whe													
Business President	Shen,Wei-Jiun													
Business President	Tseng sheng-cheng													
Vice President	Jack Chen													
Senior Vice President	Marco Hu													
Senior Vice President	Liou,Ming-Zong													
Vice President	David Liu (Notes)													
Vice President	Michael Kung (Notes)													
Vice President	Wang,Jhong-Lin (Notes)													
Vice President	Huang,guei-wu (Notes)													
Vice President	Simon Li													
Vice President	Pan,lay-lay													
Vice President	Yan,ming-shuo													
Vice President	Ben Pan													
Vice President	Jorge Tseng													
Vice President	CC Lai(Notes)													
Vice President	Zabrina.Hsu													
Vice President	Liang,bo-jie (Notes)													

Notes：David Liu, June 2019 resignation ; Michael Kung,March 2019 resignation; Wang,Jhong-Lin,Jan 2019 resignation; Huang,guei-wu, Jan 2019 retirement;CC Lai&,Feb 2020 resignation ; Liang,bo-jie,Oct 2019 resignation。

(3)Remuneration Paid to CEO, President and Vice Presidents

Remuneration Paid to Business President and Vice President	Names	
	The company	From All Consolidated Entities
Under NT$ 1,000,000	Jack Chen、Wang,Jhong-Lin、Huang,guei-wu、Liang,bo-jie	Wang,Jhong-Lin、 Huang,guei-wu、Liang,bo-jie
NT$1,000,000 ~ NT$2,000,000	David Liu、Michael Kung、Zabrina.Hsu	David Liu、Michael Kung、Zabrina.Hsu
NT$2,000,001 ~ NT$3,500,000	Simon Li、Pan,lay-lay、Yan,ming-shuo、Ben Pan、Jorge Tseng、CC Lai	Simon Li、Pan,lay-lay、Ben Pan、Jorge Tseng、CC Lai
NT$3,500,000 ~ NT$5,000,000	Marco Hu、Liou,Ming-Zong	Marco Hu、 Liou,Ming-Zong、Jack Chen、Yan,ming-shuo
NT$5,000,000 ~ NT$10,000,000	Hong, Chum-Sam、Pan.Wen-Whe、Tseng sheng-cheng、Shen,Wei-Jiun	Hong, Chum-Sam、Pan.Wen-Whe、Tseng sheng-cheng、Shen,Wei-Jiun
NT$10,000,001 ~ NT$15,000,000	—	—
NT$15,000,001 ~ NT$30,000,000	—	—
NT$30,000,001~ NT$50,000,000	—	—
NT$50,000,001 ~ NT$100,000,000	—	—
Over NT$100,000,000	—	—
Total	19	19

(4)Managerial officers with the top five highest remuneration amounts

Dec 31, 2019 /Unit: In thousand of NT$

Title	Name	Salary (A) (Notes2)		Severance Pay (B)		Bonuses, and Allowances (D) (Notes3)		Employee Compensation (D) (Notes4)				Ratio of Total Compensation (A+B+C+D) to Net Income (%) (Notes67)		Compensation Paid to Directors from an Invested Company Other than the Company's Subsidiary (Notes 7)
		The company	All companies in the consolidated financial statements (Notes 5)	The company	All companies in the consolidated financial statements (Notes 5)	The company	All companies in the consolidated financial statements (Notes 5)	The company		All companies in the consolidated financial statements (Notes 5)		The company	All companies in the consolidated financial statements	
								Cash	Stock	Cash	Stock			
Chairman & CSO	Hong, Chum-Sam	7,206	7,206	0	0	1,200	1,200	–	–	–	–	(0.15%)	(0.15%)	–
CEO	Pan,Wen-Whe	7,137	7,137	108	108	1,141	1,141	–	–	–	–	(0.15%)	(0.15%)	–
General Manager	Zeng,sheng-cheng	5,065	5,065	108	108	835	835	–	–	–	–	(0.11%)	(0.11%)	–
General Manager	Shen,Wei-Jiun	4,844	4,844	108	108	784	784	–	–	–	–	(0.10%)	(0.10%)	–
Vice President	Jack Chen	741	3,559	45	45	0	0	–	–	–	–	(0.01%)	(0.06%)	–

Notes 1: The aforementioned "supervisor" in the "Top five highest-paid supervisors" refers to the manager of the company. The criteria for the identification of managers shall be handled in accordance with the scope of application of "managers" stipulated in the letter of Taiwan Finance Certificate No. 0920001301 of the Securities and Futures Commission of the Ministry of Finance on March 27, 2003. The calculation and determination principle of the "top five highest remuneration" is based on the total number of salaries, retirement pensions, bonuses, and special expenses received by company supervisors from all companies in the consolidated financial statement, the total amount of employee compensation (that is, the total of A+B+C+D,) and the top five highest remunerations are recognized after the ranking. Besides, the table and the above table (1-1) shall be filled out if the director is concurrently a former supervisor.

Notes 2: To fill in the salary, job bonus, and severance pay of the top five highest-paid supervisors in the most recent year.

Notes 3: To fill in the various types of bonuses, rewards, traffic allowance, special disbursement, multiple allowances, dormitory, transportation dispatch, and other remuneration amounts of the top five highest-paid supervisors in the most recent year. The nature and cost of the assets provided, rents, fuel and other payments that are actually or measured at fair market value shall be disclosed when providing housing, cars, and other transportation or exclusive personal expenses, including the acquisition of employee stock option certificates, restricting employee equity new stock, and participating in cash capital subscription shares, etc., shall also be included in the remuneration.

Notes 4: To fill in the employee compensation amount (including stocks and cash) of the top five highest-paid supervisors approved by the board of directors in the most recent year. If it cannot be estimated, the proposed distribution amount for this year will be calculated based on the proportion of the actual distribution amount of the previous year, and the third form of the attached schedule shall be filled additionally.

Notes 5: The total amount of each remuneration paid to the top five highest-paid supervisors of the Company by all companies (including the Company) in the consolidated statement shall be disclosed.

Notes 6: Net profit after tax refers to net profit after tax in the most recent individual or individual financial statement.

Notes 7: a. The column shall list the top five highest-paid supervisors of the company receiving the remuneration amount from the reinvestment business outside the subsidiary or the parent company (if not, please fill in "none".)

b. Remuneration refers to the rewards, compensation (including the compensation of employees, directors, and supervisors) and business execution received by the top five highest-paid supervisors of the company as directors, supervisors, or managers of non-subsidiary companies, or parent companies.

*The content of the remuneration disclosed in this form differs from the income concept of the Income Tax Act; consequently, the purpose of the form is for information disclosure instead of taxation purposes.

(5)Employee Profit Sharing Granted to Management Team Date :None.

3.2.4.Comparison of Remuneration for Directors, Independent Directors, Presidents and Vice Presidents in the Most Recent Two Fiscal Years and Remuneration Policy for Directors, Presidents and Vice Presidents

Year	Ratio of total remuneration paid to directors, supervisors, president and vice presidents to net income (%)			
	2018		2019	
	The company	Companies in the consolidated financial statements	The company	Companies in the consolidated financial statements
Directors	(5.63%)	(5.63%)	(0.44%)	(0.43%)
Management team	(9.46%)	(10.04%)	(1.09%)	(1.15%)

Notes: According to the resolution of the Board of Directors of the company on March 26, 2020, there were not any distribution of earnings in 2019.

(1)The remuneration paid by the company to the directors includes the remuneration of the directors and the monthly fee of traffic allowance of NT$30,000. Besides, according to the articles of the incorporation of the company, if the company's final accounts have earnings, in addition to tax payment in accordance with the law, and to make up for losses in previous years, it shall list 10% of the legal reserve. If necessary, it shall propose a special reserve, and the balance of shall be proposed by the board of directors to be submitted to the shareholders meeting for resolution. Among them, the director's compensation is 2%. Under the resolution of the Board of Directors of the company on February 21, 2012, Based on the independence and detachment of independent directors, since January 2012, independent directors drew fixed remuneration and no longer participated in the company's earnings distribution.

(2)The remuneration paid by the company to the managers, include the salary, allowances and bonuses, etc., It depends on the position and responsibility of the position, the achievement rate of the company's overall operational objectives, individual performance, and academic experience, etc., and refers to the salary level of the same-type position in the same nature to establish .

3.3.Implementation of Corporate Governance

3.3.1.Attendance of Directors for Board Meetings

A total of 7 meetings of the board of directors were held in the previous period. Director attendance was as follows: (2019/1/1~2020/03/31)：

Title	Name	Attendance in Person	By Proxy	Attendance Rate in Person (%)	Notes
Chairman	Hong, Chum-Sam	7/7	0	100.00%	–
Director	Lin, Kun-Si	7/7	0	100.00%	–
Director	Pan,Wen-Whe	7/7	0	100.00%	–
Director	Lin,Wen-Yuan	6/7	0	85.71%	–
Director	Chiang, Wen-Hsing	5/7	1	71.43%	–
Director	Long Deed Corporatinn Delegate: Liu,Kong-Hsin	7/7	0	100.00%	–
Director	National Development Fund, Executive Yuan Delegate: Chiou, Yih-Peng	7/7	0	100.00%	–
Director	Yaohua Glass Co., Ltd. Management Committee Delegate: Chou, Chung-Pin	7/7	0	100.00%	–
Independent Director	Weng, Ming-Jeng	5/7	2	71.43%	–
Independent Director	Andrew C. Hsu	6/7	1	85.71%	–
Independent Director	Tsai, Ming-Fang	7/7	0	100.00%	–

Other mentionable items:：

1.If any of the following circumstances occur,, the dates of the meetings, sessions, contents of motion, all independent directors' opinions and the company's response should be specified:：

(1)Matters referred to in Article 14-3 of the Securities and Exchange Act：

Date of Meeting and Session	Motion Content	All independent directors' opinions and the company's handling of the opinions of independent directors
February 22, 2019	1.The company adopted the proposal of the absorption and merger of GES, the subsidiary of the company that held 100% of the shares.	Approved by all independent directors.
March 22, 2019	1.Approved the Internal Control System Statement for the year of 2018. 2.The company adopted the capital increase by cash of US$ 10,000,000 with Clean Focus Renewables Inc, the subsidiary that indirectly held 100% of shares of the company. 3.The company adopted the providing of endorsement/guarantee for NSP SYSTEM Nevada Holding, the subsidiary that indirectly held 100% of shares of the company. 4.The company adopted the continuous providing of endorsement/guarantee for the subsidiary of GES, which is General Energy Solutions UK Limited. 5 The company adopted the endorsement/guarantee of concession and merger other companies.	
May 6, 2019	1. Amend parts of provisions of the Articles of the Company. 2. Amend parts of provisions of the "Procedures for Acquisition or Disposal of Assets" of the Company. 3. Amend parts of provisions of the "Procedures for Endorsement and Guarantee" of the Company. 4. Amend parts of provisions of the "Procedures for the Loaning Funds to Others" of the Company. 5. Approved the case of the issuance of common stocks by cash capital increase or participate in the issuance of global depository receipt through the issuance of common stocks by cash capital increase. 6. Approved performing private common stock. 7. Approved the proposal of issuing the restricted employee equity new stock to the employees of the Company. 8. Approved appointing the corporate governance director of the Company.	
June 14, 2019	1.Approved performing the issuance of new stock by cash capital increase.	
August 12, 2019	1.Approved the Company's proposal of the plan to jointly establish a joint venture company with other investors to invest in domestic solar power plants. 2.Approved the new added Endorsement and Guarantee to GES USA. 3.Approved the continuous provision of Endorsement and Guarantee for the subsidiary, NSP System. 4.Approved the adjustment of the limit of the Endorsement and Guarantee to the subsidiary, GES UK. 5.Approved the interpretation of the issuance of new stock by cash capital increase and the recognizable share number of the managerial officer.	
November 8, 2019	1.Approved the Company's initial issuance of the restricted employee equity new stock for the year of 2019.	
March 26, 2020	1.Amend parts of provisions of the Articles of the Company.	

	2.Approved the case of the issuance of common stocks by cash capital increase or participate in the issuance of global depository receipt through the issuance of common stocks by cash capital increase. 3.Approved performing private common stock. 4.Approved the Internal Control System Statement for the year of 2019. 5.Approved the Endorsement and Guarantee to the subsidiary, GES UK.	

(2) In addition to the above-mentioned matters, other resolutions of the board of directors that have been objected to or retained by independent directors and have a record or written statement do not apply.

2. The director shall state the name of the director, the content of the proposal, the reasons for preventing the interest, and the participation in the voting:

(1) The board of directors approved the settlement with Sunshine PV Corporation on the mutual debts of both parties on May 6, 2019. The case was approved after the director, Liu Kang-Shing (shareholder of Sunshine PV Corporation,) voluntarily avoided interests and consulting other presenting directors by the chairman without any objection.

(2) The board of directors approved the remuneration of independent directors of the Company on May 6, 2019. The case was approved after three independent directors, Zhao-Ching Hsu, Ming-Fang Tsai, and Ming-Zheng Wong, voluntarily avoided their interests and consulting other presenting directors by the chairman without any objection.

(3) The board of directors issued a new share through cash increase on August 12, 2019; among them, the number of shares can be subscribed by the manager. The case was approved after the chairman, Hong, Chum-Sam (strategy chief of the Company) and Wen-Whe Pan (executive chief of the Company) voluntarily avoided their interests and consulting other presenting directors by the chairman without any objection.

3. The annual and the previous year of goal of strengthening board functions (such as establish the Audit Committee, improve the information disclosure, etc.) and the implementation evaluation:

The Company has established the performance assessment method of the board of directors on November 18, 2019. Since 2020, the board of directors and individual directors have been self-assessed or peer-reviewed regularly each year, and the results of the performance assessment will be reported.

4.The goals of reinforcing the functions of the board of directors in the current year and the most recent year (e.g. the establishment of an audit committee, the improvement of information transparency, etc.) and the assessment of implementation:

(1)TheCompany has insured the "liability insurance" for the directors and supervisors to diversify the legal liability risks of the directors and supervisors and enhance the capabilities of corporate governance.

(2)The Company has established an Audit Committee to objectively supervise the operation of the board of directors with independent functions, and implement the functions and powers prescribed by the Securities and Exchange Act, the CompanyAct, and other relevant regulations.

(3)The Company has established a remuneration committee to assist the board of directors in implementing and assessing the overall remuneration and benefits system of the Company, and regularly reviews whether the remuneration of directors and supervisors is appropriate.

(4) The board of directors of the Company approved the establishment of the corporate governance supervisors on May 6, 2019, to implement corporate governance and reinforce the effectiveness of the board of directors to assist directors with relevant information and other necessary assistance in performing their duties.

(5)To strengthen information transparency, a designated person is responsible for the disclosure of company information and updating company website information, etc.

(6)To strengthen the professional knowledge of directors and implement corporate governance, the Company arranged courses for corporate governance and operations for directors in 2019.

Notes: The way of listingis the number of actual attendance / the number of attendances during the term.

3.3.2.Attendance of Audit Committee

A total of 7 meetings of the audit committee were held in the previous period. Independent director attendance was as follows: (2019/1/1~2020/03/31)：

Title	Name	Attendance in Person	Attendance In Proxy	Attendance Rate in Person (%)	Remark
Independent Director	Weng, Ming-Jeng	5 / 7	2	71.43%	—
Independent Director	Andrew C. Hsu	6 / 7	1	85.71%	—
Independent Director	Tsai, Ming-Fang	7 / 7	0	100.00%	—

Other mentionable items：

The members of Audit Committee consists of 3 Independent Directors, Audit Committee holds meeting 7 times in 2019~2020, to consider following matters:

(1)The fair expression of the financial statement of the Company.

(2) The selection (dismissal) of the certified accountants and their ability, qualification, uniqueness, performance as well as state certificate expenses.

(3)The effective implementation of internal control of the company.

(4)Significant assets, derivatives, loaning funds, and endorsement or guaranteed transactions.

(5)Amended the procedures for performing derivatives transaction and the endorsement or guaranteed method.

(6) Appointment of accounting supervisor.

(7)Issuing or private equity securities

1.If any of the following circumstances occur, the dates of meetings, sessions, contents of motion, resolutions of the Audit Committee and the Company's response to the Audit Committee's opinion should be specified。(1). Matters referred to in Article 14-5 of the Securities and Exchange Act：

Date of Meeting and Session	Motion Content	Resolution result	All independent directors' opinions and the company's handling of the opinions of independent directors
Feb. 22, 2019	1.Capital Loan and Clean Focus Yield Ltd.'s Improvement Project Report 2.The company approved the proposal of absorption and merger of the company's subsidiary that held 100% of the shares of the company, which is GES.	Approved by all independent directors.	Approved by all independent directors.
March 22, 2019	1. Implementation of the nuclear plan 2.The 2018 Q4 Proposal for a complete operational plan Report 3.The company approved the 2018 appropriation of loss	Approved by all independent directors.	Approved by all director directors.

	4.The 2018"Validity Assessment of Internal Control System." 5.The company adopted the capital increase by cash of US$ 10,000,000 with Clean Focus Renewables Inc, the subsidiary that indirectly held 100% of shares of the company. 6.The company adopted the providing of endorsement/guarantee for nsp system nevada holding, the subsidiary that indirectly held 100% of shares of the company. 7.The company approved the continuous providing endorsement/guarantee for GES 's subsidiary, General Energy Solutions UK Limited. 8.The company adopted the endorsement/gua rantee of concession and merger other companies.		
May 6, 2019	1.The company's 2019 1nd quarter comprehensive financial statement. 2.Implementation of the nuclear plan 3.Amend articles of the "Procedure for Acquisition or Disposal of Assets" of the Company. 4.Amend articles of the "Endorsement and Guaranteed Management Method" of the Company. 5.Amend articles of the "Procedure for Loaning Funds to Others" of the Company. 6.Perfom the common stock issuance by capital increase or participate in the issuance of global depositary receipts by issuing common stock by capital increase. 7..Perform the common stock issuance of private placements. 8.Issue the restricted employee equity new stock. 9.Approved the first adjustment of the fund application plan of private placements for the year of 2018.	Approved by all independent directors.	Approved by all director directors.
June 14, 2019	1. Through the case of issuing new shares through capital increase	Approved by all independent directors.	Approved by all director directors.
Aug 12, 2019	1. Implementation of the nuclear plan 2.The company's 2019 1H comprehensive financial statement. 3.Approved the joint establishment of a joint venture to invest in domestic solar power plants with other investors. 4.Approved the addition of the Endorsement or Guaranteed case of General Energy Solutions Usa, Inc. 5.Approved the continuing Endorsement or Guaranteed case of the subsidiary, Nsp System. 6.Adjust the limit of the Endorsement or Guaranteed case of the subsidiary, General Energy Solutions UK, Limited	Approved by all independent directors.	Approved by all director directors.
Nov 08, 2019	1.The company's 2019 3nd quarter comprehensive financial statement. 2. Implementation of the nuclear plan 3. The company adopted the establishment of 2019 audit plan, please approve.	Approved by all independent directors.	Approved by all director directors.
March 26, 2020	1. Implementation of the nuclear plan 2.The company approved the 2019 business report and financial statements 3.The company approved the 2019 appropriation of loss 4.Perfom the common stock issuance by capital increase or participate in the issuance of global depositary receipts by issuing common stock by capital increase. 5. Proposal for a capital increased by private placement. 6. The 2018"Validity Assessment of Internal Control System." 7.The company approved the continuous providing endorsement/guarantee for General Energy Solutions UK Limited.	Approved by all independent directors.	Approved by all director directors.

2.Except for the above-mentioned matters, other resolutions that have not been approved by the audit committee and approved by more than two-thirds of all directors do not apply.

3.Concerning the implementation of preventing interest of advantages and disadvantages, the independent directors shall state the name of the independent directors, the content of the proposal, the reasons for preventing interests, and the participation in the voting. The audit committee has no stake motion that needs to be prevented.

4.The communication between independent directors, internal audit supervisors, and accountants (shall include the important issues, methods, and results of communicating based on the company's financial and business conditions..):

(1)The manager of the internal audit of the company shall seasonally report the company's internal audit situation and the implementation of internal control to the independent director. The independent will provide professional opinion according to the report matters, and the company shall take into account their professional opinions. If any significant event occur, the meeting shall be convened immediately to report to the independent directors. The latest year of communications as of the date of the annual handbook has been printed are as follows:

Date	Communication Point	All independent directors' opinion
March 22, 2019	The implementation of the 2018 4th quarter audit plan	Approved
May 06, 2019	The implementation of the 2019 1st quarter audit plan	Approved
August 12, 2019	The implementation of the 2019 2nd quarter audit plan	Approved
November 8, 2019	The implementation of the 2019 3rd quarter audit plan	Approved
March 26, 2020	The implementation of the 2019 4th quarter audit plan	Approved

(2)The company's independent directors and accountants will report to and thoroughly communicate with the independent directors according to the seasonal audit report, the financial situation of the company, the comprehensive operations of the subsidiaries at home and abroad, whether ther are significant adjustments and entries, special transaction matters, and the impact on the company's finance by amending laws, etc. If any significant event occur, the meeting shall be convened immediately to report to the independent directors. The latest year of communications as of the date of the annual handbook has been printed are as follows:

Date	Communication Point	All independent directors' opinion
March 22, 2019	1. Explained according to the 2018 profit and loss, significant accounting issues and important matters that discussed by the managerial authority. 2. Discussed and communicated according to new audit report – explained the key matters of audit. 3. The accountants discussed and communicated the questions of the participants.	Approved
May 06, 2019	1. Explained according to the 2019 1st quarter profit and loss, significant accounting issues and important matters that discussed by the managerial authority. 2. The accountants	Approved

		discussed and communicated the questions of the participants.	
	August 12, 2019	1. Explained according to the 2019 1st half quarter profit and loss, significant accounting issues and important matters that discussed by the managerial authority. 2. The accountants discussed and communicated the questions of the participants.	Approved
	November 8, 2019	1 Explained according to the 2019 initial three quarters profit and loss, significant accounting issues and important matters that discussed by the managerial authority. 2. The accountants discussed and communicated the questions of the participants.	Approved
	March 26, 2020	1. Explained according to the 2019 profit and loss, significant accounting issues and important matters that discussed by the managerial authority. 2. The accountants discussed and communicated the questions of the participants.	Approved

Notes: The way of listingis the number of actual attendance / the number of attendances during the term.

3.3.3.Operation of Remuneration Committee

(1)Member Information：

Title	Condition / Name	If independent directors equip with over 5 years of working experience and below qualifications			Independence (Note1)										Concurrently serving in remuneration committee of other listed companies	Remark
		Owning qualification of national/private college instructor or above of commence, law, finance or corporal operation-related professions	Owning qualification of national/private college instructor or above of commence, law, finance or corporal operation-related professions	Owning qualification of national/private college instructor or above of commence, law, finance or corporal operation-related professions	1	2	3	4	5	6	7	8	9	10		
Independent Director	Weng, Ming-Jeng	—	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	3	—
Independent Director	Andrew C. Hsu	—	✓	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	1	—
Independent Director	Tsai,Ming-Fang	✓	—	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	2	—

Note 1: Check in blocks if matching below description in tenure or two years before the tenure.

(1)Not an employee of the company or any of its affiliates.

(2) Not a director or supervisor of the company or any of its associates. The same does not apply, however, in cases where the person is an independent director of the company concurrently, its parent company, or any subsidiary in which the company holds in accordance with the Act or local state laws.

(3)Not a natural-person shareholder who holds shares, together with those held by the person's spouse, minor children, or held by the person under any other's name, in an aggregate amount of 1 percent or more of the total number of issued shares of the company or ranking in the top 10 in shareholding.

(4)Not a manager mentioned in Notes1, a spouse, relative within the second degree of kinship, or lineal relative within the third degree of kinship, of any of the persons in the preceding Notes 2 and 3.

(5)Not a director, supervisor, or employee of a corporate shareholder that directly holds 5 percent or more of the total number of issued shares of the company, ranks in the top 5 in shareholding, or being designated according to Article 27, Section 1 or 2 of the Company Act. The same does not apply, however, in cases where the person is an independent director of the company concurrently, its parant company, or any subsidiaries established in accordance with the Act or local state laws.

(6)Not a director, supervisor, or employees of other companies who are not controlled by the same person as more than half of the shares or voting rights. The same does not apply, however, in cases where the person is an independent director of the company concurrently, its parant company, or any subsidiaries established in accordance with the Act or local state laws.

(7)Not a director, supervisors, or employee of other companies or organizations who are not the same person or spouse with the chairman, general manager, or equivalent of the company. The same does not apply, however, in cases where the person is an independent director of the company concurrently, its parant company, or any subsidiaries established in accordance with the Act or local state laws

(8)Not a director, supervisor, managerial officer, or shareholder holding 5 percent or more of the shares, of a specified company or institution that has a financial or business relationship with the company. The same does not apply, however, in cases where a particular company or institution holds more than 20% and less than 50% of the company 's total issued shares,, and the person is an independent director of the company concurrently, its parant company, or any subsidiaries established in accordance with the Act or local state laws.

(9)Not a professional individual who, or an owner, partner, director, supervisor, or managerial officer of a sole proprietorship, partnership, company, or institution that, provides audits or commercial, legal, financial, or accounting services in which the accumulated remuneration in the past two years did not exceed NTD 500,000, to the company or to any associate of the company, or a spouse thereof. The same does not apply, however, in cases where a person is a member of the Remuneration and Compensation Committee, Public Acquisition Audit Committee, or M&A Special Committee performing their duties under the relevant regulations of the Securities Exchange Act and the Business M&A.

(10)Not matching description in Article 30 of Company Act

(2)Remuneration Committee consists of 3 members, term of office: 20 November 2018 to 19 November 2021.

From 2019 to annual report printed date in 2020, Remuneration Committee holds 5 meetings, members attendance as follow:

Title	Name	Attendance in Person (B)	Attendance In Proxy	Attendance Rate in Person (%)	Remark
Committee member	Weng, Ming-Jeng	4/5	1	80.00%	—
Committee member	Andrew C. Hsu	4/5	1	80.00%	—
Committee member	Tsai,Ming-Fang	5/5	0	100.00%	—

Other mentionable items:

(1)If remuneration committee's suggestions are objected ir modified by BOD, BOD date, term, contents of motions, resolution and countermeasure of remuneration committee's statement (if remuneration resolved by BOD is better than that of remuneration committee, discrepancy and reason should be specified): NA

(2)If any member is against or reserves his/her opinion with record or paper statement regarding committee's resolution, remuneration committee's date, term, contents of motions, resolution and countermeasure of member's statement should be specified: NA

(3)Operation of the Remuneration Committee

Date	Communication Point	Resolution result	Company processes opinion express by Remuneration Committee
May 06, 2019	1.Explanation of remuneration of the new managerial officers	Approved by all Remuneration Committee.	Submit to Board of Directors, and consent by all the Directors present at meeting
Jun 14, 2019	1..Explanation of remuneration of the new managerial officers 2. 2019 manager salary adjustment instructions	Approved by all Remuneration Committee.	
August 12, 2019	1.Explanation of the recognizable number of shares of the managerial officers of the issuance new shares through capital increase by cash in 2019. 2.Explanation of remuneration of the new managerial officers.	Approved by all Remuneration Committee.	
November 8, 2019	1.The first issuance attribution plan of restricted employee equity new stock for the year of 2019 of the Company' managerial officers.	Approved by all Remuneration Committee.	
March 26,2020	1.Explanation of remuneration of the new managerial officers	Approved by all Remuneration Committee。	

3.3.4.Corporate Governance Implementation as Required by the Taiwan Financial Supervisory Commission：

Evaluation Item	Implementation Status 1			Deviations from "theCorporate Governance Best-Practice Principles for TWSE/TPEx Listed ompanies" and Reasons
	Yes	No	Summary Description	
1. Does the company establish and disclose the Corporate Governance Best-Practice Principles based on "Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies"?	✓		The Company has established the Corporate Governance Best-Practice Principles based on "Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies." The information has been disclosed on M.O.P.S. (http://mops.twse.com.tw/)	No significant deviation
2. Shareholding structure & shareholders' rights				No significant deviation
(1) Does the company establish an internal operating procedure to deal with shareholders' suggestions, doubts, disputes and litigations, and implement based on the procedure?	✓		(1)The company has established spokespersons and the specific personnel of spokespersons, and has an investor special line and an e-mail address to deal with shareholders' suggestions or disputes.	
(2) Does the company possess the list of its major shareholders as well as the ultimate owners of those shares?	✓		(2)The company has a dedicated staff member to manage relevant information and appoint a brokerage agent to assist in the handling of share-related matters, and physically control the company's major shareholders and the list of ultimate controllers of major shareholders, and maintain good relations with major shareholders.	
(3)Does the company establish and execute the risk management and firewall system within its conglomerate structure?	✓		(3)The Company was established in the internal significant information processing and prevention of internal trading operations procedures, and include the operating procedure into the company's internal control system.	
(4) Does the company establish internal rules against insiders trading with undisclosed information?	✓		(4)The company has set up internal significant information processing and prevention of internal trading procedures, prohibiting insiders from using market unpublished information to buy and sell securities.	
3. Composition and Responsibilities of the Board of Director				No significant deviation
(1) Does the Board develop and implement a diversified policy for the composition of its members?	✓		(1)The structure of the board of directors of the company, in terms of the scale of the company's business development and its shareholdings of major shareholders, weighing the need for substantive operations, determining the number of directors, and establishing appropriate diversification policies for the company's operations, operational style, and development needs. Currently, there are 11 members of the board of directors; among them, three of which are independent directors, and the proportion of independent directors accounts for 27%, and the seniority is less than nine years. The diversity policy of the board of directors of the Company and the implementation of diversity by individual board members have been disclosed on the Company's website. The implementation of diversification of the board members has been shown in attachment 1.	
(2)Does the company voluntarily establish other functional committees in addition to the Remuneration Committee and the Audit Committee?		✓	(2)The establishment of other various functional committees of the company is still under development.	
(3) Does the company establish the method as well as the mode of the performance assessment of the board of directors, regularly and annually assess the performance, and report the results of the performance assessment to the board of directors, and apply it to the reference of remuneration of individual directors and nomination renewal?	✓		(3)The company has established the performance assessment method of the board of directors on November 18, 2019. Since 2020, the board of directors and individual directors have been self-assessed or peer-reviewed regularly each year, and the results of the performance assessment will be reported.	
(4) Does the company establish internal rules against insiders trading with undisclosed information?	✓		(4)The accounting unit of the Company will assess the independence and suitability of certified accountants annually. The results of the performance assessment by the board of directors for the recent two years are completed on March 22, 2019, and March 26, 2020, respectively, and have been assessed that the certified accountants are not holding any direct or indirect primary financial interests of the Company, or has no business relationship that affects independence. Yi-Shin, Kao, and Yu-Feng Huang, the accountants of Deloitte Taiwan Accountants, comply with the assessment criteria of the Company for independence and	

Evaluation Item	Implementation Status 1			Deviations from “theCorporate Governance Best-Practice Principles for TWSE/TPEx Listed ompanies” and Reasons
	Yes	No	Summary Description	
			suitability, and they are qualified to be the certified accountant of the Company. (Note 1) Assessment of Accountants independence and suitability	

Title	Evaluation index	YES	NO
1	The CPA is currently employed by the client or audited entity to perform routine work for which he or she receives a fixed salary, or currently serves as a director or supervisor thereof.		✓
2	The CPA has previously served for the client or audited entity as a director, supervisor, managerial officer, or an employee with material influence over attestation, and has been separated from the position for less than two years.		✓
3	The CPA is a spouse, lineal relative, direct relative by marriage, or a collateral relative within the second degree of kinship of any responsible person or managerial officer of the client or audited entity.		✓
4	The CPA, or the spouse or a minor child thereof, has invested in the client or audited entity, or shares in financial gains therewith.		✓
5	The CPA, or the spouse or a minor child thereof, has lent or borrowed funds to or from the client or audited entity. However, this does not apply if the client is a financial institution and the borrowing or lending is part of a normal business relationship.		✓
6	The CPA provides management consulting or other non-attestation services that affect his or her independence.		✓
7	The CPA fails to comply with regulations, as prescribed by the competent authority with relevant jurisdiction, governing CPA rotation, handling accounting matters on behalf of clients, or other matters that affect his or her independence.		✓
8	Where any of subparagraphs 1, 2, 4, or 5 under paragraph 1 applies to a practicing CPA at a CPA firm, other practicing CPAs may not contract to perform attestation on financial reports, either.		✓
9	Where any of subparagraphs 4 through 6 under paragraph 1 applies to the relationship between an incorporated CPA firm and a client or an audited entity, its shareholders may not contract to perform attestation on financial reports.		✓
10	Permit others to practice under his or her name.		✓
11	Practice under the name of another CPA.		✓
12	Accept employment from a non-CPA to perform CPA services.		✓
13	Take advantage of one's position as a CPA to engage in improper industrial or commercial competition.		✓
14	Perform practice related to matters in connection with which one is an interested party.		✓
15	Use the title of CPA to act as a guarantor in matters beyond the scope of CPA services.		✓
16	Purchase real or personal property under his or her management as a CPA.		✓
17	Solicit, agree to accept, or accept unlawful benefit or compensation.rm.		✓

Evaluation Item	Yes	No	Implementation Status 1 Summary Description	Deviations from “theCorporate Governance Best-Practice Principles for TWSE/TPEx Listed ompanies” and Reasons
			18 | Solicit business by improper means. | | ✓ 19 | Advertise for promotional purposes not related to commencement of business, office relocation, merger, accepting client engagements, or introduction of the CPA firm. | | ✓ 20 | Disclose confidential information obtained in the performance of professiona l services without the permission of the appointing agency, client, or audited entity. | | ✓ 21 | Engage in other conduct that could tarnish the reputation of CPAs, as specified by the competent authority. Rules governing the content and scope of advertising related to the accepting of client engagements or introduction of the CPA firm, as referred to in subparagraph 10 of the preceding paragraph, shall be drafted by the national federation and filed with the competent authority for review and approval. The provisions of subparagraphs 7 through 12 of paragraph 1 apply mutatis mutandis in the case of an incorporated CPA firm. | | ✓	
4.Does the company establish operation unit o staff for corporate governance?	✓		The financial unit of the company is full-time responsible for corporate governance related units, providing the information required by directors to conduct business, handling matters related to meetings of the board of directors as well as shareholders’ meeting, handling companyregistration and change of registration, making board of directors and shareholders' meeting matters, etc.	No significant deviation
5.Does the company establish a communication channel and build a designated section on its website for stakeholders, as well as handle all the issues they care for in terms of corporate social responsibilities?	✓		The Company will communicate with interested parties regarding circumstances, the appointments include investor relations, the Department of Shareholders, business units, and human resources, and establish spokespersons and the contact information of relevant unit on the company's website. For relevant information, please refer to the company’ s website: https://www.urecorp.com/ 。	No significant deviation
6.Does the company appoint a professional shareholder service agency to deal with shareholder affairs?	✓		The company entrusted ChinaTrust Commercial Bank, Transfer Agency Departmenthandle the matters of the shareholders’ meeting.	No significant deviation
7.Information Disclosure (1)Establishment of a corporate website to disclose information regarding the Company’s financials, business and corporate governance status (2) Other information disclosure channels (e.g., maintaining an English website, designating people to handle information collection and disclosure, appointing spokespersons, webcasting investors conference etc.) ? (3) Does the Company announce and file the annual financial statements within two months after the end of the fiscal year, and declare and file the first, second, and third quarter financial statements and the monthly operating performance within the specified time?	✓ ✓ ✓		(1)The Company has established the website and disclosed the financial affair of the Company and corporate governance information in accordance with the regulaitions. (2)The company has established a Chinese/English official website and set up investor relations and corporate social responsibility zones. The relevant disclosed information includes: company financial information, press releases, corporate rules, shareholders' meetings or legal person briefings.For relevant information, please refer to the company’ s website: https://www.urecorp.com/ (3)The Company regularly announces and reports the First, second, and third quarter financial statements and the operation situation of each month. For relevant information, please refer to the Company’s website.	No significant deviation
8.Is there any other important information to facilitate a better understanding of the company’s corporate governance practices (e.g., including but not limited to employee rights,	✓		(1)The company regularly holds labor-management meetings under the laws, so that employees have the opportunity to understand the company's management policy, promote communication between labor and management, and prevent all kinds of employees from happening. Additionally, the	No significant deviation

Evaluation Item	Implementation Status 1			Deviations from "theCorporate Governance Best-Practice Principles for TWSE/TPEx Listed ompanies" and Reasons
	Yes	No	Summary Description	
employee wellness, investor relations, supplier relations, rights of stakeholders, directors' and supervisors' training records, the implementation of risk management policies and risk evaluation measures, the implementation of customer relations policies, and purchasing insurance for directors and supervisors)?			company will update the important information to all employees timely through the internal announcement platform and E-mail. (2)The Company has legally required to disclose company information honestly to protect the rights of investors and interested parties and to fulfill the responsibility of the company to shareholders. (3)The company has a smooth communication and good relationship with customers and suppliers. (4)The 2018 annual training of directors of the company is as follows:：	

Name	Organizer	Course	Length of Course
Hong, Chum-Sam	Taiwan Corporate Governance Association	The impact of the amendment of recent acts on the decision-making of the directors.	3
	Taiwan Corporate Governance Association	The analysis of the return overseas funds of Taiwanese investors under gloabl anti-tax avoidance	3
Lin, Kun-Si	Sercurities & Futures Institute	Operational practice of Remuneration Committee and Growth Strategy Committee	3
Pan,Wen-Whe	Sercurities & Futures Institute	Annual Conference for prevention of insider trading for the year of 2019	3
	Taiwan Stock Exchange	Conference for effective use of directors' functions	3
Lin,Wen-Yuan	Sercurities & Futures Institute	The analysis of workaround as well as pratical operation of the enterprise when facing the new amendment of the Company Act	3
	Sercurities & Futures Institute	Risk control of legal liability for false financial statements of directors and supervisors	3
Liu,Kong-Hsin	Sercurities & Futures Institute	Discussion of the international and domestic anti-tax avoidance development and the factors that the enterprise should have	3
	Sercurities & Futures Institute	Key technologies and application opportunities of 5G	3
Chiou, Yih-Peng	Sercurities & Futures Institute	The principle and application of blockchain	3
	Sercurities & Futures Institute	Practical workshop of directors and supervisors (including independent) and corporate governance execution	12
Chou, Chung-Pin	Sercurities & Futures Institute	Practical workshop of directors and supervisors (including independent directors)	12
Chiang, Wen-Hsing	Sercurities & Futures Institute	Practical workshop of corporate governance as well as management of (independent) directors and supervisors	12
Weng, Ming-Jeng	Sercurities & Futures Institute	How to use entrepreneurship and enthusiasm to explore corporate governance?	3
	Sercurities & Futures Institute	Notice of acquisition of foreign assets	3
Andrew C. Hsu	Sercurities & Futures	How do listed directors and supervisors execute their	3

Evaluation Item	Implementation Status 1			Deviations from “theCorporate Governance Best-Practice Principles for TWSE/TPEx Listed ompanies” and Reasons
	Yes	No	Summary Description	
				Institute	duties?	
	Sercurities & Futures Institute	Significant legal issues for the directors and supervisors of public offering companies	3
	Sercurities & Futures Institute	Discussing the legal risks and countermeasures of directors and supervisors from the major corporate malpractice	3
	Sercurities & Futures Institute	The impact of latest tax act adjustment on enterprise operation and its countermeasures	3
	Sercurities & Futures Institute	Case Study on fraud in Ccrporate financial statements	3
Tsai,Ming-Fang	Sercurities & Futures Institute	Discuss the responsibilities of directors and supervisors from the illegal cases in the securities market	3
	Taiwan Academy of Banking and Finance	Discuss the tax management rights of the intellectual property from corporate governance	3 | (5)The company's internal control, risk management system and necessary management rules, and regulations shall be resolved by the board of directors. (6)The company strictly abides by the contracts and related regulations signed with customers, and ensures the relevant rights and interests of customers and provides good service quality. (7)The company has purchased liability insurance for directors。	
9.Specify the improvement of corporate governance valuation results issued by the corporate governance center of TWSE and list the follow ups for the enhancement of items to be improved.。	✓		The company implemented the self-assessed report on corporate governance and has not found any major shortcomings so far.	No significant deviation

Note: Regardless of whether the evaluation item is achieved or not, the company shall state an appropriate explanation.

Attachment 1: The implementation of diversity of the members of the Board of directors

Diversified core projects / Name	Nationality	Company employees	age				Operational judgment	Capability of accounting and financial analysis	Capability of operation management	Capability of crisis management	Industry knowledge	Perspective in international market	leadership	Capability of decision-making	Legal knowledge
			Over 70 years old	60 ~ 69 years old	50 ~ 59 years old	Under 50									
Hong, Chum-Sam	Taiwan	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	
Lin, Kun-Si	Taiwan		✓				✓	✓	✓	✓	✓	✓	✓	✓	
Pan,Wen-Whe	Taiwan	✓		✓			✓	✓	✓	✓	✓	✓	✓	✓	
Lin,Wen-Yuan	Taiwan			✓			✓	✓	✓	✓	✓	✓	✓	✓	
Liu,Kong-Hsin	Taiwan		✓				✓	✓	✓	✓	✓	✓	✓	✓	
Chiou, Yih-Peng	Taiwan				✓		✓	✓	✓	✓	✓	✓	✓	✓	
Chou Chung-Pin	Taiwan				✓		✓	✓	✓	✓	✓	✓	✓	✓	
Chiang, Wen-Hsing	Taiwan				✓		✓	✓	✓	✓	✓	✓	✓	✓	
Weng, Ming-Jeng	Taiwan			✓			✓	✓	✓	✓	✓	✓	✓	✓	
Andrew C. Hsu	Taiwan				✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
Tsai, Ming-Fang	Taiwan					✓	✓	✓	✓	✓	✓	✓	✓	✓	

3.3.5.Status of Fulfilling Corporate Social Responsibility：

<table>
<tr><th rowspan="2">Evaluation Item</th><th colspan="3">Implementation Status 1</th><th rowspan="2">Deviations from “the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies” and Reasons</th></tr>
<tr><th>Yes</th><th>No</th><th>Abstract Explanation 2</th></tr>
<tr><td>1、Does the company conduct risk assessments on environmental, social, and corporate governance issues related to the company's operations under the principle of materiality, and establish relevant management policies or strategies of risks?</td><td>✓</td><td></td><td>The Company adheres to the six core concepts and significant principles of "integrity, green energy, environmental-friendly, technology, service, and innovation" to increase the proportion of renewable energy applications, saving energy, reducing carbon, and lower the impact of the greenhouse effect on the global climate. Simultaneously, the Company emphasizes the shareholders and the equity of the employees and has included the aforementioned items to the Company's management policy and operation strategy to achieve the goal of sustainable operation.</td><td>No significant deviation</td></tr>
<tr><td>2、Does the company establish a full-time (part-time) unit to promote corporate social responsibility handled by senior management that has been authorized by the board of directors, and report the results to the board of directors?</td><td>✓</td><td></td><td>The Company has established a corporate social responsibility committee and corporate social responsibility office to report the relevant promotion to senior management.</td><td>No significant deviation</td></tr>
<tr><td>3、 Environmental issues
(1) Does the company establish proper environmental management systems based on the characteristics of their industries?</td><td>✓</td><td></td><td>(1) The environmental protection, safety as well as public health, and health businesses of the Company are all managed by a specific unit. They comply with regulations, acquiring ISO 14001, OHSAS 18001, and TOSHMS management system certification, and establishes a company-wide safety committee to investigate and track the complete environmental safety and health strategies as well as proposals of the Company.</td><td rowspan="4">No significant deviation</td></tr>
<tr><td>(2) Does the company endeavor to utilize all resources more efficiently and use renewa</td><td>✓</td><td></td><td>(2) The Company aims to promote cleaner production, improving energy resource utilization, reducing the raw material consumption as well as waste generation per unit of product manufacturing, and achieving the goal of lowering production activities and product environmental impact.</td></tr>
<tr><td>(3) Does the company assess the potential risks and opportunities of climate change to the company at present and in the future, and take measures to deal with climate-related issues?</td><td>✓</td><td></td><td>(3) The solar energy and energy storage products of the Company have been developed due to the opportunities of climate change. The production sites are distributed in different regions of the country, and there are also configurations in other areas of Asia that have not yet been affected by climate change or the frequent transmission of extreme climate phenomena. The production activities are also managed based on the principles of green production, improving energy efficiency, energy-saving, and carbon reduction. The Company was born for the green-energy operation.</td></tr>
<tr><td>(4) Does the company monitor the impact of climate change on its operations and conduct greenhouse gas inspections, as well as establish company strategies for energy conservation and carbon reduction?</td><td>✓</td><td></td><td>(4) Greenhouse gas emissions in the past two years
<table>
<tr><td>Year</td><td>2018</td><td>2019</td></tr>
<tr><td>Category 1: Direct emmission</td><td>223</td><td>377</td></tr>
<tr><td>Category 2: Indirect emmission</td><td>77,050</td><td>90,811</td></tr>
<tr><td>Total emmissions</td><td>77,273</td><td>91,188</td></tr>
</table>
Notes 1: Emission unit: metric tons of CO_2e / year
Notes 2: According to No. 14064 declaration of the Environmental Protection Administration, Executive Yuan, switching to the Operation Control Act, its calculation is measured at version 3.0.0 of the Greenhouse Gas Inventory of the Environmental Protection Administration.
Energy saving: The Company continuously implements the plan of energy-saving improvement, compares the efficiency of energy use, finds the best operation mode, and parallelly expands to all plants. The cumulative energy savings from 2015 to 2019 was 17,138 kilowatts, which is 9,135 metric tons of CO_2 reduction.
Water saving: Optimizing the water consumption reduction of the machine based on the production capacity, designing the minimum water consumption mode, implementing wastewater recovery as well as system improvement. The cumulative total amount of recovered water in the past three years reached 1.54 million degrees.
Waste management: Implement manufacture on-site audits of waste removal, treatment, and reuse, and control the process and flow of waste treatment to ensure no risk. Currently, the recycling proportion of hazardous business waste is over 99%, and the recycling proportion of general business waste also achieves 80%.</td></tr>
</table>

Evaluation Item	Implementation Status 1			Deviations from "the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Explanation 2	
4、Social issues (1) Does the company formulate appropriate management policies and procedures according to relevant regulations and the International Bill of Human Rights? (2) Does the company establish and implement reasonable employee welfare measures (including compensation, vacation, and other benefits) and appropriately reflect the performance at work or results in employee compensation? (3) Does the company formulate appropriate management policies and procedures according to relevant regulations and the International Bill of Human Rights? (4) Does the company provide its employees with career development and training sessions? ? (5) Concerning the health and safety of the customer, customer privacy, marketing as well as labeling of products and services, does the company comply with the relevant regulations and international standards and established relevant consumer protection policies and appeal procedures? (6) Does the company set up policies of supplier management that require suppliers to comply with relevant regulations on environmental protection, occupational safety and health, or labor human rights and their implementation?	✓ ✓ ✓ ✓ ✓ ✓		(1) The Company sets up employment acts based on the International Covenant on Civil and Political Rights, ICESCR, ICCPR, and the Employment Services Act. The operation in all countries complies with all local acts and adheres to all the business transactions, business relationships, supply chain activities, employment recruitment are all in compliance with ethical standards and views integrity as the priority. (2) The Company has established a reasonable remuneration policy and set up performance assessment procedures to comply with the policy of corporate social responsibility. Additionally, the Company established a reward and punishment committee to ensure clear and effective rewards and punishment. (3) The Company aims at providing employees with a safe and healthy working environment. As for environmental safety, the Company develops emergency response capabilities and safety concepts of the employee through continuous education and training and enhances the cognitive ability of the employee to reduce the risk of an accident. In terms of health management, the Company offers employee health management services through diverse health promotion activities, results of health examination of the employee, specialist consultation services, and disease tracking management. (4) Concerning mental health, apart from establishing massage spaces, fitness centers, and diverse dynamic as well as static clubs, the Company also holds stress relief seminars and various employee care activities occasionally to help employees achieve the balance between work and life. To help employees develop their careers and strengthen their professional techniques, the Company encourages employees to take part in diversified education and training courses, including new-in training, general courses, professional courses, work safety courses, and various career-related training courses in order to cultivate the career development of the employees effectively. (5) The Company complies with the relevant regulations and international standards of customer health and safety, customer privacy, marketing and labeling of products and services. The Company designated a specific person and an e-mail mailbox to handle relevant issues related to the complaints of consumer rights of the Company, and deal with the complaints fairly and immediately. (6) The Company implements an audit procedure for waste disposal suppliers, conducts site inspection and operations audit at least once a year, and conducts occational safety observations on operations in the plant. Anything that does not comply with the act will be required to correct or terminate the contract immediately. Also, there is an assessment for the building contractor, which regulates their environmental protection, safety, and health.	No significant deviation
5、Does the company refer to the universal standards or guidelines to prepare corporate social responsibility reports and other reports that disclose the non-financial information of the Company? Did the pre-report acquire the confidence or assurance opinion of the verification unit of a third-party?	✓		The Corporate Social Responsibility Report for the Year of 2018 of the Company will be prepared under the new edition of the GRI Standard for the year of 2017, and a third-party verification unit will be commissioned to review the report based on the AA1000 standard. Relevant information that has been disclosed includes: The corporate social responsibility purpose of the United Renewable Energy Corporation, organization, promotion category, implemented items, physical results, and relevant newsletter, and the information will be kept updating in the future.	
6、Other important information to facilitate better understanding of the company's corporate social responsibility practices：： No deviations, for more details on Company's activities on CSR, please see our website: https://www.urecorp.com/social_trust.php.				
7. If the company's corporate social responsibility report has passed the verification criteria of the relevant certificated agency, it shall be stated： The company has established a corporate social responsibility zone on the company's official website, and the annual corporate social responsibility reports are uploaded to public information observatories.				

Notes 1: Regardless of whether the check box is "Yes" or "No", it shall be stated in the summary description field.

Notes 2: If the company has established a corporate social responsibility report, the abstract description shall be noted as an alternative to the CSR Report and the index page.

Notes 3:The principle of materiality refers to those who have significant environmental, social and corporate governance issues that have a significant impact on the company's investors and other stakeholders.

3.3.6.The operation in performing the ethical corporate management and the variation as well as reasons for the ethical corporate management of the listed company:

Evaluation Item	Implementation Status 1			Deviations from "the Ethical Corporate Management Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Illustration	
1、Establishment of ethical corporate management policies and programs (1) Does the company establish the policy of ethical corporate management approved by the board of directors, and clearly stated the policies, methods of ethical corporate management, and the promises of active implementation of operation policies by the board and senior management in the regulations and public documents? (2) Does the company establish an assessment mechanism for non-ethical risk, and regularly analyze and evaluates business activities contains high non-ethical risks within the business range, and set up a plan to avoid non-ethical behavior, and at least cover the preventive measures in the Article 7, section 2 of the "Ethical Corporate Management Best Practice for TWSE/GTSM Listed Companies"? (3) Does the company establish appropriate precautions against high-potential unethical conducts or listed activities stated in ? and regularly review aforementioned cases before revision?	✓ ✓ ✓		(1) Integrity is the company's business faith and corporate culture. To regulate the company's directors, managers, employees in the process of engaging in business conduct, may not directly or indirectly provide, pledge, demand or accept any illegitimate interests, or behave other dishonesty that violates integrity, illegality, or breach of fiduciary duty. (2) The company has established procedures for the prevention of dishonest behaviors. All employees shall sign employment contracts, confidentiality consent, and other documents after they are employed. They will also use the training of newcomers to promote the personal conduct and violations of the "Working Rules." (3) To prevent dishonesty, the company not only specifies the procedures for suppliers, procurement and acceptance management, but also sets up reward and punishment committees and rewards and penalties for reporting, to prevent bribery and bribery, and to provide illegal political contributions.	No significant deviation
2、Fulfill operations integrity policy (1) Does the company evaluate business partners' ethical records and include ethics-related clauses in business contracts? (2) Does the company establish a specific unit under the board of directors to promote the ethical corporate management of the enterprise, and regularly (at least once a year) report to the board of directors on its policy of ethical corporate management and plans to avoid non-ethical behaviors and implementation of supervision? (3) Does the company establish policies to prevent conflicts of interest and provide appropriate communication channels, and implement it? (4) Does the company establish an effective accounting system and internal control system to implement ethical corporate management, and propose relevant audit plans in accordance with the assessment result of non-ethical behavior risks by the internal audit unit, and audit the compliance with the case to prevent non-ethical behavior, or entrust an accountant to perform the audit? (5) Does the company regularly hold internal and external educational trainings on operational integrity?	✓ ✓ ✓ ✓ ✓		(1) The company requires the company's colleagues to assess whether the transaction counterparty has a record of dishonesty before conducting the transaction, to avoid transactions with those who have dishonest behavior records, and to find that the business dealings or cooperation counterparty have unethical behavior, they shall immediately stop business dealings and listing them as the refusal counterparty. (2) The Human Resources Department of the Company is responsible for promoting the integrity of the company and regularly reports to the directors on the system of integrity management, management policies, and specific promotion plans and implementation. (3) The company has established a policy to prevent conflicts of interest, provide an appropriate presentation pipeline, and has certainly implemented it. (4) The company has established an accounting system and internal control system, which the operation is normal. The internal auditors of the company regularly audit according to the audit plan and have implemented honest management to avoid fraud. (5) The company regularly holds internal education and training related to best practice and assigns relevant personnel to participate in external education and training.	No significant deviation
3、Operation of the integrity channel (1) Does the company establish both a reward/punishment system and an integrity hotline? Can the accused be reached by an appropriate person for follow-up? (2) Does the company establish the standard operating procedures for investigating complaints, the follow-up measures to be taken after the investigation completed, and the relevant confidentiality mechanism? (3) Does the company provide proper whistleblower protection?	✓ ✓ ✓		(1) The company has established a specific reporting and reward system, and established a convenient reporting pipeline, and assigned appropriate recipients to the respondents. (2) The company has established the investigation standard operating procedures and related confidentiality mechanisms for accepting the report, the employees have to pass the factory entity's mailbox, and the Dr.H e-mail response problem, and additionally established a dedicated phone line to answer, providing multiple channels for employee complaints. (3) The company regulates the measures of the prosecutors to avoid the occurrence of the same incident or retaliation.。	No significant deviation
4、Strengthening information disclosure Does the company disclose its ethical corporate management policies and the results of	✓		The Company has disclosed the contents of the Company's Best Practice Principle	No significant deviation

Evaluation Item	Implementation Status 1			Deviations from "the Ethical Corporate Management Best-Practice Principles for TWSE/TPEx Listed Companies" and Reasons
	Yes	No	Abstract Illustration	
its implementation on the company's website and MOPS?			of Integrity and its effectiveness on the Company's website and the Public Information Observatory.	
5、If the company has conducted its best practice principle in accordance with "Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies,"： No Deviations				
6、Other important information that helps to understand the company's integrity management operations (If the company reviews and amends its establishment of best practice principle, etc.): The company operates in a stable and pragmatic spirit, and has established a spokesperson, acting spokesman and investor relations department, responsible for maintaining relationships with the public and investors and establishing a good image of the company. The company has no recent changes in corporate image and caused crisis management.				

3.3.7.If the company has established the procedures of corporate governance or relevant articles, the inquiry way shall be disclosed: The company's website: https://www.urecorp.com/ or inquire on public information observation website.

3.3.8.Other important information that is sufficient to increase the understanding of the operation of corporate governance, shall be disclosed wholly: None.

3.3.9.Internal Control System Execution Status

1. Statement of Internal Control System

United Renewable Energy Co., Ltd.

Statement of Internal Control System

Date: March 26, 2020

Based on the findings of a self-assessment, United Renewable Energy Co., Ltd.. (URE) states the following with regard to its internal control system in 2019：

1、URE is fully aware that establishing, operating, and maintaining an internal control system are the responsibility of its Board of Directors and management. URE has established such a system aimed at providing reasonable assurance regarding the achievement of objectives in the following categories: (1) effectiveness and efficiency of operations (including profitability, performance, and safeguarding of assets), (2) reliability of financial reporting, and (3) compliance with applicable laws and regulations.

2、An internal control system has inherent limitations. No matter how perfectly designed, an effective internal control system can provide only reasonable assurance of accomplishing the three objectives mentioned above. Moreover, the effectiveness of an internal control system may be subject to changes of environment or circumstances. Nevertheless, the internal control system of URE contains self-monitoring mechanisms, and URE takes corrective actions whenever a deficiency is identified.

3、URE evaluates the design and operating effectiveness of its internal control system based on the criteria provided in the Regulations Governing the Establishment of Internal Control Systems by Public Companies (herein below, the “Regulations”). The criteria adopted by the Regulations identify five components of internal control based on the process of management control: (1) control environment, (2) risk assessment and response, (3) control activities, (4) information and communication, and (5) monitoring. Each component further contains several items. Please refer to the Regulations for details.

4、URE has evaluated the design and operating effectiveness of its internal control system according to the aforesaid criteria.

5、Based on the findings of the evaluation mentioned in the preceding paragraph, URE believes that, during the year 2019 its internal control system (including its supervision and management of subsidiaries), as well as its internal controls to monitor the achievement of its objectives concerning operational effectiveness and efficiency, reliability of financial reporting, and compliance with applicable laws and regulations, were effective in design and operation, and reasonably assured the achievement of the above-stated objectives.

6、This Statement will be an integral part of URE Annual Report for the year 2019 and Prospectus, and will be made public. Any falsehood, concealment, or other illegality in the content made public will entail legal liability under Articles 20, 32, 171, and 174 of the Securities and Exchange Law.

7、This Statement has been passed by the Board of Directors in their meeting held on March 26 , 2020, with zero of the 11 attending directors expressing dissenting opinions, and the remainder all affirming the content of this Statement.

United Renewable Energy Co., Ltd.

Chairman：Hong, Chum-Sam

CEO：Pan,Wen-Whe

2.Disclose the review report of independent auditors if they are retained for reviewing the internal control system: Not applicable

3.3.10.Punishment on the Company and its Staff in Violation of Law, or Punishment on its Employees in Violation of Internal Control System and Other Internal Regulations, Major Shortcomings and Status of Correction: None.

3.3.11.As of the date of this Annual Report, the following resolutions are adopted regarding annual shareholders' meeting and Board of Directors Meeting：

1. Annual Shareholders' Meeting：

Conven Date	Important Resolution	Implementation
June 17, 2019 Annual Shareholders' Meeting	1.The company recognized the 2018 business report and financial statements	Announced at Public Information Observatory website in accordance with regulations
	2.The company recognized the proposal of 2018 loss make-up	Admitted accordingly after the resolution of the shareholders' meeting
	3.The company approved the Amendment to the "Articles of Incorporation	Implement in accordance with the articles of the new amendment
	4.The company approved the Amendment to the "Acquisition or disposal of Assets Procedure"	Implement in accordance with the articles of the new amendment
	5.The company approved the amendment of the provisions of the "Principles and Regulations of Governing the Endorsement/Guarantee" of the company	Implement in accordance with the articles of the new amendment
	6.The company approved the Amendment to the "Procedures for Lending Funds to other Parties"	Implement in accordance with the articles of the new amendment
	7.URE plans to increase capital by issuing common stock or by issuing underlying common stock for Global Depositary Receipts (GDR) offering	Fundraising was completed at the end of 2019
	8.The Company plans to issue common shares in private	The case will not be processed
	9.It is proposed to issue Restricted Stock Awards (RSAs) to employee	The first issuance will be perfomed in 2019 after the resolution of the shareholders' meeting

2. Board of Directors Meeting：

Conven Date	Important Resolution
February 22, 2019	1.Implementation of the nuclear plan 2.The company adopted the change of Hukou branch managerial officer and the relocation of the office 3.The company approved the proposal of absorption and merger of the company's subsidiary that held 100% of the shares of the company, which is GES 4.Increasing bank financing quota
March 22, 2019	1.Implementation of the nuclear plan 2.The 2018 Q4 Proposal for a complete operational plan Report 3.Evaluation report on the independence and suitability of visa accountants 4.The company approved the 2018 business report and financial statements 5.The company approved the 2018 appropriation of loss 6.The 2019 Proposal for a complete operational plan 7.The company approved the 2019 bank financing quota 8.Set RSA capital reduction base date 9.The 2018"Validity Assessment of Internal Control System." 10.The company adopted the capital increase by cash of US$ 10,000,000 with Clean Focus Renewables Inc, the subsidiary that indirectly held 100% of shares of the company 11.The company adopted the providing of endorsement/guarantee for nsp system nevada holding, the subsidiary that indirectly held 100% of shares of the company 12 The company approved the continuous providing endorsement/guarantee for GES 's subsidiary, General Energy Solutions UK Limited 13.The company adopted the endorsement/gua rantee of concession and merger other companies
May 6, 2019	1.The company's 2019 1nd quarter comprehensive financial statement 2.Implementation of the nuclear plan 3.The 2019 Q1 Proposal for a complete operational plan Report

Conven Date	Important Resolution
	4.Amendment to the “Articles of Incorporation” 5.Amend articles of the “Procedure for Acquisition or Disposal of Assets” of the Company 6.Amend articles of the “Endorsement and Guaranteed Management Method” of the Company 7.Amend articles of the “Procedure for Loaning Funds to Others” of the Company 8.Perfom the common stock issuance by capital increase or participate in the issuance of global depositary receipts by issuing common stock by capital increase 9.Perform the common stock issuance of private placements 10.Issue the restricted employee equity new stock 11.Approved the first adjustment of the fund application plan of private placements for the year of 2018 12.Set RSA capital reduction base date 13.Personnel Appointment of Corporate Governance Officer 14.Explanation of remuneration of the new Independent Director officers 15.Explanation of remuneration of the new managerial officers
June 14, 2019	1.Implementation of the nuclear plan 2.pproves capital raising plan through issuance of common shares 3.Set the listed company shall establish a standard operational protocol for responding to requests from directors 4.Increasing bank financing quota 5.Explanation of remuneration of the new managerial officers 6.manager salary adjustment instructions
August 12, 2019	1.The company’s 2019 2nd quarter comprehensive financial statement 2.Implementation of the nuclear plan 3.The 2019 Q2 Proposal for a complete operational plan Report 4.Approved the joint establishment of a joint venture to invest in domestic solar power plants with other investors 5.Approved the addition of the Endorsement or Guaranteed case of General Energy Solutions UAS, Inc 6.Approved the continuing Endorsement or Guaranteed case of the subsidiary, Nsp System 7.Adjust the limit of the Endorsement or Guaranteed case of the subsidiary, General Energy Solutions UK, Limited 8.Set RSA capital reduction base date 9.Explanation of the recognizable number of shares of the managerial officers of the issuance new shares through capital increase by cash in 2019 10.manager salary adjustment instructions
November 08, 2019	1.The company’s 2019 3nd quarter comprehensive financial statement 2.Implementation of the nuclear plan 3.The 2019 Q3 Proposal for a complete operational plan Report 4.The company adopted the establishment of 2020 audit plan 5.Set RSA capital reduction base date 6.Set the board performance evaluation shall be conducted Method 7.Increasing bank financing quota 8.approved the the first time It is proposed to issue Restricted Stock Awards (RSAs) to employee
March 26, 2020	1.Implementation of the nuclear plan 2.The 2019 Q4 Proposal for a complete operational plan Report 3.Evaluation report on the independence and suitability of visa accountants 4.The company approved the 2019 business report and financial statements 5.The company approved the 2019 appropriation of loss 6.Abandon the private placement of common shares approved at the 2019 Annual Shareholders’Meeting for the remaining period 7.Amendment to the Articles of Incorporation 8.Perfom the common stock issuance by capital increase or participate in the issuance of global depositary receipts by issuing common stock by capital increase 9. Proposal for a capital increased by private placement 10.The 2020 Proposal for a complete operational plan 11.The company approved the 2020 bank financing quota 12.Set RSA capital reduction base date 13. The 2018“Validity Assessment of Internal Control System.” 14.The company approved the continuous providing endorsement/guarantee for General Energy Solutions UK Limited 15.Manager salary adjustment instructions

3.3.12.As Of The Date Of This Annual Report, A Director Or A Supervisor Has Expressed Disagreement To A Resolution Passed By The Board Of Directors And Kept Document Or A Written Statement: None.

3.3.13.As Of The Date Of This Annual Report, Resignation Or Dismissal Of Personnel Responsible For Financial Report (Including Chairman, President, Accounting And Company Secretary And Audit Managers):

Title	Name	Date of Appointment	Date of Termination	Reasons for Resignation or Dismissal
Internal audit officer	Derek.Huang	October ,17 2011	February,14 2020	Job transfer
Research and development officer	Huang,Guei-Wu	February,01 2009	January,10 2019	Retirement

3.4.Information Regarding Audit Fees：

3.4.1.Audit Fees

Accounting Firm	Name of CPA		Audit PeriodCPA's Audit	Note
Deloitte & Touche	Yi-Hsin Kao	Yu-Feng Huang	2019.01~2019.12	N/A

Unit: In thousand of NT$

Accounting Firm	Name of CPA	Audit Fee	Non-audit Fee					Period Covered by CPA's Audit	Remarks
			System of Design	Company Registration	Human Resource	Others	Subtotal		
Deloitte & Touche	Yi-Hsin Kao Yu-Feng Huang.	12,344	—	100	—	274	374	2019/01~2019/12	—

3.4.2.Non-Audit Fee Paid to Auditors and the Accounting Firm Accounted for More Than One-Fourth of Total Audit Fee Shall Disclose the Amount and The Service Item: None.

3.4.3.When the Company Changes Its Accounting Firm and the Audit Fees Paid for the Fiscal Year in Which Such Change Took Place Are Lower Than Those for the Previous Year, The Reduction in the Amount of Audit Fees, Reduction Percentage, and Reason(S) Therefore Shall Be Disclosed: None.

3.4.4.When the Audit Fees Paid for the Current Year Are Lower Than Those for the Previous Fiscal Year by 15 Percent Or More, the Reduction in the Amount of Audit Fees, Reduction Percentage, and Reason(S) Therefore Shall Be Disclosed: None.

3.5.Replacement of CPA：None.

3.6.The Chairman, President, Finance or Accounting Manager Who Has Worked in the Accounting Firm or Affiliates in the Most Recent Year, the Name, Position and the Service Period Shall Be Disclosed: None.

3.7.Changes in Shareholding of Directors, Supervisors, Managers and Major Shareholders in Last Year and as of the Date of this Annual Report：

3.7.1.Net Change in Shareholding and Net Change in Shares Pledged by Directors, Management and Shareholders with 10% Shareholding or More：

Unit: Shares

Title	Name	2019		As of Apr. 24, 2020	
		Holding Increase (Decrease)	Pledged Holding Increase (Decrease)	Holding Increase (Decrease)	Pledged Holding Increase (Decrease)
Chairman & CSO	Hong, Chum-Sam	1,096,000	—	—	—
Director&CEO	Pan,Wen-Whe	280,722	—	(140,000)	—
Director	Lin, Kun-Si	303,424	—	—	—
Director	Lin,Wen-Yuan	—	—	—	—

Title	Name	2019		As of Apr. 24, 2020	
		Holding Increase (Decrease)	Pledged Holding Increase (Decrease)	Holding Increase (Decrease)	Pledged Holding Increase (Decrease)
Director	Chiang, Wen-Hsing	–	–	–	–
Director	Long deed corporation	223,540	–	–	–
	Delegate: Liu,Kong-Hsin	–	–	–	–
Director	National Development Fund, Executive Yuan	7,973,449	–	–	–
	Delegate: Chiou Yih-Peng	–	–	–	–
Director	Yaohua Glass Co., Ltd. Management Committee	–	–	–	–
	Delegate: Chou Chung-Pin	–	–	–	–
Independent Director	Ming-Jeng, Weng	–	–	–	–
Independent Director	Andrew C. Hsu	–	–	–	–
Independent Director	Tsai,Ming-Fang	–	–	–	–
Business President	Andy Shen	425,458	–	–	–
Business President	Tseng ,Sheng-Cheng	67,000	(714,870)	–	–
Senior Vice President	Thomas HSU	–	–	–	–
Vice President	Pan,lay-lay	41,700	–	–	–
Vice President	Simon Li	38,000	–	–	–
Vice President	Zabrina.Hsu	98,481	–	–	–
Vice President	Jack Chen	–	–	–	–
Senior Vice President	Marco Hu	23,500	–	–	–
Vice President	Jorge Tseng	(10,000)	–	44,011	–
Senior Vice President	Stone.Liu	48,650	–	–	–
Vice President	Ben.Pan	41,700	–	–	–
Vice President	Ms.Yen	(18,250)	–	–	–
Assistant Vice President	Kt.Ou	24,325	–	–	–
Assistant Vice President	Chienping.Hsieh	67,987	–	–	–
Assistant Vice President	Adam.Hsu	232,148	–	(90,000)	–
Assistant Vice President	Hf.Hsieh	–	–	–	–
Assistant Vice President	Rita Yang	–	–	–	–

3.7.2.Shares Trading with Related Parties: None

3.7.3.Shares Pledge with Related Parties: None

3.8.Relationship Information of the Top 10 Shareholders among Who are Related Parties, as Defined in the Statement of Financial Accounting Standard NO.6.：

Date: April 24, 2020

Name	Shareholding		Shareholding under spouse or underage children		Shareholding under other		Top 10 shareholders among who are related parties		Note
	Share	%	Share	%	Share	%	Name	relation	
National Development Fund under the Executive Yuan	175,119,300	6.57%	—	—	—	—	—	—	—
Yaohua Glass Co., Ltd. Management Committee	167,145,851	6.27%	—	—	—	—	—	—	—
Delta Electronics, Inc	91,794,851	3.44%	—	—	—	—	—	—	—
JP Morgan Managed Advanced Stars advanced aggregate International Equity Index	33,865,363	1.27%	—	—	—	—	—	—	—
JPMorgan Chase The Norwegian Central Bank Investment Dedicated Account	32,123,523	1.12%	—	—	—	—	—	—	—
Shen ching hsiung	31,550,680	1.18%	—	—	—	—	—	—	—
Vanguard Emerging Market Stock Index Fund Dedicated Account,managed by Vanguard Group, under custody of JP Morgan, Taipei Branch.	28,714,470	1.08%	—	—	—	—	—	—	—
CITI BANK TRUST ACCOUNT(DFA Emerging Markets Core Securities Investment Account)	23,992,313	0.09%	—	—	—	—	—	—	—
Credit Suisse TRUST ACCOUNT(iShares Emerging Markets ETF)	20,082,388	0.75%	—	—	—	—	—	—	—
CITI Bank of Taiwan Managed Secondary Emerging Markets Evaluation Fund account	17,496,072	0.66%	—	—	—	—	—	—	—

3.9.Total Numbers and Equity of Shares Held In any Single Enterprise by the Company, Directors, Supervisors, Managers and Any Companies Controlled Either Directly or Indirectly by the Company：

Date：2019/12/31；Unit:in thousands of shares; %

Reinvestment	Investment by URE		Investments directly or indirectly controlled by directors, supervisors and managers		Total investment	
	Share	%	Share	%	Share	%
Ultimate Energy Solution Limited	61,930	100.00	0	0.00	61,930	100.00
DelSolar Holding（Cayman）Ltd.	155,126	100.00	0	0.00	155,126	100.00
NSP Systems (BVI) Ltd.	45,001	100.00	0	0.00	45,001	100.00
GES Energy Middle East FZE	4	100.00	0	0.00	4	100.00
Apex solar corporation	50,500	100.00	0	0.00	50,500	100.00
NSP UK Holding Limited	3,580	100.00	0	0.00	3,580	100.00
NSP System Development Corp.	14,420	100.00	0	0.00	14,420	100.00
Prime Energy Corp	9,000	100.00	0	0.00	9,000	100.00
New Ray Investment Corp	11,500	100.00	0	0.00	11,500	100.00
Zhong Yang Corp.	3,500	100.00	0	0.00	3,500	100.00
Huiyang Solar Corporation	3,100	100.00	0	0.00	3,100	100.00
UREE Corp	2,000	100.00	0	0.00	2,000	100.00
DelSolar Holding Singapore Pte. Ltd.	1,250	100.00	0	0.00	1,250	100.00
Best Power Service Corp	600	60.00	0	0.00	600	60.00
Solartech Materials Corporation	1,000	100.00	0	0.00	1,000	100.00
Utech solar corporation	39,324	99.49	0	0.00	39,324	99.49
Yong Liang Inc.	24,900	100.00	0	0.00	24,900	100.00
Yong Shun Ltd.	200	100.00	0	0.00	200	100.00
JRC	75	100.00	0	0.00	75	100.00
Genera Energy Solutions UK	103,890	100.00	0	0.00	103,890	100.00
Neo Cathy Power Corp.	60,000	40.00	0	0.00	60,000	40.00
TSST	97,701	42.12	0	0.00	97,701	42.12
Chairman, V5 Technologies	7,789	41.43	2,001	10.65	9,790	52.08

Reinvestment	Investment by URE		Investments directly or indirectly controlled by directors, supervisors and managers		Total investment	
	Share	%	Share	%	Share	%
Gintung energy corporation	13,460	36.38	0	0.00	13,460	36.38
DS Energy Technology Co., Ltd	1,050	35.00	0	0.00	1,050	35.00
Solar PV	30,500	19.92	0	0.00	30,500	19.92
Daxiangying Energy Co., Ltd.	10	100.00	0	0.00	10	100.00
Xinkai Energy Co., Ltd.	10	100.00	0	0.00	10	100.00
Shanshang Energy Co., Ltd.	10	100.00	0	0.00	10	100.00
Jiangong Energy Co., Ltd.	10	100.00	0	0.00	10	100.00
Dongshi Energy Co., Ltd.	10	100.00	0	0.00	10	100.00
Yanshan Energy Co., Ltd.	10	100.00	0	0.00	10	100.00

IV. Capital Overview

4.1.Capital and Shares

4.1.1.Source of Capital：

Unit: in thousand of NT$；Shares

Month / Year	Price	Authorized		Authorized		Authorized		
		Shares	Amount	Shares	Amount	Source of capital	Capital increased by assets other that cash	Other
2019/05	10	3,200,000,000	32,000,000,000	2,515,801,612	25,158,016,120	Cancellation of new shares from restricted stock awards NT$16,486 thousands.	None	Note 1
2019/06	10	3,200,000,000	32,000,000,000	2,515,349,532	25,153,495,320	Cancellation of new shares from restricted stock awards NT$4,520 thousands.	None	Note 2
2019/09	10	3,200,000,000	32,000,000,000	2,514,279,132	25,142,791,320	Cancellation of new shares from restricted stock awards NT$10,700 thousands.	None	Note 3
2019/12	10	3,200,000,000	32,000,000,000	2,515,577,382	25,155,773,820	Cancellation of new shares from restricted stock awards NT$22,050 thousands. Cancellation of new shares from restricted stock awards NT$9,067 thousands.	None	Note 4
2020/01	102	3,200,000,000	32,000,000,000	2,665,577,382	26,655,773,820	Capital raising through issuance of common shares NT$1,500,000 thousands.	None	Note5
2020/04	10	3,200,000,000	32,000,000,000	2,665,337,532	26,653,375,320	Cancellation of new shares from restricted stock awards NT$2,398 thousands.	None	Note6

Note1：The 15 May 2019 Letter No. Science-Park-Listed-Company －1080013321 of Science Park Administration
Note2：The 19 June 2019 Letter No. Science-Park-Listed-Company －1080017022 of Science Park Administration
Note3：The 19 Sep 2019 Letter No. Science-Park-Listed-Company －1080027097 of Science Park Administration
Note4：The 02 Dec 2019 Letter No. Science-Park-Listed-Company －1080034359 of Science Park Administration
Note5：The 14 Jan 2020 Letter No. Science-Park-Listed-Company －1090000958 of Science Park Administration
Note6：The17 Apr 2020 Letter No. Science-Park-Listed-Company －1090010355 of Science Park Administration

4.1.2.Type of Stock

Date: April 24, 2020

Type of Stock	Authorized Capital			Remark
	Outstanding Shares	Unissued Shares	Total Shares	
Common Stock	2,665,337,532	534,662,468	3,200,000,000	Listed Stock

4.1.3.Shareholder Structure

Date: April 24, 2020

Structure	Government Agencies	Financial Institutions	Other Juridical Persons	Foreign Institution & Persons	Individuals	treasury stocks	Total
Number	2	13	429	196	152,856	1	153,497
Ownership (Share)	175,119,980	18,849,565	415,906,679	256,069,673	1,799,166,735	224,900	2,665,337,532
Ownership (%)	6.57%	0.71%	15.60%	9.61%	67.50%	0.01%	100.00%

4.1.4.Diffusion of Ownership

Date: April 24, 2020

Shareholder Ownership (Unit: Share)	Number of Shareholders	Ownership (Share)	Ownership (%)
1-999	41,957	6,655,325	0.25%
1,000-5,000	62,900	151,901,615	5.70%
5,001-10,000	19,512	147,303,573	5.53%
10,001-15,000	8,745	109,279,425	4.10%
15,001-20,000	4,925	88,745,548	3.33%
20,001-30,000	5,262	130,814,829	4.91%
30,001-40,000	2,564	89,588,938	3.36%
40,001-50,000	1,732	78,797,862	2.96%
50,001-100,000	3,191	223,935,963	8.40%
100,001-200,000	1,533	212,835,605	7.98%
200,001-400,000	711	195,870,314	7.35%
400,001-600,000	177	82,369,144	3.09%
600,001-800,000	64	43,209,868	1.62%
800,001-1,000,000	60	53,964,024	2.02%
1,000,001 the above	160	1,050,065,499	39.40%
Total	153,497	2,665,337,532	100.00%

4.1.5.Major Shareholders

Date: April 24, 2020

Major Shareholders	Ownership (Share)	Ownership (%)
National Development Fund under the Executive Yuan	175,119,300	6.57%
Yaohua Glass Co., Ltd. Management Committee	167,145,851	6.27%
Delta Electronics, Inc	91,794,851	3.44%
JP Morgan Managed Advanced Stars advanced aggregate International Equity Index	33,865,363	1.27%
JPMorgan Chase The Norwegian Central Bank Investment Dedicated Account	32,123,523	1.12%
Shen ching hsiung	31,550,680	1.18%
Vanguard Emerging Market Stock Index Fund Dedicated Account,managed by Vanguard Group, under custody of JP Morgan, Taipei Branch.	28,714,470	1.08%
CITI BANK TRUST ACCOUNT(DFA Emerging Markets Core Securities Investment Account)	23,992,313	0.09%
Credit Suisse TRUST ACCOUNT(iShares Emerging Markets ETF)Securities Investment Account)	20,082,388	0.75%
CITI Bank of Taiwan Managed Secondary Emerging Markets Evaluation Fund account ETF)	17,496,072	0.66%

4.1.6.Market Price, Net Worth, Earnings, Dividends per Share for the Recent Two Years：

Unit: New Taiwan dollars；Unless stated otherwise

Item \ Year			2018	2019	2020/1/1~3/31
Market Price per Share	Highest		14.7	11.5	7
	Lowest		6.49	6.96	4.2
	Average		10.66	8.79	5.42
Net Worth per Share	Before Distribution		9.90	7.78	7.44
	After Distribution		9.90	7.78	–
Earnings per Share	Weighted Average Shares (thousands)		2,515,759	2,665,338	2,665,113
	Earnings per Share	Before adjustment	(0.34)	(2.26)	(0.26)
		After adjustment	–	–	–
Dividends per Share	Cash Dividends		–	–	–
	Stock Dividend	Retained Earning	–	–	–
		Capital Surplus	–	–	–
	Accumulated undistributed dividends		–	–	–
Return on Investment	Price/Earnings Rate		–	–	–
	Price/Dividend Rate		–	–	–
	Cash dividend Yield		–	–	–

4.1.7.The implementation and policies of the company's stock dividend distribution.

1.Dividend distribution policy established by the article:

The Company shall, after retaining the amount of accumulated deficit cover, deduct the profit before appropriating remuneration of employees and directors from the current profit before tax. If there is still a surplus, the remuneration of employees shall be no less than 3%, and the remuneration of directors shall not exceed 2%. Actual value of appropriation shall be made by the Board of Directors with more than two-thirds of the directors' attendance and the resolution by more than half of the directors.

Targets of the employees' remuneration issuance shall include the employees who are eligible to the control of certain conditions or the subsidiary employees. The Board of Directors or its authorized person are authorized to set the relevant conditions and procedures.

Whether the employees' remuneration should be in stock or cash shall be made by the Board of Directors with more than two-thirds of the directors' attendance and the resolution by more than half of the Directors and reported to the shareholders' meeting.

If the Company has surplus earnings after settlement of each fiscal year, the company shall, after all taxes have been paid and its accumulated losses have been covered, first set aside 10% of such earnings as a legally required reserve and then set a certain amount by law as special reserve at the time of earnings distribution. When the legal reserve reaches the total amount of paid-in capital, it shall not be appropriated, If earnings still left after the arrangements above, with cumulative unappropriated retained earnings, the Board of Directors shall propose to distribute the proposal. When issuing new shares, it should be first submitted to the shareholders' meeting for resolution and then distributed.

In accordance with the provisions of the Company Act, the Company authorizes more than two-thirds of the directors from the Board of Directors to attend, and the resolution by more than half of the directors. All or a part of dividends and bonuses or the legal reserve and additional paid-in capital stipulated by Paragraph 1 of Article 241 of the Company Act shall be distributed in cash and reported to the shareholders' meeting.

The shareholders' bonus is based on the principle of matching stock dividends and cash dividends, and the distributed cash dividends are not be less than 10% of the total bonus of shareholders.

2.Proposed dividend distribution of shareholders' meeting: None.

3.Expected dividend policy major changes: none.

4.1.8.Employee Bonus and Directors' and Supervisors' Remuneration：

1.The scope or portion of the employee, directors and supervisors' remuneration recorded by the Articles of Incorporation:

Based on the needs of the company's operations and the maximization of shareholders' equity, the Company shall deduct the amount of accumulated loss from the retention of employees' compensation and the pre-remuneration benefits of the pre-tax profit for the current year. If there is still earnings remain, the employee shall be paid no less than 3%, and the director's remuneration shall not exceed 2%. The actual amount of the provision shall be determined by the board of directors with more than two-thirds of the directors present and more than half of the directors agree.

Employees' remuneration shall include employees of subordinate companies that meet certain conditions, and the relevant conditions and methods shall authorize the board of directors or their authorized personnel to establish.

The employee's remuneration is issued by stocks or cash, and shall be reported by the board of directors with more than two-thirds of the director's attendance and a majority of the directors' consent.

2.The accounting treatment if the actual distribution amount differs from the estimated number of columns, the Calculated based on the number of shares of employees paid by stocks, and the Estimated basis for the compensation for employees, directors and supervisors in this period:

The employees, directors, and remuneration of the company are based on the pre-tax profit of the current year, after deducting the employee's remuneration and the remuneration of the directors, after retaining the accumulated loss. If there is still earnings remain, it shall be estimated according to a specific ratio. After the end of the year, if there is a significant change in the amount of the resolution issued by the board of directors, the change will be adjusted to the original annual fee. At the date of the resolution of the shareholders' meeting, if the amount still changes, it shall be treated in accordance with the accounting estimates and adjusted in the resolution of the shareholders' meeting. If the resolution adopts stocks to issue employee compensation, the number of stock dividends is determined by dividing the amount of the resolution by the fair value of the stock. The fair value of the stock refers to the closing price of the day before the resolution date of the shareholders' meeting and considers the impact of the ex-dividend as the basis for calculation.

3.The distribution of employees and directors' compensation that has been approved by the board of directors, but have not been resolved by the shareholder's meeting: Not applicable.

4.The actual distribution of employees and directors' compensation in the previous year (2018): Not applicable.

4.1.9.Repurchase of Company Shares: NA

4.2.Implementation of corporate bond, special stock, Overseas depositary receipts, employee stock option certificates and mergers or acquisitions of new shares of his company shares：NA

4.3.Status of Preferred Stocks：NA

4.4.Status of GDR Issuance：NA

4.5.Status of Employee Stock Options：NA

4.6 Status of New Shares Issuance of Restricted Stocks for Employees:

4.6.1.Issuance of Employee Stock Options

Type of the Restricted Stock Award	The 6rd Employee's Restricted Stock Awards	The 3rd Employee's Restricted Stock Awards (Former name：Solartech Energy Corp)
Effective date of declaration	October 01,2019	Decenber 12,2016
Issuing date	Nobember 11,2019	October 27,2017
Number of the new issuance of restricted stocks	2,205,000 shares	4,896,450 shares
Offering Price	NT$0	NT$5
Ratio of the number of new shares issued to the total number of shares issued	0.08%	0.18%
Terms and conditions of the employees' restricted stocks	If the employee's physical performance of each year reaches the following standards during the vested period: A.The employee who still serve in the company within one year from the issued date, and his/her performance result is excellent in the year of the issued date, he/she will be vested 50% of the issuance of new restricted employee shares. B.The employee who still serve in the company within two years from the issued date, and his/her performance result is excellent in the following year of the issued date, he/she will be vested 50% of the issuance of new restricted employee shares.	The employee who has severed over three years in the company during the period of acquiring the issuance of new restricted employee shares, and his/her period performance reaches Class A (include) or above, can be vested 100% of the new restricted employee shares.
Restriction on the rights associated with employees' restricted stocks	The shares allocated or subscribed by the employees do not have ownership of their shares before the vested conditions are fulfilled, ie they may not be disposed of, pledged, transferred, donated to others, set, or other disposal.	1.The shares allocated or subscribed by employees shall not be sold, pledged, transferred, donated, set or otherwise disposed of by the employees of their shares until the vested conditions are fulfilled. 2.The issuance of new restricted employee shares has the right to participating in stock dividend distribution, and the acquired distributed dividend is not subject to the vested period. The distributed dividend will be paid from the trust account to the employee's account within one month of the issue date. 3.The employee's proposal, statement, voting rights, and other relevant shareholders' equity before the employee's failure to meet the vested conditions are entrusted to the trust custodian institution to act on their behalf. 4.After the issuance of new restricted employee shares, it shall be delivered to the Trust immediately and shall not be returned to the Trustee for any reason or manner until the vested conditions are fulfilled.
Custody of the employees' restricted new shares	The company represented the employee to sign a contract of trust deed with the stock trust custodian institution. The attendance, proposal, speech and voting rights of the shareholders' meeting are all executed by the trust custodian institution in accordance with the contract.	Restricting employee's rights after the issuance of new shares, it shall be delivered to the trust custodian, and the company shall be the sole agent of the employee and the stock trust institution to conduct negotiations, signing, revision, extension, termination, termination, and delivery of the trust property, including, but not limited to, the trust deed, Use and disciplinary instructions.
Handing of employee's failure to meet the vesting conditions	The stock dividends and cash dividends obtained by employees during the vested period, the company gives employees free of charge, but the vested rights of new shares are not yet vested in the following ways: 1.Retirement: Retirement and application for retirement in the most recent year, the outstanding performance of the applicant, has not yet vested to the issuance of new restricted employee shares, employees can be fully vested on the effective date of retirement; if the outstanding, not yet vested to the issuance of new restricted employee shares, the company shall purchase with the issued price. 2.Resign: The vested person has not yet vested in the issuance of new restricted employee shares, and the company shall purchase with the issued price. 3.Persons with disabilities, death or general death due to	The treatment of failing to achieve the vested conditions: (1) Voluntary in resign, expulsion, and severance: The new shares that have not yet been vested to limit employee rights, the company shall purchase from the employee with the issued price. (2)Retirement: New shares that have not yet been vested to limit employee rights are considered to be fully vested on the day of retirement. (3)Disability, death or general death due to occupational disaster: A.Those who are unable to continue to serve due to physical disability due to occupational disasters, and have not yet acquired the rights to new shares of employees, are deemed to be fully vested on the effective date of quit.

Type of the Restricted Stock Award	The 6rd Employee’s Restricted Stock Awards	The 3rd Employee’s Restricted Stock Awards (Former name：Solartech Energy Corp)
	occupational disasters: 4.Those who are unable to continue to serve due to physical disabilities due to occupational disasters, have not yet vested in the issuance of new restricted employee shares, and employees can be fully awarded when they leave their posts. 5.Those who have died or are generally deceased due to occupational disasters have not yet acquired the rights to new shares of employees and are considered to be fully vested. The successor has completed the necessary statutory procedures and provided relevant supporting documents to apply for receiving the shares or the interests it has inherited. 6.Transferred to the enterprise: Due to the operation of the company, the employees of the company must be transferred to the company's affiliated companies or other companies as approved by the company, and the company has not yet acquired the rights of employees.	B.Due to occupational disasters or general deaths, there is no vest of the issuance of new restricted employee shares. On the employee's death day, the heirs are deemed to have all the vested rights. (4)Leave of absence: A.The employees who have been absent from the work due to the duty, they have not yet vested in the new rights of employees. Those who have been reinstated before the expiration of the issuance of new restricted employee shares are all vested; those who have not reinstated have obtained vested after reinstatement. B. If the employee is not absent from the work due to the duty and has not yet obtained the employee's rights and new shares, the company shall purchase from the employee with the issued price. (5) Transfer: A.The employee that transfer due to the duty, there is no vested limit on the rights of employees. In the case of new employees who are entitled to limit the rights of employees, they will still be employed in the transfer unit. All of them will be resigned, and those who leave after the transfer will be treated as the employees who leave the company. B.The employee that transfer is not due to the duty, there is no vest of the issuance of new restricted employee shares. The company should buy employees from the issue price at the issue price. (6)The company will cancel the issuance of new restricted employee shares purchased or withdrawn by the company. (7)Before the unfulfilled vested condition, the employee terminates or dissolves the agency authorization of the company in violation of the provisions of section 6 of the article. The company shall buy from the employee with the issued price.
Number of the retrieved or bought shares of the employees’ restricted shares	143,000 shares	4,242,150 shares
Number of new shares that have been released from restricted rights	0 shares	0 shares
Number of new shares that have not yet been released from restricted rights	2,062,000 shares	654,300 shares
Ratio of the number of new shares outstanding to the total number of shares issued (%)	0.07%	0.02%
Effect on shareholders' equity	The number of shares that have not been restricted is only 0.07% of the number of issued shares, so the overall assessment shall have no significant impact on existing shareholders' equity.	The number of shares that have not been restricted is only 0.02% of the number of issued shares, so the overall assessment shall have no significant impact on existing shareholders' equity.

Notes: Calculated in 22,665,337,532shares as of the 2020 Annual shareholders’ meeting book closure date (April 24, 2020) of the company.

4.6.2.List of Executives Receiving New Restricted Employee Shares and the Top Ten Employees with New Restricted Employee Shares：

March 31, 2020 Unit: share/ in New Taiwan Dollars

	Title	Name	No. of Stock Options	Stock Options as a Percentage of Shares Issued	Exercised				Unexercised			
					No. of Shares Converted	Strike Price (NT$)	Amount (NT$ thousands)	Converted Shares as a Percentage of Shares Issued	No. of Shares Converted	Strike Price (NT$)	Amount (NT$ thousands)	Converted Shares as a Percentage of Shares Issued
Manager	Business President	Tseng ,sheng-cheng	1,014,300	0.04%	0	0~5	0	0	856,100	0~5	8,561,000	0.03%
	Vice President	CC Lai(Resigned)										
	Vice President	Pan,lay-lay										
	Vice President	Ms.Yen										
	Vice President	Ben.Pan										
	Vice President	Jorge Tseng										
	Vice President	Zabrina.Hsu										
	Assistant Vice President	Hf.Hsieh										
	Assistant Vice President	Chienping.Hsieh										
	Assistant Vice President	Rita Yang										
	Assistant Vice President	Adam.Hsu										
	Assistant Vice President	Allen Yangi(Resigned)										
Staff	Director&Strategic Advisory	Hsu Cheng Fang (Resigned)	565,500	0.21%	0	0~5	0	0	385,000	0~5	3,850,000	0.01%
	Deputy Director	Wang Ta Hsiung (Resigned)										
	Director	Huang,Yi-Syuan (Resigned)										
	Director	Wang Shi Jie										
	Director	Wu Shang Guang										
	Director	Lin Cheng Han										
	Director	Lin Jin Zhong										
	Director	Huang Jing Ning										
	Director	Chen Chiung Chin										
	Director	Fu Yuan Kai										

4.7.Status of New Shares Issuance in Connection with Mergers and Acquisitions：

1. The completion of issuance of new shares in connection with mergers or acquisitions or with acquisitions of shares of other companies for the recent year as of the date of the annual handbook had been printed: In order to consolidate resources, improve operation efficiency, Company and wholly owned subsidiary GES merged as per Article 19 of Business Mergers and Acquisitions Act and other relevant regulations on 31 March 2018, URE is the surviving company after the consolidated reference date and GES was dissolved. The Company owned all the shares of GES, and they will be cancelled on the reference date, the Company did not need to pay any consideration for this merger.
2. If, for the recent year as of the date of the annual handbook had been printed, the board of directors has approved any issuance of new shares in connection with a merger or acquisition or with acquisition of shares of any other company, the annual report shall specify its implementation situation or the information of merged or acquired company. The handling of issuance of new shares in connection with mergers or acquisitions or with acquisitions of shares of other companies, the annual report shall specify the implementation and the impact on the shareholder’s rights：None

4.8.Financing Plans and Implementation：

4.8.1.Finance Plans：

(1)The company issued 334,291,702 shares of common stock by private placement The total amount of the private placemen was NT $2,781,306,962。To invest inhigh-efficiency products, expand production capabilities,obtain the ability of module production, to develop systemsand relevant new fields of businesses, and/or to satisfy thefunding demands of the Company's long-term development inorder to raise the surviving company's corporate competitivenessand profitability; and to ensure the sustainable growth ofthe surviving company's business and to bring positive impacton shareholders' rights and interests.After capital increase, it would improve the financial structure, business operation and development, and benefit to the shareholders’ equity.

(2)The company handled a cash capital increase in the issuance of new shares in 2019. The total amount raised was NTD 978,000 thousand. Payments and improved financial balances will help the company ’s future operations to grow steadily and have a positive benefit to shareholders ’equity.

4.8.2.Implementation：

(1)By 2020, March 31,This Private fund has been spent NT$ 671,166 thousands.

(2)By 2020, March 31, the cash capital increase in the issuance of new shares funds have been fully implemented.

V、 Bussiness Activities

5.1.Business Scope：

5.1.1.Business Scope：

1.Main content of the business:

(1) CC01080 Electronic Parts and Components Manufacturing.
(2) CC01090 Batteries Manufacturing.
(3)CC01010 Electric Power Supply, Electric Transmission and Power Distribution Machinery Manufacturing.
(4) IG03010 Energy Technical Services.
(5)Electrical System Business
(6) F119010 Wholesale of Electronic Materials (restricted to operate outside area.)
(7) F219010 Retail Sale of Electronic Materials(restricted to operate outside area.)
(8) F401010International Trade.

Research, develop, design, manufacture and sale the following products:

(1) Solar cells and related systems.
(2) Solar power module and wafer.
(3) Running side business of import and export trade business related to the company's products.

2.Revenue distribution：

Unit: in Thousand of New Taiwan Dollars

Revenue distribution / Major Divisions	2019	
	Total Sales	(%) of total sales
Photovoltaic Module	9,522,440	52.50%
Solar Cell	5,684,108	31.34%
Power plant	2,518,512	13.88%
Others	414,052	2.28%
total	18,139,112	100.00%

3.Current product item

(1) Polycrystalline germanium solar cell 156.75mm x 156.75mm (6”)
(2) Single crystal germanium solar cell 156.75mm x 156.75mm (6”)

4.The new products that planned to be developed

New structural high-efficiency polycrystalline germanium solar cell.

5.1.2.Industry overview：

1.Industry status and development

Basically, the solar industry can be divided into two aspects: product manufacturing, system installation and, service supply, and power and energy demand. In terms of the supply side of product manufacturing, taking crystalline germanium products as an example, there are manufacturing industries of polycrystalline germanium, germanium wafers, batteries, modules, inverters, etc. from upstream to downstream. Concerning the supply side of system installation and service, it can be divided into development, system design, installation, operation, and related financing service industry. The demand for electricity and energy is to compete with thermal power generation or other forms of power generation in the retail electricity market and the electricity market.

In terms of supply side, the main cost structure of a crystallization solar power system can be approximated by the following figure:

<table>
<tr><td>Solar energy system</td><td>Module</td><td>Cell</td><td>Silicon chips</td><td>Polycrystalline germanium</td></tr>
<tr><td rowspan="6"></td><td rowspan="3"></td><td rowspan="2"></td><td></td><td>Other</td></tr>
<tr><td colspan="2">Conductive gum, etc.</td></tr>
<tr><td colspan="3">Package mold, junction box, glass, aluminum frame, etc.</td></tr>
<tr><td colspan="4">Inverter</td></tr>
<tr><td colspan="4">Other balance systems (BOS), etc.</td></tr>
<tr><td colspan="4">Development, system design, installation, operation, etc.</td></tr>
</table>

Schematic diagram of the main cost structure of solar power generation system (not drawn ccording to cost size proportion)

The battery components in the solar module are the most critical core for converting light energy into electrical energy. As far as the technical distinction is concerned. Currently, the crystallization enthalpy (which is single crystal germanium and polycrystalline germanium) solar products (batteries and modules) have become the mainstream products of the solar market due to good conversion efficiency, high stability, and mature value chain. Among them, single crystal germanium has high quality and high battery process requirements. The conversion efficiency of high-efficiency crystal cells can reach more than 22.5%, and the price is also high. It is mostly used in roof type or other niche markets. The substrate size of polycrystalline germanium is slightly loose, and the conversion efficiency can reach 19.4%. However, due to the low profit, it has gradually signed off the market.
In terms of the thin film solar products, cadmium telluride (CdTe) and copper indium gallium selenide (CIGS) become mainstream currently while Amorphous germanium (α-Si) has gradually withdrawn from the market. In the past two years, although the conversion efficiency has repeatedly made breakthroughs, it still fails to achieve the advantage of cost performance, and the market application and development are relatively limited.

Although it has postponed the scheduled decommissioning of nuclear power plants in 2027 through a referendum, it still maintains the target of 25GW of renewable energy installations. Under the strengthening concept of the public's environmental awareness and the improvement of the technology of the renewable energy industry, the Executive Yuan determined in September 2020 and ordered that all ministries shall achieve the plan of "Solar 6.5GW achievement for the year of 2020" proposed by the Ministry of Economy. According to the statistics of the Energy Bureau, the cumulative capacity of Taiwan's solar photovoltaic devices has exceeded 4GW at the end of 2019. It is estimated that the number of required new photovoltaic devices in 2020 will be 2.1GW ~ 2.4GW, which is an increase of 100% compared with 2019. The supply of solar photovoltaic modules will be in short supply; besides, the feed-in tariff mechanism in Taiwan mostly adopts the VPC specification. Module products are required to meet high-efficiency and high-reliability specifications to maximize the installable area while excluding solar photovoltaic modules imported from the overseas market at low prices.

Overviewing the global market, mainland China is still the most significant market and the primary supply manufacturing chain in the global solar industry. In 2019, the installed capacity of solar photovoltaics in mainland China was about 27GW, a decline of about 43% compared with the previous year. Besides, the United States has imposed several tariff mechanisms on mainland China, causing nearly 150GW of solar modules are only sold to Europe and Australia at low prices. Simultaneously, the European Union canceled the five-year anti-dual policy for the solar products made in China in 2019. Consequently, the modules made in China that account for 75% of global production capacity are mainly sold to Europe, and Taiwanese manufacturers were also facing severe competitive disadvantage of directly cutting prices in Europe by more than 20%. Due to the impact of two bushfires in California and Australia in 2019, the reconstruction of power transmission facilities may take several years. Thus, the local government has used renewable energy as a power generation subsidy in the reconstruction plan. Apart from installing household solar power facilities, the local government also includes the devices of energy storage in the subsidy project, making California and Australia become the major markets of apartment layout renewable energy.

In terms of application analysis, the feed-in tariff and the cost of power generation in many countries begin to be lower than the selling price of the power supply market, making self-use, peak-load shaving renewable energy devices a new cost-saving option. The famous companies, Google and Apple, have promoted green energy and sustainable energy, and many other large power consumers in the manufacturing industry also purchase or construct renewable energy facilities. As for finance, renewable energy has also developed into new financial commodities, whether it is an investment in power plant, green bond, energy certificate, energy funds, etc., the scale and system have become more and more complete. The emerging markets such as India, Southeast Asia, Australia, and other countries are all actively developing the solar energy industry. Consequently, the demand for solar devices shall remain steady in the short term, and the energy storage devices will grow substantially and develop rapidly with new business models.

2.The relevance between up, middle and downstream:

The industrial chain of solar cells can be divided from top to down: upstream: raw materials and wafers; midstream: batteries and modules; downstream: system vendors, distributors and peripheral parts suppliers, please refer to page 38 of the Chinese annual report.

3.The development trend of products

The future development trend of solar products and application and their reasons are as follows:

A.Continue to improve conversion efficiency: The subsidies for main mature solar markets such as Japan, Germany, and the United Kingdom are tilted toward roof-type and self-use requirements, while roof-type and self-use models have always had higher standards for conversion efficiency.

B.Continue to reduce construction costs: With the gradual downward adjustment of policy subsidies, solar power costs must be able to compete with traditional energy sources so that the advantages can be obtained.

C.Combined energy storage system: With the continuous decline of the cost of energy storage systems, in the market of high electricity prices or high penetration rate of solar power generation, the combined energy storage system has appeared. By making full use of the opportunity of low-cost solar energy advantages, the market share will be further pushed up by the complementarity between the two previously mentioned.

4.Competitive situation

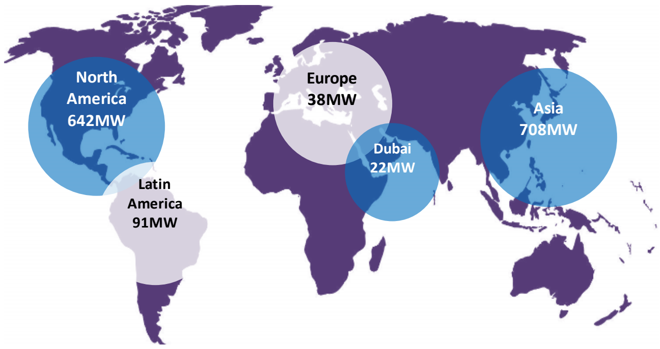
In recent years, the solar energy industry has been suffering from the severe expansion of production by mainland China manufacturers, leading to oversupply and a continuous decline in average sales prices, making the operating environment quite tricky. After the EU lifted the tariff restrictions in 2019, products made in China have covered Europe entirely. In contrast to the significant expansion of the production capacity of Chinese manufactures, the business of Taiwanese manufactures in Europe has been severely affected. Jinko, the largest solar module manufacturer in China, has an annual production capacity of more than 40GW, which is 1.5 times the installed capacity of China in 2019, and more than 30% of global installations. It has also caused the slow sales and falling prices of products from Chinese manufacturers. Instead of increasing profits from the expansion of production capacity, the elimination of second- and third-tier manufacturers has led to the recession of the overall industry. When facing these difficult challenges, United Renewable Energy Corporation has adjusted the production of orders and OEMs, using overseas OEM production capacity, providing technical guidance in the factory to meet the demand of the customer, keeping raw materials and products in low inventory, avoiding compete in production capacity, and strive for perfect orders.

As the largest renewable energy supplier in Taiwan, United Renewable Energy Corporation is confident in the Taiwan market. After the merger in 2018, it focused on promoting the transformation into a solar energy integration solution provider and became the leader in the industry transformation. In 2019, United Renewable Energy Corporation expanded the two-in-one solution of solar energy and energy storage. The domestic manufacturers who can provide solar module products in the past also have system planning and case maintenance services currently. For domestic sales competition, the comprehensive brand service of United Renewable Energy Corporation has become a priority for customers. Under the steady shipment of solar products, the company actively develops new renewable energy businesses, complies with the green energy policy of the government, and replaces competition with related companies by cooperation to create the next glory of the renewable energy industry in Taiwan.

Recently, climate change has become increasingly extreme. Global warming has been regarded as the most significant crisis for humans by the United Nations. Consequently, more and more financial institutions and investment corporations have valued sustainable renewable energy investment. As a pioneer in combining semiconductor manufacturing discipline with solar energy-rich technologies, the Company has always been committed to offering continuous and cost-effective clean energy.

Besides, the Company actively invests in the development of downstream solar power plants and continues to enhance its global layout, establishing the core abilities of development construction, sales, and financing of the global power plant. So far, the entire Company has completed a parallel power plant project and the planned power plant project (pipeline) is approximately 1.5GW. As the most complete and largest solar energy company in Taiwan in the layout of the global solar system, the Company will continue to emphasize the development of large power stations and use the advantages of its rich resources. With the advantages of PD (case development,) design and engineering, maintenance, finance and financing, network and sales, and the gather of global talent, the Company has become a few international energy companies covering comprehensive capabilities. Also, it complies with the new stage of 2.0 of the solar policy of the government, and actively transforms the solar market in Taiwan from the roof type to the ground type to achieve the goal of 20GW in 2025. With the completion of the continuous installation of new power plants and the active investment of sustainable renewable energy by financial institutions, the system will be kinetic of continued improvement of the Company in the future.

URE Group Projects around the world



In the future, the company will continue to develop forward-looking technologies, reduce manufacturing costs and maintain customer trust as the essentiality to competition and profitability, and actively respond to the national solar photovoltaic subsidy policy and adjust the market development trend. Also, the company continues to promote all types of renewable energy to replace traditional energy and strive to achieve the goal of green energy profitability and sustainable management.

5.1.3.Techniques and Research and Development Overview:

1.Technical level and research development of the operating business

The company has introduced industry-leading products over the years, such as Super19, which produces up to 20.0% of the conversion efficiency of the polycrystalline series; the single-chip series has the highest conversion efficiency of 22.1% of the "Black 21," and the P-type double-sided battery "Glory-BiFi" with a maximum conversion efficiency of 22%. URE adhered to the excellent research and development capability, which has won the affirmation of the 2019 Energy Bureau Energy Award of the Ministry of Economic Affairs, and it was the only company that had won this award for six consecutive years. The company actively carried out product research and development. At the end of 2020, the company plans to introduce a heterojunction battery with a conversion efficiency of up to 24.5%. It is expected that the wattage of 60-cell modules can reach 330 watts. In addition to providing customers with excellent battery efficiency and high wattage module products, the company is committed to improving the performance of photoinduced attenuation (LID) and voltage induced attenuation (PID). The single crystal "Black 21" battery has a LID of less than 3% and a module product of less than 2%, which is better than the industry average. In addition, the company is also actively cooperating with domestic and foreign research institutions and prudently technical alliances with domestic and foreign players. In terms of the protection of intellectual property, the company patented essential techniques. As of the end of 2019, 123 patents have been obtained, and several patents have been applied simultaneously.

2.Research and Development Expenses by the Central Research Institute (CRI) in the Past Two Years

Unit: in Thousand of New Taiwan Dollars

Year	2018	2019
Research and Development Expenses	211,737	218,674

3.The successfully developed techniques or products for the recnt year as of the date of the annual handbook had been printed

Year	Research and Development Results
2018	1. Improve the efficiency of the "Black 21" battery, with a maximum conversion efficiency of 21.9%. The 60-cell module has a wattage of up to 320W, and the high-wattage "PEACH" series module for the cut-off battery type has a maximum wattage of 330W. 2. Improve the efficiency of "BiFi" battery, the highest conversion efficiency of 21.9%, 60-cell Glory BiFi double-sided power generation module wattage up to 340W. 3. Awarded the 2018 Taiwan Excellence Award. 4.URE is the only one of the three solar energy manufacturers that won the three major awards of the Ministry of Economic Affairs, the Taiwan Excellence Award, and the BSMI PV Taiwan Plus. 5. The first company in Taiwan used of 2.5mm glass through the US UL fire rating ClassA test. 6. Established "The first P-type double-sided double-glass roof solar power station in Taiwan" in Guantian, Tainan, opened in February, 2018. 7. Acquired exclusive supply of Taiwan Power Company in Changhua Coastl's new solar photovoltaic project in Taiwan - 100MW, which was the Taiwan No.1 double-glass double-sided solar energy field.
2019	1.Strengthen the efficiency of the "Black 22" battery, making the maximum conversion efficiency for mass production reach 22.1%. The ultra-wattage of 144-cell split battery "PEACH" series module has a maximum wattage of 420W. 2.Improve the battery efficiency of "BiFi", making the highest conversion efficiency of mass production reach 22.1%. The double-glass as well as double-sided power generation module of 144-cell double-wave double-sided split battery "Glory PEACH" can reach 420W, and the equivalent power is 470W. 3.The weight of lightweight single glass double-sided module, "PEACH BiFi" series is only 25 kg. The frontal power of 144-cell reaches 420W, and the equivalent power is 470W. 4.United Renewal Energy Corporation has won its seventh consecutive award of Taiwan Execellent PV Award. 5.The voluntary product verification by the Ministry of Economic Affairs Standard Inspection Bureau has approved the Company as the highest VPC power module manufacturer with a certified power of 420W, which is the highest in Taiwan. 6.The Company has constructed the first project of a 2MW water-based double-glass double-sided power generation system in Taiwan. Also, it has built the most successful water-based double-glass double-sided power generation system.

5.1.4.Long-term and short-term business development plans：

1.Short-term development plan:

A.Marketing Strategies:

a.Enhance overall profitability through differentiation of company image and product excellence.

b.Strengthen the company's image through the affirmation of a fair and a well-known third-party verification unit and strengthen the customer's after-sales service.

c.Actively expand its market share with high quality and high conversion efficiency products.

d.Actively participate in industrial activities such as related business exhibitions and seminars at home and abroad, and reinforce interaction with downstream manufacturers at home and abroad to enhance good communication and communication between industries.

B.Development strategies:

a.Optimize existing capacity to meet supply needs.

b.Advanced products quality to meet the demand of classifying products.

c.With the company's high-quality batteries and modules, developing and expanding the seaport to the downstream system.

d.Strengthen supply chain management and continuously reduce the cost of raw materials and equipment.

e.In addition to the original power plants in Europe, America and Japan, the company will expand its business to Central and South America and the Middle East to build a global solar power plant network.

f.Cooperate with the government's green energy policy to increase the construction of the Taiwan system, which makes the company has the most complete layout in the middle and lower reaches of the solar energy supply chain.

C.Product development direction:

a.Improve the conversion efficiency of the cell through the process integration and optimization. In 2020, it is estimated that the conversion efficiency of mass production of "Black 22" monocrystalline cells will be increased to 22.2%, the wattage of the split 120-cell PEACH module will reach 350W, and the conversion efficiency of mass production of BiFi P type monocrystalline bifacial cells will be increased to 22.2 %. The front power of the 144-cell module will reach 420W, and the equivalent power is 470W.

b.Continuously lower the cost of production to enhance the competitiveness of products.

2.Medium and long term development plan:

A.Marketing strategies:

a.Committed to promoting strategic alliances in the upper, middle and downstream, to ensure a sound industrial chain and marketing network.

b.Sign a long-term cooperation contract with downstream manufacturers to consolidate the customer base for sustainable operation.

c.Virtual Supply Chain Integration, perfect global production and service layout.

d.Maximize solar system power generation efficiency by matching and developing energy storage devices.

B. Development strategies:

a.Adjust production capacity comply with the market demand and actively expand terminal system to cultivate the sea gate, to expand the seaport and maintain the long-term competitiveness of the company.

b.Improve yield and conversion efficiency。

c.Improve production quality.

d.Reduce costs.

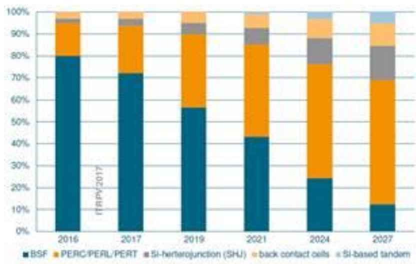
e.Actively engage in patent layout, build barriers to competition, and ensure medium- and long-term competitive advantages.

C.The direction of product development:

a.Develop new and next-generation (P-type / N-type) solar cells. Continuously update the manufacturing process, develop high conversion efficiency products, and enhance the conversion efficiency of solar cells.

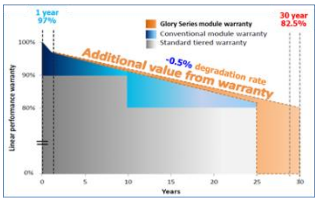
Prepare Hetero-junction Technology in advance. The high-efficiency technologies in PERC and Hetero-junction Technology will gradually increase their share in the future and become mainstream according to the prediction of ITRPV (refer to the picture below.) These two technologies are also the two fields that United Renewable Energy Corporation highly emphasizes in the product development. As for the rear passivation technique, the Company will continue to optimize the process and reduce production costs.

To maintain excellent product competitiveness, the Company has actively prepared Hetero-junction Technology in the field of new technology, which is the lead of the development of the entire next generation of high-efficiency monocrystalline cells technology in Taiwan. It is estimated to increase the conversion efficiency of cells to 24.5% within two years. The 60-piece wattage of HELLO series, the corresponding module, can reach 340W, plus its outstanding double-glass power generation efficiency and low-temperature coefficient, the equivalent wattage is up to 408W. Besides, with the technology of the double-glass module, product reliability has been significantly improved. The Company has complete integration of cells and module technology; we arrange and product characteristics for different environments, whether it is water, desert, snow, or roof, there are corresponding products. The research and development team has always maintained a good cooperative relationship with domestic and foreign academic research institutions so that the team can receive information on developing new technology and equipment timely. Also, we have constructed a close relationship with upstream critical raw material suppliers to offer complete technology services and supports to downstream customers.



b.Continue to cooperate with material manufacturers to develop high-quality and long-lasting weather-resistant modules, combined with high-performance monocrystalline and polycrystalline cells to form a completely green energy solution provider.

Comply with the development of the green energy policy of the government, the number of solar installations will reach 20GW in 2025. As the leader of solar photovoltaic industry in Taiwan, the Company constructed the first highly automated module production line that is specifically designed for the Taiwan market in Hsinchu Corporate Headquarters, to solve the severe environmental problems such as frequent typhoons, less land, high temperature as well as humidity in Taiwan, produces explicitly double-glass double-sided power generation solar modules, the Glory-BiFi Glory double-sided series, which resist strong typhoons and are suitable for special environmental areas such as impounding reservoirs, reservoirs, and high salinity areas. Its unique double-sided power generation design is based on different ground environments, and the power generation capacity is increased by 5% ~ 20% compared to traditional modules. The structural design of double-sided tempered glass offers stronger weather resistance and reliability guarantee. The 30-year power generation capacity of the solar module system is guaranteed to be more than 82.5%, reinforcing the green energy investment and operating environment in Taiwan.



5.2.Market and production and sales overview：

5.2.1.Market analysis

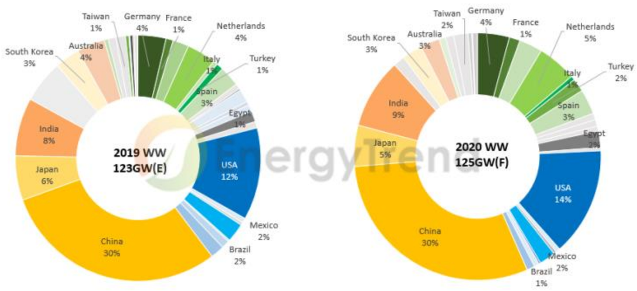
1.Sales (providing) area of the company's main products (services)

Unit: in Thousand of New Taiwan Dollars

Sales Area \ Year		2018(After re-editing)		2019	
		Amount	%	Amount	%
Domestic sales		6,743,458	51.33%	6,031,214	33.25%
Export	The United States	1,027,606	7.82%	2,810,770	15.50%
	India	-	-	2,404,830	13.26%
	Germany	1,991,574	15.16%	2,319,921	12.79%
	Other countries	3,374,487	25.69%	4,572,377	25.20%
	Minor total	6,393,567	48.67%	12,107,898	66.75%
Total		13,137,025	100%	18,139,112	100%

2.Market share1,305 MW and the shipment of solar modules was 948 MW. According to the Energy Trend of the research institute, the company's market share in Taiwan is about 48%.

3.According to TrendForce Corporation, the chaos of 531 New Deal in mainland China accelerated the overseas deployment of the enterprises in 2019. As the European market has gradually recovered, and the emerging markets in Southeast Asia have risen, the global market will become more fragmented. In 2020, it is estimated that the new-added grid-connected quantity around the world will reach 125GW. From 2020 to 2025, the global market will grow slightly; yet, the annual growth rate is approximately 7%. It is estimated that the top five global markets in 2020 will be: China, the United States, India, Japan, and the Netherlands. Although the worldwide proportion of the Chinese market has gradually shrunk, it is still the most significant market on earth. Interestingly, although the European market has recovered, the primary global markets are still in the Asia-Pacific region, accounting for about 60% of the total of the world. Among them, the Southeast Asian market has become the main growth driver of the Asia-Pacific region.



Sources: TrendForce Corp.EnergyTrend

Under the global competition, the solar industry in Taiwan has been operating at a low level for a long time. However, the domestic solar market in 2020 is expected to grow continually due to the energy transformation policy of the government. The number of solar installations grew by 51% in 2019, and the cumulative installed capacity has exceeded 4GW. Besides, solar power generation has surpassed nuclear power generation during peak power generation. Also, the Executive Yuan approved the plan of the Ministry of Economic Affairs to promote the cumulative installation of 6.5GW in 2020, and all large-scale ground power stations in Taiwan have begun to apply for operations actively. In 2020, the number of installations is 2.5GW, the estimated growth rate is 65%, and the operation of primary domestic solar module plants is expected to grow. Furthermore, the government has set the "Most-Used Power Consumer Provision" in the amendment of the Renewable Energy Development Regulations. For those most-used power consumers with a contract capacity of more than 5000kW, it is necessary to install renewable energy power generation equipment or energy storage device with a specific capability within five years from 2020 or replace it with the purchase of Green Power Certificate and payment of tokens. Hence, the demand for renewable energy and facilities of energy storage will significantly rise.

4.Competitive niche

A.Operation team

The company merged in October 2018, the leading cadres of the new operation team have professional experience in solar energy or semiconductor manufacturing, plant construction, equipment, power generation, business marketing, and production management, etc. They have a complete qualification in the production and research and development of solar energy industry with high process linkage and leads the company to develop high-quality and high-standard niche market with excellent management experience.

B.The improvement of self-owned process technology and equipment

The company purchases overseas advanced equipment plus its process technology, develops excellent quality products in the early stage of mass production and improves formulation to increase output beyond original design capacity, gradually improve conversion efficiency and reduce production cost.

C.Yield control

Currently, in addition to actively optimizing existing production capacity, reducing production costs and strengthening yield control, the company also spare no effort to optimize quality and cost structure.

D.The supply source of upstream silicon material

The company uses the industrial resources within the group and accumulates rich technology and experience. The upstream silicon material supply is scattered, and the cost and quality are superior.

E.Partnership with customers

The company has an excellent sales team and after-sales service quality and has won many long-term cooperation orders and partnerships. The client base is spread all over the world, mainly covering main markets such as Germany, Japan, and China.

F.Possess the ability of offering the “one-stop shopping” service

The company has the module product development, manufacturing abilities, and the development of solar energy systems, which is capable of providing high quality and low-cost module solutions in response to the needs of customers.

G.Possess completed battery and module production base

The company has battery and module production bases in both Taiwan and Southeast Asia, which can meet the particular needs of customers in response to the trade of the main markets, such as the European Union's limit on the price of Chinese products and the US double-reverse restrictions on Chinese battery products, flexible shipment.

5.The advantages and disadvantages as well as corresponding measures of the development prospect

A.dvantages

①Operational management ability

The operational team has rich experience in related industries and is familiar with the operation, management, planning, and execution abilities of the solar industry.

②Process techniques and research and development abilities

The research and development team has practical experience in the solar or semiconductor industry, specializing in product yield, efficiency improvement and research and development.

③Continuous research and development and innovation

The research and development team continues to deliver breakthroughs in component, conversion efficiency and, low-cost production for component characterization, new material testing, and process development to maximize added value.

④Advanced technology and equipment

The advanced technology and equipment of the company, plus the mature semiconductor process and solar cell component technology, which makes the company's products maintain excellent competitiveness in the market.

⑤The degree of market demand

Due to the global consensus on diminishing traditional energy reserves and reducing carbon dioxide emissions, which stimulates the rapid growth of demand for renewable energy. Although the solar photovoltaic industry is still yet entirely out of the stage of government subsidies, renewable energy is the world trend and trend, with the business value of sustainable operation and long-term development.

B.Disadvantages:

In recent years, new global manufacturers have actively joined the solar energy industry, and the market has become oversupply. It has also been affected by the successive reductions in the government subsidy policies of the main markets, resulting in a decline in the selling price of products, which affects sales and profits. The corresponding measures of the company are as follow:

①Diversely expand raw material supplier, control the material supply.

②Improve the quality of products, techniques and services.

③Contract up and downstream strategic partners to deepen long-term customers and increase market share.

④Keep controlling the industry's pulsation, research and development of new materials and new processes.

Also, because China's solar products continue to rise in global market share, which triggered part of the market countries to adopt trade methods to protect, after the United States and Europe have imposed anti-dumping and countervailing duties on Chinese products, the manufacturers of the Taiwanese products are also subject to the US anti-dumping tax rate, as to limit growth and profit-making space. The corresponding measures of the company are as follows:

①Make good use of relationships with strategic customers, and complement each other.

②Adjust the proportion of the configuration of the terminal market.

③Seeking overseas factory plans.

④Keep controlling the progress and strive for the negotiation of relevant department.

5.2.2.The important usage and produce process of main products

(1)Usage of main products

The main products are Solar Cell and Module. Solar cells convert sunlight into DC power without the use of fossil fuels; therefore, there is no waste or pollution. And due to the use of semiconductor components, there are no rotating components and noise problems. The application of solar cells is a solar cell module, which can be used for more than 20 years. The size of the solar module can be randomly changed; thus it can be used in a wide range of applications, from consumer products such as computers and watches to general households, industries, and even power plants. To sum up, as long as the usage is similar to the power supply of Taiwan Power Company, all of the company's products can be used instead.

(2)Production process of main products

The crystalline germanium solar cell structure is based on a P-type germanium wafer material, and the germanium wafer surface is roughened by etching the germanium wafer with an acidic or alkaline chemical etching solution, its purpose is to reduce the amount of reflection of the incident light. The surface layer of the first P-type wafer is converted into an N-type (front side) by diffusion in a tubular high-temperature furnace, and its purpose is to form a p/n Junction of the basic structure of the solar cell. The electric field caused by this p/n Junction can effectively separate the electrical holes generated by the solar cell illumination. When sunlight is incident on the surface of the crucible by air, reflection occurs. Therefore, a good anti-reflection layer is required to reduce the amount of reflection of the incident light. PECVD deposition can be used as an anti-reflection coating. Afterward, the front and back sides of the silicon chip are printed and sintered with silver or aluminum glue to form metal electrodes. The functions of the front and back metal electrodes are to extract the electrons generated by the solar cells after illumination and generate photocurrent for usage. Metal electrodes require low series resistance, high strength, resistance to soldering, etc. The electrode design of the solar cell receiving surface needs to be optimized for optical loss and resistance loss, the back electrode on the backlight side of the solar cell has an excellent ohmic contact due to no light loss problem, and the back electrode is usually made into a comprehensive wire. The simple.

process of solar cells is as follows:

Silicon chip cleaning and surface treatmen → p/n junction production → Remove PSG → Anti reflection layer deposition

SPE → sintering → measure effectiveness → solar cell products.

(3)Supply Status of Main Materials：

Major Raw Materials	Source of Supply	Supply Situation
Silicon Chip	101737、100981、101667	Good
Gum	101123、100010、104169	Good
Chemical Materials	105737、104419、100256	Good

(4)Major Suppliers and Clients：

A.Major Suppliers in the Last Two Calendar Years：

Unit: in Thousand of New Taiwan Dollars

	2018(After re-editing)				2019				2020 (As of March 31)			
Item	Name	Amount	Percent	Relation with Issuer	Name	Amount	Percent	Relation with Issuer	Name	Amount	Percent	Relation with Issuer
1	101737	922,272	12.16	None	Others	12,458,857	100.00	-	107134	242,512	11.00	None
2	100981	797,778	10.52	None	-	-	-	-	Others	1,961,980	89.00	-
3	Others	5,862,405	77.32	-	-	-	-	-	-	-	-	-
4	Net Total Supplies	7,582,455	100.00	-	Net Total Supplies	12,458,857	100.00	-	Net Total Supplies	2,204,492	100.00	-

B.Major Clients in the Last Two Calendar Years：

Unit: in Thousand of New Taiwan Dollars

Item	2018(After re-editing)				2019				2020 (As of March 31)			
	Company Name	Amount	Percent	Relation with Issuer	Company Name	Amount	Percent	Relation with Issuer	Company Name	Amount	Percent	Relation with Issuer
1	101456	1,795,032	13.66	None	Others	18,139,112	100	-	103119	400,812	13.42	None
2	100732	1,386,659	10.56	None	-	-	-	-	Others	2,586,041	86.58	-
3	Others	9,955,334	75.78	-	-	-	-	-	-	-	-	-
	Net Sales	13,137,025	100	-	Net Sales	18,139,112	100	-	Net Sales	2,986,853	100	-

(5)Production in the Last Two Years：

Unit: in Thousand of New Taiwan Dollars

Year / Output / Major Products (or by department)	2018(After re-editing)			2019		
	Capacity	Quantity	Amount	Capacity	Quantity	Amount
Solar Module & Solar Cell	469,994	232,094	10,771,921	834,853	308,732	11,068,826
Total	469,994	232,094	10,771,921	834,853	308,732	11,068,826

(6)Sales volume table　in the Last Two Years：

Unit: in Thousand of New Taiwan Dollars

Year / Shipments & Sales / Major Products	2018(After re-editing)				2019			
	Local		Export		Local		Export	
	Quantity	Amount	Quantity	Amount	Quantity	Amount	Quantity	Amount
Solar Module & Solar Cell	32,861	5,386,626	118,927	5,054,004	18,933	4,107,808	256,368	11,094,636
Others	68	1,356,832	1,695	1,359,565	1,809	1,923,406	3,187	1,013,262
合計	32,929	6,743,458	120,622	6,396,567	20,742	6,031,214	259,555	12,107,898

5.3.Human Resources：

Year		2018	2019	2020/4/30
Number of Employees	Staff	1,148	797	999
	Manufacturing	1,979	979	713
	Total	3,127	1,776	1,712
Average Age		34.88	34.59	34.59
Average Years of Service		5.28	4.85	4.85
Education	Ph.D.	0.96%	1.01%	0.90%
	Masters	10.68%	14.30%	13.17%
	Bachelor's Degree	42.19%	45.95%	47.34%
	Senior High School	13.60%	13.46%	13.23%
	Below Senior High School	32.57%	25.28%	25.36%

5.4.Information of environmental protection expenditures:

5.4.1.Explain the disposal of the total amount due to the loss of the company because of environmental pollution (including compensation,) and disclose its future corresponding measures and the possible expenditures for the recent year as of the date of the annual handbook had been printed: None.

5.4.2.The explanation of requisition, payment, and establishment of applicable requisition of facility establishment permit, or pollution discharge permit, or the payable pollution prevention fee, or shall establish environmental protection unit staff in accordance with the provisions:

(1)The permit of establishing pollution prevention facilities or the date of acquisition of the pollution discharge permit:

Plant / category	Hsinchu First Plant	Hsinchu Second Plant	Hsinchu Third Plant	Hsinchu Science Park Plant	Zhu-Nan Hsinchu A Plant	Zhu-Nan Hsinchu A Plant
Operation permit of stationary source pollution	2019/08/15	2019/01/25	2019/05/13	2018/12/27	2019/10/7	2018/12/03
Permissive document of water pollution prevention	2019/06/04	2019/05/29	2019/02/15	N/A	2019/6/14	2019/11/11
Cleaning plan of business waste	2019/07/23	2019/2/21	2019/10/28	2019/1/11	2019/7/1	2019/4/3

(2)Payable pollution prevention fees in 2019:

Unit: New Taiwan Dollars

Plant / category	Hsinchu First Plant	Hsinchu Second Plant	Hsinchu Third Plant	Hsinchu Science Park Plant	Zhu-Nan A Plant	Zhu-Nan B Plant
Air pollution prevention fee	39,846	36,121	76,046	0	474,837	110,521
Soil and groundwater pollution treatment fee	22,348	404	1,436	0	10,993	12,230

(4)The establishment of environmental protection personnel:

Plant / category	Hsinchu First Plant	Hsinchu Second Plant	Hsinchu Third Plant	Hsinchu Science Park Plant	Zhu-Nan A Plant	Zhu-Nan B Plant	Tainan Plant
Personnel of Air pollution prevention and control	Alreons Chen	Tehui.Lin	Stanley Huang	—	Chao.Huang	David Chen	Alreons Chen
Personnel of Water pollution prevention and control	Mh.Tu	—	Stanley Huang	—	Todd.Huang	David Chen	Mh.Tu
Waste treatment professional technician	—	Joseph Wang	Jamie Huang	—	Carin.Chen	Wu Shangwen	—

5.4.3.The list of the company's investment of the main equipment for the prevention and control of environmental pollution and its usage and possible benefits：

In the initial stage of the company's construction, the company focused on the investment in pollution prevention equipment, sewage, and waste gas and had entrusted professional qualified cleaning companies to remove waste. The details of the purchased control equipment are as follows:：

(1)Hsinchu First Plant:

Equipment Name	Equipment Quantity	Usage and estimated benefits may create
Air pollution preventive facility	8	Usage: Dispose of the waste gas generated in the in-plant process. Benefits: Meet the air pollution emission standards of the Environmental Protection Act.
Sewage treatment system	1	Usage: Recycle and outsourcing re-use the high concentration of hydrofluoric acid emitted from the in-plant process. Benefits: Comply with environmental laws and regulations to meet industrial zone emission standards.

(2)Hsinchu Second Plant:

Equipment Name	Equipment Quantity	Usage and estimated benefits may create
Air pollution preventive facility	4	Usage: Treatment of waste gas from in-plant processes Benefits: Meet the air pollution emission standards of the Environmental Protection Act.

(3)Hsinchu Science Park Plant:

Equipment Name	Equipment Quantity	Usage and estimated benefits may create
Air pollution preventive facility	10	Usage: Treatment of waste gas from in-plant processes. Benefits: Meet the air pollution emission standards of the Environmental Protection Act.
Sewage treatment system	1	Usage: Dispose of wastewater discharged from the in-plant process. Benefits: In compliance with environmental laws and regulations, and meets the standards for wastewater management in industrial areas.
High concentration hydrofluoric acid recycling improvement project	4	Usage: Recycle and outsourcing re-use the high concentration of hydrofluoric acid emitted from the in-plant process. Benefits: In compliance with environmental laws and regulations, and meets the standards for wastewater management in industrial areas.
Biological treatment system	1	Usage: Treatment of nitrate nitrogen and ammonia nitrogen wastewater from in-plant processes. Benefits: In compliance with environmental laws and regulations, and meets the standards for wastewater management in industrial areas.

(4)Zhu-Nan A Plant:

Equipment Name	Equipment Quantity	Usage and estimated benefits may create
Air pollution preventive facility	9	Usage: Treatment of waste gas from in-plant processes. Benefits: Meet the air pollution emission standards of the Environmental Protection Act.
Sewage treatment system	1	Usage: Dispose of wastewater discharged from the in-plant process. Benefits: In compliance with environmental laws and regulations, and meets the standards for wastewater management in industrial areas.
Fluorine wastewater treatment system	2	Usage: Treatment of nitrate nitrogen and ammonia nitrogen wastewater from in-plant processes. Benefits: In compliance with environmental laws and regulations, and meets the standards for wastewater management in industrial areas.
Biological treatment system	2	Usage: Dispose of wastewater discharged from the in-plant process. Benefits: In compliance with environmental laws and regulations, and meets the standards for wastewater management in industrial areas.

(5)Zhu-Nan B Plant:

Equipment Name	Equipment Quantity	Usage and estimated benefits may create
Air pollution preventive facility	12	Usage: Treatment of waste gas from in-plant processes. Benefits: Meet the air pollution emission standards of the Environmental Protection Act.
Sewage treatment system	1	Usage: Dispose of wastewater discharged from the in-plant process. Benefits: In compliance with environmental laws and regulations, and meets the standards for wastewater management in industrial areas.
Fluorine wastewater treatment system	1	Usage: Treatment of nitrate nitrogen and ammonia nitrogen wastewater from in-plant processes. Benefits: In compliance with environmental laws and regulations, and meets the standards for wastewater management in industrial areas.
Biological treatment system	1	Usage: Dispose of wastewater discharged from the in-plant process. Benefits: In compliance with environmental laws and regulations, and meets the standards for wastewater management in industrial areas.
Chemical treatment system	1	Usage: Dispose of wastewater discharged from the in-plant process. Benefits: In compliance with environmental laws and regulations, and meets the standards for wastewater management in industrial areas.

(6)Tainan Plant:

Equipment Name	Equipment Quantity	Usage and estimated benefits may create
Air pollution preventive facility	11	Usage: Treatment of waste gas from in-plant processes. Benefits: Meet the air pollution emission standards of the Environmental Protection Act.
Sewage treatment system	1	Usage: Dispose of wastewater discharged from the in-plant process. Benefits: In compliance with environmental laws and regulations, and meets the standards for wastewater management in industrial areas.
High concentration hydrofluoric acid recycling system	1	Usage: Recycle and outsourcing re-use the high concentration of hydrofluoric acid emitted from the in-plant process. Benefits: In compliance with environmental laws and regulations, and meets the standards for wastewater management in industrial areas.

5.4.4.Part of the company's products is sold to Europe. According to the section 4 of Article 2 of Directive 2011/65/EU, which was issued by the European Commission, Photovoltaic Panels had been excluded from the scope of the new RoHS Directive, which means that no relevant EU environmental directives had been covered.

5.5.Labor Relation

5.5.1.The current employee welfare measures, training, retirement system, and its implementation, as well as the agreement of labor, the maintenance and implementation of the employee's various rights:

1.The measures of employee welfare:

The company based on the premise of the principle of good faith, to protect the rights and interests of employees, established various management procedures and work regulations in accordance with the principles of the Labor Standard Laws, to provide the employee good salary and a safe working environment.

In addition to the national health insurance and labor insurance, the company also plans to handle group insurance for all employees, and arrange an annual health examination for the employee. Also, the company establishes the Staff Welfare Committee and the provision of employee benefits, continuing to promote diversified employee welfare measures and various welfare activities to improve the welfare system.

2.Training:
To reinforce the professional skills of employees and cultivate them into international talents, the company encourages employees to undergo a variety of educational training courses, including new staff training, on-the-job training courses, professional courses, work safety courses, and various training courses related to the job duties so as to cultivate talent within specific skills.

3.Retirement system and implementation:
The employees of the company that is applicable for the new labor retirement system，the company pays 6% of the individual's salary to the account of labor insurance bureau's personal pension. If the employee has voluntarily paid the pension, and the voluntary payment rate is deducted from the employee's monthly salary to the personal pension account of the Labor Insurance Bureau.

4.The agreement and negotiation of labor:
The company is an industry that applicable to the Labor Standard Laws and remarkably emphasizes labor relations. All operations are based on the Labor Standard Laws; the company regularly holds the labor meetings and listen to the employees’ opinion and positively respond as well as improve itself. As of the date of the annual handbook had been printed, the relationship between the employer and employees were harmonious, there were no major labor disputes.

5.5.2.The recent year as of the date of the annual had been printed, the loss due to labor disputes and disclosure of current and future estimated amounts and corresponding measures:：

1.The recent two years as of the date of the annual had been printed, no major labor disputes have occurred. The relationship between the employers and employees were harmonious, there was no dispute between labor and management, and there was no loss arising from labor disputes.
2.The corresponding measures may occur currently and in the future:
(1) Comply with the labor-related laws and regulations and implement the procedures according to law.
(2) Strengthen various welfare measures and actively strive for employee welfare.
(3) Establish an open, honest labor relationship and communication channel.
3.The loss amount may occur currently and in the future: not applicable.

5.6.Important Contract

The contract content of currently valid and effective duration of the sales contracts, technical cooperation contracts, engineering contracts, long-term loan contracts and other important contract contents that is sufficient to affect the rights of investors:

Contract Nature	Party	The Start/End Date of the Contract	Primary Content	Restrictions
Authorization Contract	First commercial bank Cooperative bank Mega International Commercial Bank、ChinaTrust Commercial Bank	November 8, 2018 ~November 7, 2021	Syndicated Authorized Loan	—
Lease Contract	Hsinchu Industrial Park Administration, Technological Department	October 1, 2018 ~December 31, 2037	Land Lease	—
	Hsinchu Industrial Park Administration, Technological Department	August 13, 2007 ~December 31, 2026	Land Lease	—
Supply Contract	A Raw Material Supplier	January 1, 2009 ~December 31, 2018	Wafer Chips Supply	Maintain a certain amount of purchases
	B Raw Material Supplier	March 2007~ December , 2019	Wafer Chips Supply	
	G Raw Material Supplier	October 2007~ December 31, 2018	Wafer Chips Supply	
	AD Raw Material Supplier	March 18, 2020 ~December 31, 2022	Long-term Material Supply	

Notes: Due to the confidential agreement signed by the company and the supply, the code will be used as the expression.

VI. Financial Information

6.1.Five-Year Financial Summary

6.1.1.Condensed Balance Sheet based o IFRS (Standalone)

Unit:in Thousands of New Taiwan Dollars

Item \ Year		Five-Year Financial Summary(Note1)				
		2015	2016	2017	2018 (Reprogram)	2019
Current assets		13,418,506	12,978,463	8,268,325	17,709,815	11,222,358
Property, Plant and Equipment		10,588,629	8,814,227	6,524,410	13,539,446	10,151,154
Intangible assets		512,440	—	—	8,098	4,234
Other assets		9,254,281	9,768,221	12,872,482	17,568,922	17,725,039
Total assets		33,773,856	31,560,911	27,665,217	48,826,281	39,102,785
Current liabilities	Before distribution	9,261,580	9,302,935	11,703,596	17,306,223	8,071,396
	After distribution	9,261,580	9,302,935	11,703,596	17,306,223	8,071,396
Non-current liabilities		4,755,982	6,195,025	4,882,219	6,920,415	10,309,396
Total liabilities	Before distribution	14,017,562	15,497,960	16,585,815	24,226,638	18,380,792
	After distribution	14,017,562	15,497,960	16,585,815	24,226,638	18,380,792
Equity attributable to shareholders of the parent		—	—	—	—	—
Capital stock		8,581,617	10,176,152	10,192,564	25,157,599	26,653,375
Capital surplus		12,211,474	12,345,346	6,028,165	1,011,023	118,989
Legal Reserve		69,422	—	—	—	—
Special Reserve		—	—	—	—	—
Retained Earnings	Before distribution	(1,238,096)	(6,309,786)	(4,611,501)	(675,712)	(6,000,644)
	After distribution	(1,238,096)	(6,309,786)	(4,611,501)	(675,712)	(6,000,644)
Other equity		131,877	(148,761)	(529,826)	(874,568)	(31,028)
Treasury stocks		—	—	—	(18,699)	(18,699)
Non-controlling interest		—	—	—	—	—
Total Shareholders' Equity	Before distribution	19,756,294	16,062,951	11,079,402	24,599,643	20,721,993
	After distribution	19,756,294	16,062,951	11,079,402	24,599,643	20,721,993

Note 1:Financial information for the past five years was audited and。

Note 2:The Group elects to apply the guidance of IFRS 16 in determining whether contracts are, or contain, a lease only to contracts entered into. Contracts identified as containing a lease of power facility, are not meet the definition of a lease under IFRS 16 and be accounted for in accordance with IFRS 15 because the customers do not have the right to direct the use of the identified assets. The Group elected to restate prior reporting periods with the cumulative effect of the initial application of IFRS 16 recognized at the date of initial application in accordance with IAS 8.

6.1.2.Consolidated Condensed Balance Sheet – Based on IFRS

Unit:in Thousands of New Taiwan Dollars

Item \ Year		Five-Year Financial Summary(Note1)					2020/1/1~3/31
		2015	2016	2017	2018 (Reprogram)	2019	
Current assets		19,301,990	17,648,551	12,573,614	23,303,040	17,502,328	16,514,415
Property, Plant and Equipment		12,924,354	12,097,204	11,162,899	25,219,508	19,064,958	18,451,138
Intangible assets		620,471	314,879	261,350	202,962	115,357	113,652
Other assets		6,254,684	6,794,184	10,248,082	9,219,235	10,543,841	8,451,934
Total assets		39,101,499	36,854,818	34,245,945	57,944,745	47,226,484	43,531,139
Current liabilities	Before distribution	12,623,827	12,833,142	16,679,572	22,078,368	12,518,166	12,486,429
	After distribution	12,623,827	12,833,142	16,679,572	22,078,368	12,518,166	12,486,429
Non-current liabilities		6,121,822	7,342,094	6,228,563	10,402,908	13,224,083	11,226,382
Total liabilities	Before distribution	18,745,649	20,175,236	22,908,135	32,481,276	25,742,249	23,712,811
	After distribution	18,745,649	20,175,236	22,908,135	32,481,276	25,742,249	23,712,811
Equity attributable to shareholders of the parent		19,756,294	16,062,951	11,079,402	24,599,643	20,721,993	19,063,950
Capital stock		8,581,617	10,176,152	10,192,564	25,157,599	26,653,375	26,651,126
Capital surplus		12,211,474	12,345,346	6,028,165	1,011,023	118,989	119,289
Legal Reserve		69,422	—	—	—	—	—
Special Reserve		—	—	—	—	—	—
Retained Earnings	Before distribution	(1,238,096)	(6,309,786)	(4,611,501)	(675,712)	(6,000,644)	(6,700,589)
	After distribution	(1,238,096)	(6,309,786)	(4,611,501)	(675,712)	(6,000,644)	(6,700,589)
Other equity		131,877	(148,761)	(529,826)	(874,568)	(31,028)	(987,177)
Treasury stocks		—	—	—	(18,699)	(18,699)	(18,699)
Non-controlling interest		599,556	616,631	258,408	863,826	762,242	754,378
Total Shareholders' Equity	Before distribution	20,355,850	16,679,582	11,337,810	25,463,469	21,484,235	19,818,328
	After distribution	20,355,850	16,679,582	11,337,810	25,463,469	21,484,235	19,818,328

Note 1: Financial information for the past five years was audited and。

Note 2: The Group elects to apply the guidance of IFRS 16 in determining whether contracts are, or contain, a lease only to contracts entered into. Contracts identified as containing a lease of power facility, are not meet the definition of a lease under IFRS 16 and be accounted for in accordance with IFRS 15 because the customers do not have the right to direct the use of the identified assets. The Group elected to restate prior reporting periods with the cumulative effect of the initial application of IFRS 16 recognized at the date of initial application in accordance with IAS 8.

6.1.3.Condensed Statement of Income (Standalone)

Unit:in Thousands of New Taiwan Dollars

Item \ Year	Five-Year Financial Summary (Note)				
	2015	2016	2017	2018 (Reprogram)	2019
Operating Revenue	19,468,555	15,171,908	9,119,985	10,419,460	14,911,766
Income from Operations	480,845	(1,597,528)	(2,088,573)	(833,060)	(723,056)
Non-Operating Income and Expenses	(600,866)	(4,867,063)	(3,292,438)	(1,920,408)	(3,655,667)
Net Income before Tax	(854,770)	(1,442,442)	(861,362)	1,344,298	(2,029,922)
Net income from operations of continued segments	(1,455,636)	(6,309,505)	(4,153,800)	(576,110)	(5,685,589)
Loss from discontinued segments	(1,455,641)	(6,309,786)	(4,154,163)	(577,240)	(5,686,065)
Net Income for the period	–	–	–	–	–
Other comprehensive income for the period - After tax	(1,455,641)	(6,309,786)	(4,154,163)	(577,240)	(5,686,065)
Total comprehensive income for the period	73,931	(312,630)	(325,081)	(286,629)	837,400
Net income attributable to parent company	(1,381,710)	(6,622,416)	(4,479,244)	(863,869)	(4,848,665)
Net income attributable to non-controlling interest	–	–	–	–	–
Total comprehensive profit and loss attributable to parent company	–	–	–	–	–
Total comprehensive profit and loss attributable to non-controlling interest	–	–	–	–	–
Earnings per Share	–	–	–	–	–
Operating Revenue	(1.71)	(6.53)	(4.08)	(0.42)	(2.26)

Note: Financial information for the past five years was audited and certified by Certified Public Accountants.

Note 2: The Group elects to apply the guidance of IFRS 16 in determining whether contracts are, or contain, a lease only to contracts entered into. Contracts identified as containing a lease of power facility, are not meet the definition of a lease under IFRS 16 and be accounted for in accordance with IFRS 15 because the customers do not have the right to direct the use of the identified assets. The Group elected to restate prior reporting periods with the cumulative effect of the initial application of IFRS 16 recognized at the date of initial application in accordance with IAS 8.

6.1.4.Condensed Statement of Income (Consolidated)

Unit:in Thousands of New Taiwan Dollars

Item \ Year	Five-Year Financial Summary (Note)					
	2015	2016	2017	2018 (Reprogram)	2019	2020/1/1~3/31
Operating Revenue	22,214,496	16,537,125	10,247,887	13,137,025	18,139,112	2,986,853
Income from Operations	625,176	(1,912,373)	(1,983,395)	(884,136)	(984,323)	(280,844)
Non-Operating Income and Expenses	(1,300,069)	(6,350,959)	(3,892,948)	(2,863,361)	(5,221,950)	(745,289)
Net Income before Tax	(252,886)	(64,648)	(237,778)	2,281,499	(484,606)	39,056
Net income from operations of continued segments	(1,552,955)	(6,415,607)	(4,130,726)	(581,862)	(5,706,556)	(706,233)
Loss from discontinued segments	(1,538,402)	(6,408,874)	(4,159,989)	(605,168)	(5,769,189)	(713,388)
Net Income for the period	–	–	–	–	–	–
Other comprehensive income for the period - After tax	(1,538,402)	(6,408,874)	(4,159,989)	(605,168)	(5,769,189)	(713,388)
Total comprehensive income for the period	90,564	(346,339)	(363,194)	(270,698)	820,072	(956,006)
Net income attributable to parent company	(1,447,838)	(6,755,213)	(4,523,183)	(875,866)	(4,949,117)	(1,669,394)
Net income attributable to non-controlling interest	(1,455,641)	(6,309,786)	(4,154,163)	(577,240)	(5,686,065)	(699,945)
Total comprehensive profit and loss attributable to parent company	(82,761)	(99,088)	(5,826)	(27,928)	(83,124)	(13,443)
Total comprehensive profit and loss attributable to non-controlling interest	(1,381,710)	(6,622,416)	(4,479,244)	(863,869)	(4,848,665)	(1,661,500)
Earnings per Share	(66,128)	(132,797)	(43,939)	(11,997)	(100,452)	(7,894)
Operating Revenue	(1.71)	(6.53)	(4.08)	(0.42)	(2.26)	(0.26)

Note: Financial information for the past five years was audited and certified by Certified Public Accountants.

Note 2: The Group elects to apply the guidance of IFRS 16 in determining whether contracts are, or contain, a lease only to contracts entered into. Contracts identified as containing a lease of power facility, are not meet the definition of a lease under IFRS 16 and be accounted for in accordance with IFRS 15 because the customers do not have the right to direct the use of the identified assets. The Group elected to restate prior reporting periods with the cumulative effect of the initial application of IFRS 16 recognized at the date of initial application in accordance with IAS 8.

6.1.5.Auditors' Opinions for Last Five Years

Year	CPA's Name	Auditing Opinion	Note
2015	Deloitte & Touche	Cheng-Chih Lin、Shu-Chieh Huang	An Unqualified Report
2016	Deloitte & Touche	Cheng-Chih Lin、Shu-Chieh Huang	Other Differences in the Opinion Paragraph
2017	Deloitte & Touche	Cheng-Chih Lin、Shu-Chieh Huang	Other Differences in the Opinion Paragraph
2018	Deloitte & Touche	Yi-Hsin Kao、Yu-Feng Huang.	Other Differences in the Opinion Paragraph
2019	Deloitte & Touche	Yi-Hsin Kao、Yu-Feng Huang.	Qualified Conclusion, Emphasis of matter and other matters

6.2.Five-Year Financial Analysis

6.2.1.Financial Analysis based on IFRS (Standalone)

Item	Year	Financial Analysis for the Past Five Years				
		2015	2016	2017	2018	2019
Financial structure (%)	Ratio Of Liabilities To Assets	41.50	49.10	59.95	47.29	47.01
	Ratio Of Long-Term Capital To Property, Plant and Equipment	231.50	252.52	244.64	234.73	305.69
Solvency (%)	Current Ratio	144.88	139.51	70.65	113.05	139.04
	Quick Ratio	119.97	113.87	58.96	99.00	107.54
	Times Interest Earned Ratio	-	-	-	-	-
Operating performance	Accounts Receivable Turnover (Turns)	4.39	4.14	3.99	4.48	5.83
	Average Collection Period	83	88	91	81	63
	Inventory Turnover (Turns)	10.02	7.27	5.62	5.87	6.49
	Accounts Payable Turnover (Turns)	11.67	11.74	11.62	7.79	8.95
	Average Days In Sales	36	50	65	62	56
	Property, Plant and Equipment Turnover (Turns)	1.73	1.56	1.19	1.03	1.26
	Total Assets Turnover (Turns)	0.58	0.46	0.31	0.28	0.34
Profitability	Return On Total Assets (%)	(3.87)	(18.48)	(12.38)	(0.41)	(11.93)
	Return On Shareholders' Equity (%)	(7.10)	(35.23)	(30.61)	(2.60)	(25.09)
	Ratio of net profit to paid-in capital before tax (%)	(16.96)	(62.00)	(40.75)	(1.86)	(21.33)
	Profit Ratio (%)	(7.48)	(41.59)	(45.55)	(4.54)	(38.13)
	Earnings Per Share ($) (Note:1)	(1.71)	(6.53)	(4.08)	(0.34)	(2.26)
Cash flow	Cash Flow Ratio (%)	17.19	(Note2)	9.44	2.27	(Note 2)
	Cash Flow Adequacy Ratio (%)	8.26	7.74	47.70	47.19	32.19
	Cash Reinvestment Ratio (%)	4.17	(Note2)	3.98	0.78	(Note 2)
Leverage	Operating Leverage	(Note3)	(Note3)	(Note3)	(Note3)	(Note 3)
	Financial Leverage	(Note3)	(Note3)	(Note3)	(Note3)	(Note 3)

Analysis of financial ratio differences for the last two years. (Not required if the difference does not exceed 20%)

1. The proportion of long-term funds account for property, plant, and equipment:
   The property, plant, and equipment decreased mainly due to the recognition of impairment loss of property, plant, and equipment in 2019; therefore, the ratio of long-term funds accounts for property, plant, and equipment has increased.
2. Solvency:
   The current ratio and quick ratio increased compared to 2018 because the repayment of short-term loans and corporate bonds in 2019 has increased compared to 2018. Moreover, the operating loss in 2019 increased compared to 2018, making interest protection multiples reduce.
3. Operating capability:
   The turnover ratio of the receivables, property, plant, equipment, and total assets increased mainly due to the increase in sales revenue in 2019 compared to 2018.
4. Profitability:
   The financial indicators such as return on assets, return on equity, pre-tax net profit accounts for paid-in capital, net profitability, and earnings per share decreased compared to 2018 is mainly because the operating losses in 2019 increased compared to 2018.
5. Cash flow:
   The ratio of cash flow, cash flow adequacy, and cash reinvestment decreased compared to 2018 was mainly due to the net cash outflow arising from the business activities in 2019.

Notes 1: Earnings per share are calculated based on the number of weighted average shares outstanding during the year.
Notes 2: If the net cash flow from operating activities is negative, shall not be calculated.
Notes 3: The operating loss of the year shall not be calculated.

1. Financial Structure
(1) Ratio Of Liabilities To Assets = Total Liabilities/ Total Assets
(2) Ratio Of Long-Term Capital To Property, Plant and Equipment = (Net Shareholder's Equity + Non-current Liabilities)/ Net Property, Plant and Equipment
2. Solvency
(1) Current Ratio = Current Assets / Current Liabilities.
(2) Quick Ratio = (Current Assets – Inventories – Prepaid Expenses) / Current Liabilities.
(3) Times Interest Earned Ratio = Earnings before Interests And Taxes/ Interest Expenses.
(1) Current Ratio = Current Assets / Current Liabilities.
(2) Quick Ratio = (Current Assets – Inventories – Prepaid Expenses) / Current Liabilities.
(3) Times Interest Earned Ratio = Earnings before Interests And Taxes/ Interest Expenses.
3. Operating Ability
(1) Accounts Receivable Turnover = Net Sales / Average Trade Receivables.
(2) Average Collection Period = 365 / Accounts Receivable Turnover.
(3) Inventory Turnover = Cost Of Goods Sold / Average Inventory.
(4) Accounts Payable Turnover = Cost Of Goods Sold / Average Accounts Payable.
(5) Average Days In Sales = 365 / Inventory Turnover.
(6) Property, Plant and Equipment Turnover = Net Sales / Net Property, Plant and Equipment.
(7) Total Assets Turnover = Net Sales / Total Assets.
4. Profitability
(1) Return on Total Assets (%) = [Net Income + Interest Expense x (1-Effective Tax Rate)] / Average Total Assets.
(2) Return on Stockholders' Equity = Net Income / Average Stockholders' Equity.
(3) Profit Ratio (%) = Net Income / Net Sales.
(4) Earnings Per Share ($)= (Net Income – Preferred Stock Dividend) / Weighted Average Number of Shares Outstanding..
5. Cash Flow
(1) Cash Flow Ratio (%) = Net Cash Provided by Operating Activities / Current Liabilities.
(2) Cash Flow Adequacy Ratio (%) = Five-year Sum of Cash from Operations / Five-year (Capital Expenditures + Inventories Additions + Cash Dividend)
(3) Cash Reinvestment Ratio (%) = (Net Cash Provided by Operating Activities - Cash Dividend) / (Gross Fixed Assets + Long-Term investments + Other Assets + Working Capital)
6. Leverage
(1) Operating Leverage = (Net Sales – Variable Cost) / Income from operations.
(2) Financial Leverage = Income from operations / (Income from operations – Interest Expenditures).

6.2.2.Financial Analysis based on IFRS (Consolidated)

Item \ Year		Financial Analysis for the Past Five Years 2015	2016	2017	2018	2019	2020/1/1~3/31
Financial structure (%)	Ratio Of Liabilities To Assets	47.94	54.74	66.89	55.73	54.51	54.47
	Ratio Of Long-Term Capital To Property, Plant and Equipment	204.87	198.57	157.36	180.53	182.05	168.25
Solvency (%)	Current Ratio	152.90	137.52	75.38	106.35	139.82	132.26
	Quick Ratio	114.17	96.32	56.33	88.13	94.30	87.83
	Times Interest Earned Ratio	-	-	-	0.33	-	-
Operating performance	Accounts Receivable Turnover (Turns)	4.25	3.89	3.86	4.52	5.23	3.82
	Average Collection Period	86	94	95	81	70	96
	Inventory Turnover (Turns)	6.24	3.70	2.84	4.06	4.34	2.55
	Accounts Payable Turnover (Turns)	11.89	10.95	9.84	8.67	10.76	8.48
	Average Days In Sales	58	99	129	90	84	143
	Property, Plant and Equipment Turnover (Turns)	1.64	1.32	0.88	0.83	0.82	0.64
	Total Assets Turnover (Turns)	0.58	0.44	0.29	0.28	0.34	0.26
Profitability	Return On Total Assets (%)	(3.46)	(15.93)	(10.01)	0.13	(9.64)	(4.97)
	Return On Shareholders' Equity (%)	(7.31)	(34.61)	(29.70)	(2.50)	(24.58)	(13.82)
	Ratio of net profit to paid-in capital before tax (%)	(18.10)	(63.05)	(40.53)	(1.75)	(21.41)	(10.60)
	Profit Ratio (%)	(6.93)	(38.75)	(40.59)	(3.57)	(31.81)	(23.88)
	Earnings Per Share ($) (Note:1)	(1.71)	(6.53)	(4.08)	(0.34)	(2.26)	(0.26)
Cash flow	Cash Flow Ratio (%)	6.11	(Note2)	2.60	(Note2)	(Note 2)	18.82
	Cash Flow Adequacy Ratio (%)	(Note2)	(Note2)	7.04	(Note2)	(Note 2)	(Note 2)
	Cash Reinvestment Ratio (%)	1.59	(Note2)	1.43	(Note2)	(Note 2)	4.54
Leverage	Operating Leverage	(Note3)	(Note3)	(Note3)	(Note3)	(Note 3)	(Note 3)
	Financial Leverage	(Note3)	(Note3)	(Note3)	(Note3)	(Note 3)	(Note 3)

Analysis of financial ratio differences for the last two years. (Not required if the difference does not exceed 20%)

1. The proportion of long-term funds account for property, plant, and equipment:
   The property, plant, and equipment decreased mainly due to the recognition of impairment loss and the disposal of subsidiary's withdrawal of property, plant, and equipment in 2019; therefore, the ratio of long-term funds accounts for property, plant, and equipment has increased.
2. Solvency:
   The current ratio and quick ratio increased compared to 2018 because the repayment of short-term loans and corporate bonds in 2019 has increased compared to 2018. Moreover, the operating loss in 2019 increased compared to 2018, making interest protection multiples reduce.
3. Operating capability:
   The turnover ratio of the payables, property, plant, and equipment increased mainly due to the increase in sales cost as well as revenue in 2019.
4. .Profitability:
   The financial indicators such as return on assets, return on equity, pre-tax net profit accounts for paid-in capital, net profitability, and earnings per share decreased compared to 2018 is mainly because the operating losses in 2019 increased compared to 2018.

Notes 1: Earnings per share are calculated based on the number of weighted average shares outstanding during the year.
Notes 2: If the net cash flow from operating activities is negative, shall not be calculated.
Notes 3: The operating loss of the year shall not be calculated.
Notes 4: The calculation formula of financial analysis, such as financial analysis - International Financial Reporting Standard (Consolidative).

6.3.Audit Committee's Report in the Most Recent Year:

United Renewable Energy Co., Ltd.
Audit Committee's Review Report

The Board of Directors has prepared the Company's 2019 Business Report, Financial Statements, and loss offsetting list. The CPA firm of Deloitte & Touche was retained to audit URE's Financial Statements and has issued an audit report relating to the Financial Statements. The Business Report, Financial Statements, and loss offsetting list have been reviewed and determined to be correct and accurate by the Audit Committee members of United Renewable Energy Co., Ltd.. According to Article 14-4 of the Securities and Exchange Act and Article 219 of the Company Law, we hereby submit this report. 。

The Audit Committee of United Renewable Energy Co., Ltd
Chairman：Independent Director MING-JENG, WENG
March 26, 2020

6.4.Financial Statemets for the Years Ended December 31,2019 ：Please refer page 91~179.

6.5.Consolidated Financial Statemets for the Years Ended December 31,2019 ：Please refer page 180~289.

6.6.The Impact on the Company's Financial Status in Cases where the Company or its Affiliates have Financial Difficulties: None

VII. Review of Financial Conditions, Operating Results, and Risk Management

7.1.Analysis of Financial Status

Unit:in Thousands of New Taiwan Dollars

Year / Item	2018 (Reprogram)	2019	Difference	
			Amount	%
Current Assets	23,303,040	23,303,040	23,303,040	23,303,040
Fixed Assets	25,219,508	25,219,508	25,219,508	25,219,508
intangible asset	202,962	202,962	202,962	202,962
intangible asset	9,219,235	9,219,235	9,219,235	9,219,235
Total Assets	57,944,745	57,944,745	57,944,745	57,944,745
current liabilities	22,078,368	22,078,368	22,078,368	22,078,368
non-current liabilities	10,402,908	10,402,908	10,402,908	10,402,908
Total Liabilities	32,481,276	32,481,276	32,481,276	32,481,276
Capital	25,157,599	25,157,599	25,157,599	25,157,599
Capital Surplus	1,011,023	1,011,023	1,011,023	1,011,023
reserve surplus (or accumulated deficit)	(675,712)	(675,712)	(675,712)	(675,712)
Equity - Other	(874,568)	(874,568)	(874,568)	(874,568)
Treasury Stock	(18,699)	(18,699)	(18,699)	(18,699)
Non-controlling Interests	863,826	863,826	863,826	863,826
Total Equity	25,463,469	25,463,469	25,463,469	25,463,469

Explanation of significant change of items: (The amount changed by more than 10%, and the amount reached 1% of the total assets of the year.)

1. Current assets: Cash and other current assests decreased is mainly because the repayment of corporate bonds in 2019.
2. Property, plant, and equipment: It is mainly because of the strategy of operating transformation in 2019, the future cash inflow of cash-generating units that are expected to use to produce batteries decreased, causing the recognition of impairment loss of property, plant, and equipment, and the disposal of subsidiary withdrawal.
3. Other assets: Mainly due to the recognition of right-of-use assets and the increase of financial assets measured at fair value through other comprehensive profits and losses under IFRS 16.
4. Current liabilities: Mainly due to the decrease of the repayment of corporate bonds in 2019 and short-term loans.
5. Non-current liabilities: Mainly due to long-term loans and the recognition of increased lease liability in accordance with the provisions of IFRS 16.
6. Capital reserve: It is mainly because the shareholders' meeting in 2019 approved the plan of loss appropriation for the year of 2018 to make up for the losses with capital reserves, and perform capital increase by cash in 2019, and issued discount common stock.
7. Retained earnings (cumulative losses): Mainly due to the increase in operating loss in 2019 compared to 2018.
8. .Other equity: Mainly due to the increase in non-current assessment, the financial assets measured at fair value through other comprehensive profits and losses in 2019.

7.2.Analysis of Operating Results

7.2.1.Comparison Analysis of Business Results

Unit:in Thousands of New Taiwan Dollars

Item \ Year	2018 (Reprogram)	2019	Percent Change	
			Amount	%
Total Net Revenues	13,137,025	18,139,112	5,002,087	38.08
Cost of Revenue	14,021,161	19,123,435	5,102,274	36.39
Gross Profit	(884,136)	(984,323)	(100,187)	11.33
Operating Expense	1,718,847	2,470,935	752,088	43.76
Other Income And Expenses	(260,378)	(1,766,692)	(1,506,314)	578.51
Loss From Operations	(2,863,361)	(5,221,950)	(2,358,589)	82.37
Total non-operating income and expenses	2,281,499	(484,606)	(2,766,105)	(121.24)
Loss Before Income Tax	(581,862)	(5,706,556)	(5,124,694)	880.74
Income Tax Expense	(23,306)	(62,633)	(39,327)	168.74
Net Loss For The Year	(605,168)	(5,769,189)	(5,164,021)	853.32

Explanation of significant change of items: (The amount changed by more than 10%, and the amount reached 1% of the total assets of the year.)

1. Net sales income, sales cost, operating expenses, operating (losses) profits, pre-tax (losses) profits, and after-tax (net loss) net profits: It is mainly due to the merger of Gintech Energy Corporation, Solartech Energy Corp., and the Company in October 2018, causing the increase in sales revenue, sales cost, and operating expenses simultaneously. Both module business revenue and gross profit have grown. However, the battery business has suffered a decline in profit in the second half of 2018 due to the impact of significant expansion of production of China; therefore, the gross loss of sales increased compared to 2018. Besides, the listed impairment loss in 2019 increased compared to 2018, and the operating losses, pre-tax losses, and after-tax net losses increased compared to 2018 is because of the bargain purchase gains arising from the merger in 2018.
2. Other income and expenses: It is because the strategy of operating transformation in 2019, the future cash inflow of cash-generating units that are expected to use to produce batteries decreased due to the impairment loss of the recognition of property, plant, and equipment, and there is no demand for future use in intangible assets after the evaluation, and the assessed recoverable amount is less than the carrying amount. Consequently, the intangible assets is recognized as an impairment loss.
3. Non-operating income and expenses: It is mainly due to the bargain purchase gains arising from the merger of Gintech Energy Corporation, Solartech Energy Corp., and the Company in 2018 that makes the non-operating income decrease compared to 2018.

7.2.2.The analysis of operating gross profit changes

Unit:in Thousands of New Taiwan Dollars

Items	The increased/decreased number of change of the initial and later period	Reason for difference, advantages and disadvantages				
		Price difference	Cost difference	Sales difference	Quantity difference	Other
Solar cells and modules	515,228	(2,134,704)	2,979,992	690,192	(1,020,251)	-

7.3.Cash Flow

7.3.1.The liquidity analysis for the recent two years

Unit:in Thousands of New Taiwan Dollars；%

Items	2018 (Reprogram)	2019	Increased (decreased) amount	Increased (decreased) ratio
Operational activities	(457,967)	(1,224,726)	(766,759)	167.43
Investment activities	5,001,008	3,694,181	(1,306,827)	(26.13)
Fundraising activities	542,186	(5,617,082)	(6,159,268)	(1,136.01)

Explanation of significant change of items: (The change in the previous and later period reached more than 50%, and the amount of change reached 5% or more of the paid-up capital.)

Fundraising activity: Net cash outflow arising from fundraising activity is mainly because the repayment of corporate bonds in 2019 and the amount of capital increase by cash in 2019 decreased compared to 2018

7.3.2.The cash liquidity analysis for the next year

Unit:in Thousands of New Taiwan Dollars

Initial cash balance	Estimated net cash flow from the operating activities for the whole year	Estimated cash flow from the investment and fundraising activities for the whole year	Estimated remaining cash amount	Remedial measures for estimated cash shortfalls	
				Investment Plan	Financing Plan
6,371,316	(10,901)	(146,317)	6,214,098	Not applicable	Not applicable

1. The analysis of the change of cash flow liquidity for the next year:
(1) The net cash outflow from operating activities was approximately NT$ 10,901thousand.
(2) The net cash inflow from estimated investment and fundraising activities was NT$ 146,317 thousand, which is due to the increase in borrowings and the disposal of power plant business.
2. Remedial measures and liquidity analysis for expected cash shortfalls: not applicable.

7.4.Financial business impact on important capital expenditures

7.4.1.The usage of important capital expenditures and sources of funds

Unit:in Thousands of New Taiwan Dollars

Planning Items	Actual or expected sources of funds	The needed total amount of funds	actual or expected funds usage		
			2019	2020	2021
Equipment Expansion	Borrowed form the bank and capital increase by cash	659,000	146,344	179,958	332,698

7.4.2.The estimated benefits may possibly produce: It is expected to effectively increase production productivity and increase production.

7.5.Recent Reinvestment Policy, Major Reasons for Profits or Losses, Improvement Plan and Investment Plan for the Following Year：

7.5.1.The re-investment policy of the company

The company's re-investment policy is mainly based on current business-related investment targets. The relevant executive departments comply with the internal control system "investment cycle" and the "procedures for acquisition or disposal of assets." The above-mentioned methods or procedures are approved by the board of directors or shareholders' meeting discussion.

7.5.2.Major reasons for reinvestment profits or losses, improvement plans and investment plan for the following year:

Unit:in Thousands of New Taiwan Dollars

Investee Company	Main Businesses and Products	2019/12/31			Major Reasons For Profits or Losses	Improvement Plan	Investment Plant For Following Year
		Investment Amount	Carrying Value	Net Income (Loss) of the Investee			
UES	Investment company	1,910,636	1,987,414	18,742	Recognized investment benefits of subsidiary.	–	–
DelSolar Cayman	Investment company	4,906,789	923,603	(1,132,534)	Recognized subsidiaries'' investment loss of Chinese and United States of American.	To allocate investment gain upon improvement of subsidiary's business operation.	To raise capital upon development of United of States of American projects.
NSP BVI	Investment company	1,426,179	1,411,425	41,205	Recognized subsidiary CFY investment gain.	–	–
GES ME	Solar related business	418,805	357,850	148	Power generation revenue from portion of the completed solar project.	–	The other 6 MWp project will be determine upon the situation of development
Apex	Solar related business	165,994	190,890	13,549	Power generation revenue from solar project	–	–
NSP UK	Investment company	138,967	182,919	38,317	Revenue has been generated due to sales of the subsidiaries.	–	–
NSP System	Solar related business	144,200	140,877	55,126	Profit gain from the put up solar project 22.6 MW solar power project on 2019.	–	–
Prime Energy	Electronic component manufacturing and selling	90,000	79,992	2	–	–	Disbanded in October 2019
New Ray Investment	Investment company	115,000	72,524	1,192	Investment gain from the company	–	–
Zhongyang	Solar related business	24,121	37,104	5,665	Power plant sale benefits on 2019	–	–
Huiyang	Solar related business	30,427	14,489	(318)	–	–	Disbanded in September 2019
UREE	Solar related business	20,000	18,565	(5,511)	–	–	–
DelSolar Singapore	Investment company	29,743	14,489	(109)	Recognized investment benefits of subsidiary.	–	–
BPS	Solar related business	6,000	21,353	11,388	Construction revenue from solar power plant	–	–
SMC	Solar related business	9,720	9,844	186	–	–	–
Solartech Japan	Solar related business	-	-	(25,587)	–	–	Cancelled in Q2 of 2019
Utech	Electronic component manufacturing	337,114	(264,541)	(429,066)	As demand and price bottomed, company lower production and inventory, but speed of price collapse plus popularity of mono crystalline product lead to losses。	Company will altered silicon wafer business strategy based on market condition. Company will focus on Hydrogen fuel cell business and sales, providing growth momentum and return to profitability。	Capital increase based on fund needed.
Yong Liang	Solar related business	249,000	246,742	7,625	Project has been completed with steady revenue generation.	–	Expand capacity from new acquisition.
Yong Zhou	Solar related business	46,500	5,829	(6,063)	The improvement has not been shown due to adjusted strategies.	The improvement has not been shown due to adjusted strategies.	Capital raise as required with alignment of improvement plan.
Ever Lite	Electronic component selling	-	1	3,960	–	–	Dissolution and liquidation completed in February 109

Investee Company	Main Businesses and Products	2019/12/31			Major Reasons For Profits or Losses	Improvement Plan	Investment Plant For Following Year
		Investment Amount	Carrying Value	Net Income (Loss) of the Investee			
Yong Shun	Solar related business	2,000	799	(115)	Still under construction phase.	To facilitate the completion of the project to recognized power generation revenue.	Capital raise as required with alignment of construction.
JRC	Solar related business	3,717	466	(14,472)	Incurred loss due to JRC's module	Assure maintain operation and control of relevant expenses	–
GES UK	Investment company	3,170,893	2,443,709	44,824	Recognized investment benefits of subsidiary.	–	–
Neo Cathay	Investment company	600,000	608,967	43,102	Recognized investment benefits of subsidiary.	–	–
TSST	Solar related business	417,692	86,638	(394,955)	Allocate loss fix assets value loss due to market down- turn.	–	–
V5 Technology	Electronic component manufacturing and selling	114,084	66,769	360	–	Allocate investment profit upon improvement of the business operation.	–
Gintung	Electronic component manufacturing	34,341	-	(44,424)	Incurred loss for fiscal year of 2019 due to anticipate bad debt from specific clients	Focus on the development of the business with periodic assessment of client's credit.	–
DSET	Solar related business	10,500	3,604	(11,227)	Start -up phase.	To allocate investment gain upon improvement of the operation	–
Solar PV	Investment company	-	-	(1,769)	–	–	De-registered in January 2020
Dashiangying	Solar related and agriculture related business	100	71	(29)	Start -up phase.	To allocate investment gain upon improvement of the operation	–
Shinkai	Solar related and agriculture related business	100	71	(29)	Start -up phase.	To allocate investment gain upon improvement of the operation	–
Shanshang	Solar related and agriculture related business	100	71	(29)	Start -up phase.	To allocate investment gain upon improvement of the operation	–
Jiangung	Solar related and agriculture related business	100	71	(29)	Start -up phase.	To allocate investment gain upon improvement of the operation	–
Dungshr	Solar related and agriculture related business	100	71	(29)	Start -up phase.	To allocate investment gain upon improvement of the operation	–
yanshan	Solar related and agriculture related business	100	71	(29)	Start -up phase.	To allocate investment gain upon improvement of the operation	–
RES	Investment company	1,971,918	1,951,370	18,742	Recognized investment benefits of subsidiary.	–	–
Gintech (Thailand)	Solar related business	1,964,202	1,943,986	18,714	Production optimization lead to lower cost and operating expenses	To develop solar project with local developer.	To raise capital upon requirement and align with company strategies.
GES USA	Investment company	1,572,325	1,420,097	110,295	Recognized investment benefits of subsidiary.	To facilitate the completion of the project to recognized power generation revenue.	Capital raise as required with alignment of construction.
NCH Solar 1	Solar related business	395,106	309,166	7,660	Project has been completed with steady revenue generation.	–	–
GES Solar 2	Solar related business	61,326	26,892	214	Project has been completed with steady revenue generation.	–	–
GES Solar 3	Solar related business	3,328	(3,799)	(832)	Incurred loss due to not reaching economy of scale.	Manage and control relevant expenses.	–
GES CANADA	Investment company	371,356	79,118	(15,359)	Recognized loss from JRC.	To allocate investment gain upon improvement of subsidiary's business operation.	–
GES JAPAN	Investment company	665,781	714,485	(4,238)	Due to corporate tax	–	–
ET ENERGY	Solar related business	-	-	-	–	–	Sold on 2019 Jan
TIPPING POINT	Solar related business	-	-	-	–	–	Sold on 2019 Jan
MEGATWO	Solar related business	535,187	429,114	(8,625)	Still under construction phase	To facilitate the completion of the project to recognized power generation revenue	Capital raise as required with alignment of construction.
MEGATHREE	Solar related business	38,606	34,759	1,861	Project has been completed with steady revenue generation	–	–
MEGAFIVE	Solar related business	19,527	19,144	674	Project has been completed with steady revenue generation	–	–
MEGASIX	Solar related business	81,496	71,441	(5,923)	Incurred loss due to the project has just been completed at middle of the year.	–	–
MEGAEIGHT	Solar related business	25,843	20,897	(1,156)	Incurred losses due to not reaching economy of scales.	–	–
MEGATWELVE	Solar related business	5,204	2,570	(928)	Incurred losses due to not reaching economy of scales.	–	–
MEGATHIRTEEN	Solar related business	58,031	55,891	(910)	Incurred loss due to the project has just been completed at middle of the year.	–	–
MEGASIXTEEN	Solar related business	351,772	324,611	(16,682)	Recognized loss of the subsidiaries	–	–
MEGASEVENTEEN	Solar related business	-	-	(1,544)	Termination of project, loss as result of DD related expenses	–	As there is no new plan, start liquidation process

Investee Company	Main Businesses and Products	2019/12/31			Major Reasons For Profits or Losses	Improvement Plan	Investment Plant For Following Year
		Investment Amount	Carrying Value	Net Income (Loss) of the Investee			
MEGANINETEEN	Solar related business	4,025	2,202	(302)	Incurred losses due to not reaching economy of scales.	–	–
MEGATWENTY	Solar related business	3,769	4,527	287	Project has been completed with steady revenue generation.	–	–
ASSET ONE	Solar related business	34,229	30,039	245	Project has been completed with steady revenue generation.	–	–
ASSET TWO	Solar related business	-	(296)	(102)	Incurred daily expenses with project still under construction.	Price adjustment for labor cost	–
ASSET THREE	Solar related business	87,289	55,684	(7,595)	Recognized loss of the subsidiaries	–	–
ASSET FOUR	Solar related business	-	-	(102)	No new plan, loss as result of auditor and LLC related expenses	–	As there is no new plan, start liquidation process
CENERGY	Solar related business	-	-	(77)	No new plan, loss as result of auditor and LLC related expenses	–	As there is no new plan, start liquidation process
SH4	Solar related business	20,665	17,716	24	Project has been completed with steady revenue generation.	–	–
CEDAR FALLS	Solar related business	70,428	60,601	(777)	Project has been completed with steady revenue generation.	–	–
Schenectady	Solar related business	-	(5,761)	(338)	Still under construction phase	To facilitate the completion of the project to recognized power generation revenue.	–
VOC	Solar related business	-	(1,539)	(241)	Still under construction phase	To facilitate the completion of the project to recognized power generation revenue.	–
SEG	Solar related business	24,144	21,078	(2,532)	Loss as result of legal proceeding against module product	Legal proceeding ended, could turn profitable in the future	–
KINECT	Solar related business	8,143	9,164	718	Project has been completed with steady revenue generation.	–	–
RER CT 57	Solar related business	62,093	58,128	2,293	Project has been completed with steady revenue generation.	–	–
TEV II	Solar related business	3,018	(30,084)	(7,337)	Recognized investment loss of subsidiary.	–	–
Illini Power LLC	Solar related business	-	(23)	(24)	Still under construction phase	Speed up the development plan	And complete the sale of the case before NTP
PS CS LLC	Solar related business	-	(23)	(24)	Still under construction phase	Speed up the development plan	And complete the sale of the case before NTP
LITH CS LLC	Solar related business	-	(23)	(24)	Still under construction phase	Speed up the development plan	And complete the sale of the case before NTP
ZION CS LLC	Solar related business	-	(26)	(26)	Still under construction phase	Speed up the development plan	And complete the sale of the case before NTP
HEYWOOD	Solar related business	98,857	74,398	(1,172)	Still under construction phase	Speed up the development plan	And complete the sale of the case before NTP
Energy Group NY 63	Solar related business	-	-	-	–	–	–
MP Solar	Solar related business	178,915	176,647	(171)	Still under construction phase	To facilitate the completion of the project	And complete the sale of the case before the COD。
Ventura	Solar related business	165,805	163,900	(143)	Still under construction phase	To facilitate the completion of the project	And complete the sale of the case before the COD。
Livermore	Solar related business	4,499	1,538	(18)	Still under construction phase	Speed up the development plan	–
Industrial Park	Solar related business	11,998	11,836	(167)	Still under construction phase	To facilitate the completion of the project	–
Hillsboro	Solar related business	55,858	55,667	389	Project has been completed with steady revenue generation.	–	–
Hashimoto	Solar related business	55,893	58,887	3,016	Project has been completed with steady revenue generation.	–	–
JRC	Solar related business	371,967	33,648	(14,472)	Project has been completed with steady revenue generation.	–	–
MUNISOL	Solar related business	512,519	450,081	(8,419)	Still under construction phase	To facilitate the completion of the project	And complete the sale of the case before the COD
SHIMA'S	Solar related business	4,496	3,986	(282)	Project has been completed with steady revenue generation.	Price adjustment for labor cost	–
WAIMEA	Solar related business	16,185	16,466	440	Project has been completed with steady revenue generation.	–	–
HONOKAWAI	Solar related business	12,260	13,420	668	Project has been completed with steady revenue generation.	–	–
ELEELE	Solar related business	19,589	20,149	490	Project has been completed with steady revenue generation.	–	–
HANALEI	Solar related business	8,595	7,669	(207)	Project has been completed with steady revenue generation.	Price adjustment for labor cost	–
KAPAA	Solar related business	23,391	22,206	(348)	Project has been completed with steady revenue generation.	Price adjustment for labor cost	–
KOLOA	Solar related business	17,506	17,782	252	Project has been completed with steady revenue generation.	–	–
GES AC	Solar related business	738,518	747,819	(16,640)	Recognized investment benefits of subsidiary.	–	–

Investee Company	Main Businesses and Products	2019/12/31			Major Reasons For Profits or Losses	Improvement Plan	Investment Plant For Following Year
		Investment Amount	Carrying Value	Net Income (Loss) of the Investee			
ANDERSON N.	Solar related business	410,752	393,920	(5,677)	Project has been completed with steady revenue generation. But the investment recovery period is not reached	–	–
ANDERSON S.	Solar related business	348,325	334,197	(4,744)	Project has been completed with steady revenue generation. But the investment recovery period is not reached	–	–
Flora	Solar related business	58,235	56,279	(635)	Project has been completed with steady revenue generation. But the investment recovery period is not reached	–	–
Greenfield	Solar related business	262,480	251,393	(3,986)	Project has been completed with steady revenue generation. But the investment recovery period is not reached	–	–
Spiceland	Solar related business	38,767	37,276	(495)	Project has been completed with steady revenue generation. But the investment recovery period is not reached	–	–
TEV Solar	Solar related business	3,018	2,813	(86)	Recognized investment loss of subsidiary. But the investment recovery period is not reached	–	Starting liquidating process
AC GES Solar	Solar related business	593,754	590,066	(2,966)	Recognized investment loss of subsidiary. But the investment recovery period is not reached	–	–
Richmond	Solar related business	581,226	574,499	(1,897)	Project has been completed with steady revenue generation. But the investment recovery period is not reached	–	–
Rensselaer	Solar related business	299,760	596,664	(596)	Project has been completed with steady revenue generation.	–	–
Advance	Solar related business	16,106	15,891	(78)	But the investment recovery period is not reached	–	–
CFY	Investment company	1,169,805	1,375,399	507,140	Project has been completed with steady revenue generation	–	–
CFGP	Solar operation management services	179,970	491	(18,235)	Start -up phase.	–	–
NSP HK	Solar related business	-	-	97	Start -up phase.	–	–
DelSolar HK	Investment company	3,755,374	315,142	(870,656)	Recognized investment loss of the subsidiary	To allocate investment gain upon improvement of subsidiary’s business operation	–
DelSolar US	Investment company	743,876	444,233	(259,583)	Recognized investment gain of CFR subsidiaries	–	–
NSP NEVADA	Solar related business	153,724	159,008	(5,073)	Recognized investment loss of subsidiary.	–	–
URE NSP	Solar related business	14,998	22,630	7,866	–	–	Starting liquidating process
NSP Malaysia	Technical management services	22,796	4,119	(247)	–	–	Starting liquidating process
NSP Vietnam	Technical management services	4,799	(82)	694	–	–	Starting liquidating process
NSP Germany	Solar related business	670	1,178	(1,530)	–	–	Starting liquidating process
PV Power Park	Solar related business	788	700	(28)	–	–	Starting liquidating process
NSP Indygen	Solar related business	-	60,152	41,095	ction and other minor related expenses	–	–
Hsin Jin Optoelectronics	Solar related business	10,647	10,282	1,040	ction and other minor related expenses	–	–
Hisn Jin Solar Energy	Solar related business	13,981	13,503	2,921	ction and other minor related expenses	–	–
Si Two	Solar related business	20,000	19,436	(311)	Incurred daily expenses with project still under Development	–	–
Tienyang	Solar related business	100	(386)	(478)	Incurred daily expenses with project still under Development	–	–
Deyang	Solar related business	100	(379)	(473)	Incurred daily expenses with project still under Development	–	–
Shanyang	Solar related business	100	(379)	(473)	Incurred daily expenses with project still under Development	–	–
Jeyang	Solar related business	100	(379)	(473)	Incurred daily expenses with project still under Development	–	–
Lianzhang	Solar related business	100	82	(18)	Incurred daily expenses with project still under Development	–	–
Lianxi	Solar related business	100	82	(18)	Incurred daily expenses with project still under Development	–	–
Liancheng	Solar related business	100	82	(18)	Incurred daily expenses with project still under Development	–	–
XYH Suzhou	Solar related business	-	-	(195)	–	–	Starting liquidating process

Investee Company	Main Businesses and Products	2019/12/31			Major Reasons For Profits or Losses	Improvement Plan	Investment Plant For Following Year
		Investment Amount	Carrying Value	Net Income (Loss) of the Investee			
UAE	Solar and agriculture related business	100	71	(29)	–	–	–
CFGP (HK)	Solar operation management services	15,897	(10,606)	(4,106)	Recognized investment loss of the subsidiary.	To allocate investment gain upon improvement of subsidiary's business operation.	–
DelSolar Wu Jiang	Solar related business	3,599,400	362,364	(763,397)	Capacity has not fully utilized that affect the average cost of production and the competitive nature of the market has let to falling market price which then influence profitability.	manage to lower the costs with plan to China's production capacity.	–
NSP JAPAN	Solar related business	2,910	10,522	(198)	–	–	–
NSP Nanchang	Solar related business	149,975	63,755	(983,902)	Capacity has not fully utilized that affect the average cost of production and the competitive nature of the market has let to falling market price which then influence profitability	manage to lower the costs with plan to China's production capacity	–
DelSolar Development	Solar related business	145,476	111,565	(7,767)	Incurred loss due to depreciation and high than market construction cost from investment solar project	Will recognize profit upon depreciation has been deplete	–
CFR	Solar related business	431,028	3,319	(202,678)	Provide operation and management after completion of the solar projects. Short term losses incurred to the fact that the development of solar projects require longer time frame.	Awaiting completion of existing projects and their sales closings. Also, to develop more projects.	–
USD1	Solar related business	107,442	197,620	(1,056)	–	–	–
JV2	Solar related business	24,897	-	(126,877)	Overdue account can't be recover, loss taken into account	–	–
Beryl	Solar related business	-	155,459	26,421	Construction revenue from solar power plant	–	–
NSP Nanchang	Solar related business	1,169,805	(497,468)	(983,902)	Incurred loss due to higher depreciation and procurement cost for components	Awaiting depletion of depreciation	–
DSS-USF PHX LLC	Solar related business	41,093	43,760	(1,242)	Incurred loss due to higher depreciation and procurement cost for components	Awaiting depletion of depreciation	–
DSS-RAL LLC	Solar related business	76,637	69,368	(7,230)	–	–	–
Rugged solar LLC	Solar related business	83,511	83,511	-	–	–	–
DevCo One	Solar related business	13,324	1,804	-	–	–	–
DevCo Two	Solar related business	13,324	1,804	-	–	–	–
CFGP (Shanghai)	Solar operations management services	15,897	(10,606)	(4,106)	Still under Construction	Awaiting completion of the construction	–

7.6.Analyzed Assessment of Risk Matters

7.6.1.The impact of interest rates, changes of exchange rate, inflation on the company's profit and loss, and future corresponding measures：

(1)Changes of Rate

The cash needed by Company and subsidiaries for operation and capital expenditure purposes are funded through capital market or borrowing from Banks, therefore the increase in interest rate does affect the Company. The trend of interest rate will be keenly observed and the borrowing that affected by fluctuations in floating and fixed interest rate is under strict control. The Company will negotiate will Banks for favorable borrowing rate, in order to lower the risk associate with changes in interest rate.

(2)Changes of Exchange Rate

The chief operating currencies of the company and its subsidiaries are USD and Euro, so the exchange rate changes have certain impacts on the company's profit and loss. The next exchange loss of the company in 2018 was NT$ 61,249 thousand, and the net exchange profit of the company in 2019 was 25,950 thousand, which was 0.47% and 0.14% of the net operating income respectively. To effectively reduce the impact on lowering exchange rate, in addition to the natural hedging policy related to income and expenditures, the finance department has additionally established the personnel to collect information on various banks, pay close attention to changes of exchange rate, and adjust foreign currency positions timely. Furthermore, to effectively reduce the risk of lowering the exchange rate, the company will prevent risks by handling financial derivatives merchandise in accordance with the provisions of "Procedures for the Acquisition or Disposal of Assets."

(3)Inflation

Due to the industrial characteristics, inflation did not cause significant a impact on the operations of the company and its subsidiaries. However, the company shall still pay much attention to inflation. In the future, the company shall pay more attention to the relevant information on the oil price and commodity price, timely adjust the cost of the merchandise and the raw material inventory, to reduce or avoid the impact on the company's operation due to the change of commodity price.

7.6.2.The main reasons and future corresponding measures of high-risk, leverage investment, loaning funds to others, the endorsement/guarantees, and financial derivatives transactions for the recent years:

(1)The main reasons and future corresponding measures of high-risk, policies of leverage investmen, and profit and loss.

The company and its subsidiaries are mainly focused on the development of the industry and have not invested in other high-risk industries, and the Company and its subsidiaries have always attached importance to stable operation and financial soundness, and do not make high leverage investment.

(2)The main reasons and future corresponding measures of the policies of loaning funds to others, and profit and loss.

The company handles the loaning funds to other in accordance with the "Procedures and Policies for Governing the Endorsement/Guarantee," and correctly and timely announces the information of loaning funds to other under the provisions of the acts. If the counterparty of loaning funds of the company and its subsidiaries is the subsidiary of the corporation, its loaning funds and amount shall meet the "Procedures and Policies for Governing the Endorsement/Guarantee" established by every subsidiary.

(3)The main reasons and future corresponding measures of the endorsement/guarantee, and profit and loss

The company handles the loaning funds to other in accordance with the "Procedures and Policies for Governing the Loaning Funds to Others and the Endorsement/Guarantee," and submits to the board of directors for approval of providing the subsidiaries endorsement/guarantee. The counterparty of the endorsement/guarantee of the company and its subsidiaries is the subsidiary or an affiliated company of the corporation. The limited amount, authorization, and relevant operating procedures shall meet the provisions of the procedures for the endorsement/guarantee of the company.

(4)The main reasons and future corresponding measures of the policies of the financial derivatives transaction, and profit and loss

The purpose of the financial derivatives transaction of the company and its subsidiaries is to hedge the market risks that are mainly resulted from the fluctuating exchange rate and interest rate instead of arbitraging and speculation. Also, when the company and its subsidiaries engage in financial derivatives transactions, in addition to comply with the relevant provisions of regulations issued by the authorities and Generally Accepted Accounting Principles, the company shall strictly comply with the "Procedures for Acquisition or Disposal of Assets" established by the company, and correctly and timely announce the transaction information under the provisions of regulations.

7.6.3.Development Plan:

(1)Short-term Research and Development Plan:

The company continues to invest in research and development projects to maintain its technological leadership. The short-term plan is to improve the conversion efficiency of the cell through process integration and optimization. It is estimated that the highest conversion efficiency of the "Black 22" monocrystalline battery will be increased to 22.1% in 2019, and the highest conversion efficiency of BiFi P single crystal double-sided battery will be increased to 22.1%. Concerning the research and development of modules, it is estimated that in 2019, the POWER series will reach 420W, the PEACH series will reach 420W, and the Glory BiFi series will reach 470W through the introduction of high-efficiency batteries and the design of new module.

(2)Medium and Long-term Research and Development Plan:

In addition to the continuous efficiency improvement of traditional P-type battery, the company focuses on the next generation (P-type / N-type) solar cell development. For example, a heterojunction battery, it is expected that its battery conversion efficiency will increase to 24.5% within two years, and the relative module HELLO series can wattage up to 360W. Plus the one-year investment plan of its excellent double-sided power generation efficiency and low-temperature coefficient, which makes the equivalent wattage up to 380W. Besides, product reliability is greatly improved with dual glass module technology. The company has a comprehensive integration of battery and module technology, with different battery and product characteristics for different environments. Whether it is water, desert, snow, and roof, there are corresponding products respectively. The research and development team has always maintained good cooperative relationships with academic research institutions at home and abroad, to obtain information on the development of various novel technologies and equipment continuously. Also, to establish a close contact network with the upstream critical raw material suppliers, to provide complete technical services and support to the downstream customers.

(3)The Estimated Costs of Research and Development:

Research and development are essential to reinforcing the company's competitiveness, acquiring new technologies, new products, and new materials, and maintaining the company's sustainable development. In 2020, the estimated costs of investing in research and development will be higher than in 20, which is approximately 2%~3% of the net sales.

7.6.4.The financial business influences and future corresponding measures of the changes of important policies and laws at home and abroad for the recent year:

For the recent year as of the date of the annual handbook has been printed, the company has not been affected by important policies and laws at home and abroad. The company established the legal department to continually pay attention to the change of important policies and laws at home and abroad, and timely actively proposes corresponding measures.

7.6.5.The financial business influences and future corresponding measures of the change of technology as well as industry for the recent year:

In response to the development of new generation solar cells, the company continues to improve research and development through process improvement, product conversion efficiency, and patent layout. The company reduces the market risks and pursues the long-term stability of the company's financial business through the development of high-efficiency solar cell with high-level twin structure and high reliability module, and simultaneously responding the needs and changes brought about by technological changes by transforming the company itself, and vigorously expand the downstream solar power plant business.

7.6.6.The influences and future corresponding measures of the change of corporation images and the management of corporation crisis for the recent year:

The company operates in a stable and pragmatic spirit, with a good image and no crisis in corporation management.

7.6.7.The expected benefits and possible risks when engaging in merger:

For the recent year as of the date of the annual handbook has been printed, there has no merger plan.

7.6.8.The estimated benefits and possible risks of the expansion of the factory：

The company's plan of factory expansion is carefully evaluated after cautious assessment of market supply and demand, and the control of future order. Therefore, although the solar industry faces market ups and downs, it has helped the company to consolidate its market position, reinforce its ability to take orders, meet customer needs, expand market share, and enjoy economies of scale. The company has always focused on the coordination of production and sales and will continue to modify the global solar industry growth and customer expansion and development by the mode of long-term strategic partner, strictly assess the expected benefits and risks of the expansion of the plant to continue to maintain a rising trend.

7.6.9.The possible risks and corresponding measures of consolidation of sales or purchasing operations:

(1)The risk assessment and corresponding of centralized purchasing:

The producers of polycrystalline germanium raw materials in the upstream of the solar energy industry are dominated by suppliers of Europe, America, and Japan, and the supply of it is more than 90% of the world. Therefore, the solar industry generally has the industry characteristics of centralized purchasing. In recent years, the industry have flourished and attracted many manufacturers to engage. The industrial characteristics of centralized purchasing have been massively improved, the risks of it has been significantly reduced by establishing a long-term supply relationship with several well-known international manufacturers.

(2) The risk assessment and corresponding measures of consolidation of sales

The company actively expands the market scale and develops new customers, and the source of orders continues to be diversified to reduce the risk of sales being over consolidated on a single customer.

7.6.10.The director, supervisor or major shareholder that holds more than 10% of the shares, the influences and risks of the company by massively transferring or changing shares:

For the recent year as of the date of the annual handbook has been printed, there was no massively transferring or changing shares of the director, supervisor, or major shareholder that held more than 10% of the shares.

7.6.11.The influences and risks of the company by changing the operation rights：

For the recent year as of the date of the annual handbook has been printed, there has no changes of operation rights.

7.6.12.The major lawsuit, non-litigation or administrative litigation incident that the company shall state itself and the company's directors, supervisors, general manager, actual personnel in charge, major shareholders holding more than 10% of the shares, and major lawsuits or subordinates that the subordinate company has decided to determine or are still in pendency. The result may have a significant impact on the shareholders' equity or the price of the securities. The facts of the dispute, the amount of the subject-matter amounts, the commencement date of the lawsuit, the parties involved in the proceedings and as of the date of the printing of the annual report shall be disclosed as follows：

(1)The controversy associated with payment for goods between the Group and Company CD:

The Group filed an appeal with Wujiang District Intermediate People's Court on July 3, 2015 to request CEEG (Shanghai) and CEEG (Nanjing), both are CD group companies, to return RMB48,230 thousand. Wujiang District Intermediate People's Court ruled in the Group's favor on September 23, 2015, but Company CD appealed to the court of second instance on October 8, 2015.

During the appeal, the Group and Company CD, a CD group company, reached an agreement on December 30, 2015 after mediation. According to the agreement, CEEG (Shanghai) would propose a specific payment schedule with an expected repayment of RMB48,230 thousand and CEEG (Nanjing) assumed joint liability.

CD Group did not make payments according to the terms of the above payment schedule; hence, the Group has entrusted a law firm to apply for a compulsory enforcement of the award. The Group recognized all above mentioned account receivables as a loss. DelSolar Wu Jiang received a total of RMB20,537 thousand through cash appropriated by the enforcement of the court and cash payments received from CEEG (Shanghai) as of April 29, 2019. CEEG (Shanghai) has repaid a debt to DelSolar Wu Jian with solar cells assemblies for 3,148 thousand as of April 29, 2019; CEEG (Shanghai) will continuously to repay the outstanding amount on the basis of RMB300 thousand per month to DelSolar Wu Jiang.

In addition, the controversy associated with payment for goods between the Group and CEEG's (Shanghai): In August 2016, the Group has entrusted a law firm to go to arbitration for the overdue payment of CD Group's CEEG (Shanghai) in the China International Economic and Trade Arbitration Commission (CIETAC). The Group requested payment of USD1,255 thousand. The Group prevailed in the proceeding on December 23, 2016, and CEEG (Shanghai) has to pay USD1,254 thousand in overdue payments and USD25 thousand in overdue penalties to the Group. The Group has applied to the court for a compulsory enforcement of the award.

On October 28, 2019, the Shanghai Third Intermediate People's Court issued an announcement. It agreed to transfer the bankruptcy application and liquidation procedures of CLP Shanghai for bankruptcy and reorganization procedures, and on the same day ruling CLP Shanghai was reorganized. On December 24, 2019, the Group filed a claim with the bankruptcy administrator.

(2)In the controversy of whether to continuously perform the supply agreement, Company K requested the help of Hsinchu district court on January 13, 2016 to demand payment of $10,000 thousand in partial claims. The Company K requested to increase the payment to $500,000 thousand in August 2016. The Corporation has filed a counterclaim against the Company K to Hsinchu district court on March 21, 2017 to reimburse prepayment and to demand payment of $20,000 thousand in partial claims.

On October 13, 2017, the Hsinchu district court ruled that the Corporation should pay Company K $500,000 thousand and accrued interest payable at 5% per annum beginning from December 23, 2015. Simultaneously, Hsinchu district court dismissed the Corporation's request for return of advance payment against supplier K. In the first court session, the Corporation considered the result of verdict as having a lot of violations; thus, the Corporation has engaged an attorney to lodge an appeal to safeguard the legitimate rights of the Corporation. Based on conservatism concept, the Corporation accrued a potential loss and necessary adjustment will be made depending on the ruling.

(3)Company CE has requested an arbitration on the controversy between Company CE and its third-party vendor Company G at the Hong Kong International Arbitration Centre, where its arbitral awards are enforced and recognized by ROC courts. With respect to the enforcement of such arbitral awards, Company CE requested the issuance of an order for attachment and an order for transfer of the Corporation's debentures of payments of goods. The Corporation's made a statement that the Corporation continuously disagreed with the demand of Company CE since February 2016; therefore, Company CE advocated that the Corporation should pay a total of $60,480 thousand and an accrued interest payable at 5% per annum. In August 2017, the Hsinchu district court ruled that the Corporation should pay CE Company $60,480 thousand and accrued interest payable 5% per annum. As Company CE has applied for the implementation of debt restructuring in mainland China with its third party vendor Company G, and the Corporation instructed legal counsels to subsequently answer the charges. The Corporation considered the result of the verdict as having a lot of violation, and has engaged an attorney to lodge an appeal. The case is currently before the Taiwan High Court. The Corporation has accrued a probable losses and will adjust any amount base on the result of such verdict, if necessary.

(4)The dispute over the buy-sell agreement between DelSolar Wu Jiang and Company JE, was admitted to the Shanghai Jiading People's Court on July 25, 2016, and the first, the second and the third court sessions were heard on September 7, 2016, November 25, 2016 and March 4, 2017, respectively. The total amount involved was RMB5,947 thousand, which was composed of a return of advance payments of RMB5,406 thousand, a penalty of RMB500 thousand, and interest losses of RMB41 thousand accrued as of the court filing date. Regarding to the circumstances of the case, DelSolar Wu Jiang has changed the litigation strategy and decided to withdraw the lawsuit on July 6, 2017. On July 10, 2017, DelSolar Wu Jiang has again appealed to the court requiring JE to pay back the prepayments of RMB4,071 thousand, with monetary losses in terms of interest payments incurred from June 23, 2016 to the day on which the appeal was made; the interest was based on the bank interest rate of the comparable period. Waiting for the court decision after two trials on December 5, 2017 and March 14, 2019. The judgment of the Shanghai Jiading People's Court on March 29, 2019 was for JE Company to return to DelSolar Wu Jiang $2,637 thousand as repayment of interest loss and burden case acceptance fee; Shanghai Jiading People's Court dismissed the other claims. Company JE filed an appeal in accordance with the law within the statutory period. The case entered the second instance procedure and was heard on July 29, 2019. The court dismissed the appeal and upheld the original judgment on September 25, 2019. Since JE Company did not fulfill its payment obligations, DelSolar Wu Jiang entrusted a law firm to apply to the court for enforcement.

(5)JRC, a subsidiary of the Group, is required to compensate ER Company USD900 thousand due to a consultancy agreement's lawsuit; the judgment was passed in the Dominican General Court. The Group has accrued a probable losses based on accounting conservatism. The litigation case is under appeal with no latest progress.

(6)The dispute over the buy-sell agreement between DelSolar Wu Jiang and Company CZ, has been filed a petition to Wu Jiang People's Court by DelSolar Wu Jiang for an order of claiming Company CZ's payment of RMB8,798 thousand, a penalty of RMB693 thousand as of February 3, 2017, the penalty from February 4, 2017 to the date of settlement, and the case acceptance fee and has reconciled on June 15, 2017. CZ Company was requested for a payment of RMB7,798 thousand by installment payment, a penalty of RMB872 thousand (as of May 8, 2017) and the case acceptance fee RMB44 thousand. CZ Company did not make payments according to the terms of the payment schedule; hence, DelSolar Wu Jiang has entrusted a law firm to apply for a compulsory enforcement of the award. CZ Company paid the amount of RMB8,487 thousand and will continue to apply to the court for RMB227 thousand, penalty and litigation expense as of December 31, 2018. The judgement of Taichou Intermediate People's court on August 7, 2019 was to accpet the liquidation of bankruptcy application. Hence, DelSolar Wujiang Has claimed declaration to the administrator on November 27, 2019.

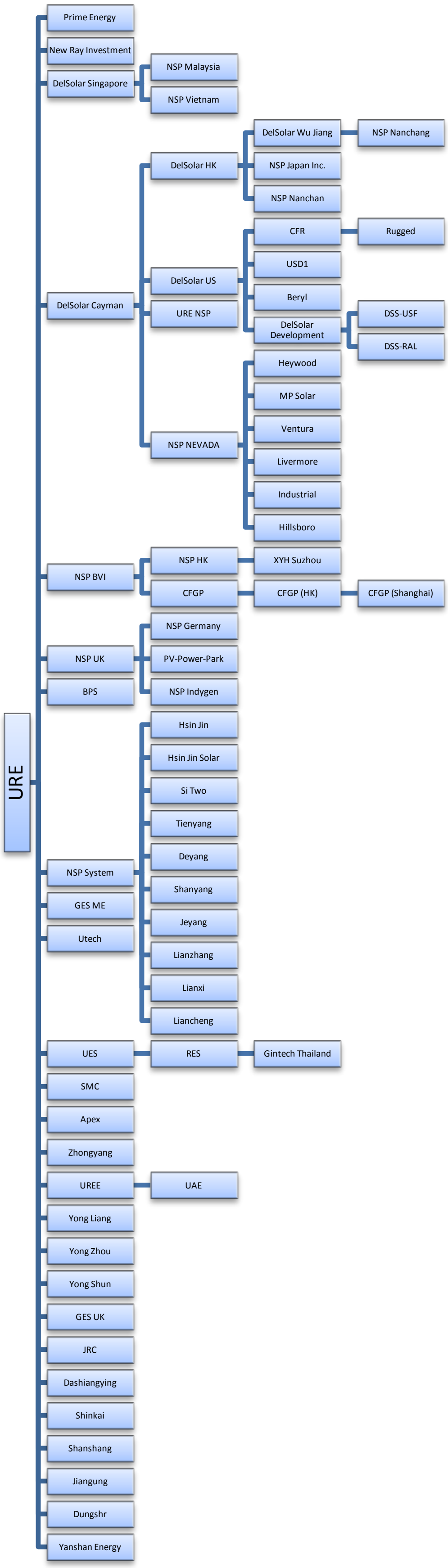
(7)The Corporation entered into a gas distribution agreement with EQ Company on May 1, 2011. The agreement stated that EQ Company would provide nitrogen, pure oxygen and other gases to GEC factories located at the Hsinchu Industrial Science Park in Zhu-nan, Miaoli. After the business combination between the Corporation and GEC, the Corporation undertook all the rights, obligations and liabilities of the above mentioned agreement. The Corporation terminated the contract earlier in accordance with the agreement due to the factories in Zhu-nan was closed on October 31, 2016. Thus, no consensus has been reached about the amount of early termination. EQ Company has filed an application for arbitration to request a payment of $60,900 thousand with an annual interest of 5%. The Corporation has instructed counsel to respond the request. This arbitration judgment was obtained in August 2019 which required the Corporation to pay EQ Company $18.51 million with an annual interest rate of 5% on the settlement date. The Corporation appealed to revoke the arbitration judgment on September 19, 2019 and the court accepted it. The Corporation has accrued a probable losses and will adjust any amount base on the result of such verdict, if necessary.

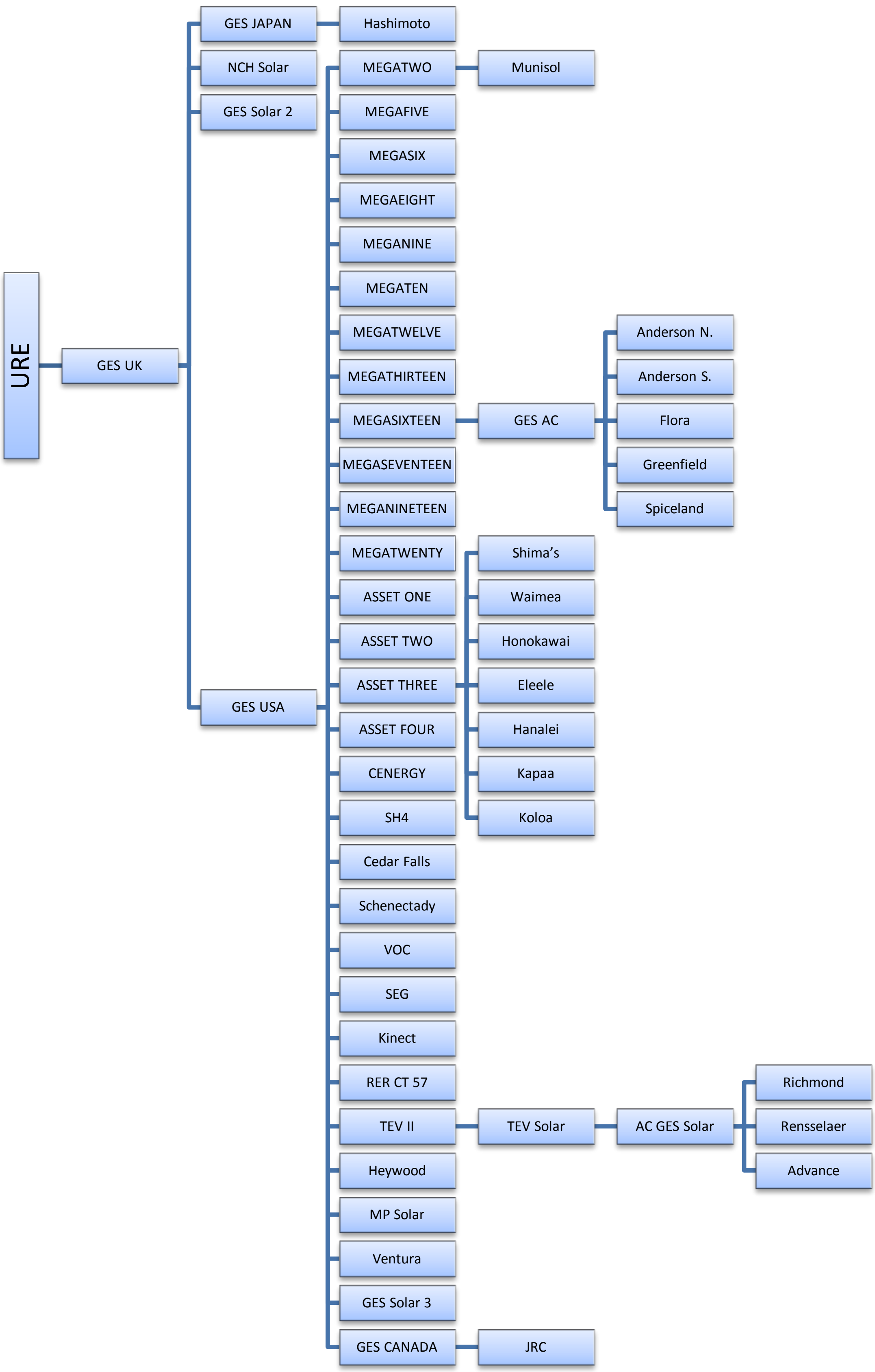
(8)On May 6, 2019, the board of directors of the Corporation resolved and signed a settlement agreement with Sunshine PV on the mutual debts of the two parties. As of June 30, 2019, Sunshine PV owed a number of items from the Corporation such as goods, rental payment and capital loans, and additional interest was $446,768 thousand, which was fully recognized as allowance for losses. The plant of Hsinchu of Solartech Energy suffered a fire disaster in October 2017, which caused damages to the machinery and equipment of Sunshine PV (referred to as "damaged equipment"). Sunshine PV applied for compensation from the insurance company, but the insurance company has not submitted an appraisal report to prove the damage yet. In order to evaluate the equipment as mentioned earlier, the Corporation requested an independent expert to evaluate the value of the damaged equipment of Sunshine PV. According to the opinion of the independent expert, the possible compensation loss was about $460,000 thousand to $510,000 thousand. Based on the long-term negotiation and the past cooperation relationship between the two parties and taking into account the current state of operation and solvency of Sunshine PV, the Corporation claimed that compensation can be obtained from Sunshine PV. The Corporation reconciled with Sunshine PV for the damages claimed, and they signed the settlement agreement on May 6, 2019. Based on the settlement agreement, the two parties no longer have any rights and obligations on the creditor's rights and debts.

VIII. Special Disclosure

8.1.Summary of Affiliated Companies：

8.1.1.Relationship organization chart (As of December 31, 2019)




URE
GES UK
GES JAPAN
Hashimoto
NCH Solar
GES Solar 2
GES USA
MEGATWO
Munisol
MEGAFIVE
MEGASIX
MEGAEIGHT
MEGANINE
MEGATEN
MEGATWELVE
MEGATHIRTEEN
MEGASIXTEEN
GES AC
Anderson N.
Anderson S.
Flora
Greenfield
Spiceland
MEGASEVENTEEN
MEGANINETEEN
MEGATWENTY
ASSET ONE
ASSET TWO
ASSET THREE
Shima's
Waimea
Honokawai
Eleele
Hanalei
Kapaa
Koloa
ASSET FOUR
CENERGY
SH4
Cedar Falls
Schenectady
VOC
SEG
Kinect
RER CT 57
TEV II
TEV Solar
AC GES Solar
Richmond
Rensselaer
Advance
Heywood
MP Solar
Ventura
GES Solar 3
GES CANADA
JRC

8.1.2.Relationship with Affiliated Companies and Share Crossholdings

2019/12/31 Unit:in Thousands of New Taiwan Dollars

Name Of Affiliated Company	Main business items	investment shares			Holding the amount of shares of the company
		Amount	Share	%	
UES	Investment company	1,910,636	61,930	100.00	–
DelSolar Cayman	Investment company	4,906,789	155,126	100.00	–
NSP BVI	Investment company	1,426,179	45,001	100.00	–
GES	Electronic component manufacturing and selling	0	0	-	–
GES ME	Solar related business	418,805	4	100.00	–
Apex	Solar related business	165,994	50,500	100.00	–
NSP UK	Investment company	138,967	3,580	100.00	–
NSP System	Solar related business	144,200	14,420	100.00	–
Prime Energy	Electronic component manufacturing and selling	90,000	9,000	100.00	–
New Ray Investment	Investment company	115,000	11,500	100.00	–
Zhongyang	Solar related business	24,121	3,500	100.00	–
Huiyang	Solar related business	30,427	3,100	100.00	–
UREE	Solar related business	20,000	2,000	100.00	–
DelSolar Singapore	Investment company	29,743	1,250	100.00	–
BPS	Solar related business	6,000	0	60.00	–
SMC	Solar related business	9,720	1,000	100.00	–
Solartech Japan	Solar related business	0	0	-	–
Utech	Electronic component manufacturing	337,114	39,324	99.49	1,883 thousand shares
Yong Liang	Solar related business	249,000	24,900	100.00	–
Yong Zhou	Solar related business	46,500	0	100.00	–
Ever Lite	Electronic component selling	0	0	100.00	–
Yong Shun	Solar related business	2,000	0	100.00	–
JRC	Solar related business	3,717	0	1.00	–
GES UK	Investment company	3,170,893	103,890	100.00	–
Neo Cathay	Investment company	600,000	60,000	40.00	–
TSST	Solar related business	417,692	97,701	42.12	–
V5 Technology	Electronic component manufacturing and selling	114,084	7,789	41.43	–
Gintung	Electronic component manufacturing	34,341	13,460	36.38	–
DSET	Solar related business	10,500	1,050	35.00	–
Solar PV	Investment company	-	30,500	19.92	–
Dashiangying	Solar related and agriculture related business	100	0	100.00	–
Shinkai	Solar related and agriculture related business	100	0	100.00	–
Shanshang	Solar related and agriculture related business	100	0	100.00	–
Jiangung	Solar related and agriculture related business	100	0	100.00	–
Dungshr	Solar related and agriculture related business	100	0	100.00	–
yanshan	Solar related and agriculture related business	100	0	100.00	–
RES	Investment company	1,971,918	61,930	100.00	–
Gintech (Thailand)	Solar related business	1,964,202	20,840	100.00	–
GES USA	Investment company	1,572,325	53,416	100.00	–
NCH Solar 1	Solar related business	395,106	7,447	100.00	–
GES Solar 2	Solar related business	61,326	1,022	100.00	–
GES Solar 3	Solar related business	3,328	0	100.00	–
GES CANADA	Investment company	371,356	10,540	100.00	–
GES JAPAN	Investment company	665,781	0	100.00	–
ET ENERGY	Solar related business	0	0	-	–
TIPPING POINT	Solar related business	0	0	-	–
MEGATWO	Solar related business	535,187	17,723	100.00	–
MEGATHREE	Solar related business	38,606	1,284	40.00	–
MEGAFIVE	Solar related business	19,527	0	100.00	–
MEGASIX	Solar related business	81,496	2,627	100.00	–
MEGAEIGHT	Solar related business	25,843	0	100.00	–

Name Of Affiliated Company	Main business items	investment shares			Holding the amount of shares of the company
		Amount	Share	%	
MEGATWELVE	Solar related business	5,204	0	100.00	–
MEGATHIRTEEN	Solar related business	58,031	2,000	100.00	–
MEGASIXTEEN	Solar related business	351,772	11,981	100.00	–
MEGASEVENTEEN	Solar related business	0	0	100.00	–
MEGANINETEEN	Solar related business	4,025	0	100.00	–
MEGATWENTY	Solar related business	3,769	0	100.00	–
ASSET ONE	Solar related business	34,229	1,060	100.00	–
ASSET TWO	Solar related business	0	0	-	–
ASSET THREE	Solar related business	87,289	2,839	100.00	–
ASSET FOUR	Solar related business	0	0	-	–
CENERGY	Solar related business	0	0	-	–
SH4	Solar related business	20,665	0	100.00	–
CEDAR FALLS	Solar related business	70,428	2,287	100.00	–
Schenectady	Solar related business	0	0	-	–
VOC	Solar related business	0	0	-	–
SEG	Solar related business	24,144	0	100.00	–
KINECT	Solar related business	8,143	0	100.00	–
RER CT 57	Solar related business	62,093	2,031	100.00	–
TEV II	Solar related business	3,018	0	50.00	–
Illini Power LLC	Solar related business	0	0	-	–
PS CS LLC	Solar related business	0	0	-	–
LITH CS LLC	Solar related business	0	0	-	–
ZION CS LLC	Solar related business	0	0	-	–
HEYWOOD	Solar related business	55,424	0	55.00	–
Energy Group NY 63	Solar related business	0	0	100.00	–
MP Solar	Solar related business	99,128	0	55.00	–
Ventura	Solar related business	91,867	3,013	55.00	–
HEYWOOD	Solar related business	43,433	0	45.00	–
MP Solar	Solar related business	79,787	0	45.00	–
Ventura	Solar related business	73,938	0	45.00	–
Livermore	Solar related business	4,499	0	75.00	–
Industrial Park	Solar related business	11,998	0	100.00	–
Hillsboro	Solar related business	55,858	0	100.00	–
Hashimoto	Solar related business	55,893	0	100.00	–
JRC	Solar related business	371,967	0	99.00	–
MUNISOL	Solar related business	512,519	17,153	100.00	–
SHIMA'S	Solar related business	4,496	0	100.00	–
WAIMEA	Solar related business	16,185	0	100.00	–
HONOKAWAI	Solar related business	12,260	0	100.00	–
ELEELE	Solar related business	19,589	0	100.00	–
HANALEI	Solar related business	8,595	0	100.00	–
KAPAA	Solar related business	23,391	0	100.00	–
KOLOA	Solar related business	17,506	0	100.00	–
GES AC	Solar related business	738,518	0	68.00	–
ANDERSON N.	Solar related business	410,752	13,507	100.00	–
ANDERSON S.	Solar related business	348,325	11,454	100.00	–
Flora	Solar related business	58,235	1,915	100.00	–
Greenfield	Solar related business	262,480	8,631	100.00	–
Spiceland	Solar related business	38,767	1,275	100.00	–
TEV Solar	Solar related business	3,018	0	100.00	–
AC GES Solar	Solar related business	593,754	19,675	66.19	–
Richmond	Solar related business	581,226	19,259	100.00	–
Rensselaer	Solar related business	299,760	9,933	100.00	–
Advance	Solar related business	16,106	0	100.00	–
CFY	Investment company	1,169,805	9,672	26.01	–

Name Of Affiliated Company	Main business items	investment shares			Holding the amount of shares of the company
		Amount	Share	%	
CFGP	Solar operation management services	179,970	0	60.00	–
NSP Stars	Trust company	0	0	-	–
NSP HK	Solar related business	0	0	100.00	–
DelSolar HK	Investment company	3,755,374	125,200	100.00	–
DelSolar US	Investment company	743,876	0	100.00	–
NSP NEVADA	Solar related business	153,724	5,125	100.00	–
URE NSP	Solar related business	14,998	0	100.00	–
NSP Malaysia	Technical management services	22,796	0	100.00	–
NSP Vietnam	Technical management services	4,799	0	100.00	–
NSP Germany	Solar related business	670	0	90.00	–
PV Power Park	Solar related business	788	0	100.00	–
NSP Indygen	Solar related business	0	0	100.00	–
Hsin Jin Optoelectronics	Solar related business	10,647	1,331	80.00	–
Hisn Jin Solar Energy	Solar related business	13,981	2,330	60.00	–
Si Two	Solar related business	20,000	2,000	100.00	–
Tienyang	Solar related business	100	0	100.00	–
Deyang	Solar related business	100	0	100.00	–
Shanyang	Solar related business	100	0	100.00	–
Jeyang	Solar related business	100	0	100.00	–
Lianzhang	Solar related business	100	0	100.00	–
Lianxi	Solar related business	100	0	100.00	–
Liancheng	Solar related business	100	0	100.00	–
XYH Suzhou	Solar related business	0	0	100.00	–
UAE	Solar and agriculture related business	100	0	100.00	–
CFGP (HK)	Solar operation management services	15,897	0	100.00	–
DelSolar Wu Jiang	Solar related business	3,599,400	0	100.00	–
NSP JAPAN	Solar related business	2,910	0	100.00	–
NSP Nanchang	Solar related business	149,975	0	11.36	–
DelSolar Development	Solar related business	145,476	0	100.00	–
CFR	Solar related business	431,028	0	100.00	–
USD1	Solar related business	107,442	0	100.00	–
JV2	Solar related business	24,897	0	67.00	–
Beryl	Solar related business	0	0	100.00	–
NSP Nanchang	Solar related business	1,169,805	0	88.64	–
DSS-USF PHX LLC	Solar related business	41,093	0	100.00	–
DSS-RAL LLC	Solar related business	76,637	0	100.00	–
Rugged solar LLC	Solar related business	83,511	0	-	–
DevCo One	Solar related business	13,324	0	40.00	–
DevCo Two	Solar related business	13,324	0	40.00	–
CFGP (Shanghai)	Solar operations management services	15,897	0	100.00	–
CFY	Investment company	0	0	2.66	–
CEC Solar #1122	Solar-related business	0	0	-	–
CEC Solar #1128	Solar-related business	0	0	-	–
CEC Solar #1130	Solar-related business	0	0	-	–
CEC Solar #1133	Solar-related business	0	0	-	–
Ewauna	Solar-related business	0	0	-	–
Long Beach	Solar-related business	0	0	-	–
Randolph	Solar-related business	0	0	-	–
Roseville	Solar-related business	0	0	-	–
NHSG	Solar-related business	0	0	-	–
DevCo One	Solar-related business	13,655	0	40.00	–
DevCo Two	Solar-related business	13,655	0	40.00	–
Clean Focus GP (Shanghai) Limited	Solar operation management services	16,292	0	100.00	–
CFY	Investment company	0	0	2.66	–

8.1.3.According to Company Act. Article 369-3, it shall be concluded as the existence of the controlling and subordinate relation ：Please refer above form

8.1.4.It shall be concluded as the existence of the controlling and subordinate relation of the board members：Please refer below form.

8.1.5.Relation compnies of business scope：
In solar cell module manufacturing and related system construction and development

8.1.6.List of Directors, Supervisors and Presidents of Affiliated Companies

2019/12/31 Unit:in thousand of Shares

Name of affiliated company	Title	Name or representative	Shares held	
			Shares or capita	(%)
New Ray Investment Corp	Chairman	URE Delegate: Andy Shen	11,500	100
	Director	URE Delegate: Lin, Kun-Si、Marco Hu	11,500	100
DelSolar Holding Singapore Pte Ltd.	Director	Hong, Chum-Sam、Andy Shen 、Lu Kee Hong	1,250	100
DelSolar Holding (Cayman) Ltd.	Director	Hong, Chum-Sam、Andy Shen、Thomas Hsu	155,126	100
NSP Systems (BVI) Ltd.	Director	Hong, Chum-Sam、Andy Shen、Thomas Hsu	45,001	100
NSP UK Holding Limited	Director	Hong, Chum-Sam、Andy Shen、Thomas Hsu 、Sandner	3,580	100
Best Power Service Corp	Chairman	URE Delegate: Andy Shen	600	60
	Director	URE Delegate: Simon Li、Pan,lay-lay	600	60
	Vice Chairman	Qi-An Technology Co., Ltd Delegate: Chen,Ying-Yao	400	40
	Director	Qi-An Technology Co., Ltd Delegate: Jhou,Yao-Yuan	400	40
	Supervisor	Rita Yang、Chen,Wei-Yu	—	—
	Business President	Chen Wun Jie	—	—
NSP System Development Corp	Chairman	URE Delegate: Hong, Chum-Sam	14,420	100
	Director	URE Delegate: Simon Li、Pan,lay-lay	14,420	100
	Supervisor	URE Delegate: Zabrina.Hsu	14,420	100
GES Energy Middle East FZE	Director	Chili Liao	4	100
Utech Solar Corporation	Chairman	URE Delegate:Chen Chien Feng	39,324	99.49
	Director	URE Delegate: Pan,Wen-Whe、Stone.Liu	39,324	99.49
	Supervisor	Pan,lay-lay	—	—
Ultimate Energy Solution Limited	Director	Pan,Wen-Whe	61,930	100
Renewable Eergy Solution Limited	Director	Pan,Wen-Whe	61,930	100
Gintech (Thailand) Limited	Chairman	Pan,Wen-Whe	20,840	100
	Director	Stone.Liu、Ms.Yen	20,840	100
Solartech Materials Corporation	Chairman	URE Delegate:Andy Shen	1,000	100
	Director	URE Delegate: Ben.Pan、Zeng,Sheng-Cheng	1,000	100
	Supervisor	URE Delegate: Pan,lay-lay	1,000	100
Apex Solar Corporation	Chairman	URE Delegate: Andy Shen	48,500	100
	Director	URE Delegate: Simon Li、Zeng,Sheng-Cheng	48,500	100
	Supervisor	URE Delegate: Pan,lay-lay	48,500	100
Zhong Yang Corp.	Chairman	URE Delegate: Hong, Chum-Sam	3,500	100
	Director	URE Delegate: Pan,Wen-Whe、Simon Li	3,500	100
	Supervisor	URE Delegate: Pan,lay-lay	3,500	100
DelSolar US Holdings (Delaware) Corp.	Director	Jack Chen、Zabrina.Hsu	3	100
URE Engineering Co. , Ltd.	Chairman	URE Delegate: Pan,Wen-Whe	2,000	100
	Director	URE Delegate: Simon Li、Chen Rong Guei	2,000	100
	Supervisor	URE Delegate: Pan,lay-lay	2,000	100

Name of affiliated company	Title	Name or representative	Shares held	
			Shares or capita	(%)
United ecological agriculture Co., Ltd	Chairman	URE Delegate: Pan,Wen-Whe	10	100
Yanshan Energy Co., Ltd.	Chairman	URE Delegate: Pan,Wen-Whe	10	100
Daxiangying Energy Co., Ltd.	Chairman	URE Delegate: Pan,Wen-Whe	10	100
Xinkai Energy Co., Ltd.	Chairman	URE Delegate: Pan,Wen-Whe	10	100
Dongshi Energy Co., Ltd.	Chairman	URE Delegate: Pan,Wen-Whe	10	100
Shanshang Energy Co., Ltd.	Chairman	URE Delegate: Pan,Wen-Whe	10	100
Jiangong Energy Co., Ltd.	Chairman	URE Delegate: Pan,Wen-Whe	10	100
Tienyang Green Power Ltd. Co.	Chairman	URE Delegate: Simon Li	10	100
Deyang Green Power Ltd. Co.	Chairman	URE Delegate: Simon Li	10	100
Shanyang Green Power Ltd. Co	Chairman	URE Delegate: Simon Li	10	100
Jeyang Green Power Ltd. Co.	Chairman	URE Delegate: Simon Li	10	100
Lien,Chang Energy Co., Ltd.	Chairman	URE Delegate: Simon Li	10	100
Lien,Cheng Energy Co., Ltd.	Chairman	URE Delegate: Simon Li	10	100
Lien,His Energy Co., Ltd.	Chairman	URE Delegate: Simon Li	10	100
DelSolar (HK) Ltd.	Director	Hong, Chum-Sam、Andy Shen	125,200	100
URE NSP Corporation	Director	Zabrina.Hsu	500	100
NSP HK Holding Limited	Director	Hong, Chum-Sam、Andy Shen、Thomas Hsu	—	—
Nsp System Nevada Holding Corp	Director	Hong, Chum-Sam、Jack Chen、Zabrina.Hsu	5,125	100
NSP Germany GmbH	Director	Andy Shen、Thomas Sandner 、Syu,Jia-Cheng	25	90
Hsin Jin Co., Ltd	Chairman	NSP System: Simon Li	—	80
	Director	NSP Syste Delegate: Syu,Jia-Cheng、Chen,Kai-Lin	—	80
Hsinking Co., Ltd	Chairman	NSP Syste Delegate: Simon Li	—	60
	Director	NSP Syste Delegate: Thomas Hsu	—	60
	Director	Hsin Jin Solar Energy Co., Ltd. You,Jie-Jyun	—	40
Si Two Corp	Chairman	NSP Syste Delegate: Hong, Chum-Sam	2,000	100
	Director	NSP Syste Delegate: Andy Shen、Thomas Hsu	2,000	100
	Supervisor	NSP Syste Delegate: Zabrina.Hsu	2,000	100
DelSolar(Wu Jiang) Ltd.	Chairman	Andy Shen	—	100
	Director	Ms.Yen、Zeng,Sheng-Cheng	—	100
	Supervisor	Marco Hu	—	100
	Business President	Ms.Yen	—	100
NSP Japan Inc. (“NSP Japan”)	Director	Hong, Chum-Sam	1	100
	Director	Andy Shen、Siao Song,Jyun-Yi	—	—
	Supervisor	Wun Jhih Jhong	1	100
Neo Solar Power (Nanchang) Ltd	Chairman	Andy Shen	—	100
	Director	Ms.Yen、Zeng,Sheng-Cheng	—	—
	Supervisor	Simon Li	—	100
	Business President	Ms.Yen	—	100
DelSolar Development (Delaware) LLC.	Business President	Jack Chen、Zabrina.Hsu	—	100
Clean Focus Renewables Inc.	Director	Hong, Chum-Sam、Thomas Hsu、 John Chang	—	100
	Business President	Stanley Chin	—	—
USD1 Owner LLC	Manager	John Chang、Stanley Chin	—	100
Beryl Construction LLC	Manager	John Chang、Stanley Chin	—	100
XYH (Suzhou) Energy Ltd. (“XYH Suzhou”)	Chairman	Marco Hu、Thomas Hsu、Simon Li	—	100
DSS-USF PHX LLC	Manager	Jack Chen、Zabrina.Hsu	—	100
DSS-RAL LLC	Manager	Jack Chen、Zabrina.Hsu	—	100

Name of affiliated company	Title	Name or representative	Shares held	
			Shares or capita	(%)
Clean Focus GP Limited	Director	Hong, Chum-Sam、Thomas Hsu、Andy Shen、John Chang、Stanley Chin	30	60
Neo Solar Power Malaysia Sdn. Bhd	Director	Lee Tee Hiang	760	100
Neo Solar Power Vietnam Co. Ltd	Delegate	Dean Lee	—	100
Pv-Power-Park Prol Verwaltings GmbH	Director	Thomas Sandner、Andy Shen、Thomas Hsu、Ciou Sai Cian	—	100
NSP Indygen UK Ltd.	Director	Jack Chen 、Huang,Jing-Ning 、David Anthony Ashton Jhang,	—	100
Clean Focus GP (HK) Limited	Director	John Chang	—	100
Livermore Community Solar Farm, LLC	Manager	Jack Chen 、Zabrina.Hsu	—	75
Industrial Park Drive Solar, LLC	Manager	Jack Chen 、Zabrina.Hsu	—	100
Hillsboro Town Solar, LLC	Manager	Jack Chen 、Zabrina.Hsu	—	100
Heywood Solar PGS, LLC	Director	Jack Chen 、Zabrina.Hsu	—	100
MP Solar, LLC	Director	Jack Chen 、Zabrina.Hsu	—	100
Ventura Solar LL	Director	Jack Chen 、Zabrina.Hsu	—	100
Clean Focus GP (Shanghai) Limited.	Delegate	Jhang,Hai-Tao	—	—
Rugged Solar LLC	Manager	Stanley Chin	—	—
Yong Liang Ltd	Chairman	URE Delegate: Hong, Chum-Sam	24,900	100
Yong Zhou Ltd.	Chairman	URE Delegate: Hong, Chum-Sam	—	100
General Energy Solutions UK Limited	Director	Jack Chen	103,890	100
General Energy Solutions USA, Inc.	Manager	Hong, Chum-Sam 、Jack Chen 、Zabrina.Hsu	53,416	100
General Energy Solutions CANADA, Inc.	Director	Jack Chen 、Zabrina.Hsu 、James	10,540	100
ELECTRONIC J.R C.,S.R.L	Manager	Jack Chen 、Zabrina.Hsu	75	100
NCH Solar1 Limited	Director	Jack Chen 、Chili Liao	7,447	100
GES Solar2 Limited	Director	Jack Chen 、Chili Liao	1,022	100
GES Solar3 Limited	Director	Jack Chen 、Chili Liao	67	100
GES JAPAN CORPORATION (“GES JAPAN”)	Chairman	Andy Shen	276	100
	Director	Zabrina.Hsu	276	100
	Supervisor	Simon Li	276	100
Hashimoto Corporation	Chairman	Simon Li	5	100
	Director	Zabrina.Hsu	5	100
MegaTwo, LLC	Manager	Jack Chen 、Zabrina.Hsu	17,723	100
GES MegaThree, LLC	Manager	N/A	1,284	40
GES MegaFive, LLC	Manager	Jack Chen 、Zabrina.Hsu	635	100
GES MegaSix, LLC	Manager	Jack Chen 、Zabrina.Hsu	2,627	100
GES MegaSeven, LLC	Manager	Jack Chen 、Zabrina.Hsu	—	55
GES MegaEight, LLC	Manager	Jack Chen 、Zabrina.Hsu	790	100
GES MegaTwelve, LLC	Manager	Jack Chen 、Zabrina.Hsu	168	100
GES MegaThirteen, LLC	Manager	Jack Chen 、Zabrina.Hsu	2,000	—
GES MegaSixteen, LLC	Manager	Jack Chen 、Zabrina.Hsu	11,981	—
GES MegaNineteen, LLC	Manager	Jack Chen 、Zabrina.Hsu	132	100
GES MegaTwenty, LLC	Manager	Jack Chen 、Zabrina.Hsu	124	100
GES ASSET ONE, LLC	Manager	Jack Chen 、Zabrina.Hsu	1,060	100
GES ASSET TWO, LLC	Manager	Jack Chen 、Zabrina.Hsu	—	—
GES ASSET THREE, LLC	Manager	Jack Chen 、Zabrina.Hsu	2,839	100
GES ASSET FOUR, LLC	Manager	Jack Chen 、Zabrina.Hsu	—	—
Cenergy Portfolio Llc	Manager	Jack Chen 、Zabrina.Hsu	—	—
SH4 SOLAR LLC	Manager	Jack Chen 、Zabrina.Hsu	619	100
Ceder Falls Solar Farm, LLC	Manager	Jack Chen 、Zabrina.Hsu	2,287	100

Name of affiliated company	Title	Name or representative	Shares held	
			Shares or capita	(%)
Schenectady Solar, LLC	Manager	Jack Chen、Zabrina.Hsu	—	—
Village of Coxsackie Municipal Solar Project One, LLC	Manager	Jack Chen、Zabrina.Hsu	—	—
SEG MI 57 LLC	Manager	Jack Chen、Zabrina.Hsu	800	100
Kinect Solar Fund 1, LLC	Manager	Jack Chen、Zabrina.Hsu	266	100
RER CT 57, LLC	Manager	Jack Chen	2,031	100
	Manager	FRANK	—	—
TEV II, LLC	Manager	Jack Chen、Albert Chen	100	50
GES MegaSeventeen, LLC	Manager	Jack Chen、Zabrina.Hsu	51	100
Muniso1 S.A.de C.V	Manager	Jack Chen、Zabrina.Hsu	171,583	100
GES ASSET Three Shima's, LLC	Manager	Jack Chen、Zabrina.Hsu	153	100
GES ASSET Three Waimea, LLC	Manager	Jack Chen、Zabrina.Hsu	526	100
GES ASSET Three Honokowai, LLC	Manager	Jack Chen、Zabrina.Hsu	418	100
GES ASSET Three Eleele, LLC	Manager	Jack Chen、Zabrina.Hsu	637	100
GES ASSET Three Hanalei, LLC	Manager	Jack Chen、Zabrina.Hsu	280	100
GES ASSET Three Kappa, LLC	Manager	Jack Chen、Zabrina.Hsu	761	100
GES ASSET Three Koloa, LLC	Manager	Jack Chen、Zabrina.Hsu	569	100
GES AC SOLAR 2017, LLC	Manager	Jack Chen、Jhongthan	0.1	67.59
Anderson North Solar Project LLC.	Manager	Jack Chen、Zabrina.Hsu	13,507	100
Anderson South Solar Project LLC	Manager	Jack Chen、Zabrina.Hsu	11,454	100
Flora Solar Project LLC	Manager	Jack Chen、Zabrina.Hsu	1,915	100
Greenfield Solar Project Llc	Manager	Jack Chen、Zabrina.Hsu	8,631	100
Spiceland Solar Project LLC	Manager	Jack Chen、Zabrina.Hsu	1,275	100
TEV Solar Alpha18 LLC	Manager	Jack Chen	0.1	100
AC GES Solar 2018 LLC	Manager	Jack Chen	19,675	66.19
Richmond 2 Solar Park, LLC	Manager	Jack Chen、Zabrina.Hsu	19,259	100
Rensselaer 2 Solar Park, LLC	Manager	Jack Chen、Zabrina.Hsu	9,933	100
Advance Solar Park, LLC	Manager	Jack Chen、Zabrina.Hsu	534	100

8.1.7.Relationship Enterprise Operation Overview：

2019/12/31 Unit:thousands

Relationship company name	Currency	Capital amount	Total assets	Total liabilities	net worth	Operating income	Operating profit and loss	After-tax (loss) benefits
UES	USD	61,930	65,057	-	65,057	-	-	606
DelSolar Cayman	USD	155,126	31,219	-	31,219	-	(7)	(36,639)
NSP BVI	USD	45,001	47,576	-	47,576	-	-	1,333
GES ME	USD	12,200	33,010	21,080	11,930	1,498	7	5
Apex	TWD	485,000	392,116	201,226	190,890	40,157	18,402	13,550
NSP System	TWD	144,200	908,844	706,578	202,266	1,150,685	71,088	55,126
NSP UK	GBP	3,580	4,799	155	4,644	-	(35)	972
Prime Energy	TWD	90,000	79,992	-	79,992	-	(57)	2
New Ray Investment	TWD	115,000	76,477	3,954	72,523	-	(10)	1,192
Zhongyang	TWD	35,000	143,292	108,525	34,767	129,606	6,445	5,665
Huiyang	TWD	31,000	29,977	-	29,977	-	(406)	(318)
DelSolar Singapore	USD	1,250	619	-	619	-	(18)	(4)
BPS	TWD	10,000	83,047	47,459	35,588	133,942	15,161	11,388
SMC	TWD	10,000	9,844	-	9,844	58,398	111	186
Utech	TWD	647,750	2,876,031	2,825,324	50,707	372,381	(373,416)	(428,745)
Neo Cathay	TWD	1,500,000	1,522,690	273	1,522,417	-	(2,286)	43,103
TSST	MYR	241,955	118,114	23,425	94,689	3,652	(11,371)	(55,074)
V5 Technology	TWD	188,008	164,120	48,089	116,031	106,728	1,594	360
Gintung	TWD	370,000	474,150	583,246	(109,096)	1,383,228	15,870	(233,551)
DSET	TWD	30,000	26,828	16,531	10,297	42,899	(11,342)	(11,227)
RES	USD	61,930	65,057	-	65,057	-	-	606
Gintech (Thailand)	THB	2,083,970	2,502,052	575,980	1,926,072	2,177,105	5,852	18,685
Yong Liang	TWD	249,000	597,913	344,931	252,982	58,480	15,817	7,812
Yong Zhou	TWD	46,500	62,510	56,681	5,829	259	(4,763)	(6,061)
Ever Lite	TWD	-	373	372	1	3,129	(224)	(223)
Yong Shun	TWD	2,000	799	-	799	-	(115)	(115)

Relationship company name	Currency	Capital amount	Total assets	Total liabilities	net worth	Operating income	Operating profit and loss	After-tax (loss) benefits
GES UK	USD	103,890	105,464	23,480	81,984	-	(331)	1,450
GES USA	USD	52,180	87,306	38,444	48,862	38,444	(2,287)	3,355
NCH Solar1	GBP	7,447	7,896	47	7,849	1,142	246	248
GES Solar2	GBP	1,022	725	42	683	103	7	7
GES Solar3	GBP	67	55	151	(96)	9	(27)	(27)
GES CANADA	USD	12,025	4,458	2,137	2,321	-	(8)	(472)
GES JAPAN	JPY	1,382,165	2,597,145	8,431	2,588,714	-	(7,693)	(14,934)
ET ENERGY	USD	4,800	-	-	-	(20)	(256)	(321)
TIPPING POINT	USD	1,155	-	-	-	2	(4)	(4)
MEGATWO	USD	17,723	15,955	1,470	14,485	1,470	(280)	(279)
MEGATHREE	USD	2,730	2,888	206	2,682	206	60	60
MEGAFIVE	USD	635	1,762	1,124	638	1,124	31	22
MEGASIX	USD	2,627	2,535	154	2,381	154	(191)	(192)
MEGAEIGHT	USD	790	1,053	357	696	357	(14)	(37)
MEGATWELVE	USD	168	457	372	85	372	(7)	(30)
MEGATHIRTEEN	USD	2,000	3,914	2,023	1,891	2,023	60	(29)
MEGASIXTEEN	USD	11,981	25,001	14,179	10,822	14,179	(11)	(540)
MEGASEVENTEEN	USD	51	-	-	-	-	(2)	(50)
MEGANINETEEN	USD	132	391	318	73	318	(9)	(10)
MEGATWENTY	USD	124	578	427	151	427	10	9
PS CS	USD	-	1,055	1,055	-	1,055	(1)	(1)
Illini Power	USD	-	2,055	2,055	-	2,055	(1)	(1)
LITH CS	USD	-	555	555	-	555	(1)	(1)
ZION CS	USD	-	555	556	(1)	556	(1)	(1)
SEG NY 63	USD	-	3,130	3,130	-	3,130	-	-
ASSET ONE	USD	1,060	1,002	1	1,001	1	9	8
ASSET TWO	USD	-	-	10	(10)	10	(3)	(3)
ASSET THREE	USD	2,839	4,908	3,051	1,857	3,051	(13)	(246)
ASSET FOUR	USD	9	-	-	-	-	(3)	(3)
CENERGY	USD	-	-	-	-	-	(3)	(3)
SH4	USD	619	597	7	590	7	2	1
CEDAR FALLS	USD	2,287	3,123	1,103	2,020	1,103	49	(25)
Schenectady	USD	-	928	1,120	(192)	1,120	(11)	(11)
VOC	USD	-	1,733	1,784	(51)	1,784	(8)	(8)
HEYWOOD	USD	3,218	5,203	2,062	3,141	2,062	(38)	(38)
SEG	USD	800	818	115	703	115	(82)	(82)
KINECT	USD	266	799	494	305	494	23	23
RER CT 57	USD	2,031	3,426	1,488	1,938	1,488	171	74
MP Solar	USD	5,911	5,889	-	5,889	-	(5)	(6)
Ventura	USD	5,478	5,471	7	5,464	7	(5)	(5)
TEV II	USD	200	10,890	14,367	(3,477)	14,367	417	(237)
Hashimoto	JPY	119,725	868,724	781,282	87,442	99,585	25,252	17,405
JRC	USD	7,511	53,194	55,233	(2,039)	3,634	2,534	(404)
MUNISOL	MXN	314,057	838,847	551,265	287,582	551,265	(5,279)	(5,245)
SHIMA'S	USD	153	505	372	133	372	(9)	(9)
WAIMEA	USD	526	989	450	539	450	14	14
HONOKAWAI	USD	418	1,314	866	448	866	22	22
ELEELE	USD	637	1,192	530	662	530	16	16
HANALEI	USD	280	521	275	246	275	(7)	(7)
KAPAA	USD	761	1,425	694	731	694	(11)	(11)
KOLOA	USD	569	1,070	487	583	487	8	8
GES AC	USD	36,242	35,866	699	35,167	699	(35)	(538)
ANDERSON N.	USD	13,507	13,133	-	13,133	-	(184)	(184)
ANDERSON S.	USD	11,454	11,142	1	11,141	1	(153)	(153)
Flora	USD	1,915	1,877	1	1,876	1	(21)	(21)
Greenfield	USD	8,631	8,382	1	8,381	1	(129)	(129)
Spiceland	USD	1,275	1,252	10	1,242	10	(16)	(16)
TEV Solar	USD	100	19,783	19,690	93	19,690	(2)	(3)
AC GES Solar	USD	29,454	29,574	309	29,265	309	(13)	(96)
Richmond	USD	19,259	19,154	1	19,153	1	(61)	(61)
Rensselaer	USD	9,933	9,892	2	9,890	2	(19)	(19)
Advance	USD	534	535	5	530	5	(2)	(3)
CFY	USD	39,000	-	-	-	-	-	-
CFGP	USD	6,000	40	13	27	-	(590)	(590)
NSP HK	USD	-	-	-	-	-	-	3
DelSolar HK	USD	125,200	10,352	2	10,350	-	(5)	(28,324)
DelSolar US	USD	14,800	47,158	32,347	14,811	-	(21)	(8,398)
NSP NEVADA	USD	5,125	24,344	19,043	5,301	-	-	(164)
URE NSP	USD	500	2,928	2,173	755	557	229	254
NSP Malaysia	MYR	736	585	-	585	-	(34)	(34)
NSP Vietnam	VND	160	845,439	915,357	(69,918)	3,212,059	576,249	573,780
NSP Germany	EUR	25	46	7	39	49	(39)	(44)
PV Power Park	EUR	25	21	-	21	-	(1)	(1)
NSP Indygen	GBP	-	5,574	4,047	1,527	-	(260)	1,042
Hsin Jin Optoelectronics	TWD	13,309	44,362	31,510	12,852	5,077	1,884	1,040
Hisn Jin Solar Energy	TWD	23,302	68,973	46,467	22,506	9,633	4,236	2,921
Si Two	TWD	20,000	21,022	1,586	19,436	-	(323)	(311)
CFGP(HK)	USD	530	-	-	-	-	-	(133)
DelSolar Wu Jiang	RMB	810,211	103,909	19,664	84,245	-	(2,323)	(170,793)
NSP JAPAN	JPY	11,700	38,129	-	38,129	-	(301)	(695)

Relationship company name	Currency	Capital amount	Total assets	Total liabilities	net worth	Operating income	Operating profit and loss	After-tax (loss) benefits
NSP Nanchang	RMB	294,849	90,273	220,751	(130,478)	28,803	(216,141)	(220,126)
Livermore	USD	200	1,549	1,481	68	-	(1)	(1)
Industrial Park	USD	400	3,081	2,686	395	-	(5)	(5)
Hillsboro	USD	1,862	1,961	105	1,856	89	13	13
DelSolar Development	USD	4,850	4,442	722	3,720	-	24	(251)
CFR	USD	4,370	47,868	47,757	111	2,977	(6,384)	(6,557)
USD1	USD	3,582	9,966	3,378	6,588	-	(34)	(34)
JV2	USD	830	-	-	-	-	-	-
Beryl	USD	4,327	7,195	2,014	5,181	893	855	855
DSS-USF PHX LLC	USD	1,370	1,524	65	1,459	159	(74)	(40)
DSS-RAL LLC	USD	2,555	2,416	103	2,313	160	(300)	(234)
DevCo One	USD	444	-	-	-	-	-	-
DevCo Two	USD	444	-	-	-	-	-	-
CFGP (Shanghai)	USD	530	-	-	-	-	-	(133)
UREE	TWD	20,000	14,901	413	14,488	-	(5,489)	(5,511)
UAE	TWD	100	71	-	71	-	(29)	(29)
Dashiangying	TWD	100	71	-	71	-	(29)	(29)
Shinkai	TWD	100	71	-	71	-	(29)	(29)
Shanshang	TWD	100	71	-	71	-	(29)	(29)
Jiangung	TWD	100	71	-	71	-	(29)	(29)
Dungshr	TWD	100	71	-	71	-	(29)	(29)
yanshan	TWD	100	71	-	71	-	(29)	(29)
Tienyang	TWD	100	7,969	8,355	(386)	-	(478)	(478)
Deyang	TWD	100	7,976	8,355	(379)	-	(473)	(473)
Shanyang	TWD	100	7,976	8,355	(379)	-	(473)	(478)
Jeyang	TWD	100	7,661	8,040	(379)	-	(473)	(473)
Lianzhang	TWD	100	103	21	82	-	(18)	(18)
Lianxi	TWD	100	8,423	8,341	82	-	(18)	(18)
Liancheng	TWD	100	82	-	82	-	(18)	(18)

DECLARATION OF CONSOLIDATION OF FINANCIAL STATEMENTS OF AFFILIATES

The companies required to be included in the consolidated financial statements of affiliates in accordance with the “Criteria Governing Preparation of Affiliation Reports, Consolidated Business Reports and Consolidated Financial Statements of Affiliated Enterprises” for the year ended December 31, 2019 are all the same as the companies required to be included in the consolidated financial statements of parent and subsidiary companies as provided in International Financial Reporting Standard 10 “Consolidated Financial Statements”. Relevant information that should be disclosed in the consolidated financial statements of affiliates have all been disclosed in the consolidated financial statements of parent and subsidiary companies. Hence, we did not prepare a separate set of consolidated financial statements of affiliates.

Very truly yours,

United Renewable Energy Co., Ltd.

By:

HONG, CHUM-SAM
Chairman

March 26, 2020

8.2.Private Placement Securities in the Most Recent Years:

Items	First private placement of securities in 2019 (same below) Date of issuance (Distribution date of stocks): Nov. 16, 2018／number of shares: 334,291,702 shares				
Type of private placement of securities	Ordinary shares				
Date and amount resolved by shareholders meeting	The resolution is resolved on the 2018 first special shareholders' meeting on March 28, 2018, where private placement of shares may be conducted with the ceiling amount of 380,000,000 shares all at once or in multiple times since the resolved date of 2018 first special shareholders' meeting.				
Basis for establishing the price and its reasonableness	According to the price establishment principle resolved during first special shareholders' meeting held on March 28, 2018, the price should be established by 80% of the higher calculated price between the two standard ones (referred to as the reference price hereunder) on the price establishment date of Oct. 1, 2018: (1)simple average closing prices of the ordinary shares for 1, 3, or 5 business days before the price determination date were NT$ 10.5, NT$ 10.4, NT$ 10.44, respectively where the lowest price was NT$ 10.4; or (2)simple average closing price of the ordinary shares for 30 business days before the price determination date was NT$ 9.57; The higher one was taken as the reference price in accordance with the regulations, which is the lowest among the simple average closing prices of the ordinary shares for 1, 3, or 5 business days before the price determination date. After comprehensive considerations, the price for private placement was established as 80% of the reference price, namely, NT$ 8.32. The total raised fund was NT$ 2,781,306,962. The aforementioned established price for private placement should be reasonable by considering the limitation of transfer within three years on private placement of securities in Securities and Exchange Act, the regulation on the qualification of subscribers, benefits to future business operations of the company and the effects on shareholders' equity under the recognition of subscribers.				
Method for the selection of specific person	Limited to those who satisfied the qualification criteria stipulated in the provisions of Article 43-6 of Securities and Exchange Act and relevant letters, knew the business operations of the company relatively well and are beneficial to future business of the company.				
Necessary reasons for conducting private placement	Fund raising conducted by private placement was chosen by considering the status of current capital market and getting hold of the factors for capital raising, such as convenience, timeliness and issuance costs, in order to obtain required funds in the shortest amount of time.				
Completion date for payment	Oc. 15, 2018				
Information on subscribers	Counterparty for private placement	Qualification criteria	Subscription quantity (shares)	Relation with the company	Participation in company's business
	National Development Fund, Executive Yuan	Satisfied Article 43-6, paragraph 1, subparagraph 2 of Securities and Exchange Act	167,145,851	None	None
	Yao Hua Glass Industry Group Co., Ltd.	Satisfied Article 43-6, paragraph 1, subparagraph 2 of Securities and Exchange Act	167,145,851	None	None
Actual subscription (or conversion) price	NT$ 8.32 per share				
Differences between the actual subscription (or conversion) price and the reference price	Subscription price of the private placement is NT$ 8.32 per share, which is 80% of the reference price of NT$ 10.4				
Effect on shareholders' equity by conducting private placement (such as resulted in the increase in cumulative losses, etc.)	Cumulative loss caused by the difference between the actual price of private placement and denomination shown on the statement will be made up based on the future operational status of the company since the actual price of private placement is lower than the denomination. The financial structure of the company will be improved after the benefit results from increasing capital have shown, which will be beneficial to stable profound development of the company. This will be a positive benefit to shareholders' equity.				
Application of funds from private placement and the execution progress of the plan	Funds from private placement is expected to be used in the investment of products with high effectiveness, the expansion of production capabilities, the acquisition of module production capability, the investment of system business and relevant new business and/or dealing with fund demands in response to long-term development of the company, hoping that enterprise competitiveness and profitability capability of the company can be enhanced, which will be helpful to stable growth in future business operation and is a positive benefit to shareholders' equity. The company has used the fund by private placement of NT$ 671,166 thousand till March 31, 2020.				
Benefit result of private placement	Enterprise competitiveness and profitability capability of the company is enhanced, which is helpful to stable growth in future business operations. This should have positive benefits on shareholders' equity.				

8.3.The Shares in the Company Held or Disposed of By Subsidiaries in the Most Recent Years: Utech Solar Corp. holds 1,833 thousands shares of URE。

8.4.Any Events And as of the Date of this Annual Report that Had Significant Impacts on Shareholders' Rights or Security Prices as Stated in Item 2 Paragraph 2 of Article 36 of Securities and Exchange Law of Taiwan: NA。

United Renewable Energy Co., Ltd.

Financial Statements for the Years Ended December 31, 2019 and 2018 and Independent Auditors' Report

INDEPENDENT AUDITORS' REPORT

The Board of Directors and Shareholders
United Renewable Energy Co., Ltd.

Opinion

We have audited the accompanying financial statements of United Renewable Energy Co., Ltd., which comprise the balance sheets as of December 31, 2019 and 2018, and the statements of comprehensive income, changes in equity and cash flows for the years then ended, and the notes to the financial statements, including a summary of significant accounting policies.

In our opinion, based on our audits and the reports of other auditors (refer to the Other Matter section of this report), the accompanying financial statements present fairly, in all material respects, the financial position of the Corporation as of December 31, 2019 and 2018, and its financial performance and its cash flows for the years then ended in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers.

Basis for Opinion

We conducted our audits in accordance with the Regulations Governing Auditing and Attestation of Financial Statements by Certified Public Accountants and auditing standards generally accepted in the Republic of China. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the Corporation in accordance with The Norm of Professional Ethics for Certified Public Accountant of the Republic of China, and we have fulfilled our other ethical responsibilities in accordance with these requirements. Based on our audits and the reports of other auditors, we believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of Matter

As disclosed in Note 3 to the financial statements, the Corporation elected to apply the guidance of IFRS 16 in determining whether contracts are, or contain, a lease only to contracts entered into. Power facility contracts, which are currently identified as containing a lease under IAS 17 and IFRIC 4, do not meet the definition of a lease under IFRS 16 and are accounted for in accordance with IFRS 15 because customers do not have the right to direct the use of the identified assets. The Corporation elected to restate prior reporting periods with the cumulative effect of the initial application recognized at the date of initial application in accordance with IAS 8. Our review result is not modified in respect of this matter.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements for the year ended December 31, 2019. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

The key audit matters identified in the Corporation's financial statements for the year ended December 31, 2019 are stated as follows:

The authenticity of sales revenue recognition

The main operating income of the Corporation comes from sales of solar cells, solar modules and solar power plants. After the three-in-one merger on October 1, 2018, the gross profit of module sales changed from negative to positive, and the sales volume continued to increase. The Corporation, in order to show the practical results of the triple play, may increase the risk of false revenue through false sales of solar module orders. Therefore, we considered the authenticity of revenue recognition as a key audit matter. For the accounting policies on sales revenue recognition, refer to Note 4-o, and for the description of sales revenue, refer to Note 23.

Our audit procedures performed in respect of the above key audit matter included the following:

1. We understood and tested the design and operating effectiveness of the internal controls.

2. We checked the transaction documents of sales revenue, including sales orders, shipping documents, and receipt documents to understand the control of the identified products, the transfer of significant risks and rewards to the buyer and to identify the Group's revenue recognition.

3. We performed post-financial reporting period audit and checked the reasonableness of significant sales returns and discounts after the period.

Assessment of impairment losses on property, plant and equipment

As of December 31, 2019, the property, plant and equipment in the balance sheet was NT$10,151,154 thousand. The management assesses the Group's financial performance by identifying any signs of impairment on the tangible assets at each balance sheet date. If any evidence of impairment exists, the recoverable amount of the asset needs to be estimated. If the recoverable amount of an individual asset cannot be estimated, the recoverable amount of the cash-generating unit to which the asset belongs is estimated. Because the above tangible assets account for 26% of the total consolidated assets and the calculation of the recoverable amount involves many assumptions and estimates, the method will directly affect the amount recognized for impairment losses. Therefore, we considered the assessment of impairment losses on property, plant and equipment as a key audit matter. For the accounting policies on impairment losses on property, plant and equipment, refer to Notes 4-k and 5. For the description of impairment losses on property, plant and equipment, refer to Note 13.

Our audit procedures performed in respect of the above key audit matter included the following:

1. We understood and tested the effectiveness of the design of major internal controls for the impairment assessment of property, plant and equipment.

2. We understood and reviewed the Corporation's self-assessment of asset impairment for cash-generating units that show signs of impairment.

3. We consulted the internal experts of the firm to understand and evaluate the rationality of the assumptions and methods of impairment assessment, including the process for assessing the operating forecasts for the next five years, and the assumptions of calculating the weighted average cost of capital ratio.

Other Matter

The financial statements of some investee companies accounted for using the equity method were audited by other auditors. The amounts within the financial statements for those investee companies were based solely on the reports of other auditors. As of December 31, 2019 and 2018, the aforementioned investments accounted for using the equity method were NT$2,635,937 thousand and NT$3,318,666 thousand, respectively. For the years ended December 31, 2019 and 2018, the Corporation's share of losses on the aforesaid investment accounted for using the equity method was NT$415,717 thousand and NT$205,606 thousand, respectively.

The financial statements of some investee companies accounted for using the equity method as of and for the year ended December 31, 2018, which are based on a different framework of the accompanying financial statements and which we have not audited, were audited by other auditors in accordance with different auditing standards. We have performed compulsory audit procedures for transferring adjustments of the reports to be in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers. The financial statements of the aforementioned investee companies were based on the reports of other auditors and the result of additional audit procedures performed in accordance with the Regulations Governing Auditing and Attestation of Financial Statements by Certified Public

Accountants and auditing standards generally accepted in the Republic of China. As of December 31, 2018, the aforesaid investment accounted for using the equity method was NT$234,182 thousand. For the years ended December 31, 2018, the share of profit of the aforesaid investments accounted for using the equity method was NT$62,984 thousand.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Corporation's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Corporation or to cease operations, or has no realistic alternative but to do so.

Those charged with governance, including the audit committee, are responsible for overseeing the Corporation's financial reporting process.

Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the auditing standards generally accepted in the Republic of China will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with the auditing standards generally accepted in the Republic of China, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

1. Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

2. Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Corporation's internal control.

3. Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

4. Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Corporation's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Corporation to cease to continue as a going concern.

5. Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

6. Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Corporation to express an opinion on the financial statements. We are responsible for the direction, supervision and performance of the audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements for the year ended December 31, 2019 and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partners on the audit resulting in this independent auditors' report are Yi-Hsin Kao and Yu-Feng Huang.

Deloitte & Touche
Taipei, Taiwan
Republic of China

March 26, 2020

Notice to Readers

The accompanying financial statements are intended only to present the financial position, financial performance and cash flows in accordance with accounting principles and practices generally accepted in the Republic of China and not those of any other jurisdiction. The standards, procedures and practices to audit such financial statements are those generally applied in the Republic of China.

For the convenience of readers, the independent auditors' report and the accompanying financial statements have been translated into English from the original Chinese version prepared and used in the Republic of China. If there is any conflict between the English version and the original Chinese version or any difference in the interpretation of the two versions, the Chinese-language independent auditors' report and financial statements shall prevail.

UNITED RENEWABLE ENERGY CO., LTD.

BALANCE SHEETS
(In Thousands of New Taiwan Dollars)

ASSETS	December 31, 2019 Amount	%	December 31, 2018 (Audited after Restatement) Amount	%	January 1, 2018 (Audited after Restatement) Amount	%
CURRENT ASSETS						
Cash and cash equivalents (Notes 4, 6 and 33)	$ 4,842,610	12	$ 7,286,477	15	$ 2,634,876	9
Financial assets at fair value through profit or loss - current (Notes 4, 7 and 33)	2,392	-	-	-	106	-
Financial assets at fair value through other comprehensive income - current (Notes 4, 5, 8 and 33)	114,414	-	133,333	-	-	-
Contract assets-current (Notes 23 and 34)	45,940	-	13,381	-	-	-
Notes and accounts receivable, net (Notes 4, 5, 10 and 34)	1,461,274	4	2,002,943	4	1,151,780	4
Accounts receivable from related parties (Notes 4, 5, 10 and 34)	391,540	1	552,155	1	315,186	1
Other receivables (Notes 4, 10 and 34)	292,525	1	103,614	-	9,603	-
Other receivables from related parties (Notes 4, 10 and 34)	566,577	2	748,617	1	2,611,848	9
Current tax assets (Notes 4, 5 and 25)	4,936	-	5,753	-	5,799	-
Inventories (Notes 4, 5 and 11)	2,206,693	6	1,820,301	4	1,255,576	4
Prepayments (Notes 4, 5, 16, 34 and 36)	336,000	1	352,440	1	143,351	-
Non-current assets held for sale (Notes 4, 12 and 14)	-	-	-	-	137,688	-
Other current assets (Notes 16, 33 and 35)	957,457	2	4,690,801	10	745,202	3
Total current assets	11,222,358	29	17,709,815	36	9,011,015	30
NON-CURRENT ASSETS						
Financial assets at fair value through other comprehensive income - non-current (Notes 4, 5, 8, 33 and 35)	2,323,725	6	1,512,133	3	81,440	-
Financial assets at amortized cost - non-current (Notes 4, 9 and 33)	149,975	-	153,700	-	149,240	1
Investments accounted for using the equity method (Notes 4, 12, 28, 29, 30 and 35)	8,942,776	23	9,876,148	20	7,856,087	27
Property, plant and equipment (Notes 4, 5, 13, 35 and 36)	10,151,154	26	13,539,446	28	6,526,148	22
Right-of-use assets (Notes 4 and 14)	391,844	1	-	-	-	-
Intangible assets (Notes 4 and 15)	4,234	-	8,098	-	187	-
Deferred tax assets (Notes 4, 5 and 25)	621,087	2	640,621	1	79,098	-
Prepayments - non-current (Notes 4, 5, 16, 34 and 36)	2,140,674	5	2,396,217	5	763,727	3
Refundable deposits (Notes 4, 17, 31, 33, 34 and 35)	847,319	2	825,595	2	606,480	2
Other receivables from related parties - non-current (Notes 4, 10, 33 and 34)	2,186,254	6	2,164,508	5	2,798,904	9
Other non-current assets (Notes 4, 16 and 35)	121,385	-	-	-	1,861,596	6
Total non-current assets	27,880,427	71	31,116,466	64	20,722,907	70
TOTAL	$ 39,102,785	100	$ 48,826,281	100	$ 29,733,922	100

LIABILITIES AND EQUITY	December 31, 2019 Amount	%	December 31, 2018 (Audited after Restatement) Amount	%	January 1, 2018 (Audited after Restatement) Amount	%
CURRENT LIABILITIES						
Short-term bank loans (Notes 17 and 33)	$ 2,688,848	7	$ 6,143,020	13	$ 7,451,827	25
Short-term bills payable (Notes 17 and 33)	-	-	79,963	-	299,550	1
Financial liabilities at fair value through profit or loss - current (Notes 4, 7, and 33)	755	-	-	-	5,742	-
Contract liabilities - current (Notes 23 and 34)	252,409	1	192,307	-	97,732	-
Notes and accounts payable (Note 33)	1,162,458	3	1,781,749	4	894,605	3
Accounts payable to related parties (Notes 33 and 34)	355,607	1	206,919	1	24,829	-
Bonuses payable to employees and directors (Note 24)	-	-	2,649	-	8,242	-
Payables to contractors and equipment suppliers (Notes 33 and 34)	34,557	-	236,006	1	117,671	-
Accrued expenses (Notes 4, 19, 33, 34 and 36)	1,131,374	3	1,630,774	3	2,055,599	7
Lease - liabilities - current (Notes 4, 5, 13 and 31)	13,077	-	-	-	-	-
Receipts in advance (Note 33)	2,219	-	-	-	137,628	1
Current portion of long-term bank loans and bonds payables (Notes 4, 17, 18, 33 and 35)	2,412,274	6	6,968,198	14	2,730,601	9
Other current liabilities (Notes 4 and 19)	17,818	-	64,638	-	10,092	-
Total current liabilities	8,071,396	21	17,306,223	36	13,834,118	46
NON-CURRENT LIABILITIES						
Bonds payable (Notes 4, 18, 33 and 35)	-	-	-	-	3,425,011	12
Long-term bank loans (Notes 17 and 33)	9,443,162	24	6,429,977	13	1,247,989	4
Provisions - non-current (Notes 4 and 20)	168,804	-	298,867	1	240,968	1
Deferred tax liabilities (Notes 4, 5 and 25)	42,826	-	55,611	-	46,059	-
Lease - liabilities - non-current (Notes 3, 4, 5, 14 and 31)	384,067	1	-	-	-	-
Guarantee deposits (Note 33)	5,996	-	1,457	-	85	-
Credit balance of investments accounted for using the equity method (Notes 4 and 12)	264,541	1	134,503	-	18,514	-
Other non-current liabilities (Notes 4 and 19)	-	-	-	-	1,813	-
Total non-current liabilities	10,309,396	26	6,920,415	14	4,980,439	17
Total liabilities	18,380,792	47	24,226,638	50	18,814,557	63
EQUITY (Notes 4, 18, 22, 27, 28, 29 and 30)						
Ordinary shares	26,653,375	68	25,157,599	51	10,192,564	35
Capital surplus	118,989	-	1,011,023	2	6,028,165	20
Accumulated deficit	(6,000,644)	(15)	(675,712)	(1)	(4,709,973)	(16)
Other equity	(31,028)	-	(874,568)	(2)	(591,391)	(2)
Treasury shares	(18,699)	-	(18,699)	-	-	-
Total equity	20,721,993	53	24,599,643	50	10,919,365	37
TOTAL	$ 39,102,785	100	$ 48,826,281	100	$ 29,733,922	100

The accompanying notes are an integral part of the financial statements.

(With Deloitte & Touche auditors' report dated March 26, 2020)

UNITED RENEWABLE ENERGY CO., LTD.

STATEMENTS OF COMPREHENSIVE INCOME
(In Thousands of New Taiwan Dollars, Except Loss Per Share)

	For the Year Ended December 31			
	2019		2018 (After Restatement)	
	Amount	%	Amount	%
NET SALES (Notes 4, 23, 34 and 36)	$ 14,911,766	100	$ 10,419,460	100
COST OF SALES (Notes 4, 5, 11, 24, 34 and 36)	15,687,440	105	11,373,700	109
GROSS LOSS	(775,674)	(5)	(954,240)	(9)
REALIZED GAINS FROM SALES	52,618	-	121,180	1
REALIZED GROSS LOSS	(723,056)	(5)	(833,060)	(8)
OPERATING EXPENSES (Notes 11, 24 and 34)				
Selling	765,350	5	357,437	3
General and administrative	878,522	6	494,628	5
Research and development	161,832	1	198,818	2
Expected credit loss on trade receivables	(5,598)	-	34,062	-
Total operating expenses	1,800,106	12	1,084,945	10
OTHER INCOME AND EXPENSES (Notes 4, 5, 12, 14 and 34)	(1,132,505)	(7)	(2,403)	-
LOSS FROM OPERATIONS	(3,655,667)	(24)	(1,920,408)	(18)
NON-OPERATING INCOME AND EXPENSES				
Other income (Notes 4, 24 and 34)	134,150	1	95,044	1
Dividends income (Notes 4 and 34)	73,953	1	2,000	-
Interest income (Notes 4, 24 and 34)	40,802	-	58,921	1
Gain on financial instruments at fair value through profit or loss (Notes 4 and 7)	29,468	-	78,453	1
Foreign exchange gain (loss) (Notes 4 and 24)	11,617	-	(47,193)	(1)
Gain from bargain purchase (Note 28)	-	-	2,261,090	22
Reversal of contract compensation interest	-	-	239,274	2
Expected credit loss (Notes 4 and 10)	(18,351)	-	(8,400)	-
Other losses (Notes 4 and 34)	(27,575)	-	(15,226)	-
(Loss) gain on disposal of investments (Notes 29 and 30)	(138,117)	(1)	30,429	-
Finance costs (Note 24)	(553,899)	(4)	(447,058)	(4)
Share of loss of subsidiaries and associates (Notes 4 and 12)	(1,581,970)	(11)	(903,036)	(9)
Total non-operating expenses	(2,029,922)	(14)	1,344,298	13

(Continued)

UNITED RENEWABLE ENERGY CO., LTD.

STATEMENTS OF COMPREHENSIVE INCOME
(In Thousands of New Taiwan Dollars, Except Loss Per Share)

	For the Year Ended December 31			
	2019		2018 (After Restatement)	
	Amount	%	Amount	%
LOSS BEFORE INCOME TAX	$ (5,685,589)	(38)	$ (576,110)	(5)
INCOME TAX EXPENSE (Notes 4, 5 and 25)	(476)	-	(1,130)	-
NET LOSS FOR THE YEAR	(5,686,065)	(38)	(577,240)	(5)
OTHER COMPREHENSIVE (LOSS) INCOME (Note 24)				
Items that will not be reclassified subsequently to profit or loss:				
Unrealized gain (loss) on investments in equity instruments at fair value through other comprehensive income	792,673	5	(394,342)	(4)
Share of other comprehensive income (loss) of subsidiaries, accounted for using the equity method				
Unrealized gain (loss) on investments in equity instruments at fair value through other comprehensive income	10,748	-	(2,664)	-
Items that may be reclassified subsequently to profit or loss:				
Exchange differences on translating foreign operations	(175,050)	(1)	110,942	1
Share of other comprehensive income (loss) of subsidiaries, accounted for using the equity method				
Exchange differences on translating foreign operations	209,029	1	(565)	-
Total other comprehensive income (loss)	837,400	5	(286,629)	(3)
TOTAL COMPREHENSIVE LOSS FOR THE YEAR	$ (4,848,665)	(33)	$ (863,869)	(8)
LOSS PER SHARE (Note 26)				
Basic loss per share	$ (2.26)		$ (0.42)	
Diluted loss per share	$ (2.26)		$ (0.42)	

The accompanying notes are an integral part of the financial statements.

(With Deloitte & Touche auditors' report dated March 26, 2020) (Concluded)

UNITED RENEWABLE ENERGY CO., LTD.

STATEMENTS OF CHANGES IN EQUITY
(In Thousands of New Taiwan Dollars)

	Ordinary Shares			Capital Surplus			Other Equity					
	Shares (In Thousands)	Ordinary Shares	Share Premium	Changes in Capital Surplus from Investments in Associates and Joint Ventures Accounted for Using the Equity Method	Restricted Shares for Employees	Accumulated Deficits	Foreign Currency Translation Reserve	Unrealized Gain (Loss) on Financial Asset at FVTOCI	Unrealized (Loss) Gain on Available-for-sale Financial Assets	Unearned Employees Benefits	Treasury Shares	Total Equity
BALANCE AT JANUARY 1, 2018	1,019,256	$ 10,192,564	$ 6,020,328	$ -	$ 7,837	$ (4,611,501)	$ (437,906)	$ -	$ (71,882)	$ (20,038)	$ -	$ 11,079,402
Effect of retrospective application	-	-	-	-	-	98,826	-	(130,891)	71,882	-	-	39,817
Effect of retrospective restatement	-	-	-	-	-	(197,298)	(2,556)	-	-	-	-	(199,854)
BALANCE AT JANUARY 1, 2018 AS RESTATED	1,019,256	10,192,564	6,020,328	-	7,837	(4,709,973)	(440,462)	(130,891)	-	(20,038)	-	10,919,365
Changes in capital surplus from investments in associates and joint ventures accounted for using the equity method	-	-	-	42,000	-	-	-	-	-	-	-	42,000
Offset of deficit against capital surplus	-	-	(4,611,501)	-	-	4,611,501	-	-	-	-	-	-
Issuance of ordinary shares for cash	334,292	3,342,917	(561,610)	-	-	-	-	-	-	-	-	2,781,307
Issuance of shares in business combination	1,157,899	11,578,990	115,790	-	-	-	-	-	-	-	-	11,694,780
Treasury shares owned by subsidiaries	-	-	-	-	-	-	-	-	-	-	(18,699)	(18,699)
Issuance of restricted shares for employees	6,121	61,211	-	-	(17,628)	-	-	-	-	(15,316)	-	28,267
Cancellation of restricted shares for employees	(1,809)	(18,083)	-	-	15,807	-	-	-	-	2,276	-	-
Compensation cost of restricted shares for employees	-	-	-	-	-	-	-	-	-	16,492	-	16,492
Net loss for the year ended December 31, 2018 (after restatement)	-	-	-	-	-	(577,240)	-	-	-	-	-	(577,240)
Other comprehensive income (loss) for the year ended December 31, 2018, net of income tax (after restatement)	-	-	-	-	-	-	110,377	(397,006)	-	-	-	(286,629)
Total comprehensive income (loss) for the year ended December 31, 2018	-	-	-	-	-	(577,240)	110,377	(397,006)	-	-	-	(863,869)
BALANCE AT DECEMBER 31, 2018 (AFTER RESTATEMENT)	2,515,759	25,157,599	963,007	42,000	6,016	(675,712)	(330,085)	(527,897)	-	(16,586)	(18,699)	24,599,643
Share of changes in capital surplus of associates or joint ventures	-	-	-	-	-	(367)	-	-	-	-	-	(367)
Offset of deficit against capital surplus	-	-	(327,468)	(42,000)	-	369,468	-	-	-	-	-	-
Issuance of ordinary share for cash	150,000	1,500,000	(522,000)	-	-	-	-	-	-	-	-	978,000
Reclassification of issuance of share premium	-	-	6,452	-	(6,452)	-	-	-	-	-	-	-
Employee restricted shares	2,205	22,050	-	-	(4,741)	-	-	-	-	(17,309)	-	-
Cancellation of restricted shares for employees	(2,626)	(26,274)	-	-	204	-	-	-	-	6,998	-	(19,072)
Compensation cost of restricted shares for employees	-	-	-	-	333	-	-	-	-	8,483	-	8,816
Compensation costs of shares for employees	-	-	3,638	-	-	-	-	-	-	-	-	3,638
Disposal of financial assets at fair value through other comprehensive income	-	-	-	-	-	(7,968)	-	7,968	-	-	-	-
Net loss for the year ended December 31, 2019	-	-	-	-	-	(5,686,065)	-	-	-	-	-	(5,686,065)
Other comprehensive income for the year ended December 31, 2019, net of income tax	-	-	-	-	-	-	33,979	803,421	-	-	-	837,400
Total comprehensive (loss) income for the year ended December 31, 2019	-	-	-	-	-	(5,686,065)	33,979	803,421	-	-	-	(4,848,665)
BALANCE AT DECEMBER 31, 2019	2,665,338	$ 26,653,375	$ 123,629	$ -	$ (4,640)	$ (6,000,644)	$ (296,106)	$ 283,492	$ -	$ (18,414)	$ (18,699)	$ 20,721,993

The accompanying notes are an integral part of the financial statements.

(With Deloitte & Touche auditors' report dated March 26, 2020)

UNITED RENEWABLE ENERGY CO., LTD.
STATEMENTS OF CASH FLOWS
(In Thousands of New Taiwan Dollars)

	For the Year Ended December 31	
	2019	**2018 (After Restatement)**
CASH FLOWS FROM OPERATING ACTIVITIES		
Loss before income tax	$ (5,685,589)	$ (576,110)
Adjustments for:		
Depreciation	2,217,292	1,580,277
Amortization	3,864	1,192
Expected credit loss recognized on trade receivables	12,753	42,462
Net gain on financial assets and liabilities at fair value through profit or loss	(1,637)	(5,636)
Loss on disposal of property, plant and equipment	12,120	-
Loss on disposal of non-current assets held for sale	-	2,403
Reclassified from property, plant and equipment to expenses	4,065	2,707
Impairment loss on property, plant and equipment	1,120,558	-
Impairment (reversal) loss on prepayments	15,895	(78,924)
(Reversal) recognized loss on purchase contracts	(14,129)	398,581
Write-down of inventories	49,979	4,982
Realized gain from associates	(52,618)	(121,180)
Gain on disposal of subsidiaries	138,117	(30,429)
Gain from bargain purchase	-	(2,261,090)
Net loss on foreign exchange	58,713	26,481
Share of loss of subsidiaries and associates	1,581,970	903,036
Compensation costs of restricted shares for employees	(301)	16,492
Compensation costs of employee share options	3,638	-
Dividend income	(73,953)	(2,000)
Interest income	(40,802)	(58,921)
Finance costs	553,899	447,058
Gain on modification of leases	(173)	-
Reversal of contracts compensation interest	-	(239,274)
Total amount of adjustment	5,589,250	628,217
Changes in operating assets and liabilities:		
Contract assets - current	(32,559)	(13,381)
Notes and accounts receivable	510,705	613,672
Accounts receivable from related parties	164,402	51,216
Other receivables	(314,935)	622,883
Other receivables from related parties	132,985	596,277
Inventories	(436,371)	603,439
Prepayments (including non-current)	73,186	101,474
Other current assets	60,933	(178,486)
Contract liabilities - current	60,102	56,997
Notes and accounts payable	(593,834)	(346,576)
Accounts payable to related parties	158,181	(128,656)
Accrued expenses	(448,722)	(1,327,645)
Bonuses payable to employees and directors	(2,649)	(5,593)
Provisions	(130,063)	57,899
Receipts in advance	2,219	(137,628)
Other current liabilities	(39,543)	10,154
Income taxes (paid) refunded	(187)	821
Net cash (used in) generated from operating activities	(932,489)	628,974

(Continued)

UNITED RENEWABLE ENERGY CO., LTD.
STATEMENTS OF CASH FLOWS
(In Thousands of New Taiwan Dollars)

	For the Year Ended December 31	
	2019	**2018 (After Restatement)**
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of financial assets at fair value through other comprehensive income	$ -	$ (59,086)
Net cash outflow from acquisition of investment accounted for using the equity method	(634,695)	(146,473)
Net cash inflow on disposal of subsidiaries	150,066	188,111
Refund due to capital reduction of investments accounted for using the equity method	-	13,921
Proceeds from sale of non-current assets held for sale	-	135,189
Acquisition of property, plant and equipment	(213,174)	(313,614)
Proceeds from disposal of property, plant and equipment	269,968	-
Increase in refundable deposits	(21,724)	(206,932)
(Increase) decrease in other receivables from related parties - non-current	(74,976)	806,241
Repayments by related parties	-	1,263,183
Net cash inflow on business combinations	-	4,721,266
Increase (decrease) in restricted assets	3,230,272	(990,278)
Increase (decrease) in pledged time deposits	318,190	(317,246)
Decrease in other non-current assets	-	8,825
Interest received	49,263	53,237
Dividends received	73,953	2,000
Dividends received from subsidiaries	40,114	56,327
Net cash generated from investing activities	3,187,257	5,214,671
CASH FLOWS FROM FINANCING ACTIVITIES		
Increase in short-term bank loans	11,501,594	18,081,193
Decrease in short-term bank loans	(14,918,438)	(20,854,624)
Decrease in short-term bill payable	(79,963)	(221,393)
Proceeds from long-term bank loans	12,365,564	3,085,075
Repayments of long-term bank loans	(10,243,976)	(3,746,012)
Repayments of bond payables	(3,728,400)	-
Increase (decrease) in guarantee deposits	4,539	(95)
Proceeds from issuance of ordinary shares	978,000	2,781,307
Repayments of the principal portion of lease liabilities	(19,196)	-
Interest paid	(521,422)	(357,357)
Net cash used in financing activities	(4,661,698)	(1,231,906)
EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS	(36,937)	39,862
NET (DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS	(2,443,867)	4,651,601
CASH AND CASH EQUIVALENTS, BEGINNING OF THE YEAR	7,286,477	2,634,876
CASH AND CASH EQUIVALENTS, END OF THE YEAR	$ 4,842,610	$ 7,286,477

The accompanying notes are an integral part of the financial statements.
(With Deloitte & Touche auditors' report dated March 26, 2020)

(Concluded)

1. ORGANIZATION AND OPERATION

United Renewable Energy Co., Ltd. (formerly Neo Solar Power Corp.) (the "Corporation") was incorporated in the Republic of China on August 26, 2005. The Corporation specializes in manufacturing high-quality solar cells, solar cell modules and wafers. The Corporation's main business activities include researching, developing, designing, manufacturing and selling solar cells as well as participating in other solar-related businesses. Its ordinary shares have been listed on the Taiwan Stock Exchange (TWSE) since January 2009. On October 1, 2018, the Corporation merged the former Gintech Energy Corporation (Gintech Energy) and Solartech Energy Corporation (Solartech Energy) with the Corporation as the surviving company. On March 31, 2019, the Corporation merged with the former General Energy Solutions Inc. (GES), with the Corporation as the surviving company.

The financial statements are presented in the Corporation's functional currency, the New Taiwan dollar.

2. APPROVAL OF FINANCIAL STATEMENTS

The financial statements were approved by the Corporation's board of directors on March 26, 2020.

3. APPLICATION OF NEW/AMENDED AND REVISED STANDARDS AND INTERPRETATIONS

a. Initial application of the amendments to the Regulations Governing the Preparation of Financial Reports by Securities Issuers and the International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), Interpretations of IFRS (IFRIC), and Interpretations of IAS (SIC) (collectively, the "IFRSs") endorsed and issued into effect by the FSC

Except for the following, whenever applied, the initial application of the amendments to the Regulations Governing the Preparation of Financial Reports by Securities Issuers and the IFRSs endorsed and issued into effect by the FSC would not have any material impact on the Corporation's accounting policies:

1) IFRS 16 "Leases"

IFRS 16 provides a comprehensive model for the identification of lease arrangements and their treatment in the financial statements of both lessee and lessor. It supersedes IAS 17 "Leases", IFRIC 4 "Determining whether an Arrangement contains a Lease", and a number of related interpretations. Refer to Note 4 for information relating to the relevant accounting policies.

Definition of a lease

The Corporation elects to apply the guidance of IFRS 16 in determining whether contracts are, or contain, a lease only to contracts entered into. Contracts identified as containing a lease of power facility, which are currently identified as containing a lease under IAS 17 and IFRIC 4, are not meet the definition of a lease under IFRS 16 and be accounted for in accordance with other standards because the customers do not have the right to direct the use of the identified assets. Therefore, it was applied with the requirements of the IFRS 15, customer contract, and the financial report of the comparative period was restated retrospectively according to IAS 8.

The Corporation as lessee

The Corporation recognizes right-of-use assets or investment properties if the right-of-use assets meet the definition of investment properties and lease liabilities for all leases on the balance sheets except for those whose payments under low-value and short-term leases will be recognized as expenses on a straight-line basis. On the statements of comprehensive income, the Corporation will present the depreciation expense charged on right-of-use assets separately from the interest expense accrued on lease liabilities; interest is computed using the effective interest method. On the statements of cash flows, cash payments for the interest and principal portions of lease liabilities will be classified within financing activities. Currently, payments under operating lease contracts, including property interest qualified as investment properties, are recognized as expenses on a straight-line basis. Cash flows for operating leases are classified within operating activities on the statements of cash flows.

The Corporation elects to apply IFRS 16 retrospectively with the cumulative effect of the initial application of this standard recognized in retained earnings on January 1, 2019. Comparative information is not restated.

Lease liabilities were recognized on January 1, 2019 for leases previously classified as operating leases under IAS 17. Lease liabilities were measured at the present value of the remaining lease payments, discounted using the lessee's incremental borrowing rate on January 1, 2019. Right-of-use assets are measured at an amount equal to the lease liabilities, adjusted by the amount of any prepaid or accrued lease payments, the Corporation applies IAS 36 to all right-of-use assets.

The Corporation also applies the following practical expedients:

a) The Corporation applies a single discount rate to a portfolio of leases with reasonably similar characteristics to measure lease liabilities.
b) The Corporation accounts for those leases for which the lease term ends on or before December 31, 2019 as short-term leases.
c) The Corporation excludes initial direct costs from the measurement of right-of-use assets on January 1, 2019.
d) The Corporation uses hindsight, such as in determining lease terms, to measure lease liabilities.

For leases previously classified as finance leases under IAS 17, the carrying amounts of right-of-use assets and lease liabilities on January 1, 2019 are determined as at the carrying amounts of the respective leased assets and finance lease payables on December 31, 2018.

The lessee's weighted average incremental borrowing rate applied to lease liabilities recognized on January 1, 2019 is 3.22%. The difference between the (i) lease liabilities recognized and (ii) operating lease commitments disclosed under IAS 17 on December 31, 2018 is explained as follows:

The future minimum lease payments of non-cancellable operating lease commitments on December 31, 2018	$ 278,969
Less: Recognition exemption for short-term leases	4,606
Less: Recognition exemption for leases of low-value assets	1,313
Undiscounted amounts on January 1, 2019	$ 273,050
	(Continued)
Discounted amounts using the incremental borrowing rate on January 1, 2019	$ 221,219
Add: Adjustments as a result of a different treatment of extension and termination options	205,710
Lease liabilities recognized on January 1, 2019	$ 426,929
	(Concluded)

The Corporation as lessor

Except for contracts identified as containing a lease, power facility does not meet the definition of a lease under IFRS 16 and be accounted for in accordance with IFRS 15. The Corporation does not make any adjustments for leases in which it is a lessor, and it accounts for those leases with the application of IFRS 16 starting from January 1, 2019.
The impact on assets, liabilities and equity as of January 1, 2019 from the initial application of IFRS 16 is set out as follows:

Impact on assets, liabilities and equity on January 1, 2019

	Originally Stated Amount	Adjustments Arising from Initial Application	Restated Amount
Right of use asset	$ -	$ 426,929	$ 426,929
Investment accounted for using the equity method	10,183,517	(307,369)	9,876,148
Total effect on assets	$ 10,183,517	$ 119,560	$ 10,303,077
Lease liabilities	$ -	$ 426,929	$ 426,929
Total effect on liabilities	$ -	$ 426,929	$ 426,929
Retained earnings	$ (369,468)	$ (306,244)	$ (675,712)
Other equity	(873,443)	(1,125)	(874,568)
Total effect on equity	$ (1,242,911)	$ (307,369)	$ (1,550,280)

For arising from Initial application of IFRS 16, adjustments to each asset, liability and equity item as of January 1, 2018 are as follows.

	Originally Stated Amount	Adjustments Arising from Initial Application	Restated Amount
As of January 1, 2018			
Investment accounted for using the equity method	$ 8,055,941	$ (199,854)	$ 7,856,087
Total effect on assets	$ 8,055,941	$ (199,854)	$ 7,856,087

(Continued)

	Originally Stated Amount	Adjustments Arising from Initial Application	Restated Amount
Retained earnings	$ (4,512,675)	$ (197,298)	$ (4,709,973)
Other equity	(588,835)	2,556	(591,391)
Total effect on equity	$ (5,101,510)	$ (199,854)	$ (5,301,364)

(Concluded)

Impact on total comprehensive income for the current period

	Originally Stated Amount	Adjustments Arising from Initial Application	Restated Amount
For the year ended of December 31, 2018			
Share of loss of associates and joint ventures	$ (794,090)	$ (108,946)	$ (903,036)

	Originally Stated Amount	Adjustments Arising from Initial Application	Restated Amount
Total effect on net profit for the period	$ (794,090)	$ (108,946)	$ (903,036)
Item that may be reclassified subsequently to profit or loss:			
Exchange differences on translating foreign operations	$ (1,996)	$ 1,431	$ (565)
Total effect on total comprehensive income for the period	$ (1,996)	$ (1,431)	$ (565)
Basic loss per share	$ (0.34)	$ (0.08)	$ (0.42)
Diluted loss per share	(0.34)	(0.08)	(0.42)

2) IFRIC 23 "Uncertainty over Income Tax Treatments"

IFRIC 23 clarifies that when there is uncertainty over income tax treatments, the Corporation should assume that the taxation authority has full knowledge of all related information when making related examinations. If the Corporation concludes that it is probable that the taxation authority will accept an uncertain tax treatment, the Corporation should determine the taxable profit, tax bases, unused tax losses, unused tax credits or tax rates consistently with the tax treatments used or planned to be used in its income tax filings. If it is not probable that the taxation authority will accept an uncertain tax treatment, the Corporation should make estimates using either the most likely amount or the expected value of the tax treatment, depending on which method the Corporation expects to better predict the resolution of the uncertainty. The Corporation has to reassess its judgments and estimates if facts and circumstances change.

3) Amendments to IAS 28 "Long-term Interests in Associates and Joint Ventures"

The amendments clarified that IFRS 9 "Financial Instruments" shall be applied to account for other financial instruments in an associate or joint venture to which the equity method is not applied. These included long-term interests that, in substance, form part of the Corporation's net investment in an associate or joint venture.

4) Annual Improvements to IFRSs 2015-2017 Cycle

Several standards, including IFRS 3 "Business Combinations", IFRS 11 "Joint Arrangements", IAS 12 "Income Taxes" and IAS 23 "Borrowing Costs", were amended in this annual improvement. IAS 23 was amended to clarify that, if any specific borrowing remains outstanding after the related asset is ready for its intended use or sale, the related borrowing costs shall be included in the calculation of the capitalization rate on general borrowings. Upon initial application of the above amendment, the related borrowing costs are included in the calculation starting from 2019.

b. The IFRSs endorsed by the FSC for application starting from 2020

New IFRSs	Effective Date Announced by IASB
Amendments to IFRS 3 "Definition of a Business"	January 1, 2020 (Note 1)
Amendments to IFRS 9, IAS 39 and IFRS 7 "Interest Rate Benchmark Reform"	January 1, 2020 (Note 2)
Amendments to IAS 1 and IAS 8 "Definition of Material"	January 1, 2020 (Note 3)

Note 1: The Corporation shall apply these amendments to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after January 1, 2020 and to asset acquisitions that occur on or after the beginning of that

period.

Note 2: The Corporation shall apply these amendments retrospectively for annual reporting periods beginning on or after January 1, 2020.

Note 3: The Corporation shall apply these amendments prospectively for annual reporting periods beginning on or after January 1, 2020.

1) Amendments to IFRS 3 "Definition of a Business"

The amendments clarify that, to be considered a business, an acquired set of activities and assets must include, at a minimum, an input and a substantive process applied to the input that together significantly contribute to the ability to create outputs. The amendments narrow the definitions of outputs by focusing on goods and services provided to customers, and the reference to an ability to reduce costs is removed. Moreover, the amendments remove the assessment of whether market participants are capable of replacing any missing inputs or processes and continuing to produce outputs. In addition, the amendments introduce an optional concentration test that permits a simplified assessment of whether or not an acquired set of activities and assets is a business.

Except for the above impact, as of the date the financial statements were authorized for issue, the Corporation is continuously assessing the possible impact that the application of other standards and interpretations will have on the Corporation's financial position and financial performance and will disclose the relevant impact when the assessment is completed.

c. New IFRSs in issue but not yet endorsed and issued into effect by the IASB

New IFRSs	Effective Date Announced by IASB (Note 1)
Amendments to IFRS 10 and IAS 28 "Sale or Contribution of Assets between an Investor and its Associate or Joint Venture"	To be determined by IASB
IFRS 17 "Insurance Contracts"	January 1, 2021
Amendments to IAS 1 "classification of liabilities as current or non-current"	January 1, 2022

Note 1: Unless stated otherwise, the above New IFRSs are effective for annual periods beginning on or after their respective effective dates.

1) Amendments to IFRS 10 and IAS 28 "Sale or Contribution of Assets between an Investor and its Associate or Joint Venture"

The amendments stipulate that, when the Corporation sells or contributes assets that constitute a business (as defined in IFRS 3) to an associate or joint venture, the gain or loss resulting from the transaction is recognized in full. Also, when the Corporation loses control of a subsidiary that contains a business but retains significant influence or joint control, the gain or loss resulting from the transaction is recognized in full.

Conversely, when the Corporation sells or contributes assets that do not constitute a business to an associate or joint venture, the gain or loss resulting from the transaction is recognized only to the extent of the Corporation's interest as an unrelated investor in the associate or joint venture, i.e. the Corporation's share of gain or loss is eliminated. Also, when the Corporation loses control of a subsidiary that does not contain a business but retains significant influence or joint control over an associate or a joint venture, the gain or loss resulting from the transaction is recognized only to the extent of the Corporation's interest as an unrelated investor in the associate or joint venture, i.e. the Corporation's share of gain or loss is eliminated.

2) Amendments to IAS 1 "classification of liabilities as current or non-current"

The amendment clarifies when determining whether a liability is classified as non-current, it should be evaluated whether the Corporation has the right to defer the settlement period to at least 12 months after the reporting period at the end of the reporting period. If Corporation has the right at the end of the reporting period, liabilities are classified as non-current whether Corporation expects to exercise the right. The amendment also clarifies that Corporation has the right to deferred settlement of liabilities since Corporation have to comply with certain conditions. Corporation must comply with certain conditions by the end of the reporting period even if the lender tests the Corporation for compliance with these conditions at a late date.

The amendment stipulates that for the purpose of liability classification, the aforementioned settlement refers to the elimination of liabilities caused by the transfer of cash, other economic resources or Corporation's equity instruments to the counterparty. Corporation's equity instruments may be transferred to cause its settlement if the terms of the liability may be based on the choice of the counterparty. In addition, if the option is separately recognized as equity in accordance with IAS 32 "Financial Instruments: Expression", the foregoing terms do not affect the classification of liabilities.

Except for the above impact, as of the date the financial statements were authorized for issue, the Corporation is continuously assessing the possible impact that the application of other standards and interpretations will have on the Corporation's financial position and financial performance and will disclose the relevant impact when the assessment is completed.

4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

a. Statement of compliance

The parent company only financial statements have been prepared in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers.

b. Basis of preparation

The financial statements have been prepared on the historical cost basis except for financial instruments that are measured at fair value.

The fair value measurements are grouped into Levels 1 to 3 based on the degree to which the fair value measurement inputs are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

1) Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities;
2) Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e., as prices) or indirectly (i.e., derived from prices); and
3) Level 3 inputs are unobservable inputs for the asset or liability.

When preparing its financial statements, the Corporation used the equity method to account for its investments in subsidiaries, associates or joint ventures. In order for the amounts of the net profit for the year, other comprehensive income for the year and total equity in the financial statements to be the same with the amounts attributable to the owners of the Corporation in its consolidated financial statements, adjustments arising from the differences between accounting treatments on an individual basis and a consolidated basis were made to investments accounted for using the equity method, shares of (profit) loss of subsidiaries and associates, and shares of other comprehensive income (loss) of subsidiaries and associates, as appropriate, in these financial statements.

c. Classification of current and non-current assets and liabilities

Current assets include:

1) Assets held primarily for the purpose of trading;
2) Assets expected to be realized within twelve months after the reporting period; and
3) Cash and cash equivalents unless the asset is restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

Current liabilities include:

1) Liabilities held primarily for the purpose of trading;
2) Liabilities due to be settled within twelve months after the reporting period; and
3) Liabilities for which the Corporation does not have an unconditional right to defer settlement for at least twelve months after the reporting period.

Assets and liabilities that are not classified as current are classified as non-current.

d. Business combinations

Acquisitions of businesses are accounted for using the acquisition method. Acquisition-related costs are generally recognized in profit or loss as incurred.

Goodwill is measured as the sum of the consideration transferred and the fair value of the acquirer's previously held equity interest in the acquiree in excess of the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed. If, after re-assessment, the net of the acquisition date amounts of the identifiable assets acquired and liabilities assumed exceeds the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree, and the fair value of the acquirer's previously held interests in the acquiree, the excess is recognized immediately in profit or loss as a bargain purchase gain.

e. Foreign currencies

In preparing the financial statements of the Corporation, transactions in currencies other than the Corporation's functional currency (i.e., foreign currencies) are recognized at the rates of exchange prevailing at the dates of the transactions.

At the end of each reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Exchange differences on monetary items arising from settlement or translation are recognized in profit or loss in the period in which they arise.

Non-monetary items measured at fair value that are denominated in foreign currencies are retranslated at the rates prevailing at the date when the fair value was determined. Exchange differences arising on the retranslation of non-monetary items are included in profit or loss for the period. When a gain or loss on a non-monetary item is recognized in other comprehensive income, any exchange component of that gain or loss is recognized in other comprehensive income.

Non-monetary items that are measured at historical cost in a foreign currency are not retranslated.

f. Inventories

Inventories consist of raw materials, supplies, work-in-process and finished goods. Inventories are stated at the lower of cost or net realizable value. Inventory write-downs are made by item, except where it may be appropriate to group similar or related items. Net realizable value is the estimated selling price of inventories less all estimated costs of completion and costs necessary to make the sale. Inventories are recorded at standard cost and adjusted to approximate weighted-average cost on the balance sheet date.

g. Investments in subsidiaries

The Corporation uses the equity method to account for its investment in subsidiaries.

Subsidiaries are the entities (including structured entities) controlled by the Corporation.

Under the equity method, investments in subsidiaries are initially recognized at cost and adjusted thereafter to recognize the Corporation's share of the profit or loss and other comprehensive income of the subsidiaries. The Corporation also recognizes the changes in the Corporation's share of equity of subsidiaries attributable to the Corporation.

Changes in the Corporation's ownership interests in subsidiaries that do not result in the Corporation's loss of control over the subsidiaries are accounted for as equity transactions. Any difference between the carrying amounts of the investment and the fair value of the consideration paid or received is recognized directly in equity.

When the Corporation’s share of losses of a subsidiary equals or exceeds its interest in that subsidiary (which includes any carrying amount of the investment in the subsidiary accounted for by the equity method and long-term interests that, in substance, form part of the Corporation’s net investment in the subsidiary), the Corporation continues recognizing its share of further losses.

Any excess of the cost of acquisition over the Corporation’s share of the net fair value of the identifiable assets and liabilities of a subsidiary recognized at the date of acquisition is recognized as goodwill, which is included within the carrying amount of the investment and is not amortized. Any excess of the Corporation’s share of the net fair value of the identifiable assets and liabilities over the cost of acquisition, after reassessment, is recognized immediately in profit or loss.

When testing for impairment, the cash-generating unit is determined based on the financial statements as a whole by comparing its recoverable amount with its carrying amount. If the recoverable amount of the asset subsequently increases, the reversal of the impairment loss is recognized as a gain, but the increased carrying amount of an asset after a reversal of an impairment loss shall not exceed the carrying amount that would have been determined (net of amortization or depreciation) had no impairment loss been recognized on the asset in prior years. An impairment loss recognized for goodwill is not reversed in subsequent periods.

When the Corporation loses control of a subsidiary, it recognizes the investment retained in the former subsidiary at its fair value at the date when control is lost. The difference between the fair value of the retained investment plus any consideration received and the carrying amount of the previous investment at the date when control is lost is recognized as a gain or loss in profit or loss. Besides, the Corporation accounts for all amounts previously recognized in other comprehensive income in relation to that subsidiary on the same basis as would be required if the Corporation had directly disposed of the related assets or liabilities.

Profits and losses from downstream transactions with a subsidiary are eliminated in full. Profits and losses from upstream transactions with a subsidiary and side stream transactions between subsidiaries are recognized in the Corporation’s financial statements only to the extent of interests in the subsidiary that are not related to the Corporation.

h. Investments in associates

An associate is an entity over which the Corporation has significant influence and that is neither a subsidiary nor an interest in a joint venture.

The Corporation uses the equity method to account for its investments in associates and joint ventures.

Under the equity method, investments in an associate are initially recognized at cost and adjusted thereafter to recognize the Corporation’s share of the profit or loss and other comprehensive income of the associate. The Corporation also recognizes the changes in the Corporation’s share of the equity of associates attributable to the Corporation.

Any excess of the cost of acquisition over the Corporation’s share of the net fair value of the identifiable assets and liabilities of an associate at the date of acquisition is recognized as goodwill, which is included within the carrying amount of the investment and is not amortized. Any excess of the Corporation’s share of the net fair value of the identifiable assets and liabilities over the cost of acquisition, after reassessment, is recognized immediately in profit or loss.

When the Corporation subscribes for additional new shares of an associate and joint venture at a percentage different from its existing ownership percentage, the resulting carrying amount of the investment differs from the amount of the Corporation’s proportionate interest in the associate and joint venture. The Corporation records such a difference as an adjustment to investments with the corresponding amount charged or credited to capital surplus - changes in capital surplus from investments in associates and joint ventures accounted for using the equity method. If the Corporation's ownership interest is reduced due to its additional subscription of the new shares of the associate and joint venture, the proportionate amount of the gains or losses previously recognized in other comprehensive income in relation to that associate and joint venture is reclassified to profit or loss on the same basis as would be required if the investee had directly disposed of the related assets or liabilities. When the adjustment should be debited to capital surplus, but the capital surplus recognized from investments accounted for using the equity method is insufficient, the shortage is debited to retained earnings.

When the Corporation's share of losses of an associate equals or exceeds its interest in that associate (which includes any carrying amount of the investment accounted for by the equity method and long-term interests that, in substance, form part of the Corporation's net investment in the associate), the Corporation discontinues recognizing its share of further losses. Additional losses and liabilities are recognized only to the extent that the Corporation has incurred legal obligations, or constructive obligations, or made payments on behalf of that associate.

The entire carrying amount of the investment (including goodwill) is tested for impairment as a single asset by comparing its recoverable amount with its carrying amount. Any impairment loss recognized is deducted from the carrying amount of the investment. Any reversal of that impairment loss is recognized to the extent that the recoverable amount of the investment subsequently increases.

When a Corporation entity transacts with its associate, profits and losses resulting from the transactions with the associate are recognized in the Corporation' financial statements only to the extent that interests in the associate are not related to the Corporation.

i. Property, plant and equipment

Property, plant and equipment are stated at cost, less accumulated depreciation and accumulated impairment loss.

Properties under construction for production, supply or administrative purposes are carried at cost, less any recognized impairment loss. Cost includes professional fees and borrowing costs eligible for capitalization. These properties are depreciated and classified to the appropriate categories of property, plant and equipment when they are completed and ready for their intended use.

Depreciation is recognized using the straight-line method. Each significant part is depreciated separately. If the lease term is shorter than the useful lives, assets are depreciated over the lease term. The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in the estimates accounted for on a prospective basis.

Any gain or loss arising on the disposal or retirement of an item of property, plant and equipment is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognized in profit or loss.

j. Intangible assets

1) Intangible assets acquired in a business combination
   Intangible assets acquired in a business combination and recognized separately from goodwill are initially recognized at their fair value at the acquisition date (which is regarded as their cost). Subsequent to initial recognition, they are reported at cost less accumulated amortization and accumulated impairment loss.
   Amortization is recognized on a straight-line basis. The estimated useful life, residual value, and amortization method are reviewed at the end of each reporting period, with the effect of any changes in the estimates accounted for on a prospective basis.

2) Derecognition of intangible assets
   On derecognition of an intangible asset, the difference between the net disposal proceeds and the carrying amount of the asset is recognized in profit or loss.

k.Impairment of tangible and intangible assets other than goodwill

At the end of each reporting period, the Corporation reviews the carrying amounts of its tangible and intangible assets, excluding goodwill, to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss. When it is not possible to estimate the recoverable amount of an individual asset, the Corporation estimates the recoverable amount of the cash-generating unit to which the asset belongs. Corporate assets are allocated to the smallest group of CGU on a reasonable and consistent basis of allocation.

The recoverable amount is the higher of fair value less costs to sell and value in use. If the recoverable amount of an asset or CGU is estimated to be less than its carrying amount, the carrying amount of the asset or CGU is reduced to its recoverable amount, with the resulting impairment loss recognized in profit or loss.

When an impairment loss is reversed, the carrying amount of the asset or CGU is increased to the revised estimate of its recoverable amount, but only to the extent of the carrying amount that would have been determined had no impairment loss been recognized for the asset or CGU in prior years. A reversal of an impairment loss is recognized immediately in profit or loss.

l. Non-current assets held for sale

Non-current assets are classified as held for sale if their carrying amount will be recovered principally through a sales transaction rather than through continuing use. This condition is regarded as met only when the sale is highly probable and the non-current asset is available for immediate sale in its present condition. To meet the criteria for the sale being highly probable, the appropriate level of management must be committed to the sale, which should be expected to qualify for recognition as a completed sale within one year from the date of classification.

Non-current assets classified as held for sale are measured at the lower of their previous carrying amount and fair value less costs to sell. Recognition of depreciation of those assets would cease.

m. Financial instruments

Financial assets and financial liabilities are recognized when the Corporation becomes a party to the contractual provisions of the financial instruments.

Financial assets and financial liabilities are initially measured at fair value. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities at fair value through profit or loss) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at fair value through profit or loss are recognized immediately in profit or loss.

1) Financial assets

   All regular way purchases or sales of financial assets are recognized and derecognized on a settlement date basis.

   a) Measurement category

      The Corporation classified its financial assets into the following categories: financial asset at FVTPL, financial assets at amortized cost and equity instruments at FVTOCI.

      i. Financial assets at FVTPL

         Financial assets are classified as at FVTPL when such a financial asset is mandatorily classified or designated as at FVTPL. Financial assets mandatorily classified as at FVTPL include investments in equity instruments which are not designated as at FVTOCI.

         Financial assets at FVTPL are subsequently measured at fair value, with any gains or losses arising on remeasurement recognized in profit or loss. The net gain or loss recognized in profit or loss does not incorporate any dividends or interest earned on such a financial asset.

Fair value is determined in the manner described in Note 33.

ii. Financial assets at amortized cost

Financial assets that meet the following conditions are subsequently measured at amortized cost:

i) The financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows; and
ii) The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Subsequent to initial recognition, financial assets at amortized cost, including cash and cash equivalents, trade receivables at amortized cost and financial liability with no active market are measured at amortized cost, which equals the gross carrying amount determined using the effective interest method less any impairment loss. Exchange differences are recognized in profit or loss.

Cash equivalents include time deposits, which are highly liquid, readily convertible to a known amount of cash. These cash equivalents are held for the purpose of meeting short-term cash commitments.

iii. Investments in equity instruments at FVTOCI

On initial recognition, the Corporation may make an irrevocable election to designate investments in equity instruments as at FVTOCI. Designation as at FVTOCI is not permitted if the equity investment is held for trading or if it is contingent consideration recognized by an acquirer in a business combination.

Investments in equity instruments at FVTOCI are subsequently measured at fair value with gains and losses arising from changes in fair value recognized in other comprehensive income and accumulated in other equity. The cumulative gain or loss will not be reclassified to profit or loss on disposal of the equity investments; instead, it will be transferred to retained earnings.

Dividends on these investments in equity instruments are recognized in profit or loss when the Corporation's right to receive the dividends is established, unless the dividends clearly represent a recovery of part of the cost of the investment.

b) Impairment of financial assets

The Corporation recognizes a loss allowance for expected credit losses on financial assets at amortized cost (including trade receivables), investments in debt instruments that are measured at FVTOCI and lease receivables.

The Corporation always recognizes lifetime expected credit losses (ECLs) for trade receivables and lease receivables. For all other financial instruments, the Corporation recognizes lifetime ECLs when there has been a significant increase in credit risk since initial recognition. If, on the other hand, the credit risk on a financial instrument has not increased significantly since initial recognition, the Corporation measures the loss allowance for that financial instrument at an amount equal to 12-month ECLs.

Expected credit losses reflect the weighted average of credit losses with the respective risks of default occurring as the weights. Lifetime ECLs represent the expected credit losses that will result from all possible default events over the expected life of a financial instrument. In contrast, 12-month ECLs represent the portion of lifetime ECLs that is expected to result from default events on a financial instrument that are possible within 12 months after the reporting date.

The Corporation recognizes an impairment gain or loss in profit or loss for all financial instruments with a corresponding adjustment to their carrying amount through a loss allowance account.

c) Derecognition of financial assets
The Corporation derecognizes a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another party.

On derecognition of a financial asset at amortized cost in its entirety, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognized in profit or loss. On derecognition of an investment in a debt instrument at FVTOCI, the difference between the asset's carrying amount and the sum of the consideration received and receivable and the cumulative gain or loss which had been recognized in other comprehensive income is recognized in profit or loss. However, on derecognition of an investment in an equity instrument at FVTOCI, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognized in profit or loss, and the cumulative gain or loss which had been recognized in other comprehensive income is transferred directly to retained earnings, without recycling through profit or loss.

2) Equity instruments
Debt and equity instruments issued by the Corporation are classified either as financial liabilities or as equity in accordance with the substance of the contractual arrangements and the definitions of a financial liability and an equity instrument.
Equity instruments issued by the Corporation are recognized at the proceeds received, net of direct issue costs.
Repurchase of the Corporation's own equity instruments is recognized in and deducted directly from equity. No gain or loss is recognized in profit or loss on the purchase, sale, issue or cancellation of the Corporation's own equity instruments.

3) Financial liabilities
a) Subsequent measurement
Except in the following situation, all the financial liabilities are measured at amortized cost using the effective interest method:
i. Financial liabilities at fair value through profit or loss
Financial liabilities are classified as at fair value through profit or loss when the financial liability is held for trading.
Financial liabilities held for trading are stated at fair value, with any gains or losses arising on remeasurement recognized in profit or loss. The net gain or loss recognized in profit or loss does not incorporate any interest or dividend paid on the financial liability. Fair value is determined in the manner described in Note 33.

b) Derecognition of financial liabilities
The difference between the carrying amount of a financial liability derecognized and the consideration paid is recognized in profit or loss.

4) Convertible bonds

The conversion options component of the convertible bonds issued by the Corporation that is settled other than by the exchange of a fixed amount of cash or other financial asset for a fixed number of the Company's own equity instruments is classified as derivative financial liabilities.

On initial recognition, the derivative financial liabilities component of the convertible bonds is recognized at fair value, and the initial carrying amount of the component of non-derivative financial liabilities is determined by deducting the amount of derivative financial liabilities from the fair value of the hybrid instrument as a whole. In subsequent periods, the non-derivative financial liabilities component of the convertible bonds is measured at amortized cost using the effective interest method. The derivative financial liabilities component is measured at fair value and the changes in fair value are recognized in profit or loss.

Transaction costs that relate to the issue of the convertible bonds are allocated to the derivative financial liabilities component and the non-derivative financial liabilities component in proportion to their relative fair values. Transaction costs relating to the derivative financial liabilities component are recognized immediately in profit or loss. Transaction costs relating to the non-derivative financial liabilities component are included in the carrying amount of the liability component.

5) Derivative financial instruments

The Corporation enters into foreign exchange forward contracts to manage its exposure to foreign exchange rate risks.

Derivatives are initially recognized at fair value at the date the derivative contracts are entered into and are subsequently remeasured to their fair value at the end of each reporting period. The resulting gain or loss is recognized in profit or loss immediately, but if the derivative is designated and effective as a hedging instrument, the timing of the recognition in profit or loss depends on the nature of the hedge relationship. When the fair value of derivative financial instruments is positive, the derivative is recognized as a financial asset; otherwise, the derivative is recognized as a financial liability.

Derivatives embedded in hybrid contracts that contain financial asset hosts that is within the scope of IFRS 9 are not separated; instead, the classification is determined in accordance with the entire hybrid contract. Derivatives embedded in non-derivative host contracts that are not financial assets that is within the scope of IFRS 9 (e.g., financial liabilities) are treated as separate derivatives when they meet the definition of a derivative; their risks and characteristics are not closely related to those of the host contracts; and the host contracts are not measured at FVTPL.

n.Provisions

Provisions are measured at the best estimate of the discounted cash flows of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation.

The warranty of obligations products that meet the eligibility criteria are recognized at the date of sale of the relevant products and at the Corporation management’s best estimate of the expenditure required to settle the obligations.

o.Revenue recognition

The Corporation identifies contracts with customers, allocates the transaction price to the performance obligations and recognizes revenue when performance obligations are satisfied.

For contracts where the period between the date on which the Corporation transfers a promised good or service to a customer and the date on which the customer pays for that good or service is one year or less, the Corporation does not adjust the promised amount of consideration for the effects of a significant financing component.

1) Revenue from the sale of goods

Revenue from the sale of goods comes from sales of solar cell, modules and power facilities construction. Sales of solar cell, modules and electric power plants are recognized as revenue when the goods are delivered to the customer’s specific location to fulfill contractual obligation.

Revenue from the sale of goods is measured at the fair value of the consideration receive or receivable, which states net of discounts and other similar sales returns and allowances. In consideration of historical experience and other factors related to contract conditions, the Corporation recognizes such sales returns and allowances as contract liabilities shown in the consolidated balance sheet as other current liabilities.

If there is a need to cut or remove material before processing, such processed products do not transfer substantially all the risks and rewards to the customer, thus revenue can not be recognized.

2) Construction revenue

The Corporation undertakes power plant construction contracts with customer-specified specifications, and recognizes revenue gradually during the construction process. As the cost of construction is directly related to the degree of completion of the performance obligation, the Corporation measures the progress of completion based on the actual input cost as a proportion of the expected total cost. The Corporation recognizes contract assets gradually during the construction process and transfers them to accounts receivable when billing. If the amount of engineering received exceeds the amount of recognized revenue, the difference would be recognized as contract liability. In accordance with contract terms, project retention payments withheld by customers are intended to ensure that the Corporation fulfills all contractual obligations and are recognized as contract asset before the Corporation's performance is completed.

If the results of performance obligations cannot be measured reliably, construction revenue is recognized only when costs incurred to meet performance obligations are expected to be recovered.

3) Processing revenue
Revenue is recognized from providing process of solar cells services to customers. Processing revenue is recognized as a sale when customer obtains control over the assets to fulfill contractual obligation.

4) Service revenue
Service revenue is recognized when services are provided.

5) Electricity sales revenue
Electricity sales revenue is calculated based on actual electricity sales and rates.

p.Leasing

2019

At the inception of a contract, the Corporation assesses whether the contract is, or contains, a lease.

1) The Corporation as lessor

Leases are classified as finance leases whenever the terms of a lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

When the Corporation subleases a right-of-use asset, the sublease is classified by reference to the right-of-use asset arising from the head lease, not with reference to the underlying asset. However, if the head lease is a short-term lease that the Corporation, as a lessee, has accounted for applying recognition exemption, the sublease is classified as an operating lease.

Under finance leases, the lease payments comprise variable lease payments which depend on an index or a rate. The net investment in a lease is measured at (a) the present value of the sum of the lease payments receivable by a lessor and any unguaranteed residual value accrued to the lessor plus (b) initial direct costs and is presented as a finance lease receivable. Finance lease income is allocated to the relevant accounting periods so as to reflect a constant, periodic rate of return on the Corporation's net investment outstanding in respect of leases.

Lease payments (less any lease incentives payable) from operating leases are recognized as income on a straight-line basis over the terms of the relevant leases.

Variable lease payments that do not depend on an index or a rate are recognized as income in the periods in which they are incurred.

2) The Corporation as lessee

The Corporation recognizes right-of-use assets and lease liabilities for all leases at the commencement date of a lease, except for short-term leases and low-value asset leases accounted for applying a recognition exemption where lease payments are recognized as expenses on a straight-line basis over the lease terms.

Right-of-use assets are initially measured at cost, which comprises the initial measurement of lease liabilities adjusted for lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs needed to restore the underlying assets, and less any lease incentives received. Right-of-use assets are subsequently measured at cost less accumulated depreciation and impairment losses and adjusted for any remeasurement of the lease liabilities. Right-of-use assets are presented on a separate line in the balance sheets.

Right-of-use assets are depreciated using the straight-line method from the commencement dates to the earlier of the end of the useful lives of the right-of-use assets or the end of the lease terms.

Lease liabilities are initially measured at the present value of the lease payments. The lease payments are discounted using the interest rate implicit in a lease, if that rate can be readily determined. If that rate cannot be readily determined, the Corporation uses the lessee’s incremental borrowing rate.

Subsequently, lease liabilities are measured at amortized cost using the effective interest method, with interest expense recognized over the lease terms. When there is a change in a lease term, a change in the assessment of an option to purchase an underlying asset, or a change in future lease payments resulting from a change in an index or a rate used to determine those payments, the Corporation remeasures the lease liabilities with a corresponding adjustment to the right-of-use-assets. However, if the carrying amount of the right-of-use assets is reduced to zero, any remaining amount of the remeasurement is recognized in profit or loss. Lease liabilities are presented on a separate line in the balance sheets.

Variable lease payments that do not depend on an index or a rate are recognized as expenses in the periods in which they are incurred.

2018

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

1) The Corporation as lessor
   Rental income from operating leases is recognized on a straight-line basis over the term of the lease.
2) The Corporation as lessee
   Operating lease payments are recognized as an expense on a straight-line basis over the lease term.

q. Borrowing costs

Borrowing costs directly attributable to an acquisition, construction or production of qualifying assets are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale.

Investment income earned on the temporary investment of specific borrowings, pending their expenditure on qualifying assets, is deducted from the borrowing costs eligible for capitalization.

Other than the situations stated above, all other borrowing costs are recognized in profit or loss in the period in which they are incurred.

r. Government grants

Government grants are recognized when there is reasonable assurance that the Corporation will comply with the conditions attached to and that the grants will be received.

Government grants are recognized in profit or loss on a systematic basis over the periods in which the

Corporation recognizes as expenses the related costs for which the grants are intended to compensate.

Government grants receivable as compensation for expenses or losses already incurred or for immediate financial support, with no future related costs, are recognized as other income in profit or loss in the period in which they become receivable.

s. Employee benefits

1) Short-term employee benefits
Liabilities recognized in respect of short-term employee benefits are measured at the undiscounted amount of the benefits expected to be paid in exchange for the related service.

2) Retirement benefits
Payments to defined contribution retirement benefit plans are recognized as an expense when employees have rendered service entitling them to the contributions.

t. Share-based payment arrangements (Employee share options)

1) Employee share options and restricted shares for employees

The fair values at the grant date of the employee share options and restricted shares for employees are expensed on a straight-line basis over the vesting period, based on the Corporation's best estimates of the number of shares or options that are expected to ultimately vest, with a corresponding increase in capital surplus - employee share options and other equity - unearned employee benefits. The whole amount of benefit is recognized as an expense at the grant date if vested immediately.

When restricted shares for employees are issued, other equity - unearned employee benefits is recognized at the grant date, with a corresponding increase in capital surplus - restricted shares for employees. If restricted shares for employees are granted for consideration, and should be returned, they are recognized as payables. Dividends paid to employees on the restricted shares that do not need to be returned if employees resign in the vesting period, are recognized as expenses when the dividends are declared with a corresponding adjustment in retained earnings and capital surplus - restricted shares for employees.

At the end of each reporting period, the Corporation revises its estimate of the number of employee share options and restricted shares for employees expected to vest. The impact of the revision of the original estimate is recognized in profit or loss such that the cumulative expense reflects the revised estimate, with a corresponding adjustment to capital surplus - employee share options or capital surplus - restricted shares of employees.

2) Share-based payment transactions of the acquiree in a business combination

When the share-based payment awards held by the employees of an acquiree (acquiree awards) are replaced by the Corporation's share-based payment awards (replacement awards), both the acquiree awards and the replacement awards are measured in accordance with the market-based measure at the acquisition date. The portion of the replacement awards that is included in measuring the consideration transferred in a business combination equals the market-based measure of the acquiree awards multiplied by the ratio of the portion of the vesting period completed to the greater of the total vesting period or the original vesting period of the acquiree award. The market-based measure of the replacement awards in excess of the market-based measure of the acquiree awards included in measuring the consideration transferred is recognized as a remuneration cost for post-combination service.

u. Taxation

Income tax expense represents the sum of the tax currently payable and deferred tax.

1) Current tax

Based on the Income Tax Law, an additional tax at 5% of unappropriated earnings is provided for as income tax in the year the shareholders approve the retention of earnings.

Adjustments of prior years' tax liabilities are added to or deducted from the current year's tax provision.

2) Deferred tax

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities and the corresponding tax bases used in the computation of taxable profit. Deferred tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets are generally recognized for all deductible temporary differences, and unused loss carryforwards to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be used.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries, except where the Corporation is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with these investments and interests are recognized only to the extent that it is probable that there will be sufficient taxable profits against which to use the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered. A previously unrecognized deferred tax asset is also reviewed at the end of each reporting period and recognized to the extent that it has become probable that future taxable profit will allow the deferred tax asset to be recovered.

Deferred tax liabilities and assets are measured at the tax rates that are expected to apply to the period in which the liability is settled or the asset realized, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. The measurement of deferred tax liabilities and assets reflects the Corporation's expectations, at the end of the reporting period, as to the manner by which the carrying amount of its assets and liabilities will be recovered or settled.

3) Current and deferred tax for the year

Current and deferred taxes are recognized in profit or loss, but when these taxes pertain to items that are recognized in other comprehensive income or directly in equity, the current and deferred taxes are also recognized in other comprehensive income or directly in equity, respectively.

5. CRITICAL ACCOUNTING JUDGMENTS AND KEY SOURCES OF ESTIMATION AND UNCERTAINTY

In the application of the Corporation's accounting policies, management is required to make judgments, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised if the revision affects only that period or in the period of the revision and future periods if the revision affects both current and future periods.

Critical Accounting Judgments

Lease terms - 2019

In determining a lease term, the Corporation considers all facts and circumstances that create an economic incentive to exercise or not to exercise an option, including any expected changes in facts and circumstances from the commencement date until the exercise date of the option. Main factors considered include contractual terms and conditions for the optional periods, significant leasehold improvements undertaken over the contract term, the importance of the underlying asset to the lessee's operations, etc. The lease term is reassessed if a significant change in circumstances that are within control of the Corporation occur.

Key Sources of Estimation Uncertainty

Lessees' incremental borrowing rates

In determining a lessee's incremental borrowing rate used in discounting lease payments, a risk-free rate for the same currency and relevant duration is selected as a reference rate.

6. CASH AND CASH EQUIVALENTS

	December 31	
	2019	2018
Demand deposits	$ 4,837,256	$ 7,143,885
Checking accounts	4,903	36,856
Cash on hand	451	751
Cash equivalents		
Time deposits	-	104,985
	$ 4,842,610	$ 7,286,477

The market rate intervals of cash in the bank at the end of the reporting period were as follows:

	December 31	
	2019	2018
Bank balance	0%-0.43%	0%-1.02%

7. FINANCIAL INSTRUMENTS AT FAIR VALUE THROUGH PROFIT OR LOSS

	December 31	
	2019	2018
Financial assets at FVTPL - current		
Financial assets mandatorily classified as at FVTPL		
Derivative financial assets (not under hedge accounting)		
Cross-currency swap contracts (a)	$ 2,392	$ -
Financial liabilities at FVTPL - current		
Financial liabilities held for trading		
Derivative financial liabilities (not under hedge accounting)		
Foreign exchange forward contracts (b)	$ 755	$ -

a. At the end of the reporting period, outstanding cross-currency swap contracts not under hedge accounting were as follows:

	Rate	Maturity Date	Contract Amount (In Thousands)
December 31, 2019			
Cross-currency swap contracts	USD:NTD 30.07150	2020.01.21	USD 10,000/ NTD300,715
Cross-currency swap contracts	USD:NTD 30.07150	2020.01.21	USD 12,000/ NTD360,858

The Corporation entered into derivative transactions during 2019 to manage exposures of assets and liabilities denominated in cross-currency swap related to exchange rate changes.

b. At the end of the reporting period, outstanding foreign exchange forward contracts not under hedge accounting were as follows:

	Currency	Maturity Date	Notional Amount (In Thousands)
December 31, 2019			
Sell	Sell EUR/Buy USD	January 17, 2020	EUR 3,000/ USD 3,339

The Corporation entered into derivative transactions during 2019 to manage exposures of assets and liabilities denominated in foreign currency related to exchange rate changes.

8. FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME

	December 31	
	2019	2018
Current		
Domestic investments		
Domestic quoted shares		
CTCI Corporation (“CTCI”)	$ 114,414	$ 133,333
Non-current		
Domestic investments		
Domestic quoted shares		
Sino-American Silicon Products Inc. (“SAS”)	$ 2,172,922	$ 1,337,855
ThinTech Materials Technology Co., Ltd. (“TTMC”)	80,880	66,240
Unlisted ordinary shares		
EXOJET Technology Corporation (“EXOJET”)	28,896	45,962
Taiwan Special Chemicals Corporation(“TSCC”)	18,601	18,601
NTNU Innovation Investment Holding Company(“NTNU”)	2,000	2,000
Sunshine PV Corp. (“Sunshine PV”)	-	-
	2,303,299	1,470,658
Overseas investments		
Unlisted ordinary shares		
ASIA GLOBAL VENTURE CAPITAL II CO., LTD	20,426	22,137
SUN APPENNINO CORPORATION	-	19,338
FICUS CAPITAL CORPORATION	-	-
	20,426	41,475
	$ 2,323,725	$ 1,512,133

The Corporation invested in corporation mentioned above for long-term strategic purposes. Accordingly, the management elected to designate these investments in equity instruments as at FVTOCI as they believe that recognizing short-term fluctuations in these investments' fair value in profit or loss would not be consistent with The Corporation's strategy of holding these investments for long-term purposes.

The Corporation's investment in TTMC's private-placement shares under Article 43-8 of the Securities and Exchange Act, there is a legally enforceable restriction on private-placement shares, which prevents their trading.

Refer to Note 35 for the amount of investments in equity instruments at FVTOCI pledged by the Corporation to secure borrowings.

9. FINANCIAL ASSETS AT AMORTIZED COST

	December 31	
	2019	2018
Non-current		
Overseas investment		
Puttable preference shares (C-Shares III) - Phanes Holding Inc. (Phanes Holding)	$ 149,975	$ 153,700
Less: Allowance for impairment loss	-	-
	$ 149,975	$ 153,700

Phanes Holding, a project developer, is an overseas unlisted company. The Group has successfully built several power facilities in the UK and the Dominican Republic through the cooperative relationship with Phanes Holding. In order to build a long-term cooperative strategic relationship with Phanes Holding, subscribed for the following preference shares issued by Phanes Holding at par:

Five-year puttable preference shares (C-Shares III) for 24,000 shares amounting to USD5,000 thousand for 100% interest.

The above preference shares carried no voting rights and no dividend rights but carried preferential rights on dividends specified at 7% of the par value. The preference shares can be redeemed prior to or later than the maturity date under the agreement between the Group and Phanes Holding.

For the years ended December 31, 2019 and 2018, the interest income of puttable preference shares amounted to $9,541 thousand and $11,487 thousand, respectively. The related interest receivable, classified as other receivables from related parties, amounted to $20,997 thousand and $10,759 thousand as of December 31, 2019 and 2018, respectively.

As of December 31, 2019, financial assets at amortized cost had not been pledged as security.

The Corporation only invests in debt instruments that are rated the equivalent of investment grade or higher and have low credit risk for the purpose of impairment assessment. The Group's exposure and the external credit ratings are continuously monitored. The Group reviews changes in other public information and makes an assessment about whether there has been a significant increase in credit risk since the last period to the reporting date.

The Corporation considers the current financial condition of debtors and industry forecasts to estimate 12-month or lifetime expected credit losses.

The Group's current credit risk grading framework comprises the following categories:

Category	Description	Basis for Recognizing Expected Credit Losses	Expected Loss Rate
Performing	The counterparty has a low risk of default and a strong capacity to meet contractual cash flows	12-month ECL	0%

10. NOTES AND ACCOUNTS RECEIVABLE, INSTALLMENT ACCOUNTS RECEIVABLE, AND OTHER RECEIVABLES

	December 31	
	2019	2018
Notes and accounts receivable		
Notes and accounts receivable	$ 1,800,696	$ 2,336,804
Accounts receivable from related parties	400,004	574,141
Less: Allowance for impairment loss	(347,886)	(355,847)
	$ 1,852,814	$ 2,555,098

(Continued)

	December 31	
	2019	2018
Other receivables		
Other receivables from related parties	$ 2,752,831	$ 2,921,525
Sales tax refund receivable	18,148	90,677
Others	278,986	12,937
Less: Allowance for impairment loss	(4,609)	(8,400)
	$ 3,045,356	$ 3,016,739

(Concluded)

a. Notes and accounts receivable

The credit periods for the sale of goods were (a) 30 to 90 days after the end of the month; (b) 15 to 150 days from the invoice date; and (c) 30 to 90 days for letters of credit and the average credit periods for power facility construction were 180 to 360 days. No interest was charged on notes and accounts receivables. For overdue accounts receivables, interest was charged on the basis of management's judgment.

In order to minimize credit risk, the management of the Corporation has delegated a team responsible for determining credit limits, credit approvals and other monitoring procedures to ensure that follow-up action is taken to recover overdue debts. In addition, the Corporation reviews the recoverable amount of each individual trade debt at the end of the reporting period to ensure that adequate allowance is made for possible irrecoverable amounts. In this regard, the management believes the Corporation's credit risk was significantly reduced.

The Corporation applies the simplified approach to providing for expected credit losses prescribed by IFRS 9, which permits the use of lifetime expected loss provision for all trade receivables. The expected credit losses on trade receivables are estimated using a provision matrix by reference to past default experience of the debtor and an analysis of the debtor's current financial position, adjusted for general economic conditions of the industry in which the debtors operate and an assessment of both the current as well as the forecasted direction of economic conditions at the reporting date. As the Corporation's historical credit loss experience shows significantly different loss patterns for different customer segments, the provision for loss allowance based on past due status is further distinguished according to the Corporation's different customer base.

The Corporation writes off a trade receivable when there is information indicating that the debtor is in severe financial difficulty and there is no realistic prospect of recovery, e.g., when the debtor has been placed under liquidation. For trade receivables that have been written off, the Corporation continues to engage in enforcement activity to attempt to recover the receivables due. Where recoveries are made, these are recognized in profit or loss.

The following table details the loss allowance of trade receivables based on the Corporation's provision matrix.

December 31, 2019

	Not Past Due	Less Than or Equal to 30 Days	31 to 60 Days	61 to 90 Days	91 to 120 Days	121 to 150 Days	151 to 180 Days	Over 180 Days	Signs of Counterparty Default	Total
Expected credit loss rate	0%-0.22%	0%-4.09%	0%-4.10%	0%-11.53%	0%-19.89%	0%-27.55%	0%-26.35%	0%-100%	100%	
Gross carrying amount	$ 782,125	$ 328,683	$ 147,634	$ 98,441	$ 20,778	$ 26,219	$ 5,402	$ 465,062	$ 326,356	$ 2,200,700
Loss allowance (lifetime ECL)	(938)	(6,451)	(2,443)	(3,466)	(3,789)	(589)	845	(3,009)	(326,356)	(347,886)
Amortized cost	$ 781,187	$ 322,232	$ 145,191	$ 94,975	$ 16,989	$ 25,630	$ 4,557	$ 462,053	$ -	$ 1,852,814

December 31, 2018

	Not Past Due	Less Than or Equal to 30 Days	31 to 60 Days	61 to 90 Days	91 to 120 Days	121 to 150 Days	151 to 180 Days	Over 180 Days	Signs of Counterparty Default	Total
Expected credit loss rate	0%-0.02%	0%-0.10%	0%-2.84%	0%-15.92%	0%-29.08%	0%-31.85%	0%-26.15%	0%-100%	100%	
Gross carrying amount	$ 1,264,817	$ 289,134	$ 361,737	$ 169,849	$ 28,199	$ 65,130	$ 4,060	$ 397,230	$ 330,789	$ 2,910,945
Loss allowance (Lifetime ECL)	(49)	(65)	(1,678)	(924)	(2,684)	(19,513)	(145)	-	(330,789)	(355,847)
Amortized cost	$ 1,264,768	$ 289,069	$ 360,059	$ 168,925	$ 25,515	$ 45,617	$ 3,915	$ 397,230	$ -	$ 2,555,098

The movements of the loss allowance of trade receivables are as follows:

	2019	2018
Balance at January 1	$ 355,847	$ 341,608
Impairment (reversal) losses	(5,598)	34,062
Amounts written off	(2,363)	(19,823)
Balance at December 31	$ 347,886	$ 355,847

b. Other receivables

The credit period was 60 days after the end of the month.

In order to minimize credit risk, the management of the Corporation has delegated a team responsible for determining credit limits, credit approvals and other monitoring procedures to ensure that follow-up action is taken to recover overdue debts. In addition, the Corporation reviews the recoverable amount of each individual trade debt at the end of the reporting period to ensure that adequate allowance is made for possible irrecoverable amounts. In this regard, the management believes the Corporation's credit risk was significantly reduced.

Loss allowance of finance lease receivables was estimated at the reporting date. For those with credit risk that did not increase significantly since initial recognition, 12-month ECL was applied; for those with credit risk that increased significantly since initial recognition, lifetime ECL was applied.

The aging of other receivables is as follows:

	December 31	
	2019	2018
Up to 60 days	$ 2,550,145	$ 2,825,273
61-90 days	-	-
91-120 days	1,111	-
More than 120 days	498,709	199,866
Total	$ 3,049,965	$ 3,025,139

The aging of other receivables that were impaired is as follows:

	December 31	
	2019	2018
Up to 60 days	$ 4,609	$ 8,400

The above analysis was based on the past due days from end of credit term.
The movements of the loss allowance of other receivables are as follows:

	2019	2018
Balance at January 1	$ 8,400	$ -
Impairment losses	18,351	8,400
Amounts written off	(22,142)	-
Balance at December 31	$ 4,609	$ 8,400

The above analysis is based on the past-due date from the end of the credit term.
The analysis of other receivables - receivables and loans are as follows:

			December 31	
	Collateral	Interest Rate	2019	2018
Fixed rate NTD-denominated loans receivables at NTD200,000 thousand (1)	$ -	1.608%	$ -	$ 200,000
Fixed rate USD-denominated loans receivables at USD3,500 thousand (2)	-	5%	-	107,590
Fixed rate NTD-denominated loans receivables at NTD24,000 thousand (2)	-	3%	-	24,000
			$ -	$ 331,590

1) The impairment losses had been recognized refer to Note 36.
2) The principal received in the second quarter of 2019.

11. INVENTORIES

	December 31	
	2019	2018
Finished goods	$ 1,648,727	$ 1,143,102
Raw materials	463,792	521,647
Power facilities construction in progress	59,477	148,042
Work in progress	34,697	7,510
	$ 2,206,693	$ 1,820,301

In 2019, the cost of sales was $15,687,440 thousand, which related to inventories included (1) unallocated fixed manufacturing overheads of $1,420,751 thousand; (2) income of $5,830 thousand from the sale of scraps; (3) reversal of losses on purchase contracts of $14,129 thousand; (4) recognized impairments prepayments of $15,895 thousand; (5) recognized inventory write-downs of $47,561 thousand; and (6) loss of 2,418 thousand from the disposal of obsolete inventories.

In 2018, the cost of sales was $11,373,700 thousand, which related to inventories included (1) unallocated fixed manufacturing overheads of $770,259 thousand; (2) income of $4,432 thousand from the sale of scraps; (3) losses on purchase contracts of $398,581 thousand; (4) reversal of prepayments write - downs of $78,924 thousand; (5) reversal of inventory write-downs of $9,207 thousand; and (6) loss of 14,189 thousand from the disposal of obsolete inventories.

The inventories had not been pledged as security or for other purposes.

12. INVESTMENTS ACCOUNTED FOR USING EQUITY METHOD

	December 31	
	2019	2018
Investments in subsidiaries	$ 7,912,257	$ 8,758,803
Credit balance of investments accounted for using the equity method	264,541	134,503
	8,176,798	8,893,306
Investments in associates	765,978	982,842
	$ 8,942,776	$ 9,876,148

a. Investments in subsidiaries

	December 31	
	2019	2018
Unlisted companies		
General Energy Solutions UK Limited (“GES UK”)	$ 2,443,709	$ 2,400,667
Ultimate Energy Solution Limited (“UES”)	1,987,414	1,863,226
NSP Systems (BVI) Ltd. (“NSP BVI”)	1,411,425	1,407,681
DelSolar Holding (Cayman) Ltd. (“DelSolar Cayman”)	923,603	1,775,871
GES Energy Middle East FZE (“GES ME”)	357,850	358,774
Young Liang Ltd. (“Young Liang”)	246,742	244,633
Apex Solar Corporation (“Apex”)	190,890	157,341
NSP UK Holding Limited (“NSP UK”)	182,919	143,188
NSP System Development Corp. (“NSP System”)	140,877	141,419
Prime Energy Corp. (“Prime Energy”)	79,992	80,222
New Ray Investment Corp. (“New Ray Investment”)	72,524	64,262
Zhongyang Corporation (“Zhongyang”)	37,104	31,439
Huiyang Corporation (“Huiyang”)	29,977	30,295

	December 31	
	2019	2018
Best Power Service Corp. (“BPS”)	21,353	14,880
DelSolar Holding Singapore Pte Ltd. (“DelSolar Singapore”)	18,565	18,692
United Renewable Energy Engineering Co., Ltd. (“UREE”)	14,489	-
Solartech Materials Corporation (“SMC”)	9,844	9,658
Yong Zhou Ltd. (“Yong Zhou”)	5,829	6,892
Yong Shun Ltd. (“Yong Shun”)	799	914
ELECTRONIC J.R.C. S.R.L. (“JRC”)	466	(33,961)
Dashiangying Energy Power Ltd. Co. (“Dashiangying”)	71	-

(Continued)

	December 31	
	2019	2018
Shinkai Energy Power Ltd. Co. (“Shinkai”)	$ 71	$ -
Shanshang Energy Power Ltd. Co. (“Shanshang”)	71	-
Jiangung Energy Power Ltd. (“Jiangung”)	71	-
Dungshr Energy Power Ltd. (“Dungshr”)	71	-
Yanshan Energy Power Ltd. Co. (“Yanshan”)	71	-
Ever Lte Power Inc. (“Ever Lite”)	1	2,787
Solartech Japan Corporation (“Solartech JP”)	-	34,333
Yong Yao Ltd. (“Yong Yao”)	-	140,093
Utech Solar Corporation (“Utech”)	(264,541)	(134,503)
	7,912,257	8,758,803
Credit balance of investments accounted for using the equity method	264,541	134,503
	$ 8,176,798	$ 8,893,306

(Concluded)

As of December 31, 2019 and 2018, the Corporation continued recognition of its share of further losses of Utech and of DelSolar Singapore, which was experiencing losses, causing credit balances on the carrying values of investments. The credit balances on the carrying values were reclassified into credit balance of investments accounted for using the equity method.

At the end of the reporting period, the proportion of ownership and voting rights in subsidiaries held by the Corporation were as follows:

	December 31	
	2019	2018
GES UK (Note 1)	100.00%	100.00%
UES	100.00%	100.00%
NSP BVI	100.00%	100.00%
DelSolar Cayman	100.00%	100.00%
GES ME	100.00%	100.00%
Young Liang (Note 1)	100.00%	100.00%
Apex	100.00%	100.00%
NSP UK	100.00%	100.00%
NSP System	100.00%	100.00%
Prime Energy	100.00%	100.00%
New Ray Investment	100.00%	100.00%
Zhongyang	100.00%	100.00%
Huiyang	100.00%	100.00%
BPS	60.00%	60.00%
DelSolar Singapore	100.00%	100.00%
UREE (Note 2)	100.00%	-
SMC	100.00%	100.00%

	December 31	
	2019	2018
Yong Zhon (Note 1)	100.00%	100.00%
Yong Shun (Note 1)	100.00%	100.00%
JRC (Note 1)	1.00%	1.00%
Dashiangying (Note 2)	100.00%	-
Shinkai (Note 2)	100.00%	-
Shanshang (Note 2)	100.00%	-
Jiangung (Note 2)	100.00%	-
Dungshr (Note 2)	100.00%	-
Yanshan (Note 2)	100.00%	-
Ever Lite (Note 1)	100.00%	100.00%
Solartech JP (Note 2)	-	100.00%
Yong Yao (Notes 1 and 2)	-	100.00%
Utech (Note 2)	99.49%	98.30%

(Continued)

(Concluded)

Note 1: The Corporation, which was the surviving company, had a short-form merge with its 100% owned subsidiary, GES, as of March 31, 2019. The subsidiaries held by GES were transferred to the Corporation.

Note 2: The movement details of the subsidiaries held by the Corporation, refer to Note 29, Note 30 and Table 5.

Refer to Note 41 to the Corporation's consolidated financial statements for the details of the subsidiaries indirectly held by the Corporation.

The investments accounted for using the equity method and the share of profit or loss and other comprehensive income of those investments for the years ended December 31, 2019 and 2018 were based on the associates' financial statements audited by the auditors for the same years.

The investment in the subsidiaries had not been pledged as collateral for bank loans.

b. Investments in associates

	December 31	
	2019	2018
Associates that are not individually material		
Neo Cathay	$ 608,967	$ 606,932
TS Solartech SDN BHD ("TSST")	86,638	254,093
V5 Technology	66,769	69,860
JNV SOLAR POWER Co., LTD ("JSP")	3,604	7,533
Gintung Energy Corporation ("Gintung")	-	44,424
Solar PV Corp. ("Solar PV")	-	-
Sunshine PV Corporation ("Sunshine PV")	-	-
	$ 765,978	$ 982,842

1) Aggregate information of associates that are not individually material

At the end of the reporting period, the proportion of ownership and voting rights in the associate and joint venture held by the Corporation were as follows:

Name of Associate	December 31 2019	December 31 2018
Neo Cathay	40.00%	40.00%
TSST	42.12%	42.12%
V5 Technology	41.43%	41.43%
DSET (a)	35.00%	35.00%
Gintung	36.38%	36.38%
Solar PV	19.92%	19.92%
Sunshine PV (b)	-	19.47%

a) The name JNV SOLAR POWER CO., LTD. ("JSP") was changed to DS Energy Technology Co., Ltd. ("DSET") on December 31, 2019.

b) The Corporation resigned from the Sunshine PV's board of directors in May 2019. Therefore, it has no significant influence on the Company. It is reclassified to FVOCI financial asset - noncurrent; Sunshine PV was dissolved in August 2019.

Aggregate information of associates that are not individually material were as follows:

	For the Year Ended December 31 2019	For the Year Ended December 31 2018
The Corporation's share of:		
Net (loss) income for the period	$(200,559)	$(111,546)
Other comprehensive (loss) income for the period	(1,099)	(36,641)
Total comprehensive (loss) income for the period	$(201,658)	$(148,187)

The Corporation had recognized impairment loss of equity investment of Solar PV, an associate, so that the Corporation did not recognize any share of profit or loss of associates. However, based on the changes in the Corporation's share of equity of associates attributable to the Corporation was $739 thousand, as of December 31, 2019.

The Corporation had recognized impairment loss of equity investment of Gintung, an associate, so that the Corporation did not recognize any share of profit or loss of associates. However, based on the changes in the Corporation's share of equity of associates attributable to the Corporation was $50,851 thousand, as of December 31, 2019.

The information of the main business, principal operating place and registry country of the above associates and joint ventures is shown in Table 6 "Information on Investees".

Except for TSST, the investments accounted for using the equity method and the share of profit or loss and other comprehensive income of the investment were calculated based on the financial statements that have been audited. Management believes there is no material impact on the financial statements that have not been audited.

The investments in the associates had been pledged as collateral for bank loans, refer to Note 35.

13. PROPERTY, PLANT AND EQUIPMENT

a. Assets used by the Corporation - 2019

	Year Ended December 31, 2019				
	Balance, Beginning of the Period	Additions	Deductions	Reclassifications	Balance, End of Period
Cost					
Land	$ 1,436,596	$ -	$ -	$ -	$ 1,436,596
Buildings	7,148,288	-	-	-	7,148,288
Machinery and equipment	17,360,914	-	(390,455)	568,001	17,538,460
Research and development equipment	65,114	-	(8,618)	8,939	65,435
Office equipment	53,206	-	(1,525)	2,818	54,499
Leasehold improvements	4,854	-	(4,792)	-	62
Transportation equipment	1,991	231	(471)	-	1,751
Miscellaneous equipment	404,415	47	(7,720)	7,077	403,819
Property under acceptance or construction	472,240	210,764	-	(590,900)	92,104
	26,947,618	$ 211,042	$ (413,581)	$ (4,065)	26,741,014
Accumulated depreciation					
Buildings	1,165,224	$ 324,562	$ -	$ -	1,489,786
Machinery and equipment	11,397,833	1,801,058	(81,227)	-	13,117,664
Research and development equipment	60,348	2,191	(6,432)	-	56,107
Office equipment	39,201	5,423	(1,525)	-	43,099
Leasehold improvements	3,977	76	(3,999)	-	54
Transportation equipment	414	517	(101)	-	830
Miscellaneous equipment	284,077	58,796	(7,721)	-	335,152
	12,951,074	$ 2,192,623	$ (101,005)	$ -	15,042,692
Accumulated impairment					
Buildings	-	$ 398,250	$ -	$ -	398,250
Machinery and equipment	457,098	715,877	(30,488)	-	1,142,487
Research and development equipment	-	958	-	-	958
Office equipment	-	72	-	-	72
Machinery and equipment	-	5,401	-	-	5,401
	457,098	$ 1,120,558	$ (30,488)	$ -	1,547,168
	$ 13,539,446				$ 10,151,154

b. 2018

	Year Ended December 31, 2018					
	Balance, Beginning of the Period	Acquired from Business Combinations	Additions	Deductions	Reclassifications	Balance, End of Period
Cost						
Land	$ 440,596	$ 996,000	$ -	$ -	$ -	$ 1,436,596
Buildings	2,758,988	4,389,300	-	-	-	7,148,288
Machinery and equipment	14,590,548	2,709,000	-	(2,000)	63,366	17,360,914
Research and development equipment	62,856	1,808	-	-	450	65,114
Office equipment	38,809	4,915	102	-	9,380	53,206
Leasehold improvements	4,854	-	-	-	-	4,854
Transportation equipment	313	1,088	590	-	-	1,991
Miscellaneous equipment	295,645	105,027	-	(398)	4,141	404,415
Property under acceptance or construction	163,832	-	388,452	-	(80,044)	472,240
	18,356,441	$ 8,207,138	$ 389,144	$ (2,398)	$ (2,707)	26,947,618
Accumulated depreciation						
Buildings	984,078	$ -	$ 181,146	$ -	$ -	1,165,224
Machinery and equipment	10,045,120	-	1,354,713	(2,000)	-	11,397,833
Research and development equipment	53,354	-	6,994	-	-	60,348
Office equipment	37,369	-	1,832	-	-	39,201
Leasehold improvements	3,558	-	419	-	-	3,977
Transportation equipment	191	-	223	-	-	414
Miscellaneous equipment	249,525	-	34,950	(398)	-	284,077
	11,373,195	$ -	$ 1,580,277	$ (2,398)	$ -	12,951,074
Accumulated impairment						
Machinery and equipment	428,098	$ -	$ -	$ -	$ -	457,098
	$ 6,526,148					$ 13,539,446

Property, plant and equipment are depreciated on a straight-line basis over the following estimated useful lives of the assets:

Buildings	15-21 years
Machinery and equipment	4-11 years
Research and development equipment	4-6 years
Office equipment	3-4 years
Leasehold improvements	4-11 years
Transportation equipment	3-5 years
Miscellaneous equipment	3-11 years

The major components of the buildings held by the Corporation included plants, and electric-powered machinery, etc., which are depreciated over their estimated useful lives of 15 to 21 years.

Refer to Note 35 for the carrying amount of property, plant and equipment pledged by the Corporation to secure borrowings.

For the year ended December 31, 2019, the deductions were amounts transferred from the disposal of property, plant and equipment of $282,088 thousand.

In compliance with the new operating policy. The Corporation's estimated future cash flows expected to arise from the cash-generating units used to produce the cell decreased. The Corporation carried out a review of the recoverable amount of that cash-generating units and determined that the carrying amount exceeded the recoverable amount. The review led to the recognition of an impairment loss of $1,120,558 thousand, which was recognized in other gains and losses for the year ended December 31, 2019. The Corporation determined the recoverable amounts of the cash-generating units on the basis of their value in use. The discount rate used in measuring the value in use was 9.04% per annum.

For the year ended December 31, 2019, there were reclassifications from property under acceptance or construction of $4,065 thousand to other expense.

For the year ended December 31, 2018, there were reclassifications from property under acceptance or construction of $2,707 thousand to other expense.

14. LEASE ARRANGEMENTS

a. Right-of-use assets - 2019

	December 31, 2019
Carrying amounts	
Land	$ 381,254
Buildings	4,062
Machinery	326
Other equipment	6,202
	$ 391,844

	For the Year Ended December 31, 2019
Additions to right-of-use assets	$ 4,598
Depreciation charge for right-of-use assets	
Land	$ 12,185
Buildings	6,675

	For the Year Ended December 31, 2019
Machinery	261
Other equipment	5,548
	$ 24,669

b. Lease liabilities - 2019

	December 31, 2019
Carrying amounts	
Current	$ 13,077
Non-current	$ 384,067

Range of discount rate for lease liabilities was as follows:

	December 31, 2019
Land	2.83%-3.37%
Buildings	2.55%-3.37%
Machinery	2.83%
Other equipment	2.80%-2.83%

c. Material lease-in activities and terms

The Corporation leases certain land, buildings and transportation equipment for the use of product manufacturing with lease terms of 2 to 20 years. The Corporation does not have bargain purchase options to acquire the leasehold land and buildings at the end of the lease terms, and some lease agreements have terms for renewal of leases.

d. Other lease information

2019

	For the Year Ended December 31, 2019
Expenses relating to short-term leases	$ 11,803
Expenses relating to low-value asset leases	$ 4,074
Total cash outflow for leases	$ (48,595)

The Corporation leases certain land and buildings which qualify as short-term leases and certain office equipment and transportation equipment which qualify as low-value asset leases. The Corporation has elected to apply the recognition exemption and thus, did not recognize right-of-use assets and lease liabilities for these leases.

2018

The future minimum lease payments of non-cancellable operating lease commitments are as follows:

	December 31, 2018
Not later than 1 year	$ 30,778
Later than 1 year and not later than 5 years	87,646
Later than 5 years	160,545
	$ 278,969

The lease payments recognized as expenses were as follows:

	For the Year Ended December 31, 2018
Minimum lease payments	$ 28,834

15. INTANGIBLE ASSETS

	December 31	
	2019	2018
Carrying amounts of each class		
Software	$ 4,234	$ 8,098

2018

	Balance, Beginning of the Period	Additions	Acquired from Business Combinations	Deductions	Total
Cost					
Software	$ 187	$ -	$ 9,103	$ -	$ 9,290
Accumulated amortization					
Software	-	$ 1,192	$ -	$ -	1,192
	$ 187				$ 8,098

2019

	Balance, Beginning of the Period	Additions	Acquired from Business Combinations	Deductions	Total
Cost					
Software	$ 9,290	$ -	$ -	$ (47)	$ 9,243
Accumulated amortization					
Software	1,192	$ 3,864	$ -	$ (47)	5,009
	$ 8,098				$ 4,234

Amortization expense is on a straight-line basis over the following estimated useful lives of the assets:

Software	1-4 years

No intangible assets had been pledged as collateral for the Corporation's bank loans.

16. PREPAYMENTS AND OTHER ASSETS

	December 31	
	2019	2018
Prepayments		
Prepayments to suppliers	$ 2,399,005	$ 2,417,797
Others	77,669	330,860
	$ 2,476,674	$ 2,748,657
Other assets		
Overpaid sales tax	$ 357,943	$ 338,983
Restricted assets	331,128	3,563,964
Pledged time deposits	208,333	526,523
Temporary debits	181,438	261,325
Others	-	6
	$ 1,078,842	$ 4,690,801
Prepayments		
Current	$ 336,000	$ 352,440
Non-current	2,140,674	2,396,217
	$ 2,476,674	$ 2,748,657
Other assets		
Current	$ 957,457	$ 4,690,801
Non-current	121,385	-
	$ 1,078,842	$ 4,690,801

The Corporation recognized an impairment loss on prepayments after an assessment; refer to Note 36.

17. LOANS

a. Short-term bank loans

	December 31	
	2019	2018
Secured borrowings		
Bank loans	$ 244,459	$ 200,000
Unsecured borrowings		

	December 31	
	2019	2018
Line of credit borrowings (1)	2,444,389	5,943,020
	$ 2,688,848	$ 6,143,020

1)The range of weighted average effective interest rates on bank loans was 1.7300%-3.6050% and 0.8800%-4.0698% per annum as of December 31 2019 and 2018, respectively.

2)The unused amount of short-term bank loan facilities were $2,700,284 thousand and $4,715,676 thousand, as of December 31, 2019 and 2018, respectively.

3)The assets pledged as collaterals for short-term bank loans are shown in Note 35.

b. Short-term bills payable

	December 31	
	2019	2018
Commercial papers	$ -	$ 80,000
Less: Unamortized discount on bills payable	-	(37)
	$ -	$ 79,963

Outstanding short-term bills payable were as follows:

December 31, 2018

Promissory Institutions	Nominal Amount	Discount Amount	Carrying Value	Interest Rate
Commercial paper				
International Bills Finance Corporation	$ 80,000	$ 37	$ 79,963	2.49%

The Corporation did not pledge any asset as collateral for the short-term bills payable.

c. Long-term bank loans

	December 31	
	2019	2018
Secured loan		
10.13 billion syndicated loan from First Bank	$ 9,803,460	$ -
KGI Bank loan	250,000	250,000
3.6 billion syndicated loan from Mega Bank	-	2,832,000
4.2 billion syndicated loan from First Bank	-	2,570,000
3.3 billion syndicated loan from Taiwan Cooperative Bank	-	1,327,550
0.55 billion syndicated loan from First Bank	-	178,750
Union Bank of Taiwan loan	-	11,660
Unsecured loan		
King's Town Bank	904,916	1,210,000
0.5 billion syndicated loan from First Bank	225,000	337,500
Cota Commercial Bank loan	-	16,664

	December 31	
	2019	2018
Other borrowings		
Machinery and equipment Financing from EQUVO Pte., Ltd.	488,134	672,941
Inventory Financing from SinoPac Leasing Corporation	78,420	-
Inventory Financing from Shinshin Credit Corporation	37,895	-
Inventory Financing from Hotai Finance Corporation	31,106	58,562
Inventory Financing from Taichung Bank Leasing & Finance Co., Ltd	21,416	71,555
Credit loan from IBT Leasing Co., Ltd.	15,089	59,714
Inventory Financing from JihSun International Leasing & Finance Co., Ltd.	-	90,370
Credit loan from Co-operative Assets Management Co., Ltd.	-	41,809
Credit loan from JihSun International Leasing & Finance Co., Ltd.	-	23,799
Credit loan from Taichung Bank Leasing Co., Ltd.	-	23,477
Inventory Financing from IBT Leasing Corporation Limited	-	7,327
	11,855,436	9,783,678
Less: Current portion	(2,412,274)	(3,353,701)
	$ 9,443,162	$ 6,429,977
The range of interest rate	1.4896%-6.9239%	1.6894%-6.9239%

1) The bank borrowing restrictions are as follows:

During the credit period, the agreement on the First Bank $10.13 billion syndicated loans requires the maintenance of certain financial ratios based on the Corporation annual and semiannual consolidated financial reports. The related restrictions are as follows:

a) Current ratio (current assets ÷ current liabilities): At least 100%;
b) Debt to equity ratio (total liabilities ÷ tangible net worth): No more than 150%;
c) Interest coverage ratio [(income before tax + interest expense + depreciation + amortization) ÷interest expense]: At least 2; and
d) Tangible net worth: At least $25 billion.

The First Bank $10.13 billion syndicated loans were new borrowings in February 2019. According to the agreement, the above financial ratios would have been reviewed based on the annual consolidated financial statements from 2019.

During the credit period, the agreement on the Mega Bank $3.6 billion syndicated loans requires the maintenance of certain financial ratios based on the Corporation's annual and semiannual consolidated financial reports. The related restrictions are as follows:

a) Current ratio (Current assets ÷ Current liabilities): At least 100%; and
b) Debt to equity ratio (Total liabilities and the guarantee balance ÷ Tangible net worth): No more than 150%;

The Corporation did not violate the required financial ratios as of December 31, 2018. The above borrowing had been settled in the first quarter of 2019.

During the credit period, from 2019, the agreement on the First Bank $4.2 billion syndicated loans requires the maintenance of certain financial ratios based on the Corporation's annual and semiannual consolidated financial reports. The related restrictions are as follows:

a) Current ratio (Current assets ÷ Current liabilities): At least 100%;
b) Debt to equity ratio (Total liabilities and the guarantee balance ÷ Tangible net worth): No more than 120%;
c) Interest coverage ratio [(Income before tax + Depreciation + Amortization + Interest expense) ÷

Interest expense]: At least 1; and

d) Tangible net worth: At least $6 billion.

The Corporation did not violate the required financial ratios as of December 31, 2018. The above borrowing had been settled in the first quarter of 2019.

During the credit period, the agreement on the Taiwan Cooperative Bank $3.3 billion syndicated loans requires the maintenance of certain financial ratios based on the Corporation's annual and semiannual nonconsolidated financial reports. The related restrictions are as follows:

a) Current ratio (Current assets ÷ Current liabilities): At least 100%;
b) Debt to equity ratio (Total liabilities and the guarantee balance ÷ Tangible net worth): No more than 125%;
c) Interest coverage ratio [(Income before tax + Depreciation + Amortization + Interest expense) ÷ Interest expense]: At least 3; and
d) Tangible net worth: At least $10 billion.

The Corporation did not violate the required financial ratios as of December 31, 2018. The above borrowing had been settled in the first quarter of 2019.

During the credit period, the agreement on the First Bank $0.55 billion syndicated loans requires the maintenance of certain financial ratios based on the Corporation's annual and semiannual consolidated financial reports. The related restrictions are as follows:

a) Current ratio (current assets ÷ current liabilities): At least 100%;
b) Debt to equity ratio (total liabilities and the guarantee balance ÷ tangible net worth): No more than 120%;
c) Interest coverage ratio [(income before tax + depreciation + amortization + interest expense) ÷ interest expense]: At least 4; and
d) Tangible net worth: At least $12 billion.

The above borrowing had been settled in the first quarter of 2019.

During the credit period, the agreement on the First Bank $0.5 billion syndicated loans requires the maintenance of certain financial ratios which had been revised and agreed by the banks based on the Corporation's annual and semiannual consolidated financial statement reports. The related restrictions are as follows:

a) Current ratio (current assets ÷ current liabilities): At least 100%;
b) Debt to equity ratio (total liabilities and the guarantee balance ÷ tangible net worth): No more than 150%;
c) Interest coverage ratio [(income before tax + depreciation + amortization + interest expense) ÷ interest expense]: At least 2; and
d) Tangible net worth: At least $25 billion.

2) Other loan restrictions are as follows:

The Corporation entered into a loan agreement with IBT Leasing Co., Ltd., Hotai Finance Co., Ltd., Co-operative Assets Management Co., Ltd., Taichung Bank Leasing Co., Ltd., Shinshin Credit Corporation, SinoPac Leasing Corporation and Jih Sun International Leasing & Finance Co., Ltd. Notes payable were used by the Corporation to repay the outstanding principal amount, including interest, in equal installments; as of December 31, 2019 and 2018, the sum of all outstanding installments were $187,582 thousand and $342,296 thousand, including interest amounting to $4,308 thousand and $7,492 thousand, respectively.

The assets pledged as collaterals for long-term bank loans are shown in Note 35.

The unused amount of long-term bank loan facilities were $506,040 thousand and $790,000 thousand as of December 31,2019 and 2018, respectively.

18. BONDS PAYABLE

	December 31	
	2019	2018
Secured overseas convertible bonds	$ -	$ 3,614,497
Less: Current portion	-	(3,614,497)
	$ -	$ -

a. Secured overseas convertible bonds

On October 27, 2016, the Corporation issued the third secured overseas convertible bonds, listed on the Singapore Exchange Securities Trading Limited. The convertible bonds contained the host liability instrument, the conversion option and derivative instrument of redemption option. The effective interest rate of the host liability instrument on initial recognition was 3.186% per annum, and the conversion option derivative instruments were measured at fair value through profit or loss.

Movement of the host liability instrument, the conversion option and derivative instrument of the redemption option were as follows:

	The Host Liability Instrument		The Conversion Option and Derivative Instrument of Redemption Option	
	US$	NT$	US$	NT$
The date of issue	$ 111,553	$ 3,518,939	$ 5,532	$ 174,728
Rate adjusted	-	81,974	-	8
Interest charged at an effective interest rate	631	20,244	-	-
Accrued interest payable	(160)	(5,119)	-	-
Fair value changes gain	-	-	(5,520)	(174,349)
Balance at December 31, 2016	112,024	3,616,038	12	387
Rate adjusted	-	(273,624)	-	-
Interest charged at an effective interest rate	3,627	109,977	-	-
Accrued interest payable	(903)	(27,380)	-	-
Fair value changes gain	-	-	(12)	(387)
Balance at December 31, 2017	114,748	3,425,011	-	-
Rate adjusted	-	103,951	-	-
Interest charged at an effective interest rate	3,744	112,981	-	-
Accrued interest payable	(909)	(27,446)	-	-
Fair value changes gain	-	-	-	-
Balance at December 31, 2018	117,583	3,614,497	-	-
Rate adjusted	-	38,873	-	-
Interest charged at an effective interest rate	3,170	98,409	-	-
Accrued interest payable	(753)	(23,379)	-	-
Repayments of bond payables	(120,000)	(3,728,400)	-	-
Balance at December 31, 2019	$ -	$ -	$ -	$ -

The agreement of ING Bank requires the maintenance of certain financial ratios during the conversion period of the third secured overseas convertible bonds based on the Corporation’s annual and semiannual non-consolidated financial reports. The related restrictions are as follows:

1) Current ratio (Current assets ÷ Current liabilities): At least 110%;
2) Debt to equity ratio (Total liabilities ÷ Total shareholders’ equity): No more than 125%, where

contingent liabilities are included when total liabilities are calculated;

3) Interest coverage ratio [(Income before tax + Depreciation + Amortization + Interest expense) ÷ Interest expense]: At least 3; and
4) Tangible net worth: At least 10 billion.

The aforementioned corporate bonds have been settled in October 2019.

The Corporation did not violate the required financial rations as of December 31, 2018.

The assets pledged as collaterals for bonds payable are shown in Note 35.

19. ACCRUED EXPENSES AND OTHER CURRENT LIABILITIES

	December 31	
	2019	2018
Accrued expenses		
Loss on contracts	$ 278,990	$ 260,480
Salaries	132,531	190,812
Bonus	131,309	279,223
Others	588,544	900,259
	$ 1,131,374	$ 1,630,774
Other liabilities		
Advanced receipts from customers	$ 10,299	$ 54,165
Receipts under custody	5,583	8,995
Others	1,936	1,478
	$ 17,818	$ 64,638
Current	$ 17,818	$ 64,638
Non-current	-	-
	$ 17,818	$ 64,638

20. PROVISIONS

	December 31	
	2019	2018
Non-current		
Warranties	$ 168,804	$ 298,867

	Years Ended December 31	
	2019	2018
Warranties		
Balance at January 1	$ 298,867	$ 240,968
Additions	49,173	61,027
Reversals	(179,236)	-
Usage	-	(3,128)
Balance at December 31	$ 168,804	$ 298,867

The provision for warranty claims represents the present value of management’s best estimate of the future outflow of economic benefits on the Corporation’s obligations stated in sales agreements. The estimate was based on historical warranty trends and may vary as a result of the entry of new materials, altered manufacturing processes or other events affecting product quality.

21. RETIREMENT BENEFIT PLANS

The Corporation makes monthly contributions to employees' individual pension accounts at 6% of monthly salaries and wages in accordance with the Labor Pension Act and these contributions are recognized as pension costs.

22. EQUITY

a. Shares capital

1) Common shares

	December 31	
	2019	2018
Number of shares authorized (in thousands)	3,200,000	3,200,000
Amount of shares authorized	$ 32,000,000	$ 32,000,000
Number of shares issued and fully paid (in thousands)	2,665,338	2,515,759
Shares issued	$ 26,653,375	$ 25,157,599

Fully paid ordinary shares, which have a par value of $10, carry one vote per share and a right to dividends.

Of the Corporation's authorized shares, 80,000 thousand shares had been reserved for the issuance of employee share options.

On January 29, 2018, the Corporation's board of directors approved to sign a merger agreement with Gintech and SEC, and the date of the merger is October 1, 2018. On March 28, 2018, the Corporation, Gintech and SEC approved the merger in their shareholders' meeting.

In connection with the combined contract, Gintech and SEC are entitled to convert outstanding ordinary shares, including private equity and restricted employee share options, through a share swap at a 1:1.39 and 1:1.17 ratio ("sum of the consideration"), respectively. Regarding the share swap, the Corporation expected a total capital increase of NT$11,644,007 thousand and issued new shares amounted to 1,164,401 thousand shares (including 40,122 thousand shares of private-placement shares,), all ordinary shares, with a par value of NT$10 which was approved by the FSC on July 23, 2018. On August 3, 2018, the Corporation's board of directors ruled that, due to the cancellation of part of the issue of employee rights shares issued by the Corporation, Gintech and SEC, the conversion equity was changed, and the new shares issued by the merger and capital increase were adjusted from 1,164,401 thousand shares to 1,164,020 thousand shares, the base date of the merger and the date of listing of the new shares issued by the capital increase were October 1, 2018.

To meet the needed amount of consideration to be paid for the combination through the issuance of ordinary shares and the liquidity requirement of the merged entity, the Corporation processed a NT$14,000,000 thousand capital increase. The Corporation's total amount of capital is NT$32,000,000 thousand after the capital increase. The number of ordinary shares issued with a par value of NT$10 was 3,200,000 thousand shares.

On January 29, 2018, the Corporation's board of directors approved to increase its capital by an issuance of up to 380,000 thousand shares through private-placement shares, which was also subject to approval by the shareholders in their meeting on March 28, 2018. On October 1, 2018, the Corporation's board of directors approved an increase of its capital by $2,781,307 thousand through a private placement of 334,292 thousand new ordinary shares at NT$8.32 per share with the effective date on October 15, 2018. The private-placement shares expired on March 27, 2019. On

May 6, 2019, the Corporation's board of directors resolved not to continue handling the issuance of 45,708 thousand unqualified shares through private-placement shares.

To integrate the overall resources and to improve the operational efficiency of the Corporation, on February 22, 2019, the Corporation's board of directors approved to sign a simplified merger agreement with 100% sharing subsidiary, GES, according to Article 19 of the Corporate Mergers and Acquisitions Act and other relevant laws and regulations, with the Corporation as the surviving company and GES as the extinct company after the merger ("the merger"). Considering that the entire issued share capital of GES was held by the Corporation, the share capital of GES held by the Corporation will be cancelled at no cost on the date of the merger. In the merger, the Corporation does not need to pay in exchange for shares. The tentative date of the merger is March 31, 2019.

As of June 14, 2019, the Corporation's board of directors approved the issuance of 150,000 thousand ordinary shares for cash through a fixed-price system. The Corporation's total amount of capital was $ 26,655,774 thousand after the capital increase. Ordinary shares were issued at $6.52 per share with a par value of $10. The above issuance was approved by FSC with the date December 10, 2019.

b. Capital surplus

	December 31	
	2019	**2018**
May be used to offset a deficit, distributed as cash dividends, or transferred to share capital (1)		
Share premiums	$ 113,539	$ 963,007
May only be used to offset a deficit (2)		
Share of changes in capital surplus of associates or joint ventures	-	42,000
Share premiums - employee restricted shares	6,452	-
Share premiums - Arising from employee share options	3,638	-
May not be used for any purpose		
Arising from employee restricted shares	(4,640)	6,016
	$ 118,989	$ 1,011,023

1) Such capital surplus may be used to offset a deficit; in addition, when the Corporation has no deficit, such capital surplus may be distributed as cash dividends or transferred to share capital (limited to a certain percentage of the Corporation's capital surplus and once a year).

2) Such capital surplus arises from the effect of changes in ownership interest in a subsidiary resulting from equity transactions other than actual disposal or acquisition, or from changes in capital surplus of a subsidiary accounted for using the equity method and adjustments for the capital surplus generated from the convertible bonds when they expire.

c. Retained earnings and dividend policy

Under the dividend policy, if the Corporation made a profit in a fiscal year, the profit shall be first utilized for paying taxes, offsetting losses of previous years, setting aside as legal reserve 10% of the remaining profit, setting aside or reversing special reserve in accordance with the laws and regulations, and then any remaining profit together with any undistributed retained earnings shall be used by the Corporation's board of directors as the basis for proposing a distribution plan, which should be resolved in the shareholders' meeting for the distribution of dividends and bonuses to shareholders. For the policies on the distribution of employees' compensation and remuneration of directors and supervisors before and after the amendment, refer to Note 24 (f).

The Articles of Incorporation of the Corporation also stipulate a dividend policy that the issuance of share dividends takes precedence over the payment of cash dividends. In principle, cash dividends should be not less than 10% of total dividends distributed.

An appropriation of earnings to legal reserve shall be made until the legal reserve equals the Corporation's paid-in capital. Legal reserve may be used to offset deficits. If the Corporation has no deficit and the legal reserve has exceeded 25% of the Corporation's paid-in capital, the excess may be transferred to capital or distributed in cash.

Items referred to under Rule No. 1010012865, Rule No. 1010047490 and Rule No. 1030006415 issued by the FSC and in the directive titled "Questions and Answers for Special Reserves Appropriated Following Adoption of IFRSs" should be appropriated to or reversed from a special reserve by the Corporation.

The offset of accumulated deficits for 2018 and 2017 had been proposed by the shareholders' meeting on June 17, 2019 and on June 20, 2018, respectively. The information is as follows:

	Offset of Accumulated Deficits	
	For the Year Ended December 31	
	2018	**2017**
Offset of Accumulated Deficits with capital surplus	$ 369,468	$ 4,611,501

The offsetting of accumulated deficit for the year ended December 31, 2019 is subject for resolution by the Corporation's board of directors on March 26, 2020.

The offset of accumulated deficit in 2019 is subject to resolution in the shareholders' meeting expected to be held on June 22, 2020.

d. Other equity items

Unrealized gain on financial assets at FVTOCI

	For the Year Ended December 31	
	2019	**2018**
Balance at January 1	$ (527,897)	$ (130,891)
Recognized during the period		
Unrealized gain - equity instruments	792,673	(394,342)
The losses of investments accounted for using the equity method	10,748	(2,664)
Disposal of equity instruments cumulative gains and losses transfer to retained earnings	7,968	-
Balance at December 31	$ 283,492	$ (527,897)

e. Treasury shares

The Corporation acquired treasury shares as result of merging Gintech on October 1, 2018.

Name of Subsidiary	**Number of Shares Held (In Thousands of Shares)**	**Carrying Amount**	**Market Price**
December 31, 2019			
Utech	1,883	$ 18,699	$ 14,427
December 31, 2018			
Utech	1,883	$ 18,699	$ 14,747

The shares of the Corporation held by Utech has been treated as treasury stock. They are same as general shareholders except for the rights of cash injection and the rights of voting.

23. REVENUE

The analysis of the Corporation's revenue was as follows:

	Years Ended December 31	
	2019	2018
Revenue from contracts with customers		
Revenue from the sale of goods	$ 13,353,906	$ 9,977,267
Revenue from construction	116,558	89,356
Processing fees revenue	7,777	56,344
Revenue from other activities	1,433,525	296,493
	$ 14,911,766	$ 10,419,460

a) Contracts with customers

1) Revenue from the sale of goods
Revenue from the sale of goods comes from sales of solar cell, modules and power facilities construction. Sales of solar cell, modules and electric power plants are recognized as revenue when the goods are delivered to the customer's specific location to fulfill contractual obligation.

Revenue from the sale of goods is measured at the fair value of the consideration receive or receivable, which states net of discounts and other similar sales returns and allowances. In consideration of historical experience and other factors related to contract conditions, the Corporation recognizes such sales returns and allowances as contract liabilities shown in the consolidated balance sheet as other current liabilities.

If there is a need to cut or remove material before processing, such processed products do not transfer substantially all the risks and rewards to the customer, thus revenue cannot be recognized.

2) Construction revenue
The Corporation undertakes power plant construction contracts with customer-specified specifications, and recognizes revenue gradually during the construction process. As the cost of construction is directly related to the degree of completion of the performance obligation, the Corporation measures the progress of completion based on the actual input cost as a proportion of the expected total cost. The Corporation recognizes contract assets gradually during the construction process and transfers them to accounts receivable when billing. If the amount of engineering received exceeds the amount of recognized revenue, the difference would be recognized as contract liability. In accordance with contract terms, project retention payments withheld by customers are intended to ensure that the Corporation fulfills all contractual obligations and are recognized as contract asset before the Corporation 's performance is completed.

If the results of performance obligations cannot be measured reliably, construction revenue is recognized only when costs incurred to meet performance obligations are expected to be recovered.

3) Processing revenue
Revenue is recognized from providing process of solar cells services to customers. Processing revenue is recognized as a sale when customer obtains control over the assets to fulfill contractual obligation.

b) Contract balances

	December 31, 2019	December 31, 2018 (Restated)	January 1, 2018 (Restated)
Notes and accounts receivable (Note 10)	$ 1,852,814	$ 2,555,098	$ 1,466,966
Contract assets			
Power facilities construction contracts	$ 45,940	$ 13,381	$ -
Less: Allowance for impairment loss	-	-	-
Contract assets - current	$ 45,940	$ 13,381	$ -
Contract liabilities			
Sale of goods	$ 252,409	$ 187,109	$ 97,732
Power facilities construction contracts	-	5,198	-
Contract liabilities - current	$ 252,409	$ 192,307	$ 97,732

Revenue of the reporting period recognized from the contract liabilities incurred from the beginning of the year is as follows:

	For the Year Ended December 31	
	2019	2018
From contract liabilities incurred from the beginning of the year		
Sale of goods	$ 137,536	$ 97,732

c) Disaggregation of revenue

	For the Year Ended December 31	
	2019	2018
Geographical markets		
Taiwan	$ 4,482,553	$ 5,765,863
America	2,549,530	468,642
Germany	2,317,143	1,982,989
Others	5,562,540	2,201,966
	$ 14,911,766	$ 10,419,460
Timing of revenue recognition		
Satisfied at a point in time	$ 14,777,748	$ 10,310,047
Satisfied over time	134,018	109,413
	$ 14,911,766	$ 10,419,460

d) Partially completed contracts

The transaction price, allocated to the performance obligations that are not fully satisfied and the expected timing for recognition of revenue are as below:

	December 31, 2019
Power facilities construction contracts	
- in 2020	$ 7,044

The above information does not include contracts with expected duration equal to or less than one year.

24. NET (LOSS) PROFIT AND OTHER COMPREHENSIVE INCOME (LOSS)

a. Other income and expenses

	Years Ended December 31	
	2019	2018
Impairment loss on property, plant and equipment	$ (1,120,558)	$ -
Loss on disposal of property, plant and equipment	(12,120)	-
Gain (loss) on disposal of non-current assets held for sale	-	(2,403)
Other	173	-
	$ (1,132,505)	$ (2,403)

b. Interest income and other income

	Years Ended December 31	
	2019	2018
Interest income		
Bank deposits	$ 26,801	$ 21,006
Puttable preference shares	9,541	11,487
Financing provided to related parties	4,433	25,735
Others	27	693
	$ 40,802	$ 58,921
Other income		
Accounting and operations management income	$ 60,280	$ 16,140
Rental income	24,813	8,787
Income	19,958	-
Late payment	1,575	24,926
Insurance compensation income	1,362	19,801
Others	26,162	25,390
	$ 134,150	$ 95,044

c. Finance costs

	Years Ended December 31	
	2019	2018
Interest on bank loans	$ 371,996	$ 281,065
Interest on convertible bonds	98,409	112,981
Other interest expenses	83,494	53,012
	$ 553,899	$ 447,058

d. Depreciation and amortization

	Years Ended December 31	
	2019	2018
Property, plant and equipment	$ 2,192,623	$ 1,580,277
Right-of-use assets	24,669	-
	$ 2,217,292	$ 1,580,277

	Years Ended December 31	
	2019	2018
Intangible assets	$ 3,864	$ 1,192
An analysis of depreciation by function		
Operating costs	$ 1,991,830	$ 1,505,413
Operating expenses	225,462	74,864
	$ 2,217,292	$ 1,580,277
An analysis of amortization by function		
Operating costs	$ 124	$ 84
Operating expenses	3,740	1,108
	$ 3,864	$ 1,192

e. Employee benefits expense

	Years Ended December 31	
	2019	2018
Post-employment benefits (Note 22)		
Defined contribution plans	$ 71,587	$ 61,941
Share-based payments		
Equity-settled share-based payments	3,337	16,492
Other employee benefits	1,874,194	1,583,112
Total employee benefits expense	$ 1,949,118	$ 1,661,545
An analysis of employee benefits expense by function		
Operating costs	$ 1,433,799	$ 1,213,385
Operating expenses	515,319	448,160
	$ 1,949,118	$ 1,661,545

f. Bonuses to employees and directors

The amendments stipulate distribution of employees’ compensation and remuneration of directors at rates of no less than 3% and no higher than 2%, respectively, of net profit before income tax, employees’ compensation, and remuneration of directors. The Corporation incurred a deficit for the years ended December 31, 2019, 2018 and 2017; and thus, neither compensation to employees nor remuneration of directors was estimated.

If there is a change in the proposed amounts after the date the annual financial statements have been authorized for issue, the differences are accounted for as a change in the accounting estimate in the following year.

Information on the employees’ compensation and remuneration of directors and supervisors resolved by the Corporation’s board of directors in 2020 and 2019 is available at the Market Observation Post System website of the Taiwan Stock Exchange.

g. Net (loss) gain on foreign currency exchange

	Years Ended December 31	
	2019	2018
Foreign exchange gains	$ 2,971,530	$ 2,435,359
Foreign exchange losses	(2,959,913)	(2,482,552)

	Years Ended December 31	
	2019	2018
Net (loss) profit	$ 11,617	$ (47,193)

25. INCOME TAXES

a. Income tax recognized in profit or loss

The major components of tax expenses were as follows:

	For the Year Ended December 31	
	2019	2018
Current tax		
Current year	$ -	$ -
Prior period	(476)	(1,130)
Income tax expense recognized in profit or loss	$ (476)	$ (1,130)

A reconciliation of profit and current income tax (expense) benefit is as follows:

	For the Year Ended December 31	
	2019	2018
Loss before tax	$ (5,685,589)	$ (576,110)
Income tax benefit at calculated statutory rate	$ 1,137,118	$ 115,222
Non-deductible expenses in determining taxable income	(25,514)	331,289
Unrecognized loss carryforwards	(612,890)	(452,594)
Unrecognized deductible temporary differences	(498,714)	6,083
Adjustments for prior years' tax expense	(476)	(1,130)
Income tax expense recognized in profit or loss	$ (476)	$ (1,130)

The Income Tax Act in the ROC was amended in 2018, and the corporate income tax rate was adjusted from 17% to 20%. In addition, the rate of the corporate surtax applicable to the 2018 unappropriated earnings was reduced from 10% to 5%.

b. Current tax assets and liabilities

	For the Year Ended December 31	
	2019	2018
Current tax assets		
Tax refund receivable	$ 4,936	$ 3,847
Acquired from business combinations	-	1,906
	$ 4,936	$ 5,753

c. Deferred tax assets and liabilities

The movements of deferred tax assets and deferred tax liabilities were as follows:

For the year ended December 31, 2019

	Balance, Beginning of Year	Movements	Balance, End of Year
Deferred tax assets			
Temporary differences			
Depreciation differences on property, plant and equipment	$ 7,427	$ (3,086)	$ 4,341
Write-downs of inventories	1,677	(516)	1,161
Others	631,157	(15,932)	615,585
	$ 640,621	$ (19,534)	$ 621,087
Deferred tax liabilities			
Temporary differences			
Unrealized foreign exchange gain	$ 19,800	$ (19,800)	$ -
Unrealized gain or financial instructions at fair value through profit or loss	29,605	5,551	35,156
Others	6,206	1,464	7,670
	$ 55,611	$ (12,785)	$ 42,826

For the year ended December 31, 2018

	Balance, Beginning of Year	Movements	Balance, End of Year
Deferred tax assets			
Temporary differences			
Depreciation differences on property, plant and equipment	$ 7,452	$ (25)	$ 7,427
Write-downs of inventories	1,254	423	1,677
Others	70,392	561,125	631,517
	$ 79,098	$ 561,523	$ 640,621
Deferred tax liabilities			
Temporary differences			
Unrealized foreign exchange gain	$ 17,381	$ 2,419	$ 19,800
Unrealized gain or financial instructions at fair value through profit or loss	28,678	927	29,605
Others	-	6,206	6,206
	$ 46,059	$ 9,552	$ 55,611

d. Deductible temporary differences, unused loss carryforwards and unused investment credits for which no deferred tax assets have been recognized in the balance sheets

	December 31	
	2019	2018
Loss carryforwards		
Expiry in 2021	$ 348,235	$ -
Expiry in 2022	824,497	-
Expiry in 2023	43,169	114,308
Expiry in 2024	7,397	7,397
Expiry in 2025	255,771	255,777
Expiry in 2026	1,230,640	1,251,072
Expiry in 2027	1,973,963	1,977,191
Expiry in 2028	2,966,415	2,971,137
Expiry in 2029	3,064,448	-
	$ 10,714,535	$ 6,576,882
Deductible temporary differences	$ 7,422,690	$ 4,961,177

Under Article 43 of the Business Mergers and Acquisitions Act, amended on July 8, 2015, any loss of the Corporation, of Gintech Energy and of Solartech Energy from within ten years before the merger is tax-deductible pro rata by the shareholders' holding in the after-merger surviving company and can be deducted from its current year's profit from within 10 years. The last deduction year is due in 2028.

e. Information on tax-exemption

As of December 31, 2019, profits attributable to the following expansion projects were exempt from income tax for five years under the Statute for Upgrading Industries:

Statute for Upgrading Industries	Period
Third expansion of the manufacturing plant	January 1, 2015 - December 31, 2019
Fourth expansion of the manufacturing plant	January 1, 2016 - December 31, 2020
Fifth expansion of the manufacturing plant	January 1, 2017 - December 31, 2021
Expansion of the manufacturing plant acquired through a business combination	January 1, 2017 - December 31, 2021

f. Income tax assessments

The Corporation's income tax returns through 2017 have been assessed by the tax authorities.

26. LOSS PER SHARE

Unit: NT$ Per Share

	Years Ended December 31	
	2019	2018
Basic loss per share	$ (2.26)	$ (0.42)
Diluted loss per share	$ (2.26)	$ (0.42)

The loss and weighted average number of common shares outstanding (in thousands of shares) in the computation of loss per share were as follows:

Net loss for the year

	Years Ended December 31	
	2019	2018
Loss for the year	$ (5,686,065)	$ (577,240)

	Years Ended December 31	
	2019	2018
Effect of dilutive potential common shares:		
Interest on convertible bonds (after tax)	-	-
Loss used in the computation of diluted loss per share	$ (5,686,065)	$ (577,240)

Weighted average number of common shares outstanding (in thousands of shares):

	Years Ended December 31	
	2019	2018
Weighted average number of common shares used in the computation of basic loss per share	2,511,855	1,380,522
Effect of dilutive potential common shares:		
Convertible bonds	-	-
Restricted employee share options	-	-
Employee compensation or bonuses issued to employees	-	-
Employee share options	-	-
Weighted average number of common shares used in the computation of diluted loss per share	2,511,855	1,380,522

Since the Corporation is allowed to settle the remuneration of employees by cash or shares, the Corporation assumed that the entire amount of the employee remuneration will be settled in shares; as the effect of the resulting potential shares is dilutive, these shares are included in the weighted average number of shares outstanding used in the computation of diluted earnings per share. This dilutive effect of the potential shares is included in the computation of diluted earnings per share until the shareholders resolve the number of shares to be distributed to employees at their meeting in the following year.

The Corporation's the outstanding convertible bonds, restricted employee share options and employee share options, were anti-dilutive and excluded from the computation of diluted loss per share.

27. SHARE-BASED PAYMENT ARRANGEMENTS

Issuance of ordinary share for cash with retained employee subscription

As of June 14, 2019, the Corporation's board of directors approved the issuance of 150,000 thousand ordinary shares for cash through a fixed-price system. The Corporation's total amount of capital was $ 26,655,774 thousand after the capital increase. Ordinary shares were issued at $6.52 per share with a par value of $10. The above issuance was approved by FSC with the date December 10, 2019.

The above issuance which retained employee subscription was granted on November 29, 2019.

The Corporation uses the Black-Scholes pricing model to estimate the share options for employees which where given in 2019 under the following assumptions:

	First time in 2019
Granted date price (per share)	$ 7.18
Exercise price(per share)	$ 6.52
Expected volatility	34.35%
Expected duration	21 Days
Expected dividend yield	-
Risk-free rate	0.45%

The expected volatility is base on the Corporation's historical share price to estimate the price volatility.

The Corporation's compensation cost which was related to the issuance of ordinary share for cash in 2019 is 3,638 thousand.

Restricted share plan for employees

The Corporation's board of directors approved a restricted share plan which amounted to $30,000 thousand, consisting of 3,000 thousand, consisting of shares with a par value of $10. Such a plan may require employees to pay a consideration at $10 or $0 per share. On June 17, 2019, the shareholders in their meeting proposed to offer the restricted share plan for employees. The issuance of 3,000 thousand shares was approved by the FSC on October 1, 2019.

The Corporation's board of directors approved a restricted share plan which amounted to $22,050 thousand, consisting of 2,205 thousand, consisting of shares with a par value of $10. Such a plan may require employees to pay a consideration at $10 or $0 per share. The grant date and issuance date were on November 11, 2019. The actual issued amount was $22,050 thousand which included 2,205 thousand shares with a fair value of $7.85 per share.

On March 21, 2017, the Corporation's board of directors approved a restricted share plan which amounted to $21,000 thousand, consisting of of 2,100 thousand shares with a par value of $10. Such a plan may require employees to pay a consideration at $10 or $0 per share. On June 14, 2017, the shareholders in their meeting proposed to offer the restricted share plan for employees. The issuance of 2,100 thousand shares was approved by the FSC on July 24, 2017.

On August 8, 2017, the Corporation's board of directors approved of a restricted share plan which amounted to $21,000 thousand, consisting of 2,100 thousand shares with a par value of $10 and distributed out of earnings, which was granted on September 15, 2017 and issued on September 30, 2017. On the grant date, an actual amount of $18,550 thousand was issued, which consisted of 1,855 thousand shares with a fair value of $14.45 per share.

The Corporation replaced restricted share plan for employees due to the merger in October 1, 2018.

Replaced employee share option plan was as follows:

Restricted Share Plan for Employees	Original Number (In Thousands)	Outstanding Number (In Thousands)	Adjustment by Percentage of Outstanding Number (In Thousands)
Gintech Energy	2,000	881	1,225
Solartech Energy	4,455	4,185	4,896

Information on issued employee restricted shares was as follows:

	Shares (In Thousands)	
	For Year Ended December 31	
	2019	2018
Beginning balance	5,252	1,761
Acquisitions through business combinations	-	6,121
Additions	2,205	-
Vested	(1,619)	(821)
Canceled	(2,626)	(1,809)
Ending balance	3,212	5,252

a. Formerly Neo Solar Power Corp. and Gintech Energy

To meet the vesting conditions, an employee has to meet performance conditions over the vesting period as follows:

1) Still on service one year after the grant date with a high rating based on the current year's performance appraisal - vesting of 50% of restricted shares;
2) Still on service two years after the grant date with a high rating based on the prior year's performance appraisal - vesting of 50% of restricted shares.

The restrictions on the rights of the employees who acquire the restricted shares but have not met the vesting conditions are as follows:

1) In addition to those disclosed in the restricted share plan, the employees should not sell, pledge, transfer, donate or in any other way dispose of these shares.
2) On behalf of employees, the Corporation signed a trust contract on the restricted shares with a trust institution; thus, based on this contract, the rights of attendance, proposal, speech and voting have all been entrusted to the trust institution.

If an employee fails to meet the vesting conditions, the Corporation will buy back the restricted shares at the offering price and have them canceled but not the share and cash dividends during the period of noncompliance with vesting conditions.

b.Formerly Solartech Energy

Employees are able to subscribe for the restricted shares at $5 per share when they meet the vesting conditions. To meet the vesting conditions, an employee has to meet performance conditions over the vesting period as follows:

1) Still on service three years after the grant date with a high rating based on the prior year's performance appraisal - vesting of 100% of restricted shares.

The restrictions on the rights of the employees who acquire the restricted shares but have not met the vesting conditions are as follows:

1) In addition to those disclosed in the restricted share plan, the employees should not sell, pledge, transfer, donate or in any other way dispose of these shares.

If an employee fails to meet the vesting conditions, the Corporation will buy back the restricted shares at the offering price and have them canceled.

The Corporation recognized compensation costs of $301 thousand and $16,492 thousand for the years ended December 31, 2019 and 2018, respectively.

28. BUSINESS COMBINATIONS

Subsidiary	Principal Activity	Date of Acquisition	Proportion of Voting Equity Interests Acquired (%)	Consideration Transferred
Gintech Energy	Solar-related business	October 1, 2018	100	$ 7,314,880
Solartech Energy	Solar-related business	October 1, 2018	100	4,399,288
				$ 11,714,168

a. Gain on bargain purchase due to consolidation

	Gintech Energy	Solartech Energy
Consideration transferred	$ 7,314,880	$ 4,399,288
Plus: Non-controlling interests	27,179	214
Less: Fair value of identifiable net assets acquired of Gintech Energy and Solar Energy	(6,023,001)	(5,269,758)
Less: Fair value of identifiable net assets acquired of Gintech Energy and Solar Energy's subsidiaries	(2,002,146)	(707,746)
	$ (683,088)	$ (1,578,002)

Gintech Energy and Solartech Energy were acquired in order to continue the expansion of the Corporation's activities in manufacturing solar cells and other solar related business. For details about the acquisition of Gintech Energy and Solartech Energy, refer to Note 22 and Note 31 to the Corporation's consolidated financial statements for the year ended December 31, 2019.

29. DISPOSAL OF SUBSIDIARIES

Yong Yao, which carried out its entire solar-related businesses in Taiwan, was disposed of in the fourth quarter of 2019, and control of Yong Yao was passed to the acquirer on that date.

a. Consideration received from the disposal

	December 31, 2019 Taiwan
Consideration received in cash and cash equivalents	$ 142,000
Sales proceeds receivable	-
Total consideration received	$ 142,000

b. Analysis of asset and liabilities on the date control was lost

	December 31, 2019 Taiwan
Current assets	
Cash and cash equivalents	$ 51
Others	26,178
Non-current assets	
Property plant and equipment	538,919
right-of-use assets	268,458
Others	66,299
Current liabilities	
Other payable	81
Other payable to related parties	348,000
Lease liabilities - current	10,328
Non-current liabilities	
Lease liabilities - non-current	261,379
Net assets disposed of	$ 280,117

c. Loss on disposals of subsidiaries

	December 31, 2019 Taiwan
Consideration received	$ 142,000
Net assets disposed of	(280,117)
Loss on disposal	$ (138,117)

d. Net cash inflow on disposal of subsidiaries

	December 31, 2019 Taiwan
Consideration received in cash and cash equivalents	$ 142,000
Less: As-of-yet received accounts receivable of disposal	(51)
	$ 141,949

Yong Han and Yong Yeh, which carried out its entire solar-related businesses in Taiwan, were disposed of in the first quarter of 2018, and control of Yong Han and Yong Yeh was passed to the acquirer, Neo Cathay, on that date. Refer to Note 32 of the Corporation's 2019 consolidated financial report.

True Honour Limited was an investment company which was cancelled in October 2018 and the shares were returned in December 2018.

30. PARTIAL ACQUISITION OR DISPOSAL OF SUBSIDIARIES - WITHOUT LOSS OF CONTROL

In May 2019, the Corporation subscribed for additional new shares of Utech, increasing its continuing interest from 98.30% to 99.49%.

The above transactions were accounted for as equity transactions since the Corporation did not cease to have control over these subsidiaries.

31. CASH FLOW INFORMATION

a. Changes in liabilities arising from financing activities

For the year ended December 31, 2019

			Non-cash Changes				
	Opening Balance	**Cash Flows**	**Exchange Rate Changes**	**New Leases**	**Rent Reductions/ Surrender of Tenancy**	**Others (Note)**	**Closing Balance**
Lease liabilities (Note 3)	$426,929	$ (32,718)	$ -	$ 4,598	$(15,187)	$13,522	$397,144

Note: The financing costs of lease liabilities.

32. CAPITAL MANAGEMENT

The Corporation manages its capital to ensure that entities in the Corporation will be able to continue as going concerns while maximizing the return to shareholders through the optimization of the debt and equity balance.

Key management personnel of the Corporation review the capital structure periodically. For this review, the key management personnel consider the cost of capital and the risks associated with each class of capital. On the basis of the recommendations of the key management personnel on balancing the overall capital structure, the Corporation may adjust the amount of dividends paid to shareholders, the number of new shares issued or repurchased, and/or the amount of new debt issued or existing debt redeemed.

33. FINANCIAL INSTRUMENTS

a. Fair value of financial instruments that are not measured at fair value

December 31, 2018

	Carrying Amount	Fair Value Level 1	Level 2	Level 3	Total
Financial liabilities					
Financial liabilities measured at amortized cost					
Bonds payable	$3,614,497	$ -	$ -	$3,561,877	$3,561,877

The fair values of the financial assets and financial liabilities included in the Level 3 categories above have been determined in accordance with the income approach based on a discounted cash flow analysis, with the most significant unobservable input being the discount rate that reflects the credit risk of counterparties.

The above bonds payable were settled in October 2019.

b. Fair value of financial instruments that are measured at fair value on a recurring basis

1) Fair value hierarchy

December 31, 2019

	Level 1	Level 2	Level 3	Total
Financial assets at FVTPL				
Cross-currency swap contracts	$ -	$ 2,392	$ -	$ 2,392
Financial assets at FVTOCI				
Investments in equity instruments at FVTOCI				
Securities listed in the ROC	$2,287,336	$ 80,880	$ -	$2,368,216
Domestic unlisted shares	-	-	49,497	49,497
Foreign unlisted shares	-	-	20,426	20,426
	$2,287,336	$ 80,880	$ 69,923	$2,438,139
Financial liabilities at FVTPL				
Foreign exchange forward contracts	$ -	$ 755	$ -	$ 755

December 31, 2018

	Level 1	Level 2	Level 3	Total
Financial assets at FVTOCI				
Investments in equity instruments at FVTOCI				
Securities listed in the ROC	$1,471,188	$ 66,240	$ -	$1,537,428
Equity securities				
Domestic unlisted shares	-	-	66,564	66,564
Foreign unlisted shares	-	-	41,474	41,474
	$1,471,188	$ 66,240	$ 108,038	$1,645,466

There were no transfers between Level 1 and 2 in the current and prior periods.

2) Reconciliation of Level 3 fair value measurements of financial instruments

For the year ended December 31, 2019

	Financial Assets at Fair Value Through Other Comprehensive Income
	Equity Instruments
Financial assets	
Balance at January 1, 2019	$ 108,038
Recognized in profit or loss - unrealized	(38,115)
Balance at December 31, 2019	$ 69,923

For the year ended December 31, 2018

	Financial Assets at Fair Value Through Other Comprehensive Income
	Equity Instruments
Financial assets	
Balance at January 1, 2018	$ 22,440
Acquisitions through business combinations	42,738
Purchases	59,086
Recognized in profit or loss - unrealized	(16,226)
Balance at December 31, 2018	$ 108,038

3) Valuation techniques and inputs applied for the purpose of Level 2 fair value measurement

Financial Instruments	Valuation Techniques and Inputs
Derivatives - cross - currency swap contracts and foreign exchange forward contracts	Discounted cash flow: Future cash flows are estimated based on observable forward exchange rates at the end of the reporting period and contract forward rates, discounted at a rate that reflects the credit risk of various counterparties.
Securities listed in the ROC	The Corporation's investments in private-placement shares that have quoted prices in an active market but cannot be traded during a lock-up period; their fair values were determined using market prices.

4) Valuation techniques and inputs applied for the purpose of Level 3 fair value measurement

a) Domestic and foreign unlisted shares

The fair values of domestic and foreign unlisted shares are mainly determined by the asset approach and the market approach.

A market approach is a method of determining the appraisal value of assets or liabilities, based on the selling price of similar items. The Black-Scholes model was used to determine the fair value of domestic and foreign unlisted shares, and the most significant unobservable inputs were price multiplier and volatility. An increase in the price multiplier used in isolation would result in an increase in the fair value of these equity instruments. An increase in the volatility used in isolation would result in a decrease in the fair value of these equity instruments. As of December 31, 2019, the price multiplier and volatility used to determine the fair value of domestic unlisted shares were 1.6300 and 38.22%, respectively, while the price multiplier and volatility used to determine the fair value of foreign unlisted shares were 1.4100 and 30.00%, respectively.

Sensitivity analysis

The Corporation's sensitivity analysis evaluated that the fair values of financial instruments were reasonable, except for the impact of possible changes in the evaluation model or evaluation parameters which may cause different outputs in the result of the evaluation. For financial instruments defined as Level 3 inputs, the impacts of possible changes in the evaluation method on profit or loss and other comprehensive income or loss in the current period are as follows:

	Input	**Increase (+)/ Decrease (-)**	**Profit or Loss Changes Arising From Fair Value Movements**	**OCI Changes Arising From Fair Value Movements**
For the year ended December 31, 2019				
Financial assets at fair value through other comprehensive income				
Domestic unlisted shares	1.6300	+5.0%	-	$ 1,471
	1.6300	-5.0%	-	(1,354)
	38.22%	+1.0%	-	(294)
	38.22%	-1.0%	-	294
				$ 117
For the year ended December 31, 2018				
Financial assets at fair value through other comprehensive income				
Domestic unlisted shares	1.4100	+5.0%	-	$ 2,236
	1.4100	-5.0%	-	(2,236)
	30.00%	+1.0%	-	(647)
	30.00%	-1.0%	-	647
Foreign unlisted shares	1.3100	+5.0%	-	967
	1.3100	-5.0%	-	(967)
	35.06%	+1.0%	-	(346)
	35.06%	-1.0%	-	349
				$ 3

b) Conversion and redemption options

The fair values of redemption and conversion options are determined using the binomial tree valuation model where the significant unobservable input is historical volatility. An increase in the historical volatility used in isolation would result in an increase in the fair value. As of December 31, 2018, the historical volatility used was 42.75%.

c. Categories of financial instruments

	December 31	
	2019	**2018**
Financial assets		
FVTPL		
Mandatorily at FVTPL	$ 2,392	$ -
Financial assets at amortized cost (Note 1)	11,259,387	17,837,419
Financial assets at FVTOCI		
Equity instruments	2,438,139	1,645,466
Financial liabilities		
FVTPL		
Mandatorily at FVTPL	755	-
Held for trading	-	-
Amortized cost (Note 2)	16,675,693	22,731,193

Note 1: The financial assets included cash and cash equivalents, notes and accounts receivable, accounts receivable from related parties, pledged time deposits, restricted deposits, other receivables, debt investments, etc. and are measured at amortized cost.

Note 2: The financial liabilities included short-term loans, short-term bills payable, notes and accounts payable, accounts payable to related parties, payables to contractors and equipment suppliers, accrued expenses, long-term loans, bonds payable, preference share liabilities, guarantee deposits, etc. and are measured at amortized cost.

d. Financial risk management objectives and policies

The Corporation's major financial instruments included equity, accounts receivable, accounts payable, bonds payable and borrowings. The Corporation's Corporate Treasury function provides services to the business, coordinates access to domestic and international financial markets, monitors and manages the financial risks relating to the operations of the Corporation through internal risk reports, which are tools for analyzing exposures by degree and magnitude of risks. These risks include market risk (including currency risk, interest rate risk and other price risk), credit risk and liquidity risk.

The Corporation seeks to minimize the effects of these risks by using derivative financial instruments to hedge against risk exposures. The use of financial derivatives is governed by the Corporation's policies approved by the board of directors, which provide written principles on foreign exchange risk, interest rate risk, credit risk, the use of financial derivatives and non-derivative financial instruments, and the investment of excess liquidity. Compliance with policies and exposure limits is reviewed by the internal auditors continually. The Corporation does not enter into financial instrument contracts or trade financial instruments, including derivative financial instruments, for speculative purposes.

The Corporate Treasury function reports quarterly to the Corporation's board of directors and audit committee, an independent organization that monitors risks and policies implemented to mitigate risk exposures.

1) Market risk

The Corporation's activities exposed it primarily to the financial risks of exchange rate changes (see [a] below) and interest rates (see [b] below). The Corporation used a variety of derivative financial instruments to manage its exposure to foreign currency and interest rate risks.
There had been no change in the Corporation's exposure to market risks or the manner in which these risks were managed and measured.

a) Foreign currency risk
The Corporation had foreign currency-denominated sales and purchases, which exposed the Corporation to exchange rate risk. The Corporation entered into foreign exchange forward contracts, cross-currency swap contracts, etc. to manage exposures due to exchange rate and interest rate fluctuations. These instruments help reduce, but do not eliminate, the impact of adverse exchange rate movements.

The Corporation also holds short-term bank loans in foreign currencies in proportion to its expected future cash flows. This allows foreign-currency-denominated bank loans to be serviced with expected future cash flows and provides a partial hedge against transaction translation exposure.

Sensitivity analysis

The Corporation was mainly exposed to USD, EUR and JPY.

The following table details the Corporation's sensitivity to a 5% increase and decrease in the New Taiwan dollar (the functional currency) against the relevant foreign currency. The sensitivity analysis included only outstanding foreign currency-denominated monetary items; their translation at the end of the reporting period is adjusted for a 5% change in exchange rates. The sensitivity analysis included cash, accounts receivable, other receivables, short-term bank loans, accounts payable, other payables and long-term bank loans. A positive number below indicates an increase in profit and other equity associated with the New Taiwan dollar's strengthening 5% against a foreign currency. For a 5% weakening of the New Taiwan dollar against a foreign currency, there would be an equal and opposite impact on profit and other equity and the balances below would be negative.

	USD Impact		**EUR Impact**		**JPY Impact**	
	For the Year Ended December 31		**For the Year Ended December 31**		**For the Year Ended December 31**	
	2019	**2018**	**2019**	**2018**	**2019**	**2018**
(Loss) or profit	$ 36,727	$ 1,290	$ 6,107	$ 8,632	$ (8,445)	$ (11,596)

The Corporation's sensitivity to USD exchange rates decreased in the current period mainly because of the increase in assets recorded in USD. The Corporation's sensitivity to EUR exchange rates decreased in the current period mainly because of the decreased in assets recorded in EUR. The Corporation's sensitivity to JPY exchange rates decreased in the current period mainly because of the increased in assets recorded in JPY.

b) Interest rate risk

Long-term and short-term bank loans mainly bear floating interest rates. Thus, the fluctuations of market interest rates will result in changes in the effective interest rates for long-term and short-term bank loans and the fluctuation of future cash flows.

The carrying amounts of the Corporation's financial assets and financial liabilities with exposure to interest rates at the end of the reporting period were as follows:

	December 31	
	2019	2018
Fair value interest rate risk		
Financial assets	$ 1,055,653	$ 1,457,104
Financial liabilities	(3,474,285)	(8,393,402)
Cash flow interest rate risk		
Financial assets	5,168,385	10,631,374
Financial liabilities	(11,534,301)	(11,348,723)

Sensitivity analysis

The sensitivity analysis below was based on the Corporation's exposure to interest rates for both derivative and non-derivative instruments at the end of the reporting period. For floating rate assets and liabilities, the analysis was prepared assuming that the amount of the assets and liabilities outstanding at the end of the reporting period was outstanding for the whole year.

If interest rates had been 1% higher and all other variables were held constant, the Corporation's net profit for 2019 and 2018 would increase by $63,659 thousand and $7,173 thousand, respectively, mainly because of the Corporation's exposure to interest rates on its variable-rate demand deposits and bank borrowings.

The Corporation's sensitivity to interest rates increased during the current period mainly because of the increase in variable-rate debt instruments.

c) Other price risk

The Corporation is exposed to equity price risk on financial asset at FVTOCI available-for-sale financial assets, which are not held for trading.

Sensitivity analysis

The sensitivity analysis below was based on the exposure to equity price risks at the end of the reporting period.

If equity prices had been 5% lower, other comprehensive income for 2019 would decrease by $121,907 thousand as a result of the changes in the fair value of financial assets at FVTOCI.

If equity prices had been 5% lower, other comprehensive income for 2018 would decrease by $82,273 thousand as a result of the changes in the fair value of financial assets at FVTOCI.

The Corporation's sensitivity to price increase in the current period mainly because of the increase in financial assets at FVTOCI.

2) Credit risk

Credit risk refers to the risk that a counterparty will default on its contractual obligations, resulting in a financial loss to the Corporation. As at the end of the reporting period, the Corporation's maximum exposure to credit risk, which would cause a financial loss to the Corporation due to a failure to discharge an obligation by the counterparties and financial guarantees provided by the Corporation, could arise from:

a) The carrying amounts of the financial assets recognized in the balance sheets; and
b) The amount of contingent liabilities on financial guarantees issued by the Corporation.

To minimize credit risk, the Corporation's management has established a team responsible for determining credit limits, credit approvals and other monitoring procedures to ensure that follow-up action is taken to recover overdue debts. In addition, the Corporation reviews the recoverable amount of each account receivable at the end of the reporting period to ensure that adequate allowances are set aside for irrecoverable amounts. Thus, the Corporation's management considers the Corporation's credit risk as significantly reduced.

The credit risk on liquid funds and derivatives was limited because the counterparties are banks with high credit ratings assigned by international credit-rating agencies.

Accounts receivable pertains to a large number of customers, spread across diverse industries and geographical areas. Ongoing credit evaluation is performed on the financial condition of the account receivables and, where appropriate, credit guarantee insurance is purchased.

The Corporation did not have significant credit risk exposure to any single counterparty or any group of counterparties with similar characteristics.

The Corporation's customer base was large and unrelated, so the concentrations of credit risk were not high.

3) Liquidity risk

The Corporation manages liquidity risk by monitoring and maintaining a level of cash deemed adequate to finance the Corporation's operations and mitigate the effects of fluctuations in cash flows. In addition, management monitors the use of bank loans and ensures compliance with loan covenants. The Corporation relies on bank loans as a significant source of liquidity.

a) Liquidity and interest risk rate tables for non-derivative financial liabilities

The following tables show the Corporation's remaining contractual maturity for its non-derivative financial liabilities with agreed-upon repayment periods. The tables were drawn up on the basis of undiscounted cash flows of financial liabilities from the earliest date on which the Corporation can be required to pay. The tables included both interest and principal cash flows.

Bank loans with a repayment on demand clause were included in the first column of the tables below regardless of the probability of the banks choosing to exercise their rights to repayment. The maturity dates for other non-derivative financial liabilities were based on the agreed-upon repayment dates.

To the extent that interest flows refer to floating rates, the undiscounted amount was derived from the interest rate curve at the end of the reporting period.

December 31, 2019

	On Demand or Up to 1 Month	**Over 1 Month-3 Months**	**Over 3 Months to 1 Year**	**1+ Years**
Non-derivative financial liabilities				
Non-interest bearing	$ 1,427,829	$ 415,656	$ 222,746	$ 65,178
Variable interest rate liabilities	94,200	1,248,947	1,379,095	9,389,933
Fixed interest rate liabilities	265,869	1,484,021	988,364	330,228
Lease liabilities	2,307	4,537	18,953	615,107
	$ 1,790,205	$ 3,153,161	$ 2,609,158	$ 10,400,446

Additional information about the maturity analysis for lease liabilities:

	Up to 1 Year	**Over 1 Year - 5 Years**	**Over 5 Years - 10 Years**	**Over 10 Years - 15 Years**	**Over 15 Years - 20 Years**	**20+ Years**
Lease liabilities	$ 25,797	$ 83,518	$ 97,643	$ 97,643	$ 97,643	$ 238,660

December 31, 2018

	On Demand or Up to 1 Month	Over 1 Month-3 Months	Over 3 Months to 1 Year	1+ Years
Non-derivative financial liabilities				
Non-interest bearing	$ 1,878,452	$ 919,441	$ 253,645	$ 58,497
Variable interest rate liabilities	158,419	1,483,426	4,042,397	6,069,748
Fixed interest rate liabilities	733,666	2,497,733	4,682,773	522,915
	$ 2,770,537	$ 4,900,600	$ 8,978,815	$ 6,651,160

As of December 31, 2019 and 2018, the Corporation believes there was no bank loan on which immediate repayment will be demanded.

The amounts included above for variable interest rate instruments for non-derivative financial assets and liabilities were subject to change if changes in variable interest rates differed from the interest rates estimated at the end of the reporting period.

b) Liquidity and interest risk rate tables for derivative financial liabilities

The following tables show the Corporation’s liquidity analysis for its derivative financial instruments. The tables were based on the undiscounted contractual net cash inflows and outflows on derivative instruments that settle on a net basis.

	On Demand or Less than 1 Month	1 - 3 Months	3 Months to 1 Year	1+ Years
Net settled				
Foreign exchange forward contracts	$ 755	$ -	$ -	$ -

34. TRANSACTIONS WITH RELATED PARTIES

In addition to those disclosed in other notes, transactions between the Corporation and its related parties are disclosed below.

a. Related parties and their relationship with the Corporation

Related Party	Relationship with the Corporation
Delta Electronics Inc.	Investors with significant influence on certain group entities (Note 1)
Zhongyang	Subsidiary (Note 2)
Ever Lite Power Inc. (Ever Lite)	Subsidiary
Apex	Subsidiary (Note 2)
Solartech JP	Subsidiary (Note 2)
SMC	Subsidiary (Note 2)
Hsin Jin Optoelectronics (Hsin Jin Optoelectronics)	Subsidiary
Utech	Subsidiary (Note 2)
BPS	Subsidiary
Prime Energy	Subsidiary
Huiyang	Subsidiary (Note 2)
NSP System	Subsidiary
Neo Solar Power (Nanchang) Ltd. (NSP Nanchang)	Subsidiary
Hsin Jin Solar Energy Co., Ltd. (Hsin Jin Solar Energy)	Subsidiary

Related Party	Relationship with the Corporation
New Ray Investment	Subsidiary
Si Two Corp. (Si Two)	Subsidiary
Beryl Construction LLC (Beryl)	Subsidiary
Clean Focus Renewables Inc. (CFR)	Subsidiary
DelSolar US Holdings (Delaware) Corporation (DelSolar US)	Subsidiary
GES ME	Subsidiary
GES UK	Subsidiary
Gintech (Thailand) Limited (Gintech Thailand)	Subsidiary (Note 2)
Neo Solar Power Vietnam Co., Ltd. (NSP Vietnam)	Subsidiary
NSP Germany GmbH (NSP Germany)	Subsidiary
NSP Indygen UK Ltd. (NSP Indygen)	Subsidiary
NSP SYSTEM NEVADA HOLDING CORP. (NSP NEVADA)	Subsidiary
NSP UK	Subsidiary
UKEG POTTERS BAR LIMITED (POTTERS BAR)	Subsidiary (Note 8)
GDL Bryncrynau Ltd.	Subsidiary (Note 8)
GDL Upper Meadowley Ltd.	Subsidiary (Note 8)
General Energy Solutions USA. Inc.	Subsidiary
Yong Zhou Ltd. (“Yong Zhou”)	Subsidiary
GES JAPAN CORPORATION (“GES JAPAN”)	Subsidiary
Yong Liang Ltd. (“Yong Liang”)	Subsidiary
Yong Yao Ltd. (“Yong Yao”)	Subsidiary
Yong Shun Ltd. (“Yong Shun”)	Subsidiary
Hashimoto Corporation (“Hashimoto”)	Subsidiary
URE NSP Co.	Subsidiary
Tienyang Green Power Ltd. Co.	Subsidiary
Deyang Green Power Ltd. Co.	Subsidiary
Shanyang Green Power Ltd. Co.	Subsidiary
Jeyang Green Power Ltd. Co.	Subsidiary
DelSolar Wu Jiang	Subsidiary
Uniited Renewable Energy Engineering Co.	Subsidiary
Lianzhang Energy Power Ltd. Co.	Subsidiary
Lianxi Energy Power Ltd. Co.	Subsidiary
Liancheng Energy Power Ltd. Co.	Subsidiary
TTMC	Other related parties
Taiwan Speciality Chemicals Corporation	Other related parties (Note 4)
SAS	Other related parties (Note 4)
Delta Electronics (Americas) Ltd.	Other related parties (Note 1)
Delta Electronics (Japan), Inc.	Other related parties (Note 1)
Delta Electronics (Switzerland) AG	Other related parties (Note 1)
Delta Greentech Ltd. - Turkey	Other related parties (Note 1)
Phanes Holding	Other related parties
Top Green Energy Technologies Inc.	Other related parties (Note 3)
Si One Corp. (Si One)	Associates (Note 5)
Da Li Energy Co., Ltd. (Da Li Energy)	Associates (Note 5)
Sunshine PV	Associates (Notes 2 and 9)
Neo Cathay Electric Power Corp. (Neo Cathay Electric)	Associates (Note 5)
Neo Cathay	Associates
DSET	Associates
V5 Technology	Associates
Gintung Energy	Associates (Note 2)
Yong Han Ltd. (“Yong Han”)	Associates (Note 6)
Yun Yeh Ltd. (“Yun Yeh”)	Associates (Note 6)
Clean Focus Corporation (CFC)	Associates (Note 7)
CFY	Associates (Note 7)

Note 1: On October 15, 2018, Delta Company originally held 6.64% of the equity of the Corporation. After the election of the directors of the Corporation on November 20, 2018, the directors representing Delta Company resigned from the board of directors of the Corporation. Delta Company and its subsidiaries (Delta Company, Delta Electronics (Americas) Ltd., Delta Electronics (Japan), Inc., Delta Electronics (Switzerland) AG, Delta Greentech Ltd. - Turkey, did not meet the definition of related parties. Therefore, only the outstanding amount as of December 31, 2018 and transactions from January 1, 2018 to November 20, 2018 were disclosed as related party transactions.

Note 2: The acquisition of subsidiaries and associates are due to absorption merging the two corporations, Gintech Energy and Solartech Energy on October 1, 2018.

Note 3: After the date of merger, October 1, 2018, Apex became the shareholder of TGET and became their directors. TGET meets the definition of other related parties. Therefore, the outstanding amounts and transactions after October 1, 2018 were disclosed as related party transactions.

Note 4: After the date of merger, October 1, 2018, the Corporation and the directors of the Corporation became the shareholders of SAS and TSCC and became their directors. SAS and TSCC meet the definition of other related parties. Therefore, the outstanding amounts and transactions after October 31, 2018 were disclosed as related party transactions.

Note 5: The associates were Neo Cathay's subsidiaries.

Note 6: Yong Han and Yun Yeh had become subsidiaries of Neo Cathay since March 30, 2018 and were deemed associates; thus, the Corporation disclosed the trading transactions from March 30, 2018 and the balances as of March 30, 2018.

Note 7: CFY is NSP BVI's associate. CFC is CFY's subsidiary.

Note 8: Non-subsidiaries after disposal in October 2018.

Note 9: The Corporation resigned from the board of Sunshine PV so the Corporation no longer has influence over Sunshine PV. Therefore, Sunshine PV does not meet the definition of a related party but only outstanding balance as of May, 2019 were disclosed.

b. Sales of goods

	For the Year Ended December 31	
	2019	**2018**
Subsidiaries	$ 1,320,686	$ 328,879
Associates	249,312	521,924
Other related parties	11,210	50,677
Investors with significant influence	-	78
	$ 1,581,208	$ 901,558

Sales of goods between the Group and related parties were based on specifically negotiated terms.

c. Other income

	For the Year Ended December 31	
	2019	**2018**
Subsidiaries		
NSP System	$ 42,373	$ 13,228
GES UK	-	18,104
Others	19,460	7,689
Associates	13,853	14,591
Other related parties	5,446	79
	$ 81,132	$ 53,691

d. Dividend income

	For the Year Ended December 31	
	2019	2018
Other related parties		
SAS	$ 65,581	$ -
TTMC	1,600	2,000
	$ 67,181	$ 2,000

e. Interest revenue

	For the Year Ended December 31	
	2019	2018
Other related parties		
Phanes Holding	$ 9,541	$ 11,487
Associates		
CFY	2,809	13,969
Others	1,336	750
Subsidiaries		
GES UK	-	10,044
Others	288	972
	$ 13,974	$ 37,222

The Corporation's interest revenue was composed of interest income from financings provided to associates and puttable preference shares with other related parties.

f. Purchases of goods

	For the Year Ended December 31	
	2019	2018
Subsidiaries	$ 655,821	$ 162,161
Other related parties	11,620	113
Investors with significant influence	-	484
	$ 667,441	$ 162,758

Purchases of goods between the Group and related parties were based on specifically negotiated terms.

g. Other expenses

	For the Year Ended December 31	
	2019	2018
Subsidiaries	$ 33,365	$ 9,430
Associates	48	1,194
Investors with significant influence	-	652
	$ 33,413	$ 11,276

h. Financial cost

	For the Year Ended December 31	
	2019	2018
Subsidiaries	$ 576	$ 49

i. Accounts receivable

	December 31	
	2019	2018
Subsidiaries		
Gintech (Thailand)	$ 158,620	$ 258,237
NSP System	94,616	95,436
Zhongyang	8,186	64,870
Others	19,839	5,892
Associates		
CFC	105,197	118,079
Others	13,546	31,627
Less: Allowance for impairment loss - Associates	(8,464)	(21,986)
	$ 391,540	$ 552,155

j. Other receivables from related parties

	December 31	
	2019	2018
Subsidiaries		
DelSolar US	$ 969,633	$ 993,716
GES ME	629,372	574,019
NSP NEVADA	562,020	578,952
Others	570,568	615,027
Associates	241	146,521
Other related parties	20,997	13,290
Less: Allowance for impairment loss - Associates	-	(8,400)
	$ 2,752,831	$ 2,913,125

Other receivables were temporary payments of project fees that the Corporation paid for its subsidiaries and associates and overdue accounts receivable. Temporary payments were temporary payments of investments and organization costs that the Corporation paid for its subsidiaries. Refer to Note 38 for information relating to financing between the Corporation and its related parties. The aging of overdue accounts receivable was as follows:

December 31, 2019

Related Party Category/Name	Up to 60 days	61-90 days	91-120 days	More than 120 days
Subsidiaries				
Zhongyang	$ -	$ -	$ -	$ 64,870
Beryl	-	-	-	46,404
NSP NEVADA	-	-	-	33,532
NSP Nanchang	-	-	885	-
	$ -	$ -	$ 885	$ 144,806

December 31, 2018

Related Party Category/Name	Up to 60 days	61-90 days	91-120 days	More than 120 days
Subsidiaries				
Beryl	$ -	$ -	$ -	$ 47,556

Related Party Category/Name	Up to 60 days	61-90 days	91-120 days	More than 120 days
NSP NEVADA	-	-	-	34,365
Gintech (Thailand)	-	-	3,484	50
	$ -	$ -	$ 3,484	$ 81,971

The outstanding receivables from related parties were unsecured

k. Contract assets

	December 31	
	2019	2018
Associates		
Yong Han	$ 45,940	$ 13,381

No impairment allowance loss was recognized for contract assets from related parties in 2019 and 2018.

l. Payments in advance

	December 31	
	2019	2018
Other related parties		
SAS	$ 1,117,975	$ 1,118,451
Subsidiaries	54,835	150,967
	$ 1,172,810	$ 1,269,418

n. Refundable deposits

	December 31	
	2019	2018
Subsidiaries	$ 46,397	$ 3,137

o. Accounts payable

	December 31	
	2019	2018
Subsidiaries		
Gintech (Thailand)	$ 275,811	$ 203,003
Utech	49,218	217
Others	23,926	3,631
Other related parties	6,652	68
	$ 355,607	$ 206,919

p. Contract liabilities

	December 31	
Related Party Category	2019	2018
Other related parties	$ 11	$ 1,195
Subsidiaries		
Zhongyang	-	28,396

Related Party Category	December 31 2019	2018
Associates	-	154
	$ 11	$ 29,745

q. Payables to contractors and equipment suppliers

	December 31 2019	2018
Investors with significant influence	$ -	$ 12,936

r. Other accrued expenses

	December 31 2019	2018
Subsidiaries		
Aeon Co Ltd.	$ 169,202	$ 226,110
Other	7,508	7,957
Other related parties	-	2,973
Investors with significant influence	-	193
Associates	-	11
	$ 176,710	$ 237,244

The outstanding trade payables from related parties were unsecured. No guarantees had been given or received for payables to related parties, and these payables would be settled in cash.

s. Disposal of property, plant and equipment

	For the Year Ended December 31 2019	2018
Subsidiaries	$ 265,815	$ -
Investors with significant influence	-	26,830
	$ 265,815	$ 26,830

t. Acquisitions of Financial assets

Related Party Category	December 31 2019	2018
Subsidiaries	$ -	$ 59,085

The Corporation paid $634,695 thousand and $146,473 thousand in cash to acquire additional new shares of its subsidiaries and association in 2019 and 2018, respectively. Refer to Note 38 for information about financing, endorsements and guarantees provided to related parties.

u. Compensation of key management personnel

The compensation of directors and other members of key management personnel for 2019 and 2018 was as follows:

	For the Year Ended December 31 2019	2018
Short-term benefits	$ 86,630	$ 69,831

	For the Year Ended December 31	
	2019	**2018**
Share-based payments	1,686	7,721
Post-employment benefits	2,076	1,174
	$ 90,392	$ 78,726

The compensation of directors and other key management personnel was determined by the Compensation Committee on the basis of individual performance and market trends.

35. PLEDGED OR MORTGAGED ASSETS

The following assets had been pledged or mortgaged as collaterals for short-term and long-term bank loans, bonds payable and deposits for the government:

	December 31	
	2019	**2018**
Property, plant and equipment	$ 8,728,542	$ 11,908,305
Financial assets at fair value through other comprehensive income	2,172,922	1,337,855
Refundable deposits	847,319	825,595
Investments accounted for using the equity method	608,967	606,932
Restricted assets (classified as other current and non-current assets)	331,128	3,563,964
Pledged time deposits (classified as other current assets)	208,333	526,523
	$ 12,897,211	$ 18,769,174

36. SIGNIFICANT CONTINGENT LIABILITIES AND COMMITMENTS

In addition to those disclosed in other notes, significant commitments and contingencies of the Corporation were as follows:

a. Significant commitments

1) Long-term purchase contracts:

As of December 31, 2019, the Corporation recognized prepayments of USD56,320 thousand (roughly NT$1,764,266 thousand), EUR8,636 thousand (roughly NT$397,190 thousand) shown in the balance sheet. The Corporation recognized an impairment loss of NT$15,895 thousand and a reversal of the impairment loss of prepayment of NT$78,924 thousand because of poor operating conditions of suppliers for the year ended December 31, 2019 and 2018, respectively; and the Corporation recognized a reversal of impairment loss of $14,129 thousand because of their supplier liquidation allocation for the year ended December 31, 2019; the Corporation recognized a purchasing agreement losses of $398,581 thousand for the year ended December 31, 2018.

2) Unused letters of credit amounted to approximately USD3,411 thousand as of December 31, 2019.

b. Contingencies

1) The controversy associated with payment for goods between the Group and Company CD:

The Group filed an appeal with Wujiang District Intermediate People’s Court on July 3, 2015 to request CEEG (Shanghai) and CEEG (Nanjing), both are CD group companies, to return RMB48,230 thousand. Wujiang District Intermediate People’s Court ruled in the Group’s favor on September 23, 2015, but Company CD appealed to the court of second instance on October 8, 2015.

During the appeal, the Group and Company CD, a CD group company, reached an agreement on December 30, 2015 after mediation. According to the agreement, CEEG (Shanghai) would propose a specific payment schedule with an expected repayment of RMB48,230 thousand and CEEG (Nanjing) assumed joint liability.

CD Group did not make payments according to the terms of the above payment schedule; hence, the Group has entrusted a law firm to apply for a compulsory enforcement of the award. The Group recognized all above mentioned account receivables as a loss. DelSolar Wu Jiang received a total of RMB20,537 thousand through cash appropriated by the enforcement of the court and cash payments received from CEEG (Shanghai) as of April 29, 2019. CEEG (Shanghai) has repaid a debt to DelSolar Wu Jian with solar cells assemblies for 3,148 thousand as of April 29, 2019; CEEG (Shanghai) will continuously to repay the outstanding amount on the basis of RMB300 thousand per month to DelSolar Wu Jiang.

In addition, the controversy associated with payment for goods between the Group and CEEG's (Shanghai): In August 2016, the Group has entrusted a law firm to go to arbitration for the overdue payment of CD Group's CEEG (Shanghai) in the China International Economic and Trade Arbitration Commission (CIETAC). The Group requested payment of USD1,255 thousand. The Group prevailed in the proceeding on December 23, 2016, and CEEG (Shanghai) has to pay USD1,254 thousand in overdue payments and USD25 thousand in overdue penalties to the Group. The Group has applied to the court for a compulsory enforcement of the award.

On October 28, 2019, the Shanghai Third Intermediate People's Court issued an announcement. It agreed to transfer the bankruptcy application and liquidation procedures of CLP Shanghai for bankruptcy and reorganization procedures, and on the same day ruling CLP Shanghai was reorganized. On December 24, 2019, the Company filed a claim with the bankruptcy administrator.

2) In the controversy of whether to continuously perform the supply agreement, Company K requested the help of Hsinchu district court on January 13, 2016 to demand payment of $10,000 thousand in partial claims. The Company K requested to increase the payment to $500,000 thousand in August 2016. The Corporation has filed a counterclaim against the Company K to Hsinchu district court on March 21, 2017 to reimburse prepayment and to demand payment of $20,000 thousand in partial claims.

   On October 13, 2017, the Hsinchu district court ruled that the Corporation should pay Company K $500,000 thousand and accrued interest payable at 5% per annum beginning from December 23, 2015. Simultaneously, Hsinchu district court dismissed the Corporation's request for return of advance payment against supplier K. In the first court session, the Corporation considered the result of verdict as having a lot of violations; thus, the Corporation has engaged an attorney to lodge an appeal to safeguard the legitimate rights of the Corporation. Based on conservatism concept, the Corporation accrued a potential loss and necessary adjustment will be made depending on the ruling.

3) Company CE has requested an arbitration on the controversy between Company CE and its third-party vendor Company G at the Hong Kong International Arbitration Centre, where its arbitral awards are enforced and recognized by ROC courts. With respect to the enforcement of such arbitral awards, Company CE requested the issuance of an order for attachment and an order for transfer of the Corporation's debentures of payments of goods. The Corporation's made a statement that the Corporation continuously disagreed with the demand of Company CE since February 2016; therefore, Company CE advocated that the Corporation should pay a total of $60,480 thousand and an accrued interest payable at 5% per annum. In August 2017, the Hsinchu district court ruled that the Corporation should pay CE Company $60,480 thousand and accrued interest payable 5% per annum. As Company CE has applied for the implementation of debt restructuring in mainland China with its third party vendor Company G, and the Corporation instructed legal counsels to subsequently answer the charges. The Corporation considered the result of the verdict as having a lot of violation, and has engaged an attorney to lodge an appeal. The case is currently before the Taiwan High Court. The Corporation has accrued a probable losses and will adjust any amount base on the result of such verdict, if necessary.

4) The Corporation entered into a gas distribution agreement with EQ Company on May 1, 2011. The agreement stated that EQ Company would provide nitrogen, pure oxygen and other gases to GEC factories located at the Hsinchu Industrial Science Park in Zhu-nan, Miaoli. After the business combination between the Corporation and GEC, the Corporation undertook all the rights, obligations and liabilities of the above mentioned agreement. The Corporation terminated the contract earlier in accordance with the agreement due to the factories in Zhu-nan was closed on October 31, 2016. Thus, no consensus has been reached about the amount of early termination. EQ Company has filed an application for arbitration to request a payment of $60,900 thousand with an annual interest of 5%. The Corporation has instructed counsel to respond the request. This arbitration judgment was obtained in August 2019 which required the Corporation to pay EQ Company $18.51 million with an annual interest rate of 5% on the settlement date. The Corporation appealed to revoke the arbitration judgment on September 19, 2019 and the court accepted it.

5) On May 6, 2019, the board of directors of the Corporation resolved and signed a settlement agreement with Sunshine PV on the mutual debts of the two parties. As of June 30, 2019, Sunshine PV owed a number of items from the Corporation such as goods, rental payment and capital loans, and additional interest was $446,768 thousand, which was fully recognized as allowance for losses. The plant of Hsinchu of Solartech Energy suffered a fire disaster in October 2017, which caused damages to the machinery and equipment of Sunshine PV (referred to as "damaged equipment"). Sunshine PV applied for compensation from the insurance company, but the insurance company has not submitted an appraisal report to prove the damage yet. In order to evaluate the equipment as mentioned earlier, the Corporation requested an independent expert to evaluate the value of the damaged equipment of Sunshine PV. According to the opinion of the independent expert, the possible compensation loss was about $460,000 thousand to $510,000 thousand. Based on the long-term negotiation and the past cooperation relationship between the two parties and taking into account the current state of operation and solvency of Sunshine PV, the Corporation claimed that compensation can be obtained from Sunshine PV. The Corporation reconciled with Sunshine PV for the damages claimed, and they signed the settlement agreement on May 6, 2019. Based on the settlement agreement, the two parties no longer have any rights and obligations on the creditor's rights and debts.

37. SIGNIFICANT ASSETS AND LIABILITIES DENOMINATED IN FOREIGN CURRENCIES

The Corporation's significant financial assets and liabilities denominated in foreign currencies are aggregated by the foreign currencies other than functional currencies and the related exchange rates between foreign currencies and respective functional currencies were as follows:

	December 31			
	2019		2018	
	Foreign Currencies (In Thousands)	Exchange Rate	Foreign Currencies (In Thousands)	Exchange Rate
Financial assets				
Monetary assets				
USD	$ 173,634	29.9950	$ 229,215	30.7400
EUR	4,183	33.6200	14,999	35.2200
JPY	5,267	0.2760	23,918	0.2781
RMB	9,897	4.3000	33,216	4.4760
GBP	165	39.3900	2,038	38.9500
Non-monetary assets				
USD	156,401	30.0437	262,671	30.7743
USD	681	29.9950	763	28.9978
EUR	-	-	600	32.2300
GBP	4,644	39.3900	3,676	38.9500
MYR	28,860	7.0380	52,054	7.1190
Financial liabilities				
Monetary liabilities				
USD	149,145	29.9950	228,376	30.7400
EUR	550	33.6200	10,097	35.2200
JPY	617,203	0.2760	857,838	0.2781
RMB	1,853	4.3000	485	4.4760
GBP	11	39.3900	23	38.9500

For the years ended December 31, 2019 and 2018, realized and unrealized net foreign exchange gains (losses) were $11,617 thousand and $(47,193) thousand, respectively. It is impractical to disclose net foreign exchange gains (losses) by each significant foreign currency due to the variety of the foreign currency transactions of the Corporation.

38. SEPARATELY DISCLOSED ITEMS

Following are the additional disclosures required by the Securities and Futures Bureau for the Corporation:

a. Financings provided to others: None
b. Endorsements/guarantees provided: Table 1 (attached)
c. Marketable securities held (not including investments in subsidiaries, associates, and joint ventures): Table 2 (attached)
d. Marketable securities acquired and disposed of at costs or prices of at least $300 million or 20% of the paid-in capital: None
e. Acquisition of individual real estate at costs of at least $300 million or 20% of the paid-in capital: None
f. Disposal of individual real estate at prices of at least $300 million or 20% of the paid-in capital: None
g. Total purchases from or sales to related parties of at least $100 million or 20% of the paid-in capital: Table 3 (attached)
h. Receivables from related parties amounting to at least $100 million or 20% of the paid-in capital: Table 4 (attached)
i. Trading in derivative instruments: Tables 7 (attached)
j. Related information of investees over which the Corporation exercises significant influence: Table 5 (attached)
k. Investments in mainland China:

1) Information on any investee company in mainland China, showing the name, principal business activities, paid-in capital, method of investment, inward and outward remittance of funds, shareholding ratio, investment gain or loss, carrying amount of the investment at the end of the

period, repatriated investment gains, and limit on the amount of investment in the mainland China area: Table 6 (attached)

2) Any of the following significant transactions with investee companies in mainland China, either directly or indirectly through a third party, and their prices, payment terms, and unrealized gains or losses: Tables 7 (attached)

TABLE 1

UNITED RENEWABLE ENERGY CO., LTD.

ENDORSEMENTS/GUARANTEES PROVIDED
FOR THE YEAR ENDED DECEMBER 31, 2019
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

No.	Endorser/Guarantor	Endorsee/Guarantee		Limit on Endorsement/ Guarantee Given on Behalf of Each Party	Maximum Amount Endorsed/ Guaranteed During the Period	Outstanding Endorsement/ Guarantee at the End of the Period	Actual Borrowing Amount	Amount Endorsed/ Guaranteed by Collateral	Ratio of Accumulated Endorsement/ Guarantee to Net Equity in Latest Financial Statements (%)	Aggregate Endorsement/ Guarantee Limit	Endorsement/ Guarantee Given by Parent on Behalf of Subsidiaries	Endorsement/ Guarantee Given by Subsidiaries on Behalf of Parent	Endorsement/ Guarantee Given on Behalf of Companies in Mainland China
		Name	Relationship										
0	The Corporation	Zhongyang	Subsidiary	$ 4,144,399	$ 770,000	$ -	$ -	$ -	-	$ 10,360,997	YES	-	-
		GES UK	Subsidiary	4,144,399	674,348	584,903	448,560	-	2.82	10,360,997	YES	-	-
		Gintech (Thailand)	Subsidiary	4,144,399	653,535	632,735	169,078	-	3.05	10,360,997	YES	-	-
		GES USA	Subsidiary	4,144,399	580,362	555,012	330,050	-	2.68	10,360,997	YES	-	-
		NSP System	Subsidiary	4,144,399	500,000	500,000	374,400	-	2.41	10,360,997	YES	-	-
		Yong Liang	Subsidiary	4,144,399	417,250	347,250	191,564	-	1.68	10,360,997	YES	-	-
		NSP Indygen	Subsidiary	4,144,399	364,500	354,510	354,510	-	1.71	10,360,997	YES	-	-
		CFR	Subsidiary	4,144,399	307,400	-	-	-	-	10,360,997	YES	-	-
		Apex	Subsidiary	4,144,399	263,000	263,000	261,000	-	1.27	10,360,997	YES	-	-
		The Corporation	Subsidiary	4,144,399	51,120	51,120	-	-	0.25	10,360,997	YES	-	-
		NSP NEVADA	Subsidiary	4,144,399	46,110	46,110	-	-	0.22	10,360,997	YES	-	-

Note 1: In accordance with the “Rules of Guarantees by the Corporation,” the ceiling for the total guaranteed amount was 50% of the Corporation’s net asset value, and the limit on the guaranteed amount for a single party was 20% of the Corporation’s net asset value. But for business purposes, the limit of the guaranteed amount was the total of the purchases from or sales to the Corporation within the most recent year.

Note 2: In accordance with the “Regulations Governing Loaning of Funds and Making of Endorsements/Guarantees by Public Companies” Article 4.1.1.(3), although, the guaranteed party is the Corporation, the Corporation issued a separate promissory note to a non-financial enterprise to meet the financing needs, which is still in accordance with the term “endorsements/guarantees” under Article 4 of the regulations.

TABLE 2

UNITED RENEWABLE ENERGY CO., LTD.

MARKETABLE SECURITIES HELD
DECEMBER 31, 2019
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Holding Company Name	Type and Name of Marketable Securities	Relationship with the Holding Company	Financial Statement Account	December 31, 2019				Note
				Number of Shares	Carrying Amount	Percentage of Ownership (%)	Fair Value	
The Corporation	Shares							
	CTCI	Investee	Financial assets at fair value through other comprehensive income- current	3,003	$ 114,414	0.39	$ 114,414	-
	SAS	Investee	Financial assets at fair value through other comprehensive income- non-current	21,860	2,172,922	3.73	2,172,922	Note 1
	TTMC	Investee	Financial assets at fair value through other comprehensive income- non-current	4,000	80,880	5.44	80,880	Notes 2 and 3
	EXOJET	Investee	Financial assets at fair value through other comprehensive income- non-current	5,885	28,896	12.06	28,896	-
	TSCC	Investee	Financial assets at fair value through other comprehensive income- non-current	1,691	18,601	0.58	18,601	-
	NTNU	Investee	Financial assets at fair value through other comprehensive income- non-current	200	2,000	2.00	2,000	-
	ASIA GLOBAL VENTURE CAPITAL II CO., LTD.	Investee	Financial assets at fair value through other comprehensive income- non-current	1,000	20,426	10.00	20,426	-
	SUN APPENNINO CORPORATION	Investee	Financial assets at fair value through other comprehensive income- non-current	-	-	26.09	-	-
	FICUS CAPITAL CORPORATION	Investee	Financial assets at fair value through other comprehensive income- non-current	-	-	28.07	-	-
	Puttable preference shares - Phanes Holding	Other related party	Financial assets at amortized cost- non-current	24	149,975	100.00	149,975	-

Note 1: The asset has been pledged as collaterals for long-term bank loans and financing facilities. For the details refer to Note 35.

Note 2: The above amount is based on fair value. For those pertaining to private-placement shares, the amount is based on quoted market prices; and for those that cannot be traded during the lock-up period, the amount is based on relevant market prices.

Note 3: TTMC’s shares held by the Corporation and New Ray Investment through private equity placement were restricted under Article 43-8 of the Securities and Exchange Act.

Note 4: The above marketable securities had not been pledged or mortgaged as of December 31, 2019.

UNITED RENEWABLE ENERGY CO., LTD.

TOTAL PURCHASES FROM OR SALES TO RELATED PARTIES AMOUNTING TO AT LEAST $100 MILLION OR 20% OF THE PAID-IN CAPITAL
FOR THE YEAR ENDED DECEMBER 31, 2019
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Buyer	Related Party	Relationship	Transaction Details				Abnormal Transaction		Notes/Accounts Receivable (Payable)		Note
			Purchase/ Sale	Amount	% to Total	Payment Terms	Unit Price	Payment Terms	Ending Balance	% to Total	
The Corporation	Utech	Subsidiary	Purchase	$ 371,714	2.38	OA 7 days after receipt	$ -	-	$ (49,218)	(3.24)	-
	CFC	Associate	Sale	194,765	1.31	60 days from the invoice date	-	-	105,197	4.79	-
	NSP System	Subsidiary	Sale	177,287	1.19	60 days from the invoice date	-	-	94,616	4.31	-
	Gintech (Thailand)	Subsidiary	Purchase	156,068	1.00	15 days from the invoice date	-	-	(275,810)	(18.17)	-
			Sale	1,004,950	6.74	60 days from the invoice date	-	-	158,620	7.22	-

Note : The amounts were based on total notes or accounts receivable (payable) or total purchase (sale) amounts of the buyer (seller).

UNITED RENEWABLE ENERGY CO., LTD.

RECEIVABLES FROM RELATED PARTIES AMOUNTING TO AT LEAST NT$100 MILLION OR 20% OF THE PAID-IN CAPITAL
DECEMBER 31, 2019
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Company Name	Related Party	Relationship	Ending Balance	Turnover Rate	Overdue		Amount Received in Subsequent Period	Allowance for Impairment Loss
					Amount	Actions Taken		
The Corporation	DelSolar US	Subsidiary	$ 969,633	-	$ 969,633	Receivable according to the financial situation	$ -	$ -
	GES ME	Subsidiary	629,372	-	629,372	Receivable according to the financial situation	-	-
	NSP NEVADA	Subsidiary	562,020	-	562,020	Receivable according to the financial situation	-	-
	GES USA	Subsidiary	189,162	-	189,162	Receivable according to the financial situation	-	-
	Gintech (Thailand)	Subsidiary	179,885	4.52	111,711	Receivable according to the financial situation	-	-
	NSP Nanchang	Subsidiary	139,578	-	139,578	Receivable according to the financial situation	-	-
	NSP System	Subsidiary	116,666	-	48,324	Receivable according to the financial situation	48,419	-
	CFC	Associate	105,197	1.74	105,197	Receivable according to the financial situation	28,275	8,434

UNITED RENEWABLE ENERGY CO., LTD.

NAMES, LOCATIONS, AND OTHER INFORMATION OF INVESTEES ON WHICH THE COMPANY EXERCISES SIGNIFICANT INFLUENCE
FOR THE YEAR ENDED DECEMBER 31, 2019
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Investor Company	Investee Company	Location	Main Businesses and Products	Investment Amount		Balance as of December 31, 2019			Net Income (Loss) of the Investee	Investment Gain (Loss)	Note
				December 31, 2019	December 31, 2018	Shares (Thousands)	% of Ownership	Carrying Value			
The Corporation	UES	Independent State of Somoa	Investment company	$ 1,910,636	$ 1,910,636	61,930	100.00	$ 1,987,414	$ 18,742	$ 18,742	-
	DelSolar Cayman	Cayman Islands	Investment company	4,906,789	4,597,639	155,126	100.00	923,603	(1,132,534)	(1,132,132)	-
	NSP BVI	British Virgin Islands	Investment company	1,426,179	1,426,179	45,001	100.00	1,411,425	41,205	41,205	-
	GES	Hsin-chu, Taiwan	Electronic component manufacturing and selling	-	-	-	-	-	-	-	Note 2
	GES ME	Dubai	Solar related business	418,805	418,805	4	100.00	357,850	148	148	-
	Apex	Hsin-chu, Taiwan	Solar related business	165,994	145,994	50,500	100.00	190,890	13,549	13,549	-
	NSP UK	London, UK	Investment company	138,967	138,967	3,580	100.00	182,919	38,317	38,317	-
	NSP System	Tainan, Taiwan	Solar related business	144,200	144,200	14,420	100.00	140,877	55,126	14,378	-
	Prime Energy	Tainan, Taiwan	Electronic component manufacturing and selling	90,000	90,000	9,000	100.00	79,992	2	2	-
	New Ray Investment	Tainan, Taiwan	Investment company	115,000	115,000	11,500	100.00	72,524	1,192	1,192	-
	Zhongyang	Hsin-chu, Taiwan	Solar related business	24,121	24,121	3,500	100.00	37,104	5,665	5,665	-
	Huiyang	Hsin-chu, Taiwan	Solar related business	30,427	30,427	3,100	100.00	29,977	(318)	(318)	Note 5
	UREE	Kaohsiung, Taiwan	Solar related business	20,000	-	2,000	100.00	14,489	(5,511)	(5,511)	Note 3
	DelSolar Singapore	Singapore	Investment company	29,743	29,743	1,250	100.00	18,565	(109)	(109)	-
	BPS	Tainan, Taiwan	Solar related business	6,000	6,000	600	60.00	21,353	11,388	6,473	-
	SMC	Hsin-chu, Taiwan	Solar related business	9,720	9,720	1,000	100.00	9,844	186	186	-
	Solartech Japan	Japan	Solar related business	-	36,205	-	-	-	(25,587)	(25,587)	Note 5
	Utech	Miaoli, Taiwan	Electronic component manufacturing	337,114	57,169	39,324	99.49	(264,541)	(429,066)	(409,616)	-
	Yong Liang	Hsin-chu, Taiwan	Solar related business	249,000	249,000	24,900	100.00	246,742	7,625	7,625	Note 2
	Yong Zhou	Hsin-chu, Taiwan	Solar related business	46,500	41,500	-	100.00	5,829	(6,063)	(6,063)	Note 2
	Ever Lite	Hsin-chu, Taiwan	Electronic component selling	-	6,000	-	100.00	1	3,960	3,960	Notes 2 and 5
	Yong Yao	Changhua, Taiwan	Solar related business	-	142,000	-	-	-	(2,483)	(2,483)	Notes 2 and 5
	Yong Shun	Hsin-chu, Taiwan	Solar related business	2,000	2,000	200	100.00	799	(115)	(115)	Note 2
	JRC	Domincan	Solar related business	3,717	3,717	1	1.00	466	(14,472)	(125)	Note 2
	GES UK	London, UK	Investment company	3,170,893	3,170,893	103,890	100.00	2,443,709	44,824	44,824	-
	Neo Cathay	Tainan, Taiwan	Investment company	600,000	600,000	60,000	40.00	608,967	43,102	17,241	-
	TSST	Malaysia	Solar related business	417,692	417,692	97,701	42.12	86,638	(394,955)	(166,356)	-
	V5 Technology	Hsin-chu, Taiwan	Electronic component manufacturing and selling	114,084	114,084	7,789	41.43	66,769	360	(3,091)	-
	Gintung	Taoyuan, Taiwan	Electronic component manufacturing	34,341	34,341	13,460	36.38	-	(44,424)	(44,424)	-
	DSET	Taipei,Taiwan	Solar related business	10,500	10,500	1,050	35.00	3,604	(11,227)	(3,929)	-
	Solar PV	Cayman Islands	Investment company	-	-	30,500	19.92	-	(1,769)	-	Note 4
	Dashiangying	Kaohsiung, Taiwan	Solar related and agriculture related business	100	-	10	100.00	71	(29)	(29)	Note 3
	Shinkai	Kaohsiung, Taiwan	Solar related and agriculture related business	100	-	10	100.00	71	(29)	(29)	Note 3
	Shanshang	Kaohsiung, Taiwan	Solar related and agriculture related business	100	-	10	100.00	71	(29)	(29)	Note 3
	Jiangung	Kaohsiung, Taiwan	Solar related and agriculture related business	100	-	10	100.00	71	(29)	(29)	Note 3
	Dungshr	Kaohsiung, Taiwan	Solar related and agriculture related business	100	-	10	100.00	71	(29)	(29)	Note 3
	Yanshan	Kaohsiung, Taiwan	Solar related and agriculture related business	100	-	10	100.00	71	(29)	(29)	Note 3

Note 1: Recognized on the basis of unaudited financial statements as December 31, 2019.
Note 2: The Corporation which was the surviving company had a short-form merge with its 100% owned subsidiary, GES, as of March 31, 2019. The subsidiaries held by the formerly GES were transferred to the Corporation.
Note 3: UREE was approved to be established in January 2019. In July, 2019, 100% subsidiary Dashiangying, Shanshang, Yanshan, Shinkai, Jiangung and Dungshr were newly established.
Note 4: The Corporation had recognized impairment loss on equity investment in Solar PV, associate; therefore, the Group did not recognize any share of profit or loss of the associate.
Note 5: The registration of Solartech Japan was cancelled in the second quarter of 2019. Huiyang and Ever Lite applied for liquidation procedures in the third quarter of 2019. The sale of Yong Yao was completed in the fourth quarter of 2019.
Note 6: For investments in Mainland China, refer to Table 6.

UNITED RENEWABLE ENERGY CO., LTD.

INFORMATION ON INVESTMENTS IN MAINLAND CHINA
FOR THE YEAR ENDED DECEMBER 31, 2019
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Investee Company	Main Businesses and Products	Paid-in Capital	Method of Investment	Accumulated Outward Remittance for Investment from Taiwan as of January 1, 2019	Remittance of Fund		Accumulated Outward Remittance for Investment from Taiwan as of December 31, 2019	Net Income (Loss) of the Investee	% Ownership of Direct or Indirect Investment	Investment Gain (Loss)	Carrying Amount as of December 31, 2019	Accumulated Repatriation of Investment Income as of December 31, 2019
					Outward	Inward						
DelSolar Wu Jiang	Solar related business	USD 120,000 $ 3,599,400	Indirect investments through the Group's 100% - owned subsidiary	USD 120,000 $ 3,599,400	$ -	$ -	USD 120,000 $ 3,599,400	USD (24,697) $ (763,397)	100	USD (24,697) $ (763,397) (Note 1)	USD 12,081 $ 362,364 (Note 1)	$ -
NSP Nanchang	Solar related business	USD 44,000 $ 1,319,780	Indirect investments through the Group's 100% - owned subsidiary	USD 5,000 $ 149,975	-	-	USD 5,000 $ 149,975	USD (31,830) $ (983,902)	100	USD (31,830) $ (983,902) (Note 1)	USD (18,711) $ (561,223) (Note 1)	-
JiangXi Solar PV Corp. (Note 2)	Solar related business	USD 18,450 $ 553,408	Indirect investments through the Group's 100% - owned subsidiary	USD 18,450 $ 553,408	-	-	USD 18,450 $ 553,408	USD (61) $ (1,889)	19.92	USD - $ -	USD - $ -	-

Accumulated Outward Remittance for Investment in Mainland China as of December 31, 2019	Investment Amount Authorized by Investment Commission, MOEA	Upper Limit on the Amount of Investment Stipulated by Investment Commission, MOEA
USD 143,450 $ 4,302,783	USD 149,618 (Note 3) $ 4,487,788	$ 12,433,195

Note 1: Amount was recognized on the basis of reviewed financial statements.

Note 2: The Group had recognized impairment loss on the equity investment in JiangXi Solar PV Corp., an associate, so that the Corporation did not recognize any share of profit or loss of associates.

Note 3: The exchange rate used is the rate on December 31, 2019.

UNITED RENEWABLE ENERGY CO., LTD.

SIGNIFICANT TRANSACTIONS WITH INVESTEE COMPANIES IN MAINLAND CHINA, EITHER DIRECTLY OR INDIRECTLY THROUGH A THIRD PARTY, AND THEIR PRICES, PAYMENT TERMS, AND UNREALIZED GAINS OR LOSSES
FOR THE YEAR ENDED DECEMBER 31, 2019
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Investee Company	Transaction Type	Purchase/Sale		Price	Transaction Details		Notes/Accounts Receivable (Payable)		Unrealized (Gain) Loss	Note
		Amount	%		Payment Term	Comparison with Normal Transaction	Ending Balance	%		
NSP Nanchang	Other operating revenue	$ 1,203	0.01	Specifically negotiated terms	Specifically negotiated terms	Specifically negotiated terms	$ -	-	$ -	-
	Purchase goods	69,640	0.45	Specifically negotiated terms	Specifically negotiated terms	Specifically negotiated terms	(17,487)	(1.15)	-	-

Note: Amount was recognized on the basis of reviewed financial statements.

United Renewable Energy Co., Ltd. and Subsidiaries

Consolidated Financial Statements for the Years Ended December 31, 2019 and 2018 and Independent Auditors' Report

DECLARATION OF CONSOLIDATION OF FINANCIAL STATEMENTS OF AFFILIATES

The companies required to be included in the consolidated financial statements of affiliates in accordance with the “Criteria Governing Preparation of Affiliation Reports, Consolidated Business Reports and Consolidated Financial Statements of Affiliated Enterprises” for the year ended December 31, 2019 are all the same as the companies required to be included in the consolidated financial statements of parent and subsidiary companies as provided in International Financial Reporting Standard 10 “Consolidated Financial Statements”. Relevant information that should be disclosed in the consolidated financial statements of affiliates have all been disclosed in the consolidated financial statements of parent and subsidiary companies. Hence, we did not prepare a separate set of consolidated financial statements of affiliates.

Very truly yours,

United Renewable Energy Co., Ltd.

By:

HONG, CHUM-SAM
Chairman

March 26, 2020

INDEPENDENT AUDITORS' REPORT

The Board of Directors and Shareholders
United Renewable Energy Co., Ltd.

Opinion

We have audited the accompanying consolidated financial statements of United Renewable Energy Co., Ltd. (the "Corporation") and its subsidiaries (collectively referred to as the "Group") which comprise the consolidated balance sheets as of December 31, 2019 and 2018, and the consolidated statements of comprehensive income, changes in equity and cash flows for the years then ended, and the notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, based on our audits and the reports of other auditors (refer to the Other Matter section of this report), the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2019 and 2018, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers, and International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), IFRIC Interpretations (IFRIC), and SIC Interpretations (SIC) endorsed and issued into effect by the Financial Supervisory Commission of the Republic of China.

Basis for Opinion

We conducted our audits in accordance with the Regulations Governing Auditing and Attestation of Financial Statements by Certified Public Accountants and auditing standards generally accepted in the Republic of China. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with The Norm of Professional Ethics for Certified Public Accountant of the Republic of China, and we have fulfilled our other ethical responsibilities in accordance with these requirements. Based on our audits and the reports of other auditors, we believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of Matter

As disclosed in Note 3 to the consolidated financial statements, the Group elected to apply the guidance of IFRS 16 in determining whether contracts are, or contain, a lease only to contracts entered into. Power facility contracts, which are currently identified as containing a lease under IAS 17 and IFRIC 4, do not meet the definition of a lease under IFRS 16 and are accounted for in accordance with IFRS 15 because customers do not have the right to direct the use of the identified assets. The Group elected to restate prior reporting periods with the cumulative effect of the initial application recognized at the date of initial application in accordance with IAS 8. Our review result is not modified in respect of this matter.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the year ended December 31, 2019. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

The key audit matters identified in the Group's consolidated financial statements for the year ended December 31, 2019 are stated as follows:

<u>Revenue recognition</u>

The Group's major sales come from solar cells, modules and power facilities. After the three-in-one merger on

October 1, 2018, the gross profit of module sales has changed from negative to positive, and the sales volume continued to increase. In order for the Group to show the results of the three-in-one merger, there may be a risk of false sales of solar module orders and the false increase in revenue. Therefore, we considered revenue recognition as a key audit matter. For the accounting policies for the recognition of revenue, refer to Note 4-p. For the description of sales revenue, refer to Note 26.

Our audit procedures performed in respect of the above key audit matter included the following:

1. We understood and tested the design and operating effectiveness of the internal controls.
2. We checked the transaction documents of sales revenue, including sales orders, shipping documents, and receipt documents to understand the control of the identified products, the transfer of significant risks and rewards to the buyer and to identify the Group's revenue recognition.
3. We performed post-financial reporting period audit and checked the reasonableness of significant sales returns and discounts after the period.

Assessment of impairment losses on property, plant and equipment

As of December 31, 2019, the property, plant and equipment in the consolidated balance sheet was NT$19,064,958 thousand. The management assesses the Group's financial performance by identifying any signs of impairment on the tangible assets at each balance sheet date. If any evidence of impairment exists, the recoverable amount of the asset needs to be estimated. If the recoverable amount of an individual asset cannot be estimated, the recoverable amount of the cash-generating unit to which the asset belongs is estimated. Because the above tangible assets account for 40% of the total consolidated assets and the calculation of the recoverable amount involves many assumptions and estimates, the method will directly affect the amount recognized for impairment losses. Therefore, we considered the assessment of impairment losses on property, plant and equipment as a key audit matter. For the accounting policies on impairment losses on property, plant and equipment, refer to Notes 4-l and 5. For the description of impairment losses on property, plant and equipment, refer to Note 15.

Our audit procedures performed in respect of the above key audit matter included the following:

1. We understood and tested the effectiveness of the design of major internal controls for the impairment assessment of property, plant and equipment.
2. We understood and reviewed the Group's self-assessment of asset impairment for cash-generating units that show signs of impairment.
3. We consulted the internal experts of the firm to understand and evaluate the rationality of the assumptions and methods of impairment assessment, including the process for assessing the operating forecasts for the next five years, and the assumptions of calculating the weighted average cost of capital ratio.

Other Matter

Some subsidiaries included in the Group's consolidated financial statements were audited by other auditors. The amounts within the consolidated financial statements for those subsidiaries were based solely on the reports of other auditors. As of December 31, 2019 and 2018, total assets of the aforementioned subsidiaries were 22.09% and 16.07% of the consolidated total assets, respectively. For the years ended December 31, 2019 and 2018, the operating revenues of these subsidiaries were 3.25% and 10.32% of the consolidated total operating revenue, respectively.

The financial statements of some investee companies accounted for using the equity method were audited by other auditors. The amounts within the consolidated financial statements for those investee companies were based solely on the reports of other auditors. As of December 31, 2019 and 2018, the aforementioned investments accounted for using the equity method were NT$66,769 thousand and NT$114,284 thousand, respectively. For the years ended December 31, 2019 and 2018, there was a loss of NT$47,515 thousand and a gain of NT$7,541 thousand, respectively, from the aforesaid investments accounted for using the equity method.

Some subsidiaries included in the Group's consolidated financial statements, which we have not audited but were audited by other auditors in accordance with different auditing standards, are based on a framework different from the accompanying consolidated financial statements. We have performed compulsory audit procedures and have made adjustments to the other financial statements for them to conform with the Regulations Governing the Preparation of Financial Reports by Securities Issuers. The consolidated financial statement amounts for the aforementioned subsidiaries were based on the reports of other auditors and the results of additional audit procedures performed in accordance with the Regulations Governing Auditing and Attestation of Financial Statements by Certified Public Accountants and auditing standards generally accepted in the Republic of China. As of December 31, 2018, total assets of the aforementioned subsidiaries was 4.02% of the consolidated total assets. For the years ended December 31, 2018, the operating revenue of these subsidiaries was 3.31% of the consolidated total operating revenue.

We have also audited the parent company only financial statements of the Corporation as of and for the years ended December 31, 2019 and 2018 on which we have issued an unqualified opinion with other matters paragraphs.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers, and International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), IFRIC Interpretations (IFRIC), and SIC Interpretations (SIC) endorsed and issued into effect by the Financial Supervisory Commission of the Republic of China, and for such internal control as management determines is necessary to enable the preparation of the consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance, including the audit committee, are responsible for overseeing the Group's financial reporting process.

Auditors' Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the auditing standards generally accepted in the Republic of China will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with the auditing standards generally accepted in the Republic of China, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

1. Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
2. Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
3. Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

4. Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Group to cease to continue as a going concern.
5. Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
6. Obtain sufficient and appropriate audit evidence regarding the financial information of entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements for the year ended December 31, 2019 and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partners on the audit resulting in this independent auditors' report are Yi-Hsin Kao and Yu-Feng Huang.

Deloitte & Touche
Taipei, Taiwan
Republic of China

March 26, 2020

<u>Notice to Readers</u>

The accompanying consolidated financial statements are intended only to present the consolidated financial position, financial performance and cash flows in accordance with accounting principles and practices generally accepted in the Republic of China and not those of any other jurisdiction. The standards, procedures and practices to audit such consolidated financial statements are those generally applied in the Republic of China.

For the convenience of readers, the independent auditors' report and the accompanying consolidated financial statements have been translated into English from the original Chinese version prepared and used in the Republic of China. If there is any conflict between the English version and the original Chinese version or any difference in the interpretation of the two versions, the Chinese-language independent auditors' report and consolidated financial statements shall prevail.

UNITED RENEWABLE ENERGY CO., LTD. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS
(In Thousands of New Taiwan Dollars)

ASSETS	December 31, 2019 Amount	%	December 31, 2018 (Audited After Restatement) Amount	%	January 1, 2018 (Audited After Restatemnet) Amount	%
CURRENT ASSETS						
Cash and cash equivalents (Notes 4 ,6, 31, 32, 33 and 35)	$ 6,371,316	14	$ 9,555,845	17	$ 4,430,627	13
Financial assets at fair value through profit or loss - current (Notes 4, 7 and 35)	2,392	-	-	-	106	-
Financial assets at fair value through other comprehensive income - current (Notes 4, 8, 35 and 37)	114,414	-	133,333	-	-	-
Contract assets - current (Notes 3, 4 and 35)	483,247	1	96,617	-	64,295	-
Notes and accounts receivable, net (Notes 4, 10 and 35)	2,060,117	4	2,601,829	4	1,370,096	4
Accounts receivable from related parties (Notes 4, 10, 35 and 36)	515,469	1	532,466	1	170,506	1
Finance lease receivables (Notes 4, 11, 35, and 37)	438	-	699	-	-	-
Other receivables (Notes 4, 10, 35 and 36)	153,196	-	217,816	-	99,626	-
Other receivables from related parties (Notes 4, 10, 35 and 36)	656,913	1	1,083,053	2	1,765,926	5
Current tax assets (Notes 4 and 28)	27,850	-	76,327	-	8,557	-
Inventories (Notes 4, 12 and 37)	4,944,580	11	3,385,486	6	2,972,591	9
Prepayments (Notes 18, 19, 36 and 38)	752,686	2	638,326	1	205,275	1
Non-current assets held for sale (Notes 4 and 37)	-	-	-	-	280,778	1
Other current assets (Notes 19, 35 and 37)	1,419,710	3	4,981,243	9	1,079,956	3
Total current assets	17,502,328	37	23,303,040	40	12,448,339	37
NON-CURRENT ASSETS						
Financial assets at fair value through profit or loss - non-current (Notes 4, 7 and 35)	268,379	1	243,130	1	141,514	-
Financial assets at fair value through other comprehensive income - non-current (Notes 4, 8, 35 and 37)	2,411,482	5	1,595,898	3	203,428	1
Financial assets at amortized cost - non-current (Notes 4, 9 and 35)	149,975	-	153,700	-	149,240	-
Investments accounted for using the equity method (Notes 4, 14 and 37)	2,130,415	5	2,371,256	4	1,885,340	5
Property, plant and equipment (Notes 4, 15, 36 and 37)	19,064,958	40	25,219,508	44	14,887,687	44
Right-of-use assets (Notes 4, 5 and 16)	981,114	2	-	-	-	-
Intangible assets (Notes 4, 17 and 31)	115,357	-	202,962	-	261,350	1
Deferred tax assets (Notes 4 and 28)	1,056,550	2	1,076,369	2	90,529	-
Finance lease receivables - non-current (Notes 4, 11, 15, 35 and 37)	34,702	-	36,018	-	-	-
Prepayments - non-current (Notes 5, 18, 19 and 38)	2,184,811	5	2,507,436	4	1,010,072	3
Refundable deposits (Notes 4, 35 and 37)	911,486	2	1,004,824	2	852,023	2
Other receivables from related parties - non-current (Notes 4, 10, 35 and 37)	23,041	-	11,681	-	194,664	1
Prepayments for leases (Notes 4 and 28)	-	-	19,469	-	19,700	-
Other non-current assets (Notes 19 and 37)	391,886	1	199,454	-	1,940,462	6
Total non-current assets	29,724,156	63	34,641,705	60	21,636,009	63
TOTAL	$ 47,226,484	100	$ 57,944,745	100	$ 34,084,348	100

LIABILITIES AND EQUITY	December 31, 2019 Amount	%	December 31, 2018 (Audited After Restatement) Amount	%	January 1, 2018 (Audited After Restatement) Amount	%
CURRENT LIABILITIES						
Short-term bank loans (Notes 20, 35 and 37)	$ 2,988,798	7	$ 6,869,628	12	$ 8,229,315	24
Short-term bills payable (Notes 20 and 35)	415,458	1	276,436	-	606,396	2
Financial liabilities at fair value through profit or loss - current (Notes 4, 7 and 35)	755	-	-	-	5,742	-
Contract liabilities - current (Notes 3, 4 and 36)	323,832	1	345,252	1	308,515	1
Notes and accounts payable (Note 34)	1,499,112	3	2,048,266	3	1,104,640	3
Accounts payable to related parties (Notes 35 and 36)	6,652	-	441	-	12,820	-
Bonuses payable to employees and directors (Note 27)	-	-	2,649	-	8,242	-
Payables to contractors and equipment suppliers (Notes 34 and 36)	78,098	-	402,074	1	507,879	2
Accrued expenses (Notes 4, 22, 35 and 36)	1,313,742	3	2,093,109	4	2,536,941	8
Current tax liabilities (Notes 4 and 28)	16,958	-	1,910	-	19,462	-
Lease liability - current (Notes 4, 5, 16 and 33)	65,778	-	-	-	-	-
Receipts in advance (Note 36)	2,327	-	478	-	138,071	-
Current portion of long-term bank loans, preference share liabilities and bonds payable (Notes 20, 21, 35 and 37)	5,737,284	12	9,906,475	17	3,101,105	9
Other current liabilities (Notes 4 and 22)	69,372	-	131,650	-	100,444	-
Total current liabilities	12,518,166	27	22,078,368	38	16,679,572	49
NON-CURRENT LIABILITIES						
Financial liabilities at fair value through profit or loss - non-current (Notes 4, 7 and 35)	143,814	-	191,790	-	94,014	-
Bonds payable (Note 21)	-	-	-	-	3,425,011	10
Long-term bank loans (Notes 20, 35 and 37)	11,776,935	25	9,528,510	17	2,158,036	6
Provisions - non-current (Notes 4 and 23)	176,069	1	305,138	1	246,033	1
Deferred tax liabilities (Notes 4 and 28)	47,732	-	63,727	-	53,125	-
Lease liability - non-current (Notes 4, 5, 16 and 33)	952,521	2	-	-	-	-
Guarantee deposits	44,260	-	38,795	-	36,595	-
Preference share liabilities (Notes 4, 20 and 35)	28,178	-	44,483	-	26,419	-
Other non-current liabilities (Note 22)	54,574	-	230,465	-	189,330	1
Total non-current liabilities	13,224,083	28	10,402,908	18	6,228,563	18
Total liabilities	25,742,249	55	32,481,276	56	22,908,135	67
EQUITY ATTRIBUTABLE TO SHAREHOLDERS OF THE PARENT (Notes 25, 31 and 32)						
Ordinary shares	26,653,375	57	25,157,599	43	10,192,564	30
Capital surplus	118,989	-	1,011,023	2	6,028,165	18
Retained earnings						
Accumulated deficit	(6,000,644)	(13)	(675,712)	(1)	(4,709,973)	(14)
Other equity	(31,028)	-	(874,568)	(2)	(591,391)	(2)
Treasury shares	(18,699)	-	(18,699)	-	-	-
Total equity attributable to shareholders of the parent	20,721,993	44	24,599,643	42	10,919,365	32
NON-CONTROLLING INTERESTS (Note 13)	762,242	1	863,826	2	256,848	1
Total equity	21,484,235	45	25,463,469	44	11,176,213	33
TOTAL	$ 47,226,484	100	$ 57,944,745	100	$ 34,084,348	100

The accompanying notes are an integral part of the consolidated financial statements.

(With Deloitte & Touche auditors' report dated March 26, 2020)

UNITED RENEWABLE ENERGY CO., LTD. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In Thousands of New Taiwan Dollars, Except Loss Per Share)

	For the Year Ended December 31			
	2019		2018 (Audited After Restatement)	
	Amount	%	Amount	%
NET SALES (Notes 4, 26, 35 and 37)	$ 18,139,112	100	$ 13,137,025	100
COST OF SALES (Notes 4, 12, 27 and 35)	19,121,643	105	14,029,471	107
GROSS LOSS	(982,531)	(5)	(892,446)	(7)
REALIZED (UNREALIZED) GAINS FROM SALES	(1,792)	-	8,310	-
REALIZED GROSS LOSS	(984,323)	(5)	(884,136)	(7)
OPERATING EXPENSES (Notes 27 and 36)				
Selling	1,090,967	6	662,207	5
General and administrative	1,167,887	7	810,900	6
Research and development	218,674	1	211,737	2
Expected credit loss on trade receivables	(6,593)	-	34,003	-
Total operating expenses	2,470,935	14	1,718,847	13
OTHER INCOME AND EXPENSES (Notes 15 and 27)	(1,766,692)	(10)	(260,378)	(2)
LOSS FROM OPERATIONS	(5,221,950)	(29)	(2,863,361)	(22)
NON-OPERATING INCOME AND EXPENSES				
Gain on disposal of investments	212,773	1	275,281	2
Other income (Notes 27 and 36)	166,081	1	97,386	1
Gain on financial instruments at fair value through profit or loss (Notes 4 and 7)	106,212	1	62,391	-
Dividends income (Note 36)	75,153	-	3,680	-
Interest income (Notes 27 and 36)	53,461	-	104,773	1
Foreign exchange gain (loss), net (Note 27)	25,950	-	(61,243)	(1)
Gain from bargain purchase	-	-	2,261,090	17
Reversal of contract compensation interest (Note 38)	-	-	239,274	2
Gain on disposal of power facility business (Note 14)	-	-	18,305	-
Gain on disposal of power facilities business held for sale	-	-	6,387	-
Expect credit loss on trade receivables (Notes 4 and 10)	(30,097)	-	(8,400)	-
Other gains and losses	(32,256)	-	(48,306)	-
Share of loss of associates and joint ventures (Notes 4 and 14)	(187,589)	(1)	(15,711)	-
Finance costs (Notes 20 and 27)	(874,294)	(5)	(653,408)	(5)
Total non-operating income and expenses	(484,606)	(3)	2,281,499	17
LOSS BEFORE INCOME TAX	(5,706,556)	(32)	(581,862)	(5)
INCOME TAX EXPENSE (Notes 4 and 28)	(62,633)	-	(23,306)	-
NET LOSS FOR THE YEAR	(5,769,189)	(32)	(605,168)	(5)

(Continued)

UNITED RENEWABLE ENERGY CO., LTD. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In Thousands of New Taiwan Dollars, Except Loss Per Share)

	For the Year Ended December 31			
	2019		2018 (Audited After Restatement)	
	Amount	%	Amount	%
OTHER COMPREHENSIVE INCOME (LOSS) (Note 27)				
Items that will not be reclassified subsequently to profit or loss:				
Unrealized loss on investments in equity instruments at fair value through other comprehensive income	$ 803,421	5	$ (397,006)	(3)
Items that may be reclassified subsequently to profit or loss:				
Exchange differences on translating foreign operations	16,651	-	126,308	1
Total other comprehensive income (loss)	820,072	5	(270,698)	(2)
TOTAL COMPREHENSIVE LOSS FOR THE YEAR	$ (4,949,117)	(27)	$ (875,866)	(7)
NET LOSS ATTRIBUTABLE TO:				
Shareholders of the parent	$ (5,686,065)	(31)	$ (577,240)	(5)
Non-controlling interests	(83,124)	(1)	(27,928)	-
	$ (5,769,189)	(32)	$ (605,168)	(5)
TOTAL COMPREHENSIVE LOSS ATTRIBUTABLE TO:				
Shareholders of the parent	$ (4,848,665)	(27)	$ (863,869)	(7)
Non-controlling interests	(100,452)	-	(11,997)	-
	$ (4,949,117)	(27)	$ (875,866)	(7)
LOSS PER SHARE (Note 29)				
Basic loss per share	$ (2.26)		$ (0.42)	
Diluted loss per share	$ (2.26)		$ (0.42)	

The accompanying notes are an integral part of the consolidated financial statements.

(With Deloitte & Touche auditors' report dated March 26, 2020) (Concluded)

UNITED RENEWABLE ENERGY CO., LTD. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
(In Thousands of New Taiwan Dollars)

	Equity Attributable to Shareholders of the Parent													
	Ordinary Shares		Capital Surplus				Other Equity							
	Shares (In Thousands)	Ordinary Shares	Share Premium	Changes in Capital Surplus from Investments in Associates and Joint Ventures Accounted for Using the Equity Method	Restricted Shares for Employees	Accumulated Deficits	Foreign Currency Translation Reserve	Unrealized Gain (Loss) on Financial Assets at Fair Value Through Other Comprehensive Income	Unrealized (Loss) Gain on Available-for-sale Financial Assets	Unearned Employees Benefits	Treasury Shares	Total	Non-controlling Interests	Total Equity
BALANCE AT JANUARY 1, 2018	1,019,256	$ 10,192,564	$ 6,020,328	$ -	$ 7,837	$ (4,611,501)	$ (437,906)	$ -	$ (71,882)	$ (20,038)	$ -	$ 11,079,402	$ 258,408	$ 11,337,810
Effect of retrospective application	-	-	-	-	-	98,826	-	(130,891)	71,882	-	-	39,817	-	39,817
Effect of retrospective restatement	-	-	-	-	-	(197,298)	(2,556)	-	-	-	-	(199,854)	(1,560)	(201,414)
BALANCE AT JANUARY 1, 2018 AS RESTATED	1,019,256	10,192,564	6,020,328	-	7,837	(4,709,973)	(440,462)	(130,891)	-	(20,038)	-	10,919,365	256,848	11,176,213
Changes in capital surplus from investments in associates and joint ventures accounted for using the equity method	-	-	-	42,000	-	-	-	-	-	-	-	42,000	-	42,000
Offset of deficit against capital surplus	-	-	(4,611,501)	-	-	4,611,501	-	-	-	-	-	-	-	-
Issuance of ordinary shares for cash	334,292	3,342,917	(561,610)	-	-	-	-	-	-	-	-	2,781,307	-	2,781,307
Issuance of shares in business combination	1,157,899	11,578,990	115,790	-	-	-	-	-	-	-	-	11,694,780	27,393	11,722,173
Treasury shares owned by subsidiaries	-	-	-	-	-	-	-	-	-	-	(18,699)	(18,699)	-	(18,699)
Issued restricted shares for employees	6,121	61,211	-	-	(17,628)	-	-	-	-	(15,316)	-	28,267	-	28,267
Cancellation of restricted shares for employees	(1,809)	(18,083)	-	-	15,807	-	-	-	-	2,276	-	-	-	-
Compensation cost of restricted shares for employees	-	-	-	-	-	-	-	-	-	16,492	-	16,492	-	16,492
Non-controlling interests	-	-	-	-	-	-	-	-	-	-	-	-	591,582	591,582
Net loss for the year ended December 31, 2018 (after restatement)	-	-	-	-	-	(577,240)	-	-	-	-	-	(577,240)	(27,928)	(605,168)
Other comprehensive loss for the year ended December 31, 2018, net of income tax (after restatement)	-	-	-	-	-	-	110,377	(397,006)	-	-	-	(286,629)	15,931	(270,698)
Total comprehensive loss for the year ended December 31, 2018	-	-	-	-	-	(577,240)	110,377	(397,006)	-	-	-	(863,869)	(11,997)	(875,866)
BALANCE AT DECEMBER 31, 2018 (AFTER RESTATEMENT)	2,515,759	25,157,599	963,007	42,000	6,016	(675,712)	(330,085)	(527,897)	-	(16,586)	(18,699)	24,599,643	863,826	25,463,469
Changes in capital surplus from investments in associates and joint ventures accounted for using the equity method	-	-	-	-	-	(367)	-	-	-	-	-	(367)	367	-
Offset of deficit against capital surplus	-	-	(327,468)	(42,000)	-	369,468	-	-	-	-	-	-	-	-
Issuance of ordinary shares for cash	150,000	1,500,000	(522,000)	-	-	-	-	-	-	-	-	978,000	-	978,000
Reclassification of share premium	-	-	6,452	-	(6,452)	-	-	-	-	-	-	-	-	-
Issued restricted shares for employees	2,205	22,050	-	-	(4,741)	-	-	-	-	(17,309)	-	-	-	-
Cancellation of restricted shares for employees	(2,626)	(26,274)	-	-	204	-	-	-	-	6,998	-	(19,072)	-	(19,072)
Compensation cost of restricted shares for employees	-	-	-	-	333	-	-	-	-	8,483	-	8,816	-	8,816
Compensation cost of shares for employees	-	-	3,638	-	-	-	-	-	-	-	-	3,638	-	3,638
Disposal of financial instruments at fair value through other comprehensive income	-	-	-	-	-	(7,968)	-	7,968	-	-	-	-	-	-
Non-controlling interests	-	-	-	-	-	-	-	-	-	-	-	-	(1,499)	(1,499)
Net loss for the year ended December 31, 2019	-	-	-	-	-	(5,686,065)	-	-	-	-	-	(5,686,065)	(83,124)	(5,769,189)
Other comprehensive income for the year ended December 31, 2019, net of income tax	-	-	-	-	-	-	33,979	803,421	-	-	-	837,400	(17,328)	820,072
Total comprehensive loss for the year ended December 31, 2019	-	-	-	-	-	(5,686,065)	33,979	803,421	-	-	-	(4,848,665)	(100,452)	(4,949,117)
BALANCE AT DECEMBER 31, 2019	2,665,338	$ 26,653,375	$ 123,629	$ -	$ (4,640)	$ (6,000,644)	$ (296,106)	$ 283,492	$ -	$ (18,414)	$ (18,699)	$ 20,721,993	$ 762,242	$ 21,484,235

The accompanying notes are an integral part of the consolidated financial statements.

(With Deloitte & Touche auditors' report dated March 26, 2020)

UNITED RENEWABLE ENERGY CO., LTD. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS
(In Thousands of New Taiwan Dollars)

	For the Year Ended December 31	
	2019	2018 (Audited After Restatement)
CASH FLOWS FROM OPERATING ACTIVITIES		
Loss before income tax	$ (5,706,556)	$ (581,862)
Adjustments for:		
Depreciation	3,348,315	2,344,212
Amortization	22,933	16,678
Expected credit loss	23,504	42,403
Net gain on financial assets and liabilities at fair value through profit or loss	(74,862)	(9,476)
Gain on disposal of investments	(212,773)	(275,281)
Gain on disposal of power facilities business	-	(18,305)
Write-down (reversal) of inventories	77,179	(19,129)
Share of loss of associates and joint ventures	187,589	15,711
Loss on disposal of property, plant and equipment	11,988	26
(Reversal) recognized loss on purchase contracts	(14,129)	398,581
Impairment (reversal) loss on prepayments	15,895	(78,924)
Reclassifications from property, plant and equipment to expenses	4,064	255,846
Impairment loss on property, plant and equipment	1,617,369	257,949
Impairment loss on intangible asset	137,904	-
Loss on disposal of non-current assets held for sale	-	2,403
Gain on disposal of power facilities business held for sale	-	(6,387)
Gain from bargain purchase	-	(2,261,090)
Unrealized (realized) gain from associates	1,792	(8,310)
Compensation costs of restricted shares for employees	(301)	16,492
Compensation costs of employee share options	3,638	-
Interest income	(55,982)	(105,645)
Dividends income	(75,153)	(3,680)
Finance costs	874,294	653,408
Reversal of contracts compensation interest	-	(239,274)
Gain on modification of leases	(569)	-
Net (gain) loss on foreign exchange	(132,141)	82,840
	5,760,554	1,061,048
Changes in operating assets and liabilities		
Contract assets - current	(386,630)	(32,322)
Notes and accounts receivable	521,608	432,338
Accounts receivable from related parties	24,373	(354,018)
Other receivables	123,076	669,021
Other receivables from related parties	390,026	(754,436)
Inventory	(376,619)	423,517
Prepayments (including non-current)	(43,799)	89,089
Other current assets	(26,317)	(364,975)
Contract liabilities - current	(21,420)	36,737
Notes and accounts payable	(523,697)	(435,272)
Accounts payable to related parties	5,202	149,673

(Continued)

UNITED RENEWABLE ENERGY CO., LTD. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS
(In Thousands of New Taiwan Dollars)

	For the Year Ended December 31	
	2019	2018 (Audited After Restatement)
Bonuses payable to employees and directors	$ (2,649)	$ (5,593)
Accrued expenses	(744,420)	(471,796)
Receipts in advance	1,849	(390,645)
Deferred revenue	15,084	42,948
Other current liabilities	(62,278)	81,995
Provisions	(128,904)	59,179
Income taxes paid	(43,209)	(112,593)
Net cash used in operating activities	(1,224,726)	(457,967)
CASH FLOWS FROM INVESTING ACTIVITIES		
Proceeds from sale of power facilities business	-	127,645
Proceeds from sale of financial assets at fair value through other comprehensive income	6,755	-
Acquisition of associates and joint ventures	-	(441)
Net cash inflow on disposal of subsidiaries (Note 32)	747,551	1,258,722
Proceeds from sale of non-current assets held for sale	-	135,189
Proceeds from sale of power facilities business held for sale	-	159,998
Acquisition of property, plant and equipment	(691,430)	(2,313,671)
Proceeds from disposal of property, plant and equipment	8,580	26
(Increase) decrease in other receivables from related parties - non-current	(11,360)	182,983
Acquisition of intangible assets	(564)	(3,739)
Repayments by related parties	-	1,263,183
Net cash inflow due to consolidation (Note 31)	-	5,397,530
Decrease (increase) in restricted assets	3,051,372	(1,059,757)
Decrease (increase) in pledged time deposits	290,174	(299,866)
Decrease in finance lease receivables	1,577	59,641
Interest received	64,431	221,429
Dividends received	90,360	3,680
Decrease (increase) in refundable deposits	97,448	(120,590)
Decrease (increase) in other non-current assets	39,287	(10,954)
Net cash generated from investing activities	3,694,181	5,001,008
CASH FLOWS FROM FINANCING ACTIVITIES		
Increase in short-term bank loans	11,501,594	17,688,129
Decrease in short-term bank loans	(15,345,096)	(21,008,981)
Increase (decrease) in short-term bills payable	139,022	(333,711)
Proceeds from long-term bank loans	13,150,879	5,948,438
Repayments of long-term bank loans	(11,406,920)	(4,599,633)
Repayments of the principle portion of lease liabilities	(59,470)	-
Repayments of bonds payable	(3,728,400)	-

(Continued)

UNITED RENEWABLE ENERGY CO., LTD. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS
(In Thousands of New Taiwan Dollars)

	For the Year Ended December 31	
	2019	2018 (Audited After Restatement)
Proceeds from issuance of preference share liabilities	$ -	$ 33,756
Repayments of preference share liabilities	(4,923)	(7,015)
Increase (decrease) in guarantee deposits	6,369	(372)
Proceeds from issuance of ordinary shares for cash	978,000	2,781,307
Interest paid	(846,638)	(551,314)
(Decrease) increase in non-controlling interests	(1,499)	591,582
Net cash (used in) generated from financing activities	(5,617,082)	542,186
EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS	(36,902)	39,991
NET (DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS	(3,184,529)	5,125,218
CASH AND CASH EQUIVALENTS, BEGINNING OF THE YEAR	9,555,845	4,430,627
CASH AND CASH EQUIVALENTS, END OF THE YEAR	$ 6,371,316	$ 9,555,845

The accompanying notes are an integral part of the consolidated financial statements.

(With Deloitte & Touche auditors' report dated March 26, 2020) (Concluded)

UNITED RENEWABLE ENERGY CO., LTD. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

1. ORGANIZATION AND OPERATION

United Renewable Energy Co., Ltd., (formerly "Neo Solar Power Corp.") (the "Corporation") was incorporated in the Republic of China on August 26, 2005. The Corporation specializes in manufacturing high-quality solar cells, solar cell modules and wafers. The Corporation's main business activities include researching, developing, designing, manufacturing and selling solar cells as well as participating in other solar-related businesses. Its ordinary shares have been listed on the Taiwan Stock Exchange (TWSE) since January 2009. On October 1, 2018, the Corporation merged the former Gintech Energy Corporation ("Gintech Energy") and Solartech Energy Corporation ("Solartech Energy") with the Corporation as the surviving company. On March 31, 2019, the Corporation merged with the former General Energy Solutions Inc. (GES), with the Corporation as the surviving company. For the main business activities of the Corporation and its subsidiaries (collectively referred to as "the Group"), refer to Notes 13 and 41.

The consolidated financial statements are presented in the Corporation's functional currency, the New Taiwan dollar.

2. APPROVAL OF FINANCIAL STATEMENTS

The consolidated financial statements were approved by Group's board of directors on March 26, 2020.

3. APPLICATION OF NEW, AMENDED AND REVISED STANDARDS AND INTERPRETATIONS

a. Initial application of the amendments to the Regulations Governing the Preparation of Financial Reports by Securities Issuers and the International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), Interpretations of IFRS (IFRIC), and Interpretations of IAS (SIC) (collectively, the "IFRSs") endorsed and issued into effect by the Financial Supervisory Commission of the Republic of China (FSC)

Except for the following, whenever applied, the initial application of the amendments to the Regulations Governing the Preparation of Financial Reports by Securities Issuers and the IFRSs endorsed and issued into effect by the FSC would not have any material impact on the Group's accounting policies:

1) IFRS 16 "Leases"

IFRS 16 provides a comprehensive model for the identification of lease arrangements and their treatment in the financial statements of both lessee and lessor. It supersedes IAS 17 "Leases", IFRIC 4 "Determining whether an Arrangement contains a Lease", and a number of related interpretations. Refer to Note 4 for information relating to the relevant accounting policies.

<u>Definition of a lease</u>

The Group elects to apply the guidance of IFRS 16 in determining whether contracts are, or contain, a lease only to contracts entered into. Contracts identified as containing a lease of power facility, which are currently identified as containing a lease under IAS 17 and IFRIC 4, are not meet the definition of a lease under IFRS 16 and be accounted for in accordance with other standards because the customers do not have the right to direct the use of the identified assets. Contracts that are reassessed as containing a lease will be accounted for in accordance with the transitional provisions under IFRS 16.

<u>The Group as lessee</u>

The Group recognizes right-of-use assets or investment properties if the right-of-use assets meet the definition of investment properties and lease liabilities for all leases on the consolidated balance sheets except for those whose payments under low-value and short-term leases will be recognized as expenses on a straight-line basis. On the consolidated statements of comprehensive income, the Group will present the depreciation expnse charged on right-of-use assets separately from the interest expense accrued on lease liabilities; interest is computed using the effective interest method. On the consolidated statements of cash flows, cash payments for the interest and principal portions of lease liabilities will be classified within financing activities. Currently, payments under operating lease contracts, including property interest qualified as investment properties, are recognized as expenses on a straight-line basis. Cash flows for operating leases are classified within operating activities on the consolidated statements of cash flows.

The Group elects to apply IFRS 16 retrospectively with the cumulative effect of the initial application of this standard recognized in retained earnings on January 1, 2019. Comparative information is not restated.

Lease liabilities were recognized on January 1, 2019 for leases previously classified as operating leases under IAS 17. Lease liabilities were measured at the present value of the remaining lease payments, discounted using the lessee's incremental borrowing rate on January 1, 2019. Right-of-use assets are measured at an amount equal to the lease liabilities, adjusted by the amount of any prepaid or accrued lease payments, the Group applies IAS 36 to all right-of-use assets.

The Group also applies the following practical expedients:

a) The Group applies a single discount rate to a portfolio of leases with reasonably similar characteristics to measure lease liabilities.
b) The Group accounts for those leases for which the lease term ends on or before December 31, 2019 as short-term leases.
c) The Group excludes initial direct costs from the measurement of right-of-use assets on January 1, 2019.
d) The Group uses hindsight, such as in determining lease terms, to measure lease liabilities.

For leases previously classified as finance leases under IAS 17, the carrying amounts of right-of-use assets and lease liabilities on January 1, 2019 are determined as at the carrying amounts of the respective leased assets and finance lease payables on December 31, 2018.

The weighted average lessee's incremental borrowing rate applied to lease liabilities recognized on January 1, 2019 is 1.18%. The difference between the (i) lease liabilities recognized and (ii) operating lease commitments disclosed under IAS 17 on December 31, 2018 is explained as follows:

The future minimum lease payments of non-cancellable operating lease commitments on December 31, 2018	$ 994,963
Less: Recognition exemption for short-term leases	4,796
Less: Recognition exemption for leases of low-value assets	1,618
Undiscounted amounts on January 1, 2019	$ 988,549
Discounted amounts using the incremental borrowing rate on January 1, 2019	$ 903,438
Add: Adjustments as a result of a different treatment of extension and termination options	182,065
Lease liabilities recognized on January 1, 2019	$ 1,085,503

The Group as lessor

Except for contracts identified as containing a lease, power facility does not meet the definition of a lease under IFRS 16 and be accounted for in accordance with IFRS 15. the Group does not make any adjustments for leases in which it is a lessor, and it accounts for those leases with the application of IFRS 16 starting from January 1, 2019.

The impact on assets, liabilities and equity as of January 1, 2019 from the initial application of IFRS 16 is set out as follows:
Impact on assets, liabilities and equity on January 1, 2019

As of January 1, 2019	Carrying Amount	Adjustments Arising from Initial Application	Adjusted Carrying Amount
Lease receivable- current and non-current	$ 5,626,874	$ (5,590,157)	$ 36,717
Account receivable	2,506,228	95,601	2,601,829
Investment accounted for using the equity method	2,381,220	(9,964)	2,371,256
Property, plant and equipment	20,056,530	5,162,978	25,219,508
Right of use asset	-	1,085,503	1,085,503
Total effect on assets	$ 30,570,852	$ 743,961	$ 31,314,813
Lease liabilities - current and non-current	$ -	$ 1,085,503	$ 1,085,503
Total effect on liabilities	$ -	$ 1,085,503	$ 1,085,503
Retained earnings	$ (369,468)	$ (306,244)	$ (675,712)
Non-controlling interests	897,999	(34,173)	863,826
Other equity	(873,443)	(1,125)	(874,568)
Total effect on equity	$ (344,912)	$ (341,542)	$ (686,454)

Impact on assets, liabilities and equity on January 1, 2018

As of January 1, 2018	Originally Stated Amount	Adjustments Arising from Initial Application	Restated Amount
Lease receivable- current and non-current	$ 3,993,789	$ (3,993,789)	$ -
Account receivable	1,300,076	70,020	1,370,096
Property, plant and equipment	11,162,899	3,724,788	14,887,687
Investment accounted for using the equity method	1,887,773	(2,433)	1,885,340
Total effect on assets	$ 18,344,537	$ (201,414)	$ 18,143,123
Retained earnings	$ (4,512,675)	$ (197,298)	$ (4,709,973)
Non-controlling interests	258,408	(1,560)	256,848
Other equity	(588,835)	(2,556)	(591,391)
Total effect on equity	$ (4,843,102)	$ (201,414)	$ (5,044,516)

Impact on total comprehensive income for 2018

For the year ended December 31, 2018	Originally Stated Amount	Adjustments Arising from Initial Application	Restated Amount
Net sales	$ 12,983,920	$ 153,105	$ 13,137,025

For the year ended December 31, 2018	**Originally Stated Amount**	**Adjustments Arising from Initial Application**	**Restated Amount**
Cost of sales	(13,722,481)	(306,990)	(14,029,471)
Share of loss of associates and joint ventures	(7,642)	(8,069)	(15,711)
Gain on disposal of investments	254,886	20,395	275,281
Total effect on net loss for the period	$ (491,317)	$ (141,559)	$ (632,876)
Item that may be reclassified subsequently to profit or loss:			
Exchange differences on translating foreign operations	$ 124,877	$ 1,431	$ 126,308
Total effect on total comprehensive income for the period	$ 124,877	$ 1,431	$ 126,308

	Originally Stated Amount	**Adjustments Arising from Initial Application**	**Restated Amount**
Increase (decrease) in net profit attributable to:			
Owners of the Company	$ (468,294)	$ (108,946)	$ (577,240)
Non-controlling interests	4,685	(32,613)	(27,928)
Increase (decrease) in total comprehensive income attributable to:			
Owners of the Company	(756,354)	(107,515)	(863,869)
Non-controlling interests	20,616	(32,613)	(11,997)
Basic loss per share	(0.34)	(0.08)	(0.42)
Diluted loss per share	(0.34)	(0.08)	(0.42)

Impact on cash flows for 2018

	Originally Stated Amount	**Adjustments Arising from Initial Application**	**Restated Amount**
Net decrease in cash outflow from operating activities	$ (981,284)	$ 634,931	$ (346,353)
Net decrease in cash inflow from investing activities	5,524,325	(634,931)	4,889,394
Net increase in cash inflow from financing activities	542,186	-	542,186
Net increase in cash and cash equivalents	5,125,218	-	5,125,218

2) IFRIC 23 "Uncertainty over Income Tax Treatments"

IFRIC 23 clarifies that when there is uncertainty over income tax treatments, the Group should assume that the taxation authority has full knowledge of all related information when making related examinations. If the Group concludes that it is probable that the taxation authority will accept an uncertain tax treatment, the Group should determine the taxable profit, tax bases, unused tax losses, unused tax credits or tax rates consistently with the tax treatments used or planned to be used in its income tax filings. If it is not probable that the taxation authority will accept an uncertain tax treatment, the Group should make estimates using either the most likely amount or the expected value of the tax treatment, depending on which method the Group expects to better predict the resolution of the uncertainty. The Group has to reassess its judgments and estimates if facts and circumstances change.

3) Amendments to IAS 28 “Long-term Interests in Associates and Joint Ventures”

   The amendments clarified that IFRS 9 “Financial Instruments” shall be applied to account for other financial instruments in an associate or joint venture to which the equity method is not applied. These included long-term interests that, in substance, form part of the Group’s net investment in an associate or joint venture.

4) Annual Improvements to IFRSs 2015-2017 Cycle
   Several standards, including IFRS 3 “Business Combinations”, IFRS 11 “Joint Arrangements”, IAS 12 “Income Taxes” and IAS 23 “Borrowing Costs”, were amended in this annual improvement. IAS 23 was amended to clarify that, if any specific borrowing remains outstanding after the related asset is ready for its intended use or sale, the related borrowing costs shall be included in the calculation of the capitalization rate on general borrowings. Upon initial application of the above amendment, the related borrowing costs are included in the calculation starting from 2019.

b. The IFRSs endorsed by the FSC for application starting from 2020

New IFRSs	Effective Date Announced by IASB
Amendments to IFRS 3 “Definition of a Business”	January 1, 2020 (Note 1)
Amendments to IFRS 9, IAS 39 and IFRS 7 “Interest Rate Benchmark Reform”	January 1, 2020 (Note 2)
Amendments to IAS 1 and IAS 8 “Definition of Material”	January 1, 2020 (Note 3)

Note 1: The Group shall apply these amendments to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after January 1, 2020 and to asset acquisitions that occur on or after the beginning of that period.

Note 2: The Group shall apply these amendments retrospectively for annual reporting periods beginning on or after January 1, 2020.

Note 3: The Group shall apply these amendments prospectively for annual reporting periods beginning on or after January 1, 2020.

1) Amendments to IFRS 3 “Definition of a Business”

   The amendments clarify that, to be considered a business, an acquired set of activities and assets must include, at a minimum, an input and a substantive process applied to the input that together significantly contribute to the ability to create outputs. The amendments narrow the definitions of outputs by focusing on goods and services provided to customers, and the reference to an ability to reduce costs is removed. Moreover, the amendments remove the assessment of whether market participants are capable of replacing any missing inputs or processes and continuing to produce outputs. In addition, the amendments introduce an optional concentration test that permits a simplified assessment of whether or not an acquired set of activities and assets is a business.

Except for the above impact, as of the date the consolidated financial statements were authorized for issue, the Group is continuously assessing the possible impact that the application of other standards and interpretations will have on the Group’s financial position and financial performance and will disclose the relevant impact when the assessment is completed.

c. New IFRSs in issue but not yet endorsed and issued into effect by the FSC

New IFRSs	Effective Date Announced by IASB (Note 1)
Amendments to IFRS 10 and IAS 28 “Sale or Contribution of Assets between an Investor and its Associate or Joint Venture”	To be determined by IASB
IFRS 17 “Insurance Contracts”	January 1, 2021
Amendments to IAS 1 “Classification of Liabilities as Current or Non-current”	January 1, 2022

Note 1: Unless stated otherwise, the above New IFRSs are effective for annual periods beginning on or after their respective effective dates.

1) Amendments to IFRS 10 and IAS 28 “Sale or Contribution of Assets between an Investor and its Associate or Joint Venture”
   The amendments stipulate that, when the Group sells or contributes assets that constitute a business (as defined in IFRS 3) to an associate or joint venture, the gain or loss resulting from the transaction is recognized in full. Also, when the Group loses control of a subsidiary that contains a business but retains significant influence or joint control, the gain or loss resulting from the transaction is

recognized in full.

Conversely, when the Group sells or contributes assets that do not constitute a business to an associate or joint venture, the gain or loss resulting from the transaction is recognized only to the extent of the Group's interest as an unrelated investor in the associate or joint venture, i.e. the Group's share of gain or loss is eliminated. Also, when the Group loses control of a subsidiary that does not contain a business but retains significant influence or joint control over an associate or a joint venture, the gain or loss resulting from the transaction is recognized only to the extent of the Group's interest as an unrelated investor in the associate or joint venture, i.e. the Group's share of gain or loss is eliminated.

2) Amendments to IAS 1 "Classification of Liabilities as Current or Non-current"
The amendments clarify that for a liability to be classified as non-current, the Group shall assess whether it has the right at the end of the reporting period to defer settlement of the liability for at least twelve months after the reporting period. If such rights are in existence at the end of the reporting period, the liability is classified as non-current regardless of whether the Group will exercise that right. The amendments also clarify that, if the right to defer settlement is subject to compliance with specified conditions, the Group must comply with those conditions at the end of the reporting period even if the lender does not test compliance until a later date.

The amendments stipulate that, for the purpose of liability classification, the aforementioned settlement refers to a transfer of cash, other economic resources or the Group's own equity instruments to the counterparty that results in the extinguishment of the liability. However, if the terms of a liability that could, at the option of the counterparty, result in its settlement by a transfer of the Group's own equity instruments, and if such option is recognized separately as equity in accordance with IAS 32: Financial Instruments: Presentation, the aforementioned terms would not affect the classification of the liability.

Except for the above impact, as of the date the consolidated financial statements were authorized for issue, the Group is continuously assessing the possible impact that the application of other standards and interpretations will have on the Group's financial position and financial performance and will disclose the relevant impact when the assessment is completed.

4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

a. Statement of compliance
The consolidated financial statements have been prepared in accordance with the Regulations Governing the Preparation of Financial Reports by Securities Issuers and IFRSs as endorsed and issued into effect by the FSC.

b. Basis of preparation
The consolidated financial statements have been prepared on the historical cost basis except for financial instruments that are measured at fair value.

The fair value measurements are grouped into Levels 1 to 3 based on the degree to which the fair value measurement inputs are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

1) Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities;
2) Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices); and
3) Level 3 inputs are unobservable inputs for the asset or liability.

c. Classification of current and non-current assets and liabilities

Current assets include:

1) Assets held primarily for the purpose of trading;
2) Assets expected to be realized within twelve months after the reporting period; and
3) Cash and cash equivalents unless the asset is restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

Current liabilities include:

1) Liabilities held primarily for the purpose of trading;
2) Liabilities due to be settled within twelve months after the reporting period; and

3) Liabilities for which the Corporation does not have an unconditional right to defer settlement for at least twelve months after the reporting period.

Assets and liabilities that are not classified as current are classified as non-current.

d. Basis of consolidation

The consolidated financial statements incorporate the financial statements of the Group and the entities controlled by the Group (i.e. its subsidiaries, including structured entities). Income and expenses of subsidiaries acquired or disposed of during the period are included in the consolidated statement of comprehensive income from the effective date of acquisition up to the effective date of disposal, as appropriate. When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with those used by the Group. All intra-group transactions, balances, income and expenses are eliminated in full upon consolidation. Total comprehensive income of subsidiaries is attributed to the owners of the Group and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

Changes in the Group's ownership interests in subsidiaries that do not result in the Group's losing control over the subsidiaries are accounted for as equity transactions. The carrying amounts of the Group's interests and the non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiaries. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received is recognized directly in equity and attributed to the owners of the Group.

When the Group loses control of a subsidiary, a gain or loss is recognized in profit or loss and is calculated as the difference between (i) the aggregate of the fair value of the consideration received and any investment retained in the former subsidiary at its fair value at the date when control is lost and (ii) the assets (including any goodwill) and liabilities and any non-controlling interests of the former subsidiary at their carrying amounts at the date when control is lost. The Group accounts for all amounts recognized in other comprehensive income in relation to that subsidiary on the same basis as would be required if the Group had directly disposed of the related assets or liabilities.

The fair value of any investment retained in the former subsidiary at the date when control is lost is regarded as the fair value on initial recognition for subsequent accounting under the cost on initial recognition of an investment in an associate.

See Note 13 and Table 7 following the Notes for the detailed information of subsidiaries, including the percentage of ownership and the main business of the subsidiaries.

e. Business combinations

Acquisitions of businesses are accounted for using the acquisition method. Acquisition-related costs are generally recognized in profit or loss as incurred.

Goodwill is measured as the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree, and the fair value of the acquirer's previously held equity interest in the acquiree in excess of the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed. If, after re-assessment, the net of the acquisition date amounts of the identifiable assets acquired and liabilities assumed exceeds the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree, and the fair value of the acquirer's previously held interests in the acquiree, the excess is recognized immediately in profit or loss as a bargain purchase gain.

Non-controlling interests that are present ownership interests and entitle their holders to a proportionate share of the entity's net assets in the event of liquidation may be initially measured at fair value. Other types of non-controlling interests are measured at fair value.

When a business combination is achieved in stages, the Group's previously held equity interest in an acquiree is remeasured to fair value at the acquisition date, and the resulting gain or loss is recognized in profit or loss.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Group reports provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are adjusted retrospectively during the measurement period or additional assets or liabilities are recognized to reflect new information obtained about facts and circumstances that existed as of the acquisition date that, if known, would have affected the amounts recognized as of that date.

f. Foreign currencies

In preparing the financial statements of each individual group entity, transactions in currencies other than the entity's functional currency (foreign currencies) are recognized at the rates of exchange prevailing at the dates of the transactions.

At the end of each reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Exchange differences on monetary items arising from settlement or translation are recognized in profit or loss in the period in which they arise.

Non-monetary items measured at fair value that are denominated in foreign currencies are retranslated at the rates prevailing at the date when the fair value was determined. Exchange differences arising on the retranslation of non-monetary items are included in profit or loss for the period. When a gain or loss on a non-monetary item is recognized in other comprehensive income, any exchange component of that gain or loss is recognized in other comprehensive income.

Non-monetary items that are measured at historical cost in a foreign currency are not retranslated.

For purposes of presenting consolidated financial statements, the assets and liabilities of the Corporation's foreign operations (including subsidiaries, associates, joint ventures and branches in other countries that use a currency different from the currency of the Group) are translated into New Taiwan dollars using exchange rates prevailing at the end of each reporting period. Income and expense items are translated at the average exchange rates for the period, unless exchange rates fluctuate significantly during that period, in which case the exchange rates at the dates of the transactions are used. Exchange differences arising are recognized in other comprehensive income and attributed to the owners of the Group and non-controlling interests as appropriate.

In relation to a partial disposal of a subsidiary that results in the Corporation losing control over the subsidiary, the proportionate share of the accumulated exchange differences recognized in other comprehensive income is reclassified to profit or loss.

In relation to a partial disposal of a subsidiary that does not result in the Group losing control over the subsidiary, the proportionate share of accumulated exchange differences is re-attributed to non-controlling interests of the subsidiary and is not recognized in profit or loss. For all other partial disposals, the proportionate share of the accumulated exchange differences recognized in other comprehensive income is reclassified to profit or loss.

g. Inventories

Inventories consist of raw materials, supplies, work-in-process, finished goods and construction in progress. Inventories are stated at the lower of cost or net realizable value. Inventory write-downs are made by item, except where it may be appropriate to group similar or related items. Net realizable value is the estimated selling price of inventories less all estimated costs of completion and costs necessary to make the sale. Inventories are recorded at standard cost and adjusted to approximate weighted-average cost on the balance sheet date.

h. Investments in associates and joint ventures

An associate is an entity over which the Group has significant influence and is neither a subsidiary nor an interest in a joint venture. A joint venture is a joint arrangement whereby the Group and other parties that have joint control of the arrangement have rights to the net assets of the arrangement.

The Group uses the equity method to account for its investments in associates and joint ventures.

Under the equity method, investments in an associate and a joint venture are initially recognized at cost and adjusted thereafter to recognize the Group's share of the profit or loss and other comprehensive income of the associate and joint venture. The Group also recognizes the changes in the Group's share of equity of associates and joint venture attributable to the Group.

Any excess of the cost of acquisition over the Group's share of the net fair value of the identifiable assets and liabilities of an associate and a joint venture at the date of acquisition is recognized as goodwill, which is included within the carrying amount of the investment and is not amortized. Any excess of the Group's share of the net fair value of the identifiable assets and liabilities over the cost of acquisition, after reassessment, is recognized immediately in profit or loss.

If the fair value measurement of the identifiable assets and liabilities for associates and joint ventures is incomplete by the end of the reporting period in which the investment occurs, the Group reports provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are adjusted retrospectively during the measurement period, to reflect new information obtained about facts and circumstances that existed as of the investment date that, if known, would have affected the amounts recognized as of that date.

When the Group subscribes for additional new shares of the associate and joint venture at a percentage different from its existing ownership percentage, the resulting carrying amount of the investment differs from the amount of the Group's proportionate interest in the associate and joint venture. The Group records such a difference as an adjustment to investments with the corresponding amount charged or credited to capital surplus - changes in the Group's share of equity of associates and joint ventures, and the investment is accounted for using the equity method. If the Group's ownership interest is reduced due to the additional subscription of the new shares of associate and joint venture, the proportionate amount of the gains or losses previously recognized in other comprehensive income in relation to that associate and joint venture is reclassified to profit or loss on the same basis as would be required if the investee had directly disposed of the related assets or liabilities. When the adjustment should be debited to capital surplus, but the capital surplus recognized from the investment accounted for using the equity method is insufficient, the shortage is debited to retained earnings.

When the Group's share of losses of an associate and a joint venture equals or exceeds its interest in that associate and joint venture (which includes any carrying amount of the investment accounted for using the equity method and long-term interests that, in substance, form part of the Group's net investment in the associate and joint venture), the Group discontinues recognizing its share of further losses. Additional losses and liabilities are recognized only to the extent that the Group has incurred legal obligations, or constructive obligations, or made payments on behalf of that associate and joint venture.

The entire carrying amount of the investment (including goodwill) is tested for impairment as a single asset by comparing its recoverable amount with its carrying amount. Any impairment loss recognized is not allocated to any asset, including goodwill that forms part of the carrying amount of the investment. Any reversal of that impairment loss is recognized to the extent that the recoverable amount of the investment subsequently increases.

The Group discontinues the use of the equity method from the date on which its investment ceases to be an associate and a joint venture. Any retained investment is measured at fair value at that date and the fair value is regarded as its fair value on initial recognition as a financial asset. The difference between the previous carrying amount of the associate and the joint venture attributable to the retained interest and its fair value is included in the determination of the gain or loss on disposal of the associate and the joint venture. The Group accounts for all amounts previously recognized in other comprehensive income in relation to that associate and the joint venture on the same basis as would be required if that associate had directly disposed of the related assets or liabilities. If an investment in an associate becomes an investment in a joint venture or an investment in a joint venture becomes an investment in an associate, the Group continues to apply the equity method and does not remeasure the retained interest.

When a Group entity transacts with its associate and joint venture, profits and losses resulting from the transactions with the associate and joint venture are recognized in the Group's consolidated financial statements only to the extent of interests in the associate and joint venture that are not related to the Group.

i. Property, plant, and equipment

Property, plant and equipment are stated at cost, less accumulated depreciation and accumulated impairment loss.

Properties under construction for production, supply or administrative purposes are carried at cost, less any recognized impairment loss. Cost includes professional fees and borrowing costs eligible for capitalization. These properties are depreciated and classified to the appropriate categories of property, plant and equipment when they are completed and ready for their intended use.

Depreciation is recognized using the straight-line method. Each significant part is depreciated separately. If the lease term is shorter than the useful lives, assets are depreciated over the lease term. The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in the estimates accounted for on a prospective basis.

Any gain or loss arising on the disposal or retirement of an item of property, plant and equipment is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognized in profit or loss.

j. Goodwill
Goodwill arising on an acquisition of a business is carried at cost as established at the date of acquisition of the business less accumulated impairment loss.

For the purposes of impairment testing, goodwill is allocated to each of the Group's cash-generating units (CGU) or groups of cash-generating units (referred to as cash-generating units) that is expected to benefit from the synergies of the combination.

A CGU to which goodwill has been allocated is tested for impairment annually, or more frequently when there is an indication that the unit may be impaired, by comparing its carrying amount, including the attributable goodwill, with its recoverable amount. However, if the goodwill allocated to a CGU is acquired in a business combination during the current annual period, that unit shall be tested for impairment before the end of the current annual period. If the recoverable amount of the CGU is less than its carrying amount, the impairment loss is allocated first, to reduce the carrying amount of any goodwill allocated to the unit and then, to the other assets of the unit pro rata based on the carrying amount of each asset in the unit. Any impairment loss is recognized directly in profit or loss. An impairment loss recognized for goodwill should not be reversed in subsequent periods.

If goodwill has been allocated to a CGU and the entity disposes of an operation within that unit, the goodwill associated with the operation disposed of is included in the carrying amount of the operation when determining the gain or loss on disposal.

k. Intangible assets

1) Intangible assets acquired in a business combination
Intangible assets acquired in a business combination and recognized separately from goodwill are initially recognized at their fair value at the acquisition date (which is regarded as their cost). Subsequent to initial recognition, they are reported at cost less accumulated amortization and accumulated impairment loss. Amortization is recognized on a straight-line basis. The estimated useful life, residual value, and amortization method are reviewed at the end of each reporting period, with the effect of any changes in the estimates accounted for on a prospective basis.

2) Derecognition of intangible assets
On derecognition of an intangible asset, the difference between the net disposal proceeds and the carrying amount of the asset is recognized in profit or loss.

l. Impairment of tangible and intangible assets other than goodwill
At the end of each reporting period, the Group reviews the carrying amounts of its tangible and intangible assets, excluding goodwill, to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss. When it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs. The Group assets are allocated to the smallest group of CGUs on a reasonable and consistent basis of allocation.
The recoverable amount is the higher of fair value less costs to sell and value in use. If the recoverable amount of an asset or CGU is estimated to be less than its carrying amount, the carrying amount of the asset or CGU is reduced to its recoverable amount, with the resulting impairment loss recognized in profit or loss.
When an impairment loss is reversed, the carrying amount of the asset or CGU is increased to the revised estimate of its recoverable amount, but only to the extent of the carrying amount that would have been determined had no impairment loss been recognized for the asset or CGU in prior years. A reversal of an impairment loss is recognized immediately in profit or loss.

m. Non-current assets held for sale
Non-current assets are classified as held for sale if their carrying amount will be recovered principally through a sales transaction rather than through continuing use. This condition is regarded as met only when the sale is highly probable and the non-current asset is available for immediate sale in its present condition. To meet the criteria for the sale being highly probable, the appropriate level of management must be committed to the sale, which should be expected to qualify for recognition as a completed sale within one year from the date of classification.

Non-current assets classified as held for sale are measured at the lower of their previous carrying amount and fair value less costs to sell. Recognition of depreciation of those assets would cease.

n. Financial instruments

Financial assets and financial liabilities are recognized when the Group becomes a party to the contractual provisions of the financial instruments.

Financial assets and financial liabilities are initially measured at fair value. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities at fair value through profit or loss) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at fair value through profit or loss are recognized immediately in profit or loss.

1) Financial assets

All regular way purchases or sales of financial assets are recognized and derecognized on a settlement date basis.

a) Measurement category

The group classified its financial assets into the following categories: financial asset at FVTPL, financial assets at amortized cost and equity instruments at FVTOCI.

i. Financial assets at FVTPL

Financial assets are classified as at FVTPL when such a financial asset is mandatorily classified or designated as at FVTPL. Financial assets mandatorily classified as at FVTPL include investments in equity instruments which are not designated as at FVTOCI.

Financial assets at FVTPL are subsequently measured at fair value, with any gains or losses arising on remeasurement recognized in profit or loss. The net gain or loss recognized in profit or loss does not incorporate any dividends or interest earned on such a financial asset. Fair value is determined in the manner described in Note 35.

ii. Financial assets at amortized cost

Financial assets that meet the following conditions are subsequently measured at amortized cost:

i) The financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows; and

ii) The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Subsequent to initial recognition, financial assets at amortized cost, including cash and cash equivalents, trade receivables at amortized cost and financial liability with no active market are measured at amortized cost, which equals the gross carrying amount determined using the effective interest method less any impairment loss. Exchange differences are recognized in profit or loss.

Cash equivalents include time deposits, which are highly liquid, readily convertible to a known amount of cash. These cash equivalents are held for the purpose of meeting short-term cash commitments.

iii. Investments in equity instruments at FVTOCI

On initial recognition, the Group may make an irrevocable election to designate investments in equity instruments as at FVTOCI. Designation as at FVTOCI is not permitted if the equity investment is held for trading or if it is contingent consideration recognized by an acquirer in a business combination.

Investments in equity instruments at FVTOCI are subsequently measured at fair value with gains and losses arising from changes in fair value recognized in other comprehensive income and accumulated in other equity. The cumulative gain or loss will not be reclassified to profit or loss on disposal of the equity investments; instead, it will be transferred to retained earnings.

Dividends on these investments in equity instruments are recognized in profit or loss when the Group’s right to receive the dividends is established, unless the dividends clearly represent a recovery of part of the cost of the investment.

b) Impairment of financial assets and contract asset

The Group recognizes a loss allowance for expected credit losses on financial assets at amortized cost (including trade receivables), investments in debt instruments that are measured at FVTOCI, lease receivables, as well as contract assets.

The Group always recognizes lifetime expected credit losses (i.e. ECLs) for trade receivables, lease receivables and contract assets. For all other financial instruments, the Group recognizes lifetime ECLs when there has been a significant increase in credit risk since initial recognition. If, on the other hand, the credit risk on a financial instrument has not increased significantly since initial recognition, the Group measures the loss allowance for that financial instrument at an amount equal to 12-month ECLs.

Expected credit losses reflect the weighted average of credit losses with the respective risks of default occurring as the weights. Lifetime ECLs represent the expected credit losses that will result from all possible default events over the expected life of a financial instrument. In contrast, 12-month ECLs represent the portion of lifetime ECLs that is expected to result from default events on a financial instrument that are possible within 12 months after the reporting date.

The Group recognizes an impairment loss for all financial assets with a corresponding adjustment to their carrying amount through a loss allowance account.

c) Derecognition of financial assets

The Group derecognizes a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another party.

On derecognition of a financial asset at amortized cost in its entirety, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognized in profit or loss. On derecognition of an investment in a debt instrument at FVTOCI, the difference between the asset's carrying amount and the sum of the consideration received and receivable and the cumulative gain or loss which had been recognized in other comprehensive income is recognized in profit or loss. However, on derecognition of an investment in an equity instrument at FVTOCI, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognized in profit or loss, and the cumulative gain or loss which had been recognized in other comprehensive income is transferred directly to retained earnings, without recycling through profit or loss.

2) Equity instruments

Debt and equity instruments issued by the Group are classified either as financial liabilities or as equity in accordance with the substance of the contractual arrangements and the definitions of a financial liability and an equity instrument.

Equity instruments issued by the Group are recognized at the proceeds received, net of direct issue costs.

Repurchase of the Corporation's own equity instruments is recognized in and deducted directly from equity. No gain or loss is recognized in profit or loss on the purchase, sale, issue or cancellation of the Corporation's own equity instruments.

3) Financial liabilities

a) Subsequent measurement

Except in the following situation, all the financial liabilities are measured at amortized cost using the effective interest method:

i. Financial liabilities at fair value through profit or loss

Financial liabilities are classified as at fair value through profit or loss when the financial liability is held for trading.

Financial liabilities held for trading are stated at fair value, with any gains or losses arising on remeasurement recognized in profit or loss. The net gain or loss recognized in profit or loss does not incorporate any interest or dividend paid on the financial liability. Fair value is determined in the manner described in Note 35.

b) Derecognition of financial liabilities

The difference between the carrying amount of a financial liability derecognized and the consideration paid is recognized in profit or loss.

4) Convertible bonds
The conversion options component of the convertible bonds issued by the Group that is settled other than by the exchange of a fixed amount of cash or other financial asset for a fixed number of the Corporation's own equity instruments is classified as derivative financial liabilities.

On initial recognition, the derivative financial liabilities component of the convertible bonds is recognized at fair value, and the initial carrying amount of the component of non-derivative financial liabilities is determined by deducting the amount of derivative financial liabilities from the fair value of the hybrid instrument as a whole. In subsequent periods, the non-derivative financial liabilities component of the convertible bonds is measured at amortized cost using the effective interest method. The derivative financial liabilities component is measured at fair value and the changes in fair value are recognized in profit or loss.

Transaction costs that relate to the issue of the convertible bonds are allocated to the derivative financial liabilities component and the non-derivative financial liabilities component in proportion to their relative fair values. Transaction costs relating to the derivative financial liabilities component are recognized immediately in profit or loss. Transaction costs relating to the non-derivative financial liabilities component are included in the carrying amount of the liability component.

5) Derivative financial instruments
The Group enters into foreign exchange forward contracts and to manage its exposure to foreign exchange rate and interest rate risks.
Derivatives are initially recognized at fair value at the date the derivative contracts are entered into and are subsequently remeasured to their fair value at the end of each reporting period. The resulting gain or loss is recognized in profit or loss immediately, but if the derivative is designated and effective as a hedging instrument, the timing of the recognition in profit or loss depends on the nature of the hedge relationship. When the fair value of derivative financial instruments is positive, the derivative is recognized as a financial asset; otherwise, the derivative is recognized as a financial liability.

Derivatives embedded in hybrid contracts that contain financial asset hosts that is within the scope of IFRS 9 are not separated; instead, the classification is determined in accordance with the entire hybrid contract. Derivatives embedded in non-derivative host contracts that are not financial assets that is within the scope of IFRS 9 (e.g. financial liabilities) are treated as separate derivatives when they meet the definition of a derivative; their risks and characteristics are not closely related to those of the host contracts; and the host contracts are not measured at FVTPL.

o. Provisions
Provisions are measured at the best estimate of the discounted cash flows of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation.

The warranty of obligations products that meet the eligibility criteria are recognized at the date of sale of the relevant products and at the Group management's best estimate of the expenditure required to settle the obligations.

p. Revenue recognition
The Group identifies contracts with customers, allocates the transaction price to the performance obligations and recognizes revenue when performance obligations are satisfied.

For contracts where the period between the date on which the Group transfers a promised good or service to a customer and the date on which the customer pays for that good or service is one year or less, the Group does not adjust the promised amount of consideration for the effects of a significant financing component.

1) Revenue from the sale of goods
Revenue from the sale of goods comes from sales of solar cell, modules and power facilities construction. Sales of solar cell, modules and electric power plants are recognized as revenue when the goods are delivered to the customer's specific location to fulfill contractual obligation.

Revenue from the sale of goods is measured at the fair value of the consideration receive or receivable, which states net of discounts and other similar sales returns and allowances. In consideration of historical experience and other factors related to contract conditions, the Group recognizes such sales returns and allowances as contract liabilities shown in the consolidated

balance sheet as other current liabilities.
If there is a need to cut or remove material before processing, such processed products do not transfer substantially all the risks and rewards to the customer, thus revenue can not be recognized.

2) Construction contract revenue
Customers provide construction contract with specifications while they are construction in progress, and thus, the Group recognizes revenue over time. The Group measures the progress on the basis of costs incurred relative to the total expected costs as there is a direct relationship between the costs incurred and the progress of satisfying the performance obligations. Contract assets are recognized during the construction and are reclassified to trade receivables at the point at which the customer is invoiced. If the milestone payments exceed the revenue recognized to date, then the Group recognizes contract liabilities for the difference. Certain payments, which are retained by the customer as specified in the contract, are intended to ensure that the Group adequately completes all of its contractual obligations. Such retention receivables are recognized as contract assets until the Group satisfies its performance obligations.

When Contractual obligation cannot be estimated reliably, revenue is recognized only to the extent of contract costs incurred that is probable to be recoverable.

3) Revenue from the sale of power facilities construction
Revenue is recognized from the sale of solar energy power plant. Revenue from the sale of electric power plants is recognized as a sale when customer obtains control over the assets to fulfill contractual obligation.
4) Processing revenue
Revenue is recognized from providing process of solar cells services to customers. Processing revenue is recognized as a sale when customer obtains control over the assets to fulfill contractual obligation.
5) Services revenue
Service revenue is recognized when services are provided.
6) Electricity revenue
Electricity charges are calculated based on the actual amount of consumption at applicable rates.

q. Leasing
2019
At the inception of a contract, the Group assesses whether the contract is, or contains, a lease.

1) The Group as lessor
Leases are classified as finance leases whenever the terms of a lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

When the Group subleases a right-of-use asset, the sublease is classified by reference to the right-of-use asset arising from the head lease, not with reference to the underlying asset. However, if the head lease is a short-term lease that the Group, as a lessee, has accounted for applying recognition exemption, the sublease is classified as an operating lease.

Under finance leases, the lease payments comprise variable lease payments which depend on an index or a rate. The net investment in a lease is measured at (a) the present value of the sum of the lease payments receivable by a lessor plus (b) initial direct costs and is presented as a finance lease receivable. Finance lease income is allocated to the relevant accounting periods so as to reflect a constant, periodic rate of return on the Group's net investment outstanding in respect of leases.

Lease payments (less any lease incentives payable) from operating leases are recognized as income on a straight-line basis over the terms of the relevant leases.
Variable lease payments that do not depend on an index or a rate are recognized as income in the periods in which they are incurred.

2) The Group as lessee

The Group recognizes right-of-use assets and lease liabilities for all leases at the commencement date of a lease, except for short-term leases and low-value asset leases accounted for applying a recognition exemption where lease payments are recognized as expenses on a straight-line basis over the lease terms.

Right-of-use assets are initially measured at cost, which comprises the initial measurement of lease liabilities adjusted for lease payments made at or before the commencement date. Right-of-use assets are subsequently measured at cost less accumulated depreciation and impairment losses and adjusted for any remeasurement of the lease liabilities. Right-of-use assets are presented on a separate line in the consolidated balance sheets.

Right-of-use assets are depreciated using the straight-line method from the commencement dates to the earlier of the end of the useful lives of the right-of-use assets or the end of the lease terms.

Lease liabilities are initially measured at the present value of the lease payments. The lease payments are discounted using the interest rate implicit in a lease, if that rate can be readily determined. If that rate cannot be readily determined, the Group uses the lessee's incremental borrowing rate.

Subsequently, lease liabilities are measured at amortized cost using the effective interest method, with interest expense recognized over the lease terms. When there is a change in a lease term, a change in the assessment of an option to purchase an underlying asset, or a change in future lease payments resulting from a change in an index or a rate used to determine those payments, the Group remeasures the lease liabilities with a corresponding adjustment to the right-of-use-assets. However, if the carrying amount of the right-of-use assets is reduced to zero, any remaining amount of the remeasurement is recognized in profit or loss. Lease liabilities are presented on a separate line in the consolidated balance sheets.

Variable lease payments that do not depend on an index or a rate are recognized as expenses in the periods in which they are incurred.

2018

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases. Because the Group entered into several electricity purchase agreements which were covered by IFRIC 4 "Determining Whether an Arrangement Contains a Lease", they were accounted for as finance leases.

1) The Group as lessor

Amounts due from lessees under finance leases are recognized as receivables at the amount of the Group's net investment in the leases. Finance lease income is allocated to accounting periods so as to reflect a constant periodic rate of return on the Group's net investment outstanding in respect of the leases.

Rental income from operating leases is recognized on a straight-line basis over the term of the lease.

2) The Group as lessee

Operating lease payments are recognized as an expense on a straight-line basis over the lease term.

r. Borrowing costs

Borrowing costs directly attributable to an acquisition, construction or production of qualifying assets are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale.

Investment income earned on the temporary investment of specific borrowings, pending their expenditure on qualifying assets, is deducted from the borrowing costs eligible for capitalization.

Other than the situations stated above, all other borrowing costs are recognized in profit or loss in the period in which they are incurred.

s. Government grants

Government grants are recognized when there is reasonable assurance that the Group will comply with the conditions attached to and that the grants will be received.

Government grants are recognized in profit or loss on a systematic basis over the periods in which the Group recognizes as expenses the related costs for which the grants are intended to compensate.

Government grants receivable as compensation for expenses or losses already incurred or for immediate financial support, with no future related costs, are recognized as other income in profit or loss in the period in which they become receivable.

t. Employee benefits

1) Short-term employee benefits

Liabilities recognized in respect of short-term employee benefits are measured at the undiscounted amount of the benefits expected to be paid in exchange for the related service.

2) Retirement benefits

Payments to defined contribution retirement benefit plans are recognized as an expense when employees have rendered service entitling them to the contributions.

u. Share-based payment arrangements (Employee share options)

1) Employee share options and restricted shares for employees

The fair values at the grant date of the employee share options and restricted shares for employees are expensed on a straight-line basis over the vesting period, based on the Group’s best estimates of the number of shares or options that are expected to ultimately vest, with a corresponding increase in capital surplus - employee share options and other equity - unearned employee benefits. The whole amount of benefit is recognized as an expense at the grant date if vested immediately.

When restricted shares for employees are issued, other equity - unearned employee benefits is recognized at the grant date, with a corresponding increase in capital surplus - restricted shares for employees. If restricted shares for employees are granted for consideration, and should be returned, they are recognized as payables. Dividends paid to employees on the restricted shares that do not need to be returned if employees resign in the vesting period, are recognized as expenses when the dividends are declared with a corresponding adjustment in retained earnings and capital surplus - restricted shares for employees.

At the end of each reporting period, the Group revises its estimate of the number of employee share options and restricted shares for employees expected to vest. The impact of the revision of the original estimate is recognized in profit or loss such that the cumulative expense reflects the revised estimate, with a corresponding adjustment to capital surplus - employee share options or capital surplus - restricted shares of employees.

2) Share-based payment transactions of the acquiree in a business combination

When the share-based payment awards held by the employees of an acquiree (acquiree awards) are replaced by the Group’s share-based payment awards (replacement awards), both the acquiree awards and the replacement awards are measured in accordance with the market-based measure at the acquisition date. The portion of the replacement awards that is included in measuring the consideration transferred in a business combination equals the market-based measure of the acquiree awards multiplied by the ratio of the portion of the vesting period completed to the greater of the total vesting period or the original vesting period of the acquiree award. The market-based measure of the replacement awards in excess of the market-based measure of the acquiree awards included in measuring the consideration transferred is recognized as a remuneration cost for post-combination service.

v. Taxation

Income tax expense represents the sum of the tax currently payable and deferred tax.

1) Current tax

Based on the Income Tax Law, an additional tax at 5% of unappropriated earnings is provided for as income tax in the year the shareholders approve the retention of earnings.

Adjustments of prior years’ tax liabilities are added to or deducted from the current year’s tax provision.

2) Deferred tax

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities and the corresponding tax bases used in the computation of taxable profit.

Deferred tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets are generally recognized for all deductible temporary differences, and unused loss carryforwards to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be used.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries and in associates, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with these investments and interests are recognized only to the extent that it is probable that there will be sufficient taxable profits against which to use the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered. A previously unrecognized deferred tax asset is also reviewed at the end of each reporting period and recognized to the to the extent that it has become probable that future taxable profit will allow the deferred tax asset to be recovered.

Deferred tax liabilities and assets are measured at the tax rates that are expected to apply to the period in which the liability is settled or the asset realized, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. The measurement of deferred tax liabilities and assets reflects the Group's expectations, at the end of the reporting period, as to the manner by which the carrying amount of its assets and liabilities will be recovered or settled.

3) Current and deferred tax for the year
Current and deferred taxes are recognized in profit or loss, but when these taxes pertain to items that are recognized in other comprehensive income or directly in equity, the current and deferred taxes are also recognized in other comprehensive income or directly in equity, respectively.
Where current tax or deferred tax arises from the initial accounting for a business combination, the tax effect is included in the accounting for the business combination.

5. CRITICAL ACCOUNTING JUDGMENTS AND KEY SOURCES OF ESTIMATION AND UNCERTAINTY

In the application of the Group's accounting policies, management is required to make judgments, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised if the revision affects only that period or in the period of the revision and future periods if the revision affects both current and future periods.

Critical Accounting Judgements

a. Lease terms - 2019
In determining a lease term, the Group considers all facts and circumstances that create an economic incentive to exercise or not to exercise an option, including any expected changes in facts and circumstances from the commencement date until the exercise date of the option. Main factors considered include contractual terms and conditions for the optional periods, significant leasehold improvements undertaken over the contract term, the importance of the underlying asset to the lessee's operations, etc. The lease term is reassessed if a significant change in circumstances that are within control of the Group occur.

Key Sources of Estimation Uncertainty

a. Lessees' incremental borrowing rates-2019

   In determining a lessee's incremental borrowing rate used in discounting lease payments, a risk-free rate for the same currency and relevant duration is selected as a reference rate.

b. Estimated impairment of assets other than goodwill
In assessing assets for impairment, income and expenses that may occur in the future, assets' useful lives, and independent cash flows for the particular asset group are based on subjective judgment in accordance with the asset's usage patterns and the industrial characteristics. Any change in the economic condition or in the estimation due to the Group's strategy may lead to a material impairment loss in the future.

6. CASH AND CASH EQUIVALENTS

	December 31	
	2019	2018
Demand deposits	$ 6,333,268	$ 9,080,667
Checking accounts	34,543	121,377
Cash on hand	905	1,000
Cash equivalents		
Time deposits	2,600	328,785
Repurchase agreements collateralized by bonds	-	24,016
	$ 6,371,316	$ 9,555,845

The market rate intervals of cash in the bank at the end of the reporting period were as follows:

	December 31	
	2019	2018
Bank deposits	0%-1.07%	0%-1.89%

7. FINANCIAL INSTRUMENTS AT FAIR VALUE THROUGH PROFIT OR LOSS

	December 31	
	2019	2018
Financial assets at FVTPL - current		
Financial assets mandatorily classified as at FVTPL		
Derivative financial assets (not under hedge accounting)		
Cross-currency swap contracts (a)	$ 2,392	$ -
Financial assets at FVTPL - non-current		
Financial assets mandatorily classified as at FVTPL		
Derivative financial assets (not under hedge accounting)		
Long call options (d)	$ 232,865	$ 243,130
Put options (c)	35,514	-
	$ 268,379	$ 243,130
Financial liabilities at FVTPL- current		
Financial liabilities held for trading		
Derivative financial liabilities (not under hedge accounting)		
Foreign exchange forward contracts (b)	$ 755	$ -
Financial liabilities at FVTPL- non-current		
Financial liabilities held for trading		
Derivative financial liabilities (not under hedge accounting)		
Short put options (e)	$ 143,814	$ 191,790

a. At the end of the reporting period, outstanding cross-currency swap contracts not under hedge accounting were as follows:

	Coupon exchange rate	Maturity Date	Contract Amount (In Thousands)
December 31, 2019			
Swap	USD:NTD 30.0715	January 21, 2020	USD 10,000/NTD300,715
Swap	USD:NTD 30.0715	January 21, 2020	USD 12,000/NTD360,858

The Corporation entered into derivative transactions during 2019 to manage exposures of assets and liabilities denominated in foreign currency related to exchange rate changes.

b. At the end of the reporting period, outstanding foreign exchange forward contracts not under hedge accounting were as follows:

	Currency	Maturity Date	Contract Amount (In Thousands)
December 31, 2019			
Sell	Sell EUR/Buy USD	January 17, 2020	EUR 3,000/USD 3,339

The Corporation entered into derivative transactions during 2019 to manage exposures of assets and liabilities denominated in foreign currency related to exchange rate changes.

c. Put options
The Group entered into equity purchase agreements with Clean Focus Yield Limited ("CFY") with the right of redemption, in which the Group may require CFY to redeem all of its shares with certain conditions.

d. Long call options
As stated in Note 20 (d), GES MEGASIXTEEN, LLC ("MEGASIXTEEN") was set up for the purpose of tax deductions, and MEGASIXTEEN expects to have a higher of fair value or 5.5% return of the investment from MPC AC 2017 Energy Fund, LLC ("MPC") from the flip date (December 2022). The agreement is subject to non-controlling equity interests should MPC purchase the rights to buy back all of the Class A shares issued by GES AC SOLAR 2017, LLC ("GES AC").

As stated in Note 20 (d), TEV Solar Alpha 18 ("TEV Solar") was set up for the purpose of tax deductions, and TEV Solar expects the return on the investment in Advantage Capital Solar Partners II, LLC ("ACS") to be at the higher of fair value or 7% of the capital injection of ACS, starting from the Flip date (June 2024). The agreement is subject to stipulations on non-controlling equity interests should ACS purchase the rights to buy back all of the Class A shares issued by AC GES Solar 2018 LLC ("AC GES Solar")

e. Short call options
As stated in Note 20 (c), MEGASIXTEEN's borrower, Indiana Municipal Power Agency ("IMPA"), has agreed that it will execute the right to buy back all of the equity (Class A and B shares) of GES AC from the Flip date.
As stated in Note 20 (c), TEV II's borrower, IMPA, has agreed that it will execute the right to buy back all of the equity (Class A and B shares) of AC GES Solar from the Flip date.

8. FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME

	December 31	
	2019	2018
Current		
Domestic investments		

	December 31	
	2019	2018
Current		
Domestic quoted shares		
CTCI Corporation ("CTCI")	$ 114,414	$ 133,333
Non-current		
Domestic investments		
Domestic quoted shares		
Sino-American Silicon Products Inc. ("SAS")	$ 2,172,922	$ 1,337,855
ThinTech Materials Technology Co., Ltd. ("TTMC")	141,539	122,292
Unlisted ordinary shares		
EXOJET Technology Corporation ("EXOJET")	28,896	45,962
Top Green Energy Technologies Inc.("TGET")	27,098	27,098
Taiwan Special Chemicals Corporation("TSCC")	18,601	18,601
NTNU Innovation Investment Holding Company("NTNU")	2,000	2,000
	2,391,056	1,553,808
Overseas investments		
Unlisted ordinary shares		
ASIA GLOBAL VENTURE CAPITAL II CO., LTD	20,426	22,137
SUN APPENNINO CORPORATION	-	19,338
TG ENERGY SOLUTIONS LLC	-	615
FICUS CAPITAL CORPORATION	-	-
	20,426	42,090
	$ 2,411,482	$ 1,595,898

The Group invested in corporation mentioned above for long-term strategic purposes. Accordingly, the management elected to designate these investments in equity instruments as at FVTOCI as they believe that recognizing short-term fluctuations in these investments' fair value in profit or loss would not be consistent with the Group's strategy of holding these investments for long-term purposes.

The carrying amount of the Group's investment in TTMC's private-placement shares amounted to $141,540 thousand and 115,920 thousand as of December 31, 2019 and 2018, respectively; under Article 43-8 of the Securities and Exchange Act, there is a legally enforceable restriction on private-placement shares, which prevents their trading.
The amount of investments in equity instruments at FVTOCI pledged by the Group to secure borrowings refers to Note 37.

9. FINANCIAL ASSETS AT AMORTIZED COST

	December 31	
	2019	2018
Non-current		
Overseas investment		
Puttable preference shares (C-Shares III) Phanes Holding Inc. (Phanes Holding)	$ 149,975	$ 153,700
Less: Allowance for impairment loss	-	-
	$ 149,975	$ 153,700

Phanes Holding, a project developer, is an overseas unlisted company. The Group, has successfully built several power facilities in the UK and the Dominican Republic through the cooperative relationship with

Phanes Holding. In order to build a long-term cooperative strategic relationship with Phanes Holding, subscribed for the following preference shares issued by Phanes Holding at par:

Five-year puttable preference shares (C-Shares III) for 24,000 shares amounting to USD5,000 thousand for 100% interest.

The above preference shares carried no voting rights and no dividend rights but carried preferential rights on dividends specified at 7% of the par value. The preference shares can be redeemed prior to or later than the maturity date under the agreement between the Group and Phanes Holding.

For the year ended December 31, 2019 and 2018, the interest income of puttable preference shares amounted to $9,541 thousand and $11,487 thousand. The related interest receivable, classified as other receivables from related parties, amounted to $20,997 thousand and $10,759 thousand at December 31, 2019 and 2018, respectively.

As of December 31, 2019, financial assets at amortized cost had not been pledged as security.

The Group only invests in debt instruments that are rated the equivalent of investment grade or higher and have low credit risk for the purpose of impairment assessment. The Group's exposure and the external credit ratings are continuously monitored. The Group reviews changes in other public information and makes an assessment about whether there has been a significant increase in credit risk since the last period to the reporting date.

The Group considers the current financial condition of debtors and industry forecasts to estimate 12-month or lifetime expected credit losses.
The Group’s current credit risk grading framework comprises the following categories:

Category	Description	Basis for Recognizing Expected Credit Losses	Expected Loss Rate
Performing	The counterparty has a low risk of default and a strong capacity to meet contractual cash flows	12-month ECLs	0%

10. NOTES AND ACCOUNTS RECEIVABLE, INSTALLMENT ACCOUNTS RECEIVABLE AND OTHER RECEIVABLES

	December 31	
	2019	2018 (Restated)
Notes and accounts receivable		
Notes and accounts receivable	$ 2,653,904	$ 3,202,497
Accounts receivable from related parties	523,933	554,452
Less: Allowance for impairment loss	(602,251)	(622,654)
	$ 2,575,586	$ 3,134,295
Other receivables		
Other receivables from related parties	$ 691,352	$ 1,103,134
Others	157,805	217,816
Less: Allowance for impairment loss	(16,007)	(8,400)
	$ 833,150	$ 1,312,550

a. Notes and accounts receivable
The credit periods for the sale of goods were (a) 30 to 90 days after the end of the month; (b) 15 to 150 days from the invoice date; and (c) 30 to 90 days for letters of credit and the average credit periods for

power facility construction were 180 to 360 days. No interest was charged on notes and accounts receivable. For overdue accounts receivable, interest was charged on the basis of management’s judgment.

In order to minimize credit risk, the management of the Group has delegated a team responsible for determining credit limits, credit approvals and other monitoring procedures to ensure that follow-up action is taken to recover overdue debts. In addition, the Group reviews the recoverable amount of each individual trade debt at the end of the reporting period to ensure that adequate allowance is made for possible irrecoverable amounts. In this regard, the management believes the Group’s credit risk was significantly reduced.

The Group applies the simplified approach to providing for expected credit losses prescribed by IFRS 9, which permits the use of lifetime expected loss provision for all trade receivables. The expected credit losses on trade receivables are estimated using a provision matrix by reference to past default experience of the debtor and an analysis of the debtor’s current financial position, adjusted for general economic conditions of the industry in which the debtors operate and an assessment of both the current as well as the forecasted direction of economic conditions at the reporting date. As the Group’s historical credit loss experience shows significantly different loss patterns for different customer segments, the provision for loss allowance based on past due status is further distinguished according to the Group’s different customer base.

The Group writes off a trade receivable when there is information indicating that the debtor is in severe financial difficulty and there is no realistic prospect of recovery, e.g. when the debtor has been placed under liquidation. For trade receivables that have been written off, the Group continues to engage in enforcement activity to attempt to recover the receivables due. Where recoveries are made, these are recognized in profit or loss.

The following table details the loss allowance of trade receivables based on the Group’s provision matrix.

December 31, 2019

	Not Past Due	Less Than or Equal to 30 Days	31 to 60 Days	61 to 90 Days	91 to 120 Days	121 to 150 Days	151 to 180 Days	Over 180 Days	Signs of Counterparty Default	Total
Expected credit loss rate	0%-0.22%	0%-4.09%	0%-4.10%	0%-11.53%	0%-19.89%	0%-27.55%	0%-26.35%	0%-100%	100%	
Gross carrying amount	$ 1,434,430	$ 252,724	$ 155,176	$ 125,901	$ 20,778	$ 26,219	$ 5,402	$ 579,146	$ 578,061	$ 3,177,837
Loss allowance (Lifetime ECL)	(938)	(6,451)	(2,443)	(3,466)	(3,789)	(589)	(845)	(5,669)	(578,061)	(602,251)
Amortized cost	$ 1,433,492	$ 246,273	$ 152,733	$ 122,435	$ 16,989	$ 25,630	$ 4,557	$ 573,477	$ -	$ 2,575,586

December 31, 2018 (Restated)

	Not Past Due	Less Than or Equal to 30 Days	31 to 60 Days	61 to 90 Days	91 to 120 Days	121 to 150 Days	151 to 180 Days	Over 180 Days	Signs of Counterparty Default	Total
Expected credit loss rate	0%-0.02%	0%-0.10%	0%-2.84%	0%-15.92%	0%-29.08%	0%-31.85%	0%-26.15%	0%-100%	100%	
Gross carrying amount	$ 1,936,154	$ 339,031	$ 262,859	$ 84,684	$ 59,070	$ 79,493	$ 4,060	$ 397,230	$ 594,368	$ 3,756,949
Loss allowance (Lifetime ECL)	(49)	(65)	(1,679)	(923)	(2,684)	(22,741)	(145)	-	(594,368)	(622,654)
Amortized cost	$ 1,936,105	$ 338,966	$ 261,180	$ 83,761	$ 56,386	$ 56,752	$ 3,915	$ 397,230	$ -	$ 3,134,295

The movements of the loss allowance of trade receivables are as follows:

	For the Year Ended December 31	
	2019	**2018**
Balance at January 1	$ 622,654	$ 616,275
Impairment (reversal) losses	(6,593)	34,003
Amounts written off	(3,963)	(23,506)
Foreign exchange losses and gains	(9,847)	(4,118)
Balance at December 31	$ 602,251	$ 622,654

b. Other receivables

The credit period was 60 days after the end of the month.

In order to minimize credit risk, the management of the Group has delegated a team responsible for determining credit limits, credit approvals and other monitoring procedures to ensure that follow-up action is taken to recover overdue debts. In addition, the Group reviews the recoverable amount of each individual trade debt at the end of the reporting period to ensure that adequate allowance is made for possible irrecoverable amounts. In this regard, the management believes the Group's credit risk was significantly reduced.

Loss allowance of finance lease receivables was estimated at the reporting date. For those with credit risk that did not increase significantly since initial recognition, 12-month ECL was applied; for those with credit risk that increased significantly since initial recognition, lifetime ECL was applied.

The aging of other receivables is as follows:

	December 31	
	2019	**2018**
Up to 60 days	$ 838,933	$ 1,187,546
61-90 days	-	398
91-120 days	-	6,570
More than 120 days	10,224	126,436
Total	$ 849,157	$ 1,320,950

The aging of other receivables that were impaired is as follows:

	December 31	
	2019	**2018**
Up to 60 days	$ 11,398	$ 8,400
More than 120 days	4,609	-
Total	$ 16,007	$ 8,400

The above analysis is based on the past-due date from the end of the credit term.

The movements of the loss allowance of other receivables are as follows:

	December 31	
	2019	**2018**
Balance at January 1	$ 8,400	$ -
Impairment losses	30,097	8,400
Amounts written off	(22,142)	-
Foreign exchange gains and losses	(348)	-
Balance at December 31	$ 16,007	$ 8,400

The above analysis is based on the past-due date from the end of the credit term.

The analysis of other receivables - receivables and loans are as follows:

			December 31	
	Collateral	**Interest Rate**	**2019**	**2018**
Fixed rate NTD-denominated loans receivables at NTD200,000 thousand (1)	$ -	1.608%	$ -	$ 200,000
Fixed rate USD-denominated loans receivables at USD3,500 thousand (2)	-	5%	-	107,590
			$ -	$ 307,590

1) The impairment losses had been recognized, refer to Note 38.
2) The principal received in the second quarter of 2019.

11. FINANCE LEASE RECEIVABLES

	December 31	
	2019	2018 (Restated)
Gross investment in leases		
Not later than 1 year	$ 2,945	$ 3,206
Over 1 year to 5 years	12,382	15,712
Later than 5 years	49,122	50,342
	64,449	69,260
Less: Unearned finance income	(29,039)	(32,543)
Present value of minimum lease payments	$ 35,140	$ 36,717

The Group entered into equipment lease agreements. The term of finance leases was 20 years. They were accounted for as finance leases.
The interest rate inherent in the leases was fixed at the contract date for the entire lease term. The effective interest rate contracted was 6.16% per annum.
The amounts of finance lease receivables pledged as collateral for bank loans are shown in Note 37.
Loss allowance of finance lease receivables was estimated at the reporting date. For those with credit risk that did not increase significantly since initial recognition, 12-month ECL was applied; for those with credit risk that increased significantly since initial recognition, lifetime ECL was applied. As of December 31, 2019, no finance lease receivable was past due. The Group has not recognized any loss allowance for finance lease receivables after considering historical experience, industry forecasts and the collaterals.

The finance lease receivables as of December 31, 2019 and 2018 were neither past due nor impaired.

12. INVENTORIES

	December 31	
	2019	2018
Finished goods and goods	$ 1,769,145	$ 1,220,727
Work in progress	34,993	10,174
Raw materials	606,876	684,287
Power facility construction in progress	2,533,566	1,470,298
	$ 4,944,580	$ 3,385,486

Power facility construction in progress is the cost relevant to power facility construction which will be sold in the near future.

In 2019, the cost of sales was $19,121,643 thousand, which related to inventories included (1) unallocated fixed manufacturing overhead of $1,767,618 thousand; (2) income of $7,229 thousand from the sale of scraps; (3) reversal of losses on purchase contracts of $14,129 thousand; and (4) recognized impairments of prepayments of $15,895 thousand; (5) recognized inventory write-downs of $72,024 thousand and (6) loss of $5,155 thousand from the disposal of obsolete inventories.

In 2018, the cost of sales was $14,029,471 thousand, which related to inventories included (1) unallocated fixed manufacturing overhead of $1,075,295 thousand; (2) income of $3,527 thousand from the sale of scraps; (3) losses on purchase contracts of $398,581 thousand; and (4) reversal of prepayments write-downs of $78,924 thousand; (5) reversal of inventories write-downs of $33,318 thousand and (6) loss of $14,189 thousand from the disposal of obsolete inventories.

Refer to Note 37 for the carrying amount of inventories pledged by the Group to secure borrowings.

13. SUBSIDIARIES

a. Subsidiaries included in the consolidated financial statements

Investor	Investee	Main Business	% of Ownership December 31 2019	% of Ownership December 31 2018	Remark
The Corporation	General Energy Solutions Inc. ("GES")	Electronic component manufacturing and selling	-	-	2
	Prime Energy Corp. ("Prime Energy")	Electronic component manufacturing and selling	100.00	100.00	-
	New Ray Investment Corp. ("New Ray Investment")	Investment company	100.00	100.00	-
	DelSolar Holding Singapore Pte. Ltd. ("DelSolar Singapore")	Investment company	100.00	100.00	-
	DelSolar Holding (Cayman) Ltd. ("DelSolar Cayman")	Investment company	100.00	100.00	-
	NSP Systems (BVI) Ltd. ("NSP BVI")	Investment company	100.00	100.00	-
	NSP UK Holding Limited ("NSP UK")	Investment company	100.00	100.00	-
	Best Power Service Corp. ("BPS")	Solar-related business	60.00	60.00	-
	NSP System Development Corp. ("NSP System")	Solar-related business	100.00	100.00	-
	GES Energy Middle East FZE ("GES ME")	Solar-related business	100.00	100.00	-
	Utech solar corporation ("Utech")	Electronic component manufacturing and selling	99.49	98.30	3
	Ultimate Energy Solution Limited ("UES")	Investment company	100.00	100.00	3
	Solartech Materials Corporation ("SMC")	Electronic component manufacturing and selling	100.00	100.00	3
	Apex solar Corporation ("Apex")	Electronic component manufacturing and selling	100.00	100.00	3
	Solartech Japan Corporation ("Solartech JP")	Electronic component manufacturing and selling	-	100.00	3 and 4
	Zhongyang Corporation ("Zhongyang")	Electronic component manufacturing and selling	100.00	100.00	3
	Huiyang Corporation ("Huiyang")	Electronic component manufacturing and selling	100.00	100.00	3 and 4
	True Honour Limited	Investment company	-	-	3 and 4
	United Renewable Energy Engineering Co. , Ltd. ("UREE")	Solar-related business	100.00	-	10
	Yong Han Ltd. ("Yong Han")	Solar-related business	-	-	4
	Yun Yeh Energy INC. ("Yun Yeh")	Solar-related business	-	-	4
	Yong Liang Ltd. ("Yong Liang")	Solar-related business	100.00	100.00	2
	Yong Zhou Ltd. ("Yong Zhou")	Solar-related business	100.00	100.00	2
	Ever Lite Power Inc. ("Ever Lite")	Electronic component manufacturing and selling	100.00	100.00	2 and 4
	Yong Shun Ltd. ("Yong Shun")	Solar-related business	100.00	100.00	2
	General Energy Solutions UK Limited ("GES UK")	Investment company	100.00	100.00	2
	ELECTRONIC J.R.C. S.R.L ("JRC")	Solar-related business	1.00	1.00	2
	Dashiangying Energy Power Ltd. Co. ("Dashiangying")	Solar and agriculture-related business	100.00	-	10
	Shinkai Energy Power Ltd. Co. ("Shinkai")	Solar and agriculture-related business	100.00	-	10
	Shanshang Energy Power Ltd. Co. ("Shanshang")	Solar and agriculture-related business	100.00	-	10
	Jiangung Energy Power Ltd. Co. ("Jiangung")	Solar and agriculture-related business	100.00	-	10
	Dungshr Energy Power Ltd. Co. ("Dungshr")	Solar and agriculture-related business	100.00	-	10
	Yanshan Energy Power Ltd. Co. ("Yanshan")	Solar and agriculture-related business	100.00	-	10
GES UK	General Energy Solutions USA. Inc. ("GES USA")	Investment company	100.00	100.00	-
	GES JAPAN CORPORATION ("GES JAPAN")	Investment company	100.00	100.00	-
	NCH Solar 1 Limited ("NCH Solar 1")	Solar-related business	100.00	100.00	-
	GES Solar 2 Limited ("GES Solar 2")	Solar-related business	100.00	100.00	-
	GES Solar 3 Limited ("GES Solar 3")	Solar-related business	100.00	100.00	-
	General Energy Solutions CANADA Inc. ("GES CANADA")	Investment company	100.00	100.00	-

(Continued)

Investor	Investee	Main Business	% of Ownership December 31 2019	2018	Remark
GES USA	ET ENERGY SOLUTIONS LLC (“ET ENERGY”)	Solar-related business	-	100.00	4
	TIPPING POINT ENERGY COC PPA SPE-1, LLC (“TIPPING POINT”)	Solar-related business	-	100.00	4
	MEGATWO, LLC (“MEGATWO”)	Solar-related business	100.00	100.00	-
	GES MEGAFIVE, LLC (“MEGAFIVE”)	Solar-related business	100.00	100.00	-
	GES MEGASIX, LLC (“MEGASIX”)	Solar-related business	-	-	1
	GES MEGASEVEN, LLC (“MEGASEVEN”)	Solar-related business	-	-	4
	GES MEGAEIGHT, LLC (“MEGAEIGHT”)	Solar-related business	100.00	100.00	-
	GES MEGANINE, LLC (“MEGANINE”)	Solar-related business	-	-	1
	GES MEGATEN, LLC (“MEGATEN”)	Solar-related business	-	-	1
	GES MEGAELEVEN, LLC (“MEGAELEVEN”)	Solar-related business	-	-	4
	GES MEGATWELVE, LLC (“MEGATWELVE”)	Solar-related business	100.00	100.00	-
	GES MEGATHIRTEEN, LLC (“MEGATHIRTEEN”)	Solar-related business	100.00	100.00	1
	GES MEGAFIFTEEN, LLC (“MEGAFIFTEEN”)	Solar-related business	-	-	4
	GES MEGASIXTEEN, LLC (“MEGASIXTEEN”)	Solar-related business	100.00	100.00	5
	GES MEGASEVENTEEN, LLC (“MEGASEVENTEEN”)	Solar-related business	-	-	1
	GES MEGANINETEEN, LLC (“MEGANINETEEN”)	Solar-related business	100.00	100.00	-
	GES MEGATWENTY, LLC (“MEGATWENTY”)	Solar-related business	100.00	100.00	-
	GES ASSET ONE, LLC. (“ASSET ONE”)	Solar-related business	100.00	100.00	-
	GES ASSET TWO, LLC. (“ASSET TWO”)	Solar-related business	-	-	1
	GES ASSET THREE LLC (“ASSET THREE”)	Solar-related business	100.00	100.00	-
	GES ASSET FOUR LLC (“ASSET FOUR”)	Solar-related business	-	-	1
	CENERGY PORTFOLIO LLC (“CENERGY”)	Solar-related business	-	-	1
	SH4 SOLAR LLC (“SH4”)	Solar-related business	100.00	100.00	-
	Cedar Falls Solar Farm, LLC (“CEDAR FALLS”)	Solar-related business	100.00	100.00	-
	Schenectady Solar, LLC (“Schenectady”)	Solar-related business	-	-	1
	Village of Coxsackie Municipal Solar Project One, LLC (“VOC”)	Solar-related business	-	-	1
	SEG MI 57 LLC (“SEG”)	Solar-related business	100.00	100.00	1
	Kinect Solar Fund 1, LLC (“KINECT”)	Solar-related business	100.00	100.00	-
	RER CT 57, LLC (“RER CT 57”)	Solar-related business	100.00	100.00	-
	TEV II, LLC (TEV II) Investment Company	Solar-related business	50.00	50.00	7
	Heywood Solar PGS, LLC (“HEYWOOD”)	Solar-related business	55.00	55.00	-
	MP Solar, LLC (“MP Solar”)	Solar-related business	55.00	55.00	-
	Ventura Solar LLC (“Ventura”)	Solar-related business	55.00	55.00	-
NSP NEVADA	Heywood Solar PGS, LLC (“HEYWOOD”)	Solar-related business	45.00	45.00	-
	MP Solar, LLC (“MP Solar”)	Solar-related business	45.00	45.00	-
	Ventura Solar, LLC (“Ventura”)	Solar-related business	45.00	45.00	-
	Livermore Community Solar Farm, LLC (“Livermore”)	Solar-related business	75.00	75.00	-
	GES MEGASEVEN, LLC (“MEGASEVEN”)	Solar-related business	-	-	4
	GES MEGAELEVEN, LLC (“MEGAELEVEN”)	Solar-related business	-	-	4
	GES MEGAFIFTEEN, LLC (“MEGAFIFTEEN”)	Solar-related business	-	-	4
	Industrial Park Drive Solar, LLC (“Industrial Park”)	Solar-related business	100.00	100.00	-
	Hillsboro Town Solar, LLC (“Hillsboro”)	Solar-related business	100.00	100.00	-
GES JAPAN	GES KYUSHU CORPORATION (“GES KYUSHU”)	Solar-related business	-	-	4
	Hashimoto Corporation (“Hashimoto”)	Solar-related business	100.00	100.00	-
GES CANADA	ELECTRONIC J.R.C., S.R.L (“JRC”)	Solar-related business	99.00	99.00	-
MEGATWO	Munisol S.A.P.I. de C.V. (“MUNISOL”)	Solar-related business	100.00	100.00	-
ASSET THREE	GES Asset Three Shima’s, LLC (“SHIMA’S”)	Solar-related business	100.00	100.00	-
	GES Asset Three Waimea, LLC (“WAIMEA”)	Solar-related business	100.00	100.00	-
	GES Asset Three Honokawai, LLC (“HONOKAWAI”)	Solar-related business	100.00	100.00	-
	GES Asset Three Eleele, LLC (“ELEELE”)	Solar-related business	100.00	100.00	-
	GES Asset Three Hanalei, LLC (“HANALEI”)	Solar-related business	100.00	100.00	-
	GES Asset Three Kapaa, LLC (“KAPAA”)	Solar-related business	100.00	100.00	-
	GES Asset Three Koloa, LLC (“KOLOA”)	Solar-related business	100.00	100.00	-

(Continued)

Investor	Investee	Main Business	% of Ownership December 31 2019	2018	Remark
MEGASIXTEEN	GES AC SOLAR 2017, LLC ("GES AC")	Solar-related business	67.59	67.59	5
GES AC	Anderson North Solar Project LLC ("Anderson N.")	Solar-related business	100.00	100.00	5
	Anderson South Solar Project LLC ("Anderson S.")	Solar-related business	100.00	100.00	5
	Flora Solar Project LLC ("Flora")	Solar-related business	100.00	100.00	5
	Greenfield Solar Project LLC ("Greenfield")	Solar-related business	100.00	100.00	5
	Spiceland Solar Project LLC ("Spiceland")	Solar-related business	100.00	100.00	5
TEV II	TEV Solar Alpha18 LLC (TEV Solar)	Solar-related business	100.00	100.00	8
TEV Solar	AC GES Solar 2018 LLC (AC GES Solar)	Solar-related business	66.19	66.19	8
AC GES Solar	Richmond 2 Solar Park, LLC (Richmond)	Solar-related business	100.00	100.00	8
	Rensselaer 2 Solar Park, LLC (Rensselaer)	Solar-related business	100.00	100.00	8
	Advance Solar Park, LLC (Advance)	Solar-related business	100.00	100.00	8
DelSolar Cayman	DelSolar (HK) Ltd. ("DelSolar HK")	Investment company	100.00	100.00	-
	DelSolar US Holdings (Delaware) Corporation ("DelSolar US")	Investment company	100.00	100.00	-
	NSP SYSTEM NEVADA HOLDING CORP. ("NSP NEVADA")	Solar-related business	100.00	100.00	-
	URE NSP Corporation (URE NSP)	Solar-related business	100.00	100.00	9
NSP BVI	NSP HK Holding Ltd. ("NSP HK")	Solar-related business	-	-	1
	Clean Focus GP Limited ("CFGP")	Solar operation management services	60.00	60.00	-
DelSolar Singapore	DelSolar India EPC Company Private Ltd. ("DelSolar India")	Solar-related business	-	-	4
	Neo Solar Power Malaysia Sdn. Bhd ("NSP Malaysia")	Technical management services	100.00	100.00	-
	Neo Solar Power Vietnam Co., Ltd ("NSP Vietnam")	Technical management services	100.00	100.00	-
NSP UK	NSP Germany GmbH ("NSP Germany")	Solar-related business	90.00	90.00	-
	PV-Power-Park Pro1 Verwaltings GmbH ("PV-Power-Park")	Solar-related business	100.00	100.00	-
	NSP Indygen UK Ltd. ("NSP Indygen")	Solar-related business	-	-	1
NSP System	Hsin Jin Optoelectronics ("Hsin Jin Optoelectronics")	Solar-related business	80.00	80.00	-
.	Hsin Jin Solar Energy Co., Ltd. ("Hsin Jin Solar Energy")	Solar-related business	60.00	60.00	-
	Si Two Corp. ("Si Two")	Solar-related business	100.00	100.00	-
NSP System	Tienyang Green Power Ltd. Co. ("Tienyang")	Solar-related business	100.00	-	11
	Deyang Green Power Ltd. Co. ("Deyang")	Solar-related business	100.00	-	11
	Shanyang Green Power Ltd. Co. ("Shanyang")	Solar-related business	100.00	-	11
	Jeyang Green Power Ltd. Co. ("Jeyang")	Solar-related business	100.00	-	11
	Lianzhang Energy Power Ltd. Co. ("Lianzhang")	Solar-related business	100.00	-	11
	Lianxi Energy Power Ltd. Co. ("Lianxi")	Solar-related business	100.00	-	11
	Liancheng Energy Power Ltd. Co. ("Liancheng")	Solar-related business	100.00	-	11
UNIITED RENEWABLE ENERGY ENGINEERING CO.	United Agriculture Ecology Ltd. Co. ("UAE")	Solar and agriculture-related business	100.00	-	6
NSP HK	XYH (Suzhou) Energy Ltd. ("XYH Suzhou")	Solar-related business	100.00	100.00	-
CFGP	Clean Focus GP (HK) Limited. ("CFGP (HK)")	Solar operation management services	100.00	100.00	-
DelSolar HK	DelSolar (Wu Jiang) Ltd. ("DelSolar Wu Jiang")	Solar-related business	100.00	100.00	-
	NSP Japan Inc. ("NSP Japan")	Solar-related business	100.00	100.00	-
	Neo Solar Power (Nanchang) Ltd. ("NSP Nanchang")	Solar-related business	11.36	11.36	-
DelSolar US	DelSolar Development (Delaware) LLC ("DelSolar Development")	Solar-related business	100.00	100.00	-
	Clean Focus Renewables Inc. ("CFR")	Solar-related business	100.00	100.00	-
	USD1 Owner LLC ("USD1")	Solar-related business	100.00	100.00	-
	Beryl Construction LLC ("Beryl")	Solar-related business	100.00	100.00	-
NSP Indygen	UKEG POTTERS BAR LIMITED ("POTTERS BAR")	Solar-related business	-	-	1 and 4
	UKEG CLAY CROSS LIMITED ("CLAY CROSS")	Solar-related business	-	-	1 and 4
	UKEG BELPER LIMITED ("BELPER")	Solar-related business	-	-	1 and 4
	GDL Bryncrynau Ltd. ("Bryncrynau")	Solar-related business	-	-	1 and 4
	GDL Upper Meadowley Ltd. ("Meadowley")	Solar-related business	-	-	1 and 4
CFGP (HK)	Clean Focus GP (Shanghai) Limited. ("CFGP (Shanghai)")	Solar operation management services	100.00	100.00	-
DelSolar Wu Jiang	Neo Solar Power (Nanchang) Ltd. ("NSP Nanchang")	Solar-related business	88.64	88.64	-
DelSolar Development	DSS-USF PHX LLC	Solar-related business	100.00	100.00	-
	DSS-RAL LLC	Solar-related business	100.00	100.00	-

(Continued)

Investor	Investee	Main Business	% of Ownership December 31 2019	2018	Remark
CFR	Rugged Solar LLC	Solar-related business	100.00	100.00	-
	CEC Solar #1117 LLC (CEC Solar #1117)	Solar-related business	-	-	1 and 4
	CEC Solar #1118 LLC (CEC Solar #1118)	Solar-related business	-	-	1 and 4
	CEC Solar #1119 LLC (CEC Solar #1119)	Solar-related business	-	-	1 and 4
	CEC Solar #1121 LLC (CEC Solar #1121)	Solar-related business	-	-	1 and 4
	CEC Solar #1122 LLC (CEC Solar #1122)	Solar-related business	-	-	1 and 4
	CEC Solar #1128 LLC (CEC Solar #1128)	Solar-related business	-	-	1 and 4
CFR	CEC Solar #1130 LLC (CEC Solar #1130)	Solar-related business	-	-	1 and 4
	CEC Solar #1133 LLC (CEC Solar #1133)	Solar-related business	-	-	1 and 4
	Klamath Falls Solar 2 LLC (Ewauna)	Solar-related business	-	-	1 and 4
UES	Renewable Energy Solution Limited (RES)	Investment company	100.00	100.00	3
RES	Gintech (Thailand) Limited (Gintech Thailand)	Solar-related business	100.00	100.00	3

(Concluded)

Note 1: The subsidiary was deemed as a subsidiary of the Group in accordance with IFRS 10.

Note 2: The Corporation, which was the surviving company, had a short-form merge with its 100% owned subsidiary, GES, as of March 31, 2019. The subsidiaries held by GES were transferred to the Corporation.

Note 3: The acquisitions of subsidiaries were due to the absorption of the two merged corporations, Gintech Energy and Solartech Energy, on October 1, 2018. The Corporation increased the capital of Utech in May 2019 and increased its shareholding ratio on Utech from 98.30% to 99.49%.

Note 4: Yong Han was disposed of in the first quarter of 2018. Yun Yeh was disposed of in the first quarter of 2018. MEGASEVEN, MEGAELEVEN and MEGAFIFTEEN were all disposed of in the second quarter of 2018. GES KYUSHU was disposed of in the fourth quarter of 2018. POTTERS BAR, CLAY CROSS, BELPER, Bryncrynau and Meadowley were all disposed of in the fourth quarter of 2018. CEC Solar #1117, CEC Solar #1118, CEC Solar #1119, CEC Solar #1121, CEC Solar #1122, CEC Solar #1128, CEC Solar #1130, CEC Solar #1133, and Ewauna were all disposed of in the fourth quarter of 2018. ET ENERGY and TIPPING POINT were all disposed of in the first quarter of 2019. True Honour Limited was disposed of in the fourth quarter of 2018. Solartech JP was disposed of in the second quarter of 2019. Huiyong and Ever Lite were all disposed of in the third quarter of 2019.

Note 5: MEGASIXTEEN was established for taxation purposes based on an agreement. MEGASIXTEEN established GES AC with MPC AC 2017 Energy Fund, LLC (”MPC”), and acquired 67.59% of the shares of GES AC. Through GES AC, MEGASIXTEEN owned 5 Power Facilities LLC under GES AC.

Note 6: UREE had invested capital in UAE in July 2019; UAE became 100%-owned subsidiaries of UREE.

Note 7: GES USA and non-related party, Telamon Enterprise Ventures (“Telamon”) established TEV II and each acquired 50% of the shares of TEV II, based on an agreement. GES USA is responsible for all relevant events and the risk of fluctuating return, thus, GES USA obtains substantial control over TEV II.

Note 8: TEV II acquired 100% of the shares of TEV Solar. TEV Solar and non-related party, Advantage Capital Solar Partners II, LLC (“ACS”) established AC GES Solar. TEV Solar acquired 66.19% of the shares of AC GES Solar which is the 100% owner of three LLC solar power facilities engaged in solar-related business.

Note 9: DelSolar Cayman had injected capital in URE NSP in November 2018, URE NSP became a 100%-owned subsidiary of DelSolar Cayman.

Note 10: UREE was incorporated in January 2019; the Corporation owns 100% of UREE’s outstanding ordinary shares; Dashiangying, Shinkai, Shanshang, Jiangung, Dungshr and Yanshan were incorporated in July 2019; the Corporation owns 100% of abovementioned companies’ outstanding ordinary shares.

Note 11: NSP System had invested capital in Tienyang, Deyang, Shanyang and Jeyang in January 2019 and had invested capital in Lianzhang, Lianxi, Liangcheng in June 2019, the abovementioned companies became 100%-owned subsidiaries of NSP System.

14. INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD

	December 31	
	2019	2018 (Restated)
Investments in associates	$ 2,126,807	$ 2,304,082
Investments in joint ventures	3,608	67,174
	$ 2,130,415	$ 2,371,256

a. Investments in associates

	December 31	
	2019	2018 (Restated)
Associates that are not individually material		
Clean Focus Yield Limited ("CFY")	$ 1,375,398	$ 1,295,281
Neo Cathay Power Corp. ("Neo Cathay")	559,639	598,352
TS Solartech SDN BHD ("TSST")	86,638	254,093
V5 Technology	66,769	69,860
MEGATHREE	34,759	34,539
DS Energy Technology Co., Ltd. ("DSET")	3,604	7,533
Gintung energy Corp. ("Gintung")	-	44,424
Sunshine PV Corp. ("Sunshine PV")	-	-
Solar PV Corp ("Solar PV")	-	-
	$ 2,126,807	$ 2,304,082

1) Aggregate information of joint ventures that are not individually material

At the end of the reporting period, the proportion of ownership and voting rights in the associates and joint ventures held by the Group were as follows:

	December 31	
Name of Company	2019	2018
CFY	28.67%	28.67%
Neo Cathay	40.00%	40.00%
TSST	42.12%	42.12%
V5 Technology	41.43%	41.43%
Gintung	36.38%	36.38%
MEGATHREE	40.00%	40.00%
DSET (a)	35.00%	35.00%
Sunshine PV (b)	-	19.47%
Solar PV	19.92%	19.92%

a) JNV SOLAR POWER CO., LTD. ("JSP") changed its name to DS Energy Technology Co., Ltd. ("DSET") on December 31, 2019.

b) The Corporation resigned from the Sunshine PV's board of directors in May 2019. Therefore, it has no significant influence on the Company. It is reclassified to FVOCI financial asset - noncurrent; Sunshine PV was dissolved in August 2019.

Aggregate information of associates that are not individually material was as follows:

	2019	2018
The Group's share of:		
Net loss for the year	$ (124,151)	$ (15,694)

	2019	2018
Other comprehensive income for the year	(1,099)	(36,641)
Total comprehensive (loss) for the year	$ (125,250)	$ (52,335)

The Group had recognized impairment loss of equity investment of Solar PV, an associate of the Group; therefore, the Group did not recognize any share of profit or loss of associates. However, based on the shareholding ratio, as of December 31, 2019, the recognized share of equity associates attributable to the Group was $739 thousand.

The Group used equity investment in affiliated company Gintung has been fully depreciated. Therefore, the profit and loss of the invested company was no longer recognized according to the equity method. If calculated based on the shareholding ratio, as of December 31, 2019, the company should recognize the loss share of Gintung as 50,851 yuan.

b. Investments in joint ventures

	December 31	
	2019	2018 (Restated)
Joint ventures that are not individually material		
NSP ET CAP MN HOLDINGS LLC ("JV2")	$ -	$ 63,088
CF MN DevCo One LLC ("DevCo One")	1,804	2,043
CF MN DevCo Two LLC ("DevCo Two")	1,804	2,043
	$ 3,608	$ 67,174

At the end of the reporting period, the proportion of ownership and voting rights in joint ventures held by the Group were as follows:

	December 31	
Name of Company	**2019**	**2018**
JV2 (Note 1)	67.00%	67.00%
DevCo One (Note 2)	40.00%	40.00%
DevCo Two (Note 2)	40.00%	40.00%

Note 1: NSP ET CAP MN HOLDINGS LLC (JV2) jointly invested in DelSolar US, a subsidiary of NSP, and ET Capital Solar Partners (USA), Inc. on December 28, 2015. As of December 31, 2019, the Group held a 67% equity interest in JV2 and two of three seats of JV2's board of directors. Based on the contractual arrangement between DelSolar US and ET Capital Solar Partners (USA), Inc., any material management decisions of JV2 shall be approved by the full board of directors. Therefore, DelSolar US concluded that it does not have control over JV2. In addition, as specified in the contractual arrangement, both DelSolar US and ET Capital Solar Partners (USA), Inc. have an equal percentage of profit distribution. After assessing JV2's operating status with accounts receivable that cannot be recovered, the Group had recognized impairment loss of investment of JV2 in the third quarter of 2019.

Note 2: DevCo One was jointly invested in by USD 1 and Novel Energy Solutions, LLC. DevCo Two was jointly invested in by USD 1 and Greenmark Solar, LLC. According to the contract, all of both DevCo One and DevCo Two's major management decisions are subject to the consent of all investors and hence the Corporation does not have control over DevCo One and DevCo Two. In addition, as specified in the contractual arrangement, both DevCo One and DevCo Two have a 40% profit distribution.

Aggregate information of joint ventures that are not individually material is as follows:

	2019	2018
The Corporation’s share of:		
Net loss for the year	$ (63,438)	$ (17)
Other comprehensive loss for the year	-	-
Total comprehensive loss for the year	$ (63,438)	$ (17)

The information of the main business, principal operating place and registry country of the above associates is shown in Table 7 following Notes to Consolidated Financial Statements.

Except for TSST and CFY, the investments accounted for using the equity method and the share of profit or loss and other comprehensive income of the investment were calculated based on the financial statements that have been audited. Management believes there is no material impact on the financial statements that have not been audited.

The investments in the associates and joint ventures have been pledged as collateral for bank loans, refer to note 37.

15. PROPERTY, PLANT AND EQUIPMENT

	December 31, 2019
Assets used by the Group	$ 18,951,458
Assets leased under operating leases	113,500
	$ 19,064,958

a. Assets used by the Group - 2019

	Balance at January 1, 2019	Adjustments on Initial Application of IFRS 16	Balance at January 1, 2019 (Restated)	Additions	Disposals	Transfers to Assets Leased Under Operating Leases	Reclassified	Effects of Foreign Currency Exchange Differences	Balance at September 30, 2019
Cost									
Land	$ 1,537,278	$ -	$ 1,537,278	$ -	$ -	$ -	$ -	$ 4,131	$ 1,541,409
Buildings	8,154,114	-	8,154,114	-	-	-	-	22,273	8,176,387
Machinery and equipment	20,796,539	-	20,796,539	214,093	(85,471)	-	568,001	4,005	21,497,167
Rental assets	254,314	-	254,314	-	-	(254,314)	-	-	-
Research and development equipment	69,566	-	69,566	340	(8,618)	-	8,939	-	70,227
Office equipment	55,984	-	55,984	1,591	(2,505)	-	2,818	57	57,945
Leasehold improvements	735,412	-	735,412	4,305	(4,792)	-	-	(505)	734,420
Transportation equipment	2,965	-	2,965	231	(471)	-	-	(73)	2,652
Miscellaneous equipment	555,181	5,961,690	6,516,871	536,631	(1,106,949)	-	67,403	64,749	6,078,705
Property under acceptance or construction	2,964,541	-	2,964,541	(123,337)	(334)	-	(1,955,790)	(10,885)	874,195
	35,125,894	$ 5,961,690	41,087,584	$ 633,854	$ (1,209,140)	$ (254,314)	$ (1,308,629)	$ 83,752	39,033,107
Accumulated depreciation									
Buildings	1,175,351	$ -	$ 1,175,351	$ 378,248	$ -	$ -	$ -	$ 369	1,553,968
Machinery and equipment	12,922,317	-	12,922,317	2,423,116	(39,098)	-	-	(31,266)	15,275,069
Rental assets	119,488	-	119,488	-	-	(119,488)	-	-	-
Research and development equipment	60,525	-	60,525	2,945	(6,432)	-	-	-	57,038
Office equipment	29,155	-	29,155	13,107	(2,060)	-	-	(83)	40,119
Leasehold improvements	25,684	-	25,684	56,402	(3,999)	-	-	(139)	77,948
Transportation equipment	1,442	-	1,442	601	(101)	-	-	(56)	1,886
Miscellaneous equipment	20,355	798,712	819,067	353,626	(388,621)	-	-	8,455	792,527
	14,354,317	$ 798,712	15,153,029	$ 3,228,045	$ (440,311)	$ (119,488)	$ -	$ (22,720)	17,798,555
Accumulated impairment									
Buildings	-	$ -	-	$ 398,250	$ -	$ -	$ -	$ -	398,250
Machinery and equipment	457,098	-	457,098	1,202,159	(29,019)	-	-	(18,329)	1,611,909
Research and development equipment	-	-	-	958	-	-	-	-	958
Office equipment	-	-	-	535	-	-	-	(17)	518
Leasehold improvements	-	-	-	9,383	-	-	-	(353)	9,030
Miscellaneous equipment	-	-	-	6,084	-	-	-	(26)	6,058
Property under acceptance or construction	257,949	-	257,949	-	-	-	-	(1,578)	256,371
	715,047	$ -	715,047	$ 1,617,369	$ (29,019)	$ -	$ -	$ (20,303)	2,283,094
	$ 20,056,530		$ 25,219,508						$ 18,951,458

b. Assets leased under operating leases - 2019

	Balance at January 1, 2019	Adjustments on Initial Application of IFRS 16	Balance at January 1, 2019 (Restated)	Transfers from Assets used by the Group	Additions	Disposals	Reclassified	Effects of Foreign Currency Exchange Differences	Balance at September 30, 2019
Cost									
Miscellaneous equipment	$ -	$ -	$ -	$ 254,314	$ -	$ -	$ -	$ (4,992)	$ 249,322
Accumulated depreciation									
Miscellaneous equipment	-	$ -	-	$ 119,488	$ 20,713	$ -	$ -	$ (4,379)	135,822
	$ -		$ -						$ 113,500

c. 2018

	Balance at January 1, 2019	Adjustments on Initial Application of IFRS 16	Balance at January 1, 2019 (Restated)	Acquired from Business Combinations	Additions	Disposals	Reclassified	Effects of Foreign Currency Exchange Differences	Balance at September 30, 2019
Cost									
Land	$ 460,731	$ -	$ 460,731	$ 1,075,945	$ -	$ -	$ -	$ 602	$ 1,537,278
Buildings	2,758,988	-	2,758,988	5,395,126	-	-	-	-	8,154,114
Machinery and equipment	16,100,104	-	16,100,104	4,502,972	87,658	(2,000)	128,964	(21,159)	20,796,539
Rental assets	164,118	-	164,118	-	82,684	-	-	7,512	254,314
Research and development equipment	62,857	-	62,857	6,259	-	-	450	-	69,566
Office equipment	28,912	-	28,912	12,530	5,227	(425)	9,380	360	55,984
Leasehold improvements	20,903	-	20,903	712,700	696	-	1,294	(181)	735,412
Transportation equipment	1,910	-	1,910	1,088	-	-	-	(33)	2,965
Miscellaneous equipment	330,625	4,210,844	4,541,469	216,673	1,752,387	(398)	7,031	(291)	6,516,871
Property under acceptance or construction	4,022,221	-	4,022,221	274,980	216,915	(1,363,193)	(289,804)	103,422	2,964,541
	23,951,369	$ 4,210,844	28,162,213	$ 12,198,273	$ 2,145,567	$ (1,366,016)	$ (142,685)	$ 90,232	41,087,584
Accumulated depreciation									
Buildings	984,078	$ -	984,078	$ -	$ 191,223	$ -	$ -	$ 50	1,175,351
Machinery and equipment	10,884,067	-	10,884,067	-	2,050,525	(2,000)	-	(10,275)	12,922,317
Rental assets	94,980	-	94,980	-	20,220	-	-	4,288	119,488
Research and development equipment	53,354	-	53,354	-	7,171	-	-	-	60,525
Office equipment	24,817	-	24,817	-	4,452	(372)	-	258	29,155
Leasehold improvements	10,306	-	10,306	-	15,416	-	-	(38)	25,684
Transportation equipment	1,294	-	1,294	-	172	-	-	(24)	1,442
Miscellaneous equipment	278,476	486,056	764,532	-	55,033	(398)	-	(100)	819,067
	12,331,372	$ 486,056	12,817,428	$ -	$ 2,344,212	$ (2,770)	$ -	$ (5,841)	15,153,029
Accumulated impairment									
Machinery and equipment	457,098	$ -	457,098	$ -	$ -	$ -	$ -	$ -	457,098
Property under acceptance or construction	-	-	-	-	257,949	-	-	-	257,949
	457,098	$ -	457,098	$ -	$ 257,949	$ -	$ -	$ -	715,047
	$ 11,162,899		$ 14,887,687						$ 25,219,508

Property, plant and equipment are depreciated on a straight-line basis over their estimated useful lives as follows:

Buildings	15-21 years
Machinery and equipment	4-11 years
Rental assets	10-20 years
Research and development equipment	4-6 years
Office equipment	3-4 years
Leasehold improvements	4-11 years
Transportation equipment	3-5 years
Miscellaneous equipment	3-25 years

The major components of the buildings held by the Group included plants and electric-powered machinery, which are depreciated over their estimated useful lives of 15 to 21 years.

Refer to Note 37 for the carrying amount of property, plant and equipment pledged by the Group to secure borrowings.

For the year ended December 31, 2019, the deductions were amounts transferred from the disposal of property, plant and equipment of $20,568 thousand and disposal of subsidiaries of $719,242 thousand.

The Group shall comply with new operating policy, and the estimated future cash flows expected to arise from the cash-generating units which are used to produce the cell decreased. The Group carried out a review of the recoverable amount of the cash-generating units and determined that the carrying amount exceeded the recoverable amount. The review led to the recognition of an impairment loss of $1,617,369 thousand, which was recognized in other gains and losses for the year ended December 31,

2019. The Group determined the recoverable amounts of the cash-generating units on the basis of their value in use. The discount rate used in measuring the value in use was 9.04% per annum.

For the year ended December 31, 2019, there were reclassifications from equipment for inspection of $4,065 thousand to miscellaneous purchases, from construction in progress and for inspection of $1,364,665 thousand to inventory and from inventory of $60,101 thousand.

For the year ended December 31, 2018, the deductions were amounts transferred from the disposal of property, plant and equipment of $52 thousand, disposal of power facilities of $109,854 thousand and disposal of subsidiaries of $1,253,340 thousand.
For the year ended December 31, 2018, there were reclassifications from inventory of $109,854 thousand, from repayments for equipment of $3,307 thousand and from construction in progress and for inspection of $255,846 thousand to miscellaneous purchases.

16. LEASE ARRANGEMENTS

a. Right-of-use assets - 2019

	December 31, 2019
Carrying amounts	
Land	$ 746,073
Buildings	164,308
Machinery and equipment	41,159
Miscellaneous equipment	29,574
	$ 981,114

	For the Year Ended December 31, 2019
Additions to right-of-use assets	$ 37,992
Depreciation charge for right-of-use assets	
Land	$ 44,832
Buildings	41,490
Machinery and equipment	6,016
Miscellaneous equipment	7,219
	$ 99,557

b. Lease liabilities - 2019

	December 31, 2019
Carrying amounts	
Current	$ 65,778
Non-current	$ 952,521

Range of discount rate for lease liabilities was as follows:

	September 30, 2019
Land	1.50%-3.37%
Buildings	2.55%-5.25%
Machinery and equipment	2.83%-4.90%
Miscellaneous equipment	2.07%-4.76%

c. Material lease-in activities and terms

The Group leases certain land, buildings and transportation equipment for operating with lease terms of 2 to 20 years. The Group does not have bargain purchase options to acquire the leasehold land and buildings at the end of the lease terms. Therefore, some of these arrangements contain renewal options.

d. Other lease information

Lease arrangements under operating leases for the leasing out of property, plant and equipment refer to Notes 15. Lease arrangements for the leasing out of assets under finance leases refer to Note 11.

2019

	For the Year Ended December 31, 2019
Expenses relating to short-term leases	$ 20,725
Expenses relating to low-value asset leases	$ 7,909
Expenses relating to variable lease payments not included in the measurement of lease liabilities	$ 6,440
Total cash outflow for leases	$ (128,267)

The Group leases certain lands and buildings which qualify as short-term leases and certain office equipment, transportation equipment and others which qualify as low-value asset leases. The Group has elected to apply the recognition exemption and, did not recognize right-of-use assets and lease liabilities for these leases.

2018

The future minimum lease payments of operating lease commitments are as follows:

	December 31, 2018
Not later than 1 year	$ 57,271
Later than 1 year and not later than 5 years	277,023
Later than 5 years	660,669
	$ 994,963

The lease payments and sublease payments recognized in profit or loss were as follows:

	For the year Ended December 31, 2018
Minimum lease payments	$ 82,637

17. INTANGIBLE ASSETS

	December 31	
	2019	2018
Carrying amounts of each class		
Contracts with customers	$ 103,712	$ 37,365
Software	2,049	2,836
Patents	1,039	1,202
Contracts with consultants	-	135,606
Goodwill	-	11,969
Brands	-	-
Others	8,557	13,984
	$ 115,357	$ 202,962

	Year Ended December 31, 2018							
	Contracts with Consultants	Goodwill	Contracts with Customers	Brands	Patents	Software	Others	Total
Cost								
Balance at January 1	$ 153,628	$ 11,622	$ 106,901	$ 44,301	$ -	$ -	$ 1,468	$ 317,920
Acquired from Business Combinations	-	-	-	-	1,250	2,493	13,888	17,631
Additions	-	-	3,074	-	-	665	-	3,739
Disposal of subsidiaries	-	-	(74,532)	-	-	-	-	(74,532)
Translation adjustments	4,591	347	4,509	-	-	-	112	9,559
Balance at December 31	158,219	11,969	39,952	44,301	1,250	3,158	15,468	274,317
Accumulated amortization								
Balance at January 1	11,823	-	446	44,301	-	-	-	56,570
Amortization	10,245	-	4,586	-	48	322	1,477	16,678
Disposal of subsidiaries	-	-	(2,447)	-	-	-	-	(2,447)
Translation adjustments	545	-	2	-	-	-	7	554
Balance at December 31	22,613	-	2,587	44,301	48	322	1,484	71,355
	$ 135,606	$ 11,969	$ 37,365	$ -	$ 1,202	$ 2,836	$ 13,984	$ 202,962

	Year Ended December 31, 2019							
	Contracts with Consultants	Goodwill	Contracts with Customers	Brands	Patents	Software	Others	Total
Cost								
Balance at January 1	$ 158,219	$ 11,969	$ 39,952	$ 44,301	$ 1,250	$ 3,158	$ 15,468	$ 274,317
Additions	-	-	-	-	34	530	-	564
Reclassifications	-	-	74,232	-	-	-	-	74,232
Translation adjustments	(3,835)	(289)	(2,832)	-	-	-	291	(6,665)
Balance at December 31	154,384	11,680	111,352	44,301	1,284	3,688	15,759	342,448
Accumulated amortization								
Balance at January 1	22,613	-	2,587	44,301	48	322	1,484	71,355
Amortization	10,495	-	5,246	-	197	1,317	5,678	22,933
Translation adjustments	(860)	-	(193)	-	-	-	40	(1,013)
Balance at December 31	32,248	-	7,640	44,301	245	1,639	7,202	93,275
Accumulated impairment								
Balance at January 1	-	-	-	-	-	-	-	-
Impairment loss	125,866	12,038	-	-	-	-	-	137,904
Translation adjustments	(3,730)	(358)	-	-	-	-	-	(4,088)
Balance at December 31	122,136	11,680	-	-	-	-	-	133,816
	$ -	$ -	$ 103,712	$ -	$ 1,039	$ 2,049	$ 8,557	$ 115,357

Contracts with consultants are for the on-going management and long-term maintenance of the power station.

Contracts with customers were long-term electricity purchase agreements that the Group entered into with local power companies and with expected 20-year revenue generation from sale of electricity.

The above items of intangible assets are amortized on a straight-line basis over 1 to 15.16 years.

The Corporation evaluated the carrying amount of some intangible assets and determined that they were unrecoverable as they have no future economic benefits. The Corporation carried out a review of the recoverable amount of some intangible assets and determined that the carrying amount exceeded the recoverable amount. The review led to the recognition of an impairment loss of $137,904 thousand, which was recognized in other gains and losses for the year ended December 31, 2019.

No intangible assets were pledged as collateral for the Group's bank loans.

18. PREPAYMENTS FOR LEASES

	December 31	
	2019	2018
Current assets	$ 2,531	$ 4,748
Non-current assets	-	19,469
	$ 2,531	$ 24,217

The Group adopted the IFRS 16 starting from January 1, 2019. The prepayments for lease - current are short-term leases for which the recognition exemption is applied.

Prepayments for leases, which mainly included land use rights paid for power facility construction in the United States, were amortized on a straight-line basis over 30 years. As of December 31, 2019 and 2018, such land use rights amounted to $0 thousand and $19,469 thousand, respectively. The Group had obtained the certificates of land use rights.

19. PREPAYMENTS AND OTHER ASSETS

	December 31	
	2019	**2018**
Prepayments		
Payments in advance	$ 2,363,684	$ 2,286,892
Prepayments for equipment	47,592	311,706
Others	526,221	547,164
	$ 2,937,497	$ 3,145,762
Other assets		
Restricted assets	$ 642,259	$ 3,701,289
Offset against business tax payable	616,034	458,029
Pledged time deposits	304,845	595,018
Temporary payment	186,724	264,385
Others	61,734	161,976
	$ 1,811,596	$ 5,180,697
Prepayments		
Current	$ 752,686	$ 638,326
Non-current	2,184,811	2,507,436
	$ 2,937,497	$ 3,145,762
Other assets		
Current	$ 1,419,710	$ 4,981,243
Non-current	391,886	199,454
	$ 1,811,596	$ 5,180,697

The Group recognized impairment loss on prepayments after assessment; for further disclosures, refer to Note 38.

20. LOANS

a. Short-term borrowings

	December 31	
	2019	**2018**
Secured borrowings		
Bank loans	$ 244,459	$ 270,000
Non-financial loans	-	41,808
	244,459	311,808

	December 31	
	2019	2018
Unsecured borrowings		
Line of credit borrowings	2,744,339	6,557,820
	$ 2,988,798	$ 6,869,628

1) The range of weighted average effective interest rates on bank loans was 1.7300%-6.2718% and 0.8800%-4.0698% per annum as of December 31, 2019 and 2018, respectively.
2) The secured non-financial loans were the refundable deposits that were pledged as collateral for loans to Co-operative Assets Management Co., Ltd. and Robina Finance & Leasing Corp. The borrowing rate was 4.1096%-6.5000% as of December 31, 2018.
3) The unused amounts of short-term bank loan facilities were $2,700,284 thousand and $5,227,083 thousand, as of December 31, 2019 and 2018, respectively.
4) The assets pledged as collaterals for short-term bank loans are shown in Note 37.

b. Short-term bills payable

	December 31	
	2019	2018
Commercial papers	$ 416,100	$ 276,600
Less: Unamortized discount on bills payable	(642)	(164)
	$ 415,458	$ 276,436

Outstanding short-term bills payable were as follows:

December 31, 2019

Promissory Institutions	Nominal Amount	Discount Amount	Carrying Value	Interest Rate
Commercial papers				
International Bills Finance Corporation	$ 374,400	$ 377	$ 374,023	0.750%
International Bills Finance Corporation	41,700	265	41,435	2.438%

December 31, 2018

Promissory Institutions	Nominal Amount	Discount Amount	Carrying Value	Interest Rate
Commercial papers				
International Bills Finance Corporation	$ 163,200	$ 78	$ 163,122	0.700%
International Bills Finance Corporation	113,400	86	113,314	2.490%

The Group did not pledge any asset as collateral for the short-term bills payable.

c. Long-term bank loans

	December 31	
	2019	2018
Secured loan		
10.13 billion syndicated loan from First Bank	$ 9,803,460	$ -
4.5 billion syndicated loan from First Bank	2,455,038	2,369,560
FMO & DEG Bank	1,071,422	1,149,430
Cathay Bank	678,119	796,164

	December 31	
	2019	2018
KGI Bank loan	250,000	250,000
CTBC Bank loan	171,374	412,458
Mega Bank	107,197	95,110
Taiwan Cooperative Bank loan	99,500	210,022
Bank SinoPac	94,981	-
Land Bank of Taiwan	65,770	-
Yuanta Bank	65,570	72,191
Far Eastern Bank	64,122	68,535
Union Bank of Taiwan loan	-	11,660
3.6 billion syndicated loan from Mega Bank	-	2,832,000
4.2 billion syndicated loan from First Bank	-	2,570,000
3.3 billion syndicated loan from Taiwan Cooperative Bank	-	1,327,550
0.55 billion syndicated loan from First Bank	-	178,750
Unsecured loan		
King's Town Bank	904,916	1,210,000
0.5 billion syndicated loan from First Bank	225,000	337,500
The Shanghai Commercial & Savings Bank	-	107,407
First Bank loan	-	23,515
Cota Commercial Bank loan	-	16,664
Other borrowings		
IMPA (1)	620,998	554,631
Machinery and equipment Financing from EQUVO Pte., Ltd.	488,134	672,941
Chailease International Financial Services. Co., Ltd.	143,061	81,384
Inventory Financing from SinoPac Leasing Corporation	78,420	-
Inventory Financing from Shinshin Credit Corporation	37,895	-
Inventory Financing from Hotai Finance Co., Ltd.	31,106	77,344
Inventory Financing from Taichung Bank Leasing Co., Ltd	21,416	71,555
Credit loan from IBT Leasing Co., Ltd.	15,089	59,714

(Continued)

	December 31	
	2019	2018
ROBINA VENTURES INCORPORATION	$ 5,549	$ 102,949
Credit loan from JihSun International Leasing & Finance Co., Ltd.	-	23,799
Credit loan from Taichung Bank Leasing Co., Ltd.	-	23,477
Inventory Financing from JihSun International Leasing & Finance Co., Ltd.	-	90,370
Inventory Financing from IBT Leasing Co., Ltd.	-	7,327
	17,498,137	15,804,007
Less: Current portion	(5,721,202)	(6,275,497)
	$ 11,776,935	$ 9,528,510
The range of interest rate	1.4896%-7.8200%	1.6894%-7.8200%

(Concluded)

Note 1: MEGASIXTEEN and TEV II entered into a long-term contract with IMPA for a term of 25 years. A derivative, which has a right to sell, as a liability, was embedded in the host contract. Such right was designated on initial recognition as one to be measured at fair value through profit or loss; the embedded derivative was required to be separated from the host contract as the economic characteristics of the embedded derivative were not closely related to those of the host contract, resulting in an approximate effective interest rate of 11.08% and 11.38%, respectively.

Note 2: The contracts will expire in November 2043 as of December 31, 2019 and December 31, 2018.

1) The bank borrowing restrictions are as follows:

Short-term borrowings

During the credit period, the agreement on the Taiwan Cooperative Bank, EnTie Commercial Bank and Yuanta Commercial Bank syndicated loans requires the maintenance of certain financial ratios based on the Group's annual and semiannual consolidated and nonconsolidated financial reports. The related restrictions are as follows:

a) Current ratio (current assets ÷ current liabilities): At least 100%;
b) Debt to equity ratio (total liabilities ÷ tangible net worth): No more than 300% and 125%;
c) Interest coverage ratio [(income before tax + depreciation + amortization + interest expense) ÷interest expense]: At least 100%; and
d) Tangible net worth: At least $2 billion and $10 billion.

The Group was not in compliance with the above loan requirements as shown in their consolidated and nonconsolidated financial statements as of December 31, 2018. However, during the grace period from the date that the consolidated and nonconsolidated financial statements was authorized for issue until the date that the consolidated and nonconsolidated financial statements as of and for the year ended December 31, 2018 are authorized for issue, such situation will not constitute a breach of the agreements, but the Group shall pay an additional 0.2% interest per annum based on the loan balance according to the loan agreements. In addition, should the Group fail to achieve the financial ratios in the next examination, the lender will demand 15% of the total borrowing amounts as reserve funds and an extra 0.2% interest will be charged until the Group attain the required ratios. According to the agreement, the Group has deposited amounts of $83,244 thousand as of December 31, 2018.

The above short-term borrowings had been settled in the first quarter of 2019.

Long-term borrowings

During the credit period, the agreement on the First Bank $10.13 billion syndicated loans requires the maintenance of certain financial ratios based on the Corporation annual and semiannual consolidated financial reports. The related restrictions are as follows:

a) Current ratio (current assets ÷ current liabilities): At least 100%;
b) Debt to equity ratio (total liabilities ÷ tangible net worth): No more than 150%;
c) Interest coverage ratio [(income before tax + interest expense + depreciation + amortization) ÷interest expense]: At least 2; and
d) Tangible net worth: At least $25 billion.

The First Bank $10.13 billion syndicated loans were new borrowings in February 2019. According to the agreement, the above financial ratios would have been reviewed based on the annual consolidated financial statements from 2019.

As of December 31, 2019, the Corporation did not meet the required interest coverage ratio and tangible net worth. Therefore, such contract will not constitute a breach of the agreement during the improvement period.

During the credit period, the agreement on the First Bank $4.5 billion syndicated loans requires the maintenance of certain financial ratios based on Utech's annual nonconsolidated financial reports. The related restrictions are as follows:

a) Current ratio (current assets ÷ current liabilities): At least 100%;
b) Debt to equity ratio (total liabilities ÷ tangible net worth): No more than 250% and 200%, as of 2018 and 2019, respectively;
c) Interest coverage ratio [(income before tax + depreciation + amortization + interest expense) ÷interest expense]: At least 4; and
d) Tangible net worth (net worth - intangible assets) should be at least $1.2 billion and $1.3 billion, as of 2018 and 2019, respectively.

Utech did not meet the required current ratio, interest coverage ratio and tangible net worth as of

December 31, 2019. An additional interest should be accrued during the improvement period, from December 31, 2018 to December 31, 2020, and such situation will not constitute a breach of the agreements. Since the above syndicated loans will expire on September 30, 2020, they were transferred from long-term bank loans to the current portion. A part of property, plant and equipment was pledged as collaterals for the abovementioned $4.5 billion syndicated loans as stated in the agreement, refer to Note 37.

Under the syndicated loan agreement with FMO Bank and DEG Bank, JRC should comply with all of the following financial covenants in its annual and semiannual consolidated financial statements:

a) Debt to equity ratio (total liabilities ÷ tangible net worth): No more than 233%;
b) Interest coverage ratio [(income before tax + depreciation + amortization + interest expense) ÷ principal and interest paid in current year]: At least 115%; and

c) The balance of reserve funds should not be less than US$ 3,000 thousand.

JRC meet the required financial covenants as of December 31, 2019.

During the credit period, the agreement on the CTBC Bank syndicated loans requires the maintenance of certain financial ratios based on Gintech (Thailand)'s annual nonconsolidated financial reports. The related restrictions are as follows:

a) Current ratio (current assets ÷ current liabilities): At least 120%;
b) Interest coverage ratio [(income before tax + depreciation + amortization + interest expense) ÷ (interest expense + current portion of loan-term bank loans)]: At least 150%.

As a guarantor, during the credit period, the maintenance of certain financial ratios based on the Corporation's annual and semiannual consolidated financial reports. The related restrictions are as follows:

a) Current ratio (current assets ÷ current liabilities): At least 100%;
b) Debt to equity ratio (total liabilities ÷ tangible net worth): No more than 120%;
c) Interest coverage ratio [(income before tax + depreciation + amortization + interest expense) ÷interest expense]: At least 4; and
d) Tangible net worth (net worth - intangible assets) should be at least $12 billion.

The Corporation obtained the consent from the banks in which the above-mentioned consolidated financial report's interest coverage ratio was not restricted in 2018.

As of December 31, 2019, the Corporation did not meet the required debt to equity ratio and interest coverage ratio. Therefore, such contract will not constitute a breach of the agreement during the improvement period, from September 30, 2019 to December 31, 2019. Additional interest should be accrued during the improvement period.

During the credit period, the agreement on the Cathay Bank secured loans requires the maintenance of certain financial ratios based on quarter nonconsolidated financial reports of ET ENERGY and of certain financial ratios based on annual nonconsolidated financial reports of CEDAR FALLS, MEGAEIGHT, MEGATWELVE, MEGATHIRTEEN, ASSETTHREE and RER CT 57. The related restrictions are as follows:

a) Interest coverage ratio [(income before tax + depreciation + amortization + interest expense) ÷ principal and interest paid in the current year]: At least 110% or 120%;

The companies mentioned above did not meet the required interest coverage ratio, under the loan agreements, the bank could increase the amount of reserve funds and they have deposited US$1,181 thousand as reserve funds as of December 31, 2019, and such situations will not constitute a breach of the agreements.

The Cathay Bank secured loans of ET ENERGY was derecognized since it was disposed of in the first quarter of 2019.

For the credit duration, the agreement on the Cathay Bank secured loans requires the maintenance of certain financial ratios based on the consolidated financial reports of GES USA. The related restrictions are as follows:

a) Current ratio (current assets ÷ current liabilities): At least 100%; and
b) Debt to equity ratio (total liabilities ÷ tangible net worth): No more than 300%.

GES USA did not violate the required financial ratios as of December 31, 2019.

Under the long-term loan agreement with Far Eastern International Bank, the Group is a guarantor for Yong Liang; the Group should be in compliance with all of the following financial covenants in its annual and semiannual consolidated financial statements:

a) Debt to equity ratio (total liabilities ÷ tangible net worth): No more than 150%; and
b) Tangible net worth should be at least $1.1 billion.

During the credit period, the agreement on the Mega Bank $3.6 billion syndicated loans requires the maintenance of certain financial ratios based on the Corporation’s annual and semiannual consolidated financial reports. The related restrictions are as follows:

a) Current ratio (current assets ÷ current liabilities): At least 100%; and
b) Debt to equity ratio (total liabilities and the guarantee balance ÷ tangible net worth): No more than 150%;

The Corporation did not violate the required financial ratios as of December 31, 2018. The above borrowing had been settled in the first quarter of 2019.

During the credit period, from 2019, the agreement on the First Bank $4.2 billion syndicated loans requires the maintenance of certain financial ratios based on the Corporation’s annual and semiannual consolidated financial reports. The related restrictions are as follows:

a) Current ratio (current assets ÷ current liabilities): At least 100%;
b) Debt to equity ratio (total liabilities and the guarantee balance ÷ tangible net worth): No more than 120%;
c) Interest coverage ratio [(income before tax + depreciation + amortization + interest expense) ÷ interest expense]: At least 1; and
d) Tangible net worth: At least $6 billion.

The Corporation did not violate the required financial ratios as of December 31, 2018. The above borrowing had been settled in the first quarter of 2019.

During the credit period, the agreement on the Taiwan Cooperative Bank $3.3 billion syndicated loans requires the maintenance of certain financial ratios based on the Corporation’s annual and semiannual nonconsolidated financial reports. The related restrictions are as follows:

a) Current ratio (current assets ÷ current liabilities): At least 100%;
b) Debt to equity ratio (total liabilities and the guarantee balance ÷ tangible net worth): No more than 125%;
c) Interest coverage ratio [(income before tax + depreciation + amortization + interest expense) ÷ interest expense]: At least 3; and
d) Tangible net worth: At least $10 billion.

The Corporation did not violate the required financial ratios as of December 31, 2018. The above borrowing had been settled in the first quarter of 2019.

During the credit period, the agreement on the First Bank $0.55 billion syndicated loans requires the maintenance of certain financial ratios based on the Corporation’s annual and semiannual consolidated financial statement:

a) Current ratio (current assets ÷ current liabilities): At least 100%;
b) Debt to equity ratio (total liabilities and guarantee balance ÷ tangible net worth): No more than 120%;
c) Interest coverage ratio [(income before tax + depreciation + amortization + interest expense) ÷ interest expense]: At least 4; and
d) Tangible net worth: At least $12 billion.

The above borrowing had been settled in the first quarter of 2019.
During the credit period, the agreement on the First Bank $0.5 billion syndicated loans requires the maintenance of certain financial ratios which has been revised and agreed by the banks based on the Corporation’s annual and semiannual consolidated financial statements:

a) Current ratio (current assets ÷ current liabilities): At least 100%;
b) Debt to equity ratio (total liabilities and guarantee balance ÷ tangible net worth): No more than 150%;
c) Interest coverage ratio [(income before tax + depreciation + amortization + interest expense) ÷

interest expense]: At least 2; and

d) Tangible net worth: At least $25 billion.

As of December 31, 2019, the Corporation did not meet the required interest coverage ratio and tangible net worth. The exemption is subject to approval by the banks and such exemption will not constitute a breach of the agreement.

The assets pledged as collaterals for long-term bank loans are shown in Note 37.
The unused amounts of long-term bank loan facilities were $506,040 thousand and $901,905 thousand as of December 31, 2019 and December 31, 2018, respectively.

2) Other loan restrictions are as follows:

a) Under its agreement with IMPA, the Group estimated that the fair value of its call option was US$3,150 thousand (roughly NT$94,014 thousand) at the date the agreement was signed in December 2017. The revalued fair value at December 31, 2019 was US$1,496 thousand (roughly NT$44,883 thousand). The fair values were estimated using the Black-Scholes pricing model under the following assumptions:

i. The executed price was approximately US$13,347 thousand (measured by reference to the flip date fair value);
ii. The expected volatility was 17.5%;
iii. The expected term of the option was 3 years; and
iv. Risk-free interest rate was 1.6%.

The expected volatility was derived from the average historical share volatilities of the entity and a peer group of public companies within the Group’s industry which it considers to be comparable to its business over the period. The expected term of share options represents the period that the entity issues the shares until the flip date. The risk-free interest rate is based on the U.S. Treasury yield curve.

b) Under its agreement with IMPA, the Group estimated that the fair value of its call option was US$3,538 thousand (roughly NT$108,758 thousand) at the date the agreement was signed in November 2018. The revalued fair value at December 31, 2019 was US$3,298 thousand (roughly NT$98,931 thousand). The fair values were estimated using the Black-Scholes pricing model under the following assumptions:

i. The executed price was approximately US$13,822 thousand (measured by reference to the Flip Date fair value);
ii. The expected volatility was 18%;
iii. The expected term of the option was 4.5 years; and
iv. Risk-free interest rate was 1.6%.

c) The Group entered into a loan agreement with IBT Leasing Co., Ltd., Hotai Finance Co., Ltd., Co-operative Assets Management Co., Ltd., Taichung Bank Leasing Co., Ltd., Shinshin Credit Corporation, SinoPac Leasing Corporation and Jih Sun International Leasing & Finance Co., Ltd. Notes payable were used by the Group to repay the outstanding principal amount, including interest, in equal installments; as of December 31, 2019 and December 31, 2018, the sum of all outstanding installments were $187,582 thousand and $342,353 thousand, including interest amounting to $4,308 thousand and $7,439 thousand, respectively.

d. Preference share liabilities

	December 31	
	2019	**2018**
Class A preference shares	$ 44,260	$ 60,964
Less: Current portion	(16,082)	(16,481)
	$ 28,178	$ 44,483

1) Class A preference shares
For the purpose of tax deductions, the contents of the agreement included two parts as follows:

a) MEGASIXTEEN, a US subsidiary of GES, entered into a contract with MPC, a non-controlling interest, to setup a startup company, GES AC, in order to carry out the solar energy business and activities through its five limited liability companies; all of those limited liability companies entered into a 25-year sales contract with IMPA for the sale of electricity. As of December 31, 2019, the amount of injection from MPC and MEGASIXTEEN into Class A shares and Class B shares, respectively, are as follows:
   i. Class A shares: MPC owns 32.41% of GES AC's outstanding ordinary shares, amounting to US$11,920 thousand (roughly NT$347,105 thousand). MPC will be given priority to receive 0.65% of the accumulated cash dividends with a fixed asset management fee on a quarterly basis. The Class A shareholders have voting rights and are entitled to 99% of the profit sharing during the first five years of GES AC's business operations.

   ii. Class B shares: MEGASIXTEEN owns 67.59% of GES AC's outstanding ordinary shares, amounting to US$24,862 thousand (roughly NT$723,987 thousand). The Class B shareholders have voting rights, and GES AC's financial management and control remains under the control of Class B shareholders and is subject to a managing member fee. MEGASIXTEEN will receive 1% of the profit sharing during the first five years of GES AC's business operations.

   The contract which contained a financial liability component, which was not closely related to the host contract, amounted to $34,949 thousand. The obligation was designated on initial recognition as one to be classified as "preference shares liabilities - current and non-current". As of December 31, 2019, preference share liability was US$628 thousand (roughly NT$18,832 thousand). The Group paid the agreed amount in the form of cash dividends and a fixed asset management fee of US$317 thousand (roughly NT$9,812 thousand) as repayments of Class A preference shares. A cash dividend of US$85 thousand (roughly NT$2,549 thousand) was not yet paid out by the Group, and was classified under "Other payables".

   Five limited liability companies within GES AC estimated the fair value of total shareholdings to be US$12,592 thousand (roughly NT$377,696 thousand), as of December 31, 2019; the fair value measurements are those derived from valuation techniques that include inputs that are not based on observable market data; therefore the entities made estimates and judgments about their fair values using an income approach defined as using Level 3 inputs under IFRS 13 fair value measurement standards. The fair values using the Level 3 fair value measurement standards were estimated using the following significant assumptions, as of December 31, 2019:

   i. A discount rate of 6.5%, respectively;
   ii. Final valuation based on a 0.5% lapse rate of tariff rates on long-term sales of electricity; and
   iii. Financial multipliers by peer companies.

   MEGASIXTEEN has the preferred rights to repurchase all Class A shares at the higher of the fair value or 5.5% of the amount of capital injection by MPC which is the value applicable under the contract; MEGASIXTEEN is expected to have such rights for a certain period of time starting from the flip date (December 2022). The long call option is estimated at a fair value of US$3,948 thousand (equivalent to approximately NT$117,840 thousand) and reevaluated at a fair value of US$3,449 thousand (equivalent to approximately NT$103,452 thousand) at December 31, 2019, using the Black-Scholes pricing model with the following significant assumptions:

   i. The executed price of approximately US$656 thousand (measured by reference to the flip date fair value);
   ii. The expected volatility of 17.5%;
   iii. The expected term of the option of 3 years; and
   iv. A risk-free interest rate of 1.6%.

   The expected volatility is derived from the average historical share volatilities of the entity and a peer group of public companies within the entity's industry that the Group considers to be comparable to the entity's business over a period. The expected term of share options represents the period that the entity issues the shares to the flip date. The risk-free interest rate is based on the U.S. Treasury yield curve.

b) A US subsidiary, GES USA had injected capital in TEV II, and owned 50% legal right, and reinvested into TEV Solar to own 100% right. In order to carry out the solar energy business and activities through its three limited liability companies, a US subsidiary, GES USA, entered into a contract with ACS, a non-controlling interest, to setup a startup company, AC GES Solar; all of those limited liability companies entered into a 25-year sales contract with IMPA for the sale of electricity. As of December 31, 2019, the amount of injection from ACS and TEV solar into Class A shares and Class B shares, respectively, are as follows:

i. Class A shares: ACS owns 33.81% of AC GES Solar's outstanding ordinary shares, amounting to US$10,051 thousand (roughly NT$308,970 thousand). ACS will be given priority to receive 0.675% of the accumulated cash dividends with a fixed asset management fee on a quarterly basis. The Class A shareholders have voting rights and are entitled to 99% of the profit sharing during the first five and half years of AC GES Solar's business operations.

ii. Class B shares: A US subsidiary of GES USA owns 66.19% of AC GES Solar's outstanding ordinary shares, amounting to US$19,674 thousand (roughly NT$604,780 thousand). The Class B shareholders have voting rights, and AC GES Solar's financial management and control remains under the control of Class B shareholders and is subject to a managing member fee. A US subsidiary of GES will receive 1% of the profit sharing during the first five and half years of AC GES Solar's business operations.

The contract which contained a financial liability component, which was not closely related to the host contract, amounted to $33,756 thousand. The obligation was designated on initial recognition as one to be classified as "preference shares liabilities - current and non-current". As of December 31, 2019, preference share liability was US$848 thousand (roughly NT$25,428 thousand). The Group paid the agreed amount in the form of cash dividends and a fixed asset management fee of US$279 thousand (roughly 8,620 thousand) as repayments of Class A preference shares. A cash dividend of US$143 thousand (roughly NT$4,295 thousand) was not yet paid out by the Group and was classified under "Other payables".

Three limited liability companies within AC GES Solar estimated the fair value of total shareholdings to be US$14,695 thousand (roughly NT$440,782 thousand) as of December 31, 2019; the fair value measurements are those derived from valuation techniques that include inputs that are not based on observable market data; therefore the entities made estimates and judgments about their fair values using an income approach defined as using Level 3 inputs under IFRS 13 fair value measurement standards. The fair values using the Level 3 fair value measurement standards were estimated using the following significant assumptions, as of December 31, 2019:

i. A discount rate of 6.5%;
ii. Final valuation based on a 0.5% lapse rate of tariff rates on long-term sales of electricity; and
iii. Financial multipliers by peer companies.

TEV Solar has the preferred rights to repurchase all Class A shares at the higher of the fair value or 7% of the amount of capital injection by ACS which is the value applicable under the contract; TEV Solar is expected to have such rights for a certain period of time starting from the flip date (June 2024). The long call option is estimated at a fair value of US$4,149 thousand (equivalent to approximately NT$127,543 thousand) and reevaluated at a fair value of US$4,314 thousand (equivalent to approximately NT$129,413 thousand) at December 31, 2019, using the Black-Scholes pricing model with the following significant assumptions:

i. The executed price of approximately US$704 thousand (measured by reference to the flip date fair value);
ii. The expected volatility of 18%;
iii. The expected term of the option of 4.5 years; and
iv. A risk-free interest rate of 1.6%.

The expected volatility is derived from the average historical share volatilities of the entity and a peer group of public companies within the entity's industry that the Group considers to be comparable to the entity's business over a period. The expected term of share options represents the period that the entity issues the shares to the flip date. The risk-free interest rate is based on the U.S. Treasury yield curve.
For the year ended December 31, 2019, the Group paid preference share dividends of US$60 thousand (roughly NT$1,859 thousand) and US$28 thousand (roughly NT$881 thousand) to

MegaSixteen and TEV II, respectively, which were classified under “finance costs”.
As of December 31, 2019 and 2018, GES recognized $4,506 thousand and 5,669 thousand loss on financial liabilities at fair value through profit or loss, which was classified under “Loss on financial assets (liabilities) at fair value through profit or loss”.

21. BONDS PAYABLE

	December 31 2019	December 31 2018
Secured overseas convertible bonds (a)	$ -	$ 3,614,497
Less: Current portion	-	(3,614,497)
	$ -	$ -

a. Secured overseas convertible bonds

On October 27, 2016, the Corporation issued the third secured overseas convertible bonds, listed on the Singapore Exchange. The convertible bonds contained the host liability instrument, the conversion option and derivative instrument of redemption option. The effective interest rate of the host liability instrument on initial recognition was 3.186% per annum, and the conversion option derivative instruments were measured at fair value through profit or loss.

Movements of the host liability instrument, the conversion option and derivative instrument of the redemption option are as follows:

	Host Liability Instrument		Conversion Option and Derivative Instrument of Redemption Option	
	US$	NT$	US$	NT$
Date of issue	$ 111,553	$ 3,518,939	$ 5,532	$ 174,728
Rate adjusted	-	81,974	-	8
Interest charged at an effective interest rate	631	20,244	-	-
Accrued interest payable	(160)	(5,119)	-	-
Gain due to changes in fair value	-	-	(5,520)	(174,349)
Balance at December 31, 2016	112,024	3,616,038	12	387
Rate adjusted	-	(273,624)	-	-
Interest charged at an effective interest rate	3,627	109,977	-	-
Accrued interest payable	(903)	(27,380)	-	-
Gain due to changes in fair value	-	-	(12)	(387)
Balance at December 31, 2017	114,748	3,425,011	-	-
Rate adjusted	-	103,951	-	-
Interest charged at an effective interest rate	3,744	112,981	-	-
Accrued interest payable	(909)	(27,446)	-	-
Gain due to changes in fair value	-	-	-	-
Balance at December 31, 2018	117,583	3,614,497	-	-
Rate adjusted	-	38,873	-	-
Interest charged at an effective interest rate	3,170	98,409	-	-
Accrued interest payable	(753)	(23,379)	-	-
Repayments of bond payables	(120,000)	(3,728,400)	-	-
Balance at October 27, 2019	$ -	$ -	$ -	$ -

The agreement of ING Bank requires the maintenance of certain financial ratios during the conversion period of the third secured overseas convertible bonds based on the Corporation's annual and semiannual unconsolidated financial reports. The related restrictions are as follows:

1) Current ratio (Current assets ÷ Current liabilities): At least 110%;
2) Debt to equity ratio (Total liabilities ÷ Total tangible net worth): No more than 125%, where contingent liabilities are included when total liabilities are calculated;
3) Interest coverage ratio [(Income before tax + Depreciation + Amortization + Interest expense) ÷ Interest expense]: At least 3; and
4) Tangible net worth: At least $10 billion..

The Corporation did not violate the required financial ratios as of December 31, 2018.

The bonds payable was repaid in October 2019.

The assets pledged as collaterals for bonds payable are shown in Note 37.

22. ACCRUED EXPENSES AND OTHER CURRENT LIABILITIES

	December 31	
	2019	**2018**
Accrued expenses		
Loss on contracts	$ 278,990	$ 260,480
Bonus	149,646	284,718
Salaries	140,062	221,354
Others	745,044	1,326,557
	$ 1,313,742	$ 2,093,109
Other liabilities		
Deferred revenue	$ 53,826	$ 245,677
Advance receipts from customers	60,706	94,832
Others	9,414	21,606
	$ 123,946	$ 362,115
Current	$ 69,372	$ 131,650
Non-current	54,574	230,465
	$ 123,946	$ 362,115

23. PROVISIONS

	December 31	
	2019	**2018**
Non-current		
Warranties	$ 176,069	$ 305,138

Warranties		
Balance at January 1	$ 305,138	$ 246,033
Additions	50,384	62,485
Reversals	(179,236)	-
Usage	(52)	(3,306)
Effects of exchange rate changes	(165)	(74)
Balance at December 31	$ 176,069	$ 305,138

The provision for warranty claims represents the present value of management’s best estimate of the future outflow of economic benefits on the Group’s obligations stated in sales agreements. The estimate was based on historical warranty trends and may vary as a result of the entry of new materials, altered manufacturing processes or other events affecting product quality.

24. RETIREMENT BENEFIT PLANS

The Group makes monthly contributions to employees’ individual pension accounts at 6% of monthly salaries and wages in accordance with the Labor Pension Act and these contributions are recognized as pension costs.
The employees of the Group’s subsidiaries in the People’s Republic of China (PRC) are members of a state-managed retirement benefit plan operated by the government of the PRC. The subsidiaries are required to contribute a specified percentage of payroll costs to the retirement benefit scheme to fund the benefits. The Group’s only obligations to the retirement benefit plan is to make contributions equal in the amount of the specified contributions.

25. EQUITY

a. Share capital

1) Ordinary shares

	December 31	
	2019	**2018**
Number of shares authorized (in thousands)	3,200,000	3,200,000
Amount of shares authorized	$ 32,000,000	$ 32,000,000
Number of shares issued and fully paid (in thousands)	2,665,338	2,515,759
Shares issued	$ 26,653,375	$ 25,157,599

Fully paid ordinary shares, which have a par value of $10, carry one vote per share and a right to dividends.
Of the Corporation’s authorized shares, 80,000 thousand shares had been reserved for the issuance of employee share options.
On January 29, 2018, the Corporation’s board of directors approved to sign a merger agreement with Gintech Energy and Solartech Energy, and the date of the merger is October 1, 2018. On March 28, 2018, the Corporation, Gintech Energy and Solartech Energy approved the merger in their shareholders’ meeting.

In connection with the combined contract, Gintech Energy and Solartech Energy are entitled to convert outstanding ordinary shares, including private equity and restricted employee share options, through a share swap at a 1:1.39 and 1:1.17 ratio (“sum of the consideration”), respectively. Regarding the share swap, the Corporation expected a total capital increase of NT$11,644,007 thousand and issued new shares amounted to 1,164,401 thousand shares (including 40,122 thousand shares of private-placement shares,), all ordinary shares, with a par value of NT$10 which was approved by the FSC on July 23, 2018. On August 3, 2018, the Corporation’s board of directors ruled that, due to the cancellation of part of the issue of employee rights shares issued by the Corporation, Gintech Energy and Solartech Energy, the conversion equity was changed, and the new shares issued by the merger and capital increase were adjusted from 1,164,401 thousand shares to 1,164,020 thousand shares, the base date of the merger and the date of listing of the new shares issued by the capital increase were October 1, 2018.

To meet the needed amount of consideration to be paid for the combination through the issuance of ordinary shares and the liquidity requirement of the merged entity, the Corporation processed a NT$14,000,000 thousand capital increase. The Corporation’s total amount of capital is NT$32,000,000 thousand after the capital increase. The number of ordinary shares issued with a par value of NT$10 was 3,200,000 thousand shares.

On January 29, 2018, the Corporation’s board of directors approved to increase its capital by an issuance of up to 380,000 thousand shares through private-placement shares, which was also subject to approval by the shareholders in their meeting on March 28, 2018. On October 1, 2018, the Corporation’s board of directors approved an increase of its capital by $2,781,307 thousand through a private placement of 334,292 thousand new ordinary shares at NT$8.32 per share with the effective date on October 15, 2018.The private-placement shares expired on March 27, 2019. On May 6, 2019, the Corporation’s board of directors resolved not to continue handling the issuance of

45,708 thousand unqualified shares through private-placement shares.

To integrate the overall resources and to improve the operational efficiency of the Group, on February 22, 2019, the Corporation's board of directors approved to sign a simplified merger agreement with 100% sharing subsidiary, GES, according to Article 19 of the Corporate Mergers and Acquisitions Act and other relevant laws and regulations, with the Corporation as the surviving company and GES as the extinct company after the merger (the "merger"). Considering that the entire issued share capital of GES was held by the Corporation, the share capital of GES held by the Corporation was cancelled at no cost on the date of the merger. In the merger, the Corporation does not need to pay in exchange of shares. The date of the merger was March 31, 2019.

As of June 14, 2019, the Corporation's board of directors approved the issuance of 150,000 thousand ordinary shares for cash through a fixed-price system. The Corporation's total amount of capital was $ 26,655,774 thousand after the capital increase. Ordinary shares were issued at $6.52 per share with a par value of $10. The above issuance was approved by FSC on December 10, 2019.

b. Capital surplus

	December 31	
	2019	2018
May be used to offset a deficit, distributed as cash dividends, or transferred to share capital (1)		
Share premiums	$ 113,539	$ 963,007
May only be used to offset a deficit (2)		
Share of change in equity interests of associates and joint ventures	-	42,000
Share premiums - employee restricted shares	6,452	-
Share premiums - employee share options	3,638	-
May not be used for any purpose		
Arising from employee restricted shares	(4,640)	6,016
	$ 118,989	$ 1,011,023

1) Such capital surplus may be used to offset a deficit; in addition, when the Group has no deficit, such capital surplus may be distributed as cash dividends or transferred to share capital (limited to a certain percentage of the Group's capital surplus and once a year).
2) Such capital surplus arises from the effect of changes in ownership interest in a subsidiary resulting from equity transactions other than actual disposal or acquisition, or from changes in capital surplus of a subsidiary accounted for using the equity method and adjustments for the capital surplus generated from the convertible bonds, employee restricted shares and employee share options when they expire.

c. Retained earnings and dividend policy

Under the dividend policy, if the Group made a profit in a fiscal year, the profit shall be first utilized for paying taxes, offsetting losses of previous years, setting aside as legal reserve 10% of the remaining profit, setting aside or reversing special reserve in accordance with the laws and regulations, and then any remaining profit together with any undistributed retained earnings shall be used by the Group's board of directors as the basis for proposing a distribution plan, which should be resolved in the shareholders' meeting for the distribution of dividends and bonuses to shareholders. For the policies on the distribution of employees' compensation and remuneration of directors and supervisors before and after the amendment, refer to Note 27 (f).

The Articles of Incorporation of the Group also stipulate a dividend policy that the issuance of share dividends takes precedence over the payment of cash dividends. In principle, cash dividends should be not less than 10% of total dividends distributed.

An appropriation of earnings to legal reserve shall be made until the legal reserve equals the Group's paid-in capital. Legal reserve may be used to offset deficits. If the Group has no deficit and the legal reserve has exceeded 25% of the Group's paid-in capital, the excess may be transferred to capital or distributed in cash.

Items referred to under Rule No. 1010012865, Rule No. 1010047490 and Rule No. 1030006415 issued by the FSC and in the directive titled "Questions and Answers for Special Reserves Appropriated Following Adoption of IFRSs" should be appropriated to or reversed from a special reserve by the

Group.

The offset of accumulated deficits for 2018 and 2017 had been proposed by the Corporation's board of directors on June 17, 2019 and had been approved in the shareholders' meeting on June 20, 2018, respectively. The information is as follows:

	Offset of Accumulated Deficits For the Year Ended December 31	
	2018	**2017**
Offset of Accumulated Deficits with capital surplus	$ 369,468	$ 4,611,501

The offsetting of accumulated deficit for the year ended December 31, 2019 is subject for resolution by the Corporation's board of directors on March 26, 2020.
The offset of accumulated deficit in 2019 is subject to resolution in the shareholders' meeting expected to be held on June 22, 2020.

d. Other equity items

1) Unrealized gain on financial assets at FVTOCI

	For the Year Ended December 31	
	2019	**2018**
Balance at January 1	$ (527,897)	$ (130,891)
Recognized during the period		
Unrealized gain - equity instruments	803,421	(397,006)
Disposal of equity instruments cumulative gains and losses transfer to retained earnings	7,968	-
Balance at December 31	$ 283,492	$ (527,897)

e. Treasury shares

The Corporation acquired treasury shares as result of merging Gintech Energy on October 1, 2018.

Name of Subsidiary	**Number of Shares Held (In Thousands of Shares)**	**Carrying Amount**	**Market Price**
December 31, 2019			
Utech	1,883	$ 18,699	$ 14,427
December 31, 2018			
Utech	1,883	$ 18,699	$ 14,747

The shares of the Corporation held by Utech has been treated as treasury shares. They are same as general shareholders except for the rights of cash injection and the rights of voting.

26. REVENUE

For the year ended December 31, 2019

	Reportable Segments				
	Modules	Solar Cells	Power Facilities	Others	Total
Revenue from contracts with customers					
Revenue from the sale of goods	$ 9,522,440	$ 5,684,108	$ 1,815	$ 1,875	$15,210,238
Revenue from construction	-	-	984,702	-	984,702
Revenue from the sale of power facilities	-	-	802,662	-	802,662
Revenue from other activities	-	-	714,850	412,177	1,127,027
	9,522,440	5,684,108	2,504,029	414,052	18,124,629
Revenue from other operating activities	-	-	14,483	-	14,483
	$ 9,522,440	$ 5,684,108	$ 2,518,512	$ 414,052	$18,139,112

For the year ended December 31, 2018 (Restated)

	Reportable Segments				
	Modules	Solar Cells	Power Facilities	Others	Total
Revenue from contracts with customers					
Revenue from the sale of goods	$ 7,190,802	$ 3,249,827	$ 525,538	$ 47,663	$11,013,830
Revenue from the sale of power facilities	-	-	712,943	-	712,943
Revenue from construction	-	-	613,411	-	613,411
Revenue from other activities	-	65,339	280,069	351,060	696,468
	7,190,802	3,315,166	2,131,961	398,723	13,036,652
Revenue from other operating activities	-	-	100,329	44	100,373
	$ 7,190,802	$ 3,315,166	$ 2,232,290	$ 398,767	$13,137,025

a. Contract balances

	December 31, 2019	December 31, 2018 (Restated)	January 1, 2018 (Restated)
Notes and accounts receivable (Note 10)	$ 2,575,586	$ 3,134,295	$ 1,540,602
Contract assets			
Power facility construction contracts	$ 483,247	$ 96,617	$ 64,295
Less: Allowance for impairment loss	-	-	-
Contract assets - current	$ 483,247	$ 96,617	$ 64,295
Contract liabilities			
Sale of goods	$ 253,899	$ 201,876	$ 91,298
Power facility construction contracts	42,777	102,876	71,963
Power facility sales contracts	27,156	40,500	145,254
Contract liabilities - current	$ 323,832	$ 345,252	$ 308,515

The changes in the contract asset and the contract liability balances primarily result from the timing difference between the Group’s performance and the customer’s payment; other significant changes are as follows:

	For the Year Ended December 31	
	2019	2018
Contract assets		
Transfers of beginning balance to receivables	$ 82,899	$ 56,819

Revenue of the reporting period recognized from the contract liabilities incurred from the beginning of the year and from the performance obligations satisfied in previous periods is as follows:

	For the Year Ended December 31	
	2019	2018
From contract liabilities incurred from the beginning of the year		
Sale of goods	$ 187,953	$ 76,025
Power facility construction contracts	66,512	49,372
Power facility sales contracts	20,357	138,651
	$ 274,822	$ 264,048

b. Disaggregation of revenue

	For the Year Ended December 31	
	2019	2018 (Restated)
Geographical markets		
Taiwan	$ 6,031,169	$ 6,688,542
America	2,796,332	929,117
India	2,404,830	-
Germany	2,319,921	1,991,574
Others	4,572,377	3,427,419
	$ 18,124,629	$ 13,036,652

(Continued)

	For the Year Ended December 31	
	2019	2018 (Restated)
Timing of revenue recognition		
Satisfied at a point in time	$ 17,121,370	$ 12,402,479
Satisfied over time	1,003,259	634,173
	$ 18,124,629	$ 13,036,652

(Concluded)

c. Partially completed contracts

The transaction price, allocated to the performance obligations that are not fully satisfied and the expected timing for recognition of revenue are as below:

	December 31, 2019
Power facility construction contracts - in 2020	$ 319,110

The above information does not include contracts with expected duration equal to or less than one year.

27. COMPREHENSIVE INCOME (LOSS)

a. Other income and expenses

	For the Year Ended December 31	
	2019	2018
Impairment loss on property, plant and equipment	$ (1,617,369)	$ (257,949)
Impairment loss on intangible assets	(137,904)	-
Loss on disposal of property, plant and equipment	(11,988)	(26)
Loss on disposal of non-current assets held for sale	-	(2,403)
Other	569	-
	$ (1,766,692)	$ (260,378)

b. Interest income and other income

	For the Year Ended December 31	
	2019	2018
Interest income		
Bank deposits	$ 35,482	$ 69,250
Puttable preference shares	9,541	11,487
Financing provided to related parties	4,145	14,719
Others	4,293	9,317
	$ 53,461	$ 104,773

(Continued)

	For the Year Ended December 31	
	2019	2018
Other income		
Rental income	$ 27,277	$ 7,742
Machine lending income	19,958	-
Insurance compensation income	8,092	38,833
Others	110,754	50,811
	$ 166,081	$ 97,386

c. Finance costs

	For the Year Ended December 31	
	2019	2018
Interest on bank loans	$ 575,819	$ 480,268
Interest on convertible bonds	98,409	112,981
Other interest expense	200,066	60,159
	$ 874,294	$ 653,408

d. Depreciation and amortization

	For the Year Ended December 31	
	2019	2018
Property, plant and equipment	$ 3,248,758	$ 2,344,212
Right-of-use assets	99,557	-
Intangible assets	22,933	16,678
	$ 3,371,248	$ 2,360,890
An analysis of depreciation by function		
Operating costs	$ 3,071,168	$ 2,205,792
Operating expenses	277,147	138,420
	$ 3,348,315	$ 2,344,212
An analysis of amortization by function		
Operating costs	$ 5,885	$ -
Operating expenses	17,048	16,678
	$ 22,933	$ 16,678

e. Employee benefits expense

	For the Year Ended December 31	
	2019	2018
Post-employment benefits (Note 24)		
Defined contribution plans	$ 76,693	$ 64,183
Share-based payments		
Equity-settled share-based payments	3,337	16,492
Other employee benefits	2,319,444	1,829,896
Total employee benefits expense	$ 2,399,474	$ 1,910,571

	For the Year Ended December 31	
	2019	2018
An analysis of employee benefits expense by function		
Operating costs	$ 1,625,089	$ 1,270,508
Operating expenses	774,385	640,063
	$ 2,399,474	$ 1,910,571

(Concluded)

f. Employee’s compensation and remuneration of directors and supervisors

The amendments stipulate distribution of employees’ compensation and remuneration to directors at the rates no less than 3% and no higher than 2%, respectively, of net profit before income tax, employees’ compensation, and remuneration to directors. The Corporation incurred a deficit for the year ended December 31, 2019, 2018 and 2017; thus, neither compensation to employees nor remuneration to directors was estimated.

If there is a change in the proposed amounts after the date the annual consolidated financial statements have been authorized for issue, the differences are accounted for as a change in accounting estimate in the following year.

Information on the compensation to employees and the remuneration to directors, approved by the Corporation’s board of directors in 2020 and 2019 is available on the Market Observation Post System website of the Taiwan Stock Exchange.

g. Net gain (loss) on foreign currency exchange

	For the Year Ended December 31	
	2019	2018
Foreign exchange gains	$ 3,478,355	$ 2,449,751
Foreign exchange losses	(3,452,405)	(2,510,994)
Net profit (loss)	$ 25,950	$ (61,243)

h. Components of other comprehensive income

	For the Year Ended December 31	
	2019	2018
Unrealized loss on financial assets at FVTOCI		
Arising during the year	$ 803,421	$ (397,006)
Exchange difference on translating foreign operations:		
Arising during the year	$ 16,651	$ 126,308

28. INCOME TAXES

a. Income tax recognized in profit or loss

The major components of tax (expense) benefit were as follows:

	For the Year Ended December 31	
	2019	2018
Current tax		
Current year	$ (61,845)	$ (21,915)
Prior period	(788)	(1,391)
Income tax expense recognized in profit or loss	$ (62,633)	$ (23,306)

A reconciliation of profit and current income tax benefit is as follows:

	For the Year Ended December 31	
	2019	2018
Loss before tax	$ (5,706,556)	$ (581,862)
Income tax benefit at the 20% statutory rate	$ 1,143,312	$ 116,372
Non-deductible expenses in determining taxable income	(20,083)	348,914
Permanent difference	(192,267)	-
Tax-exempt income	178	767
Income tax on unappropriated earnings	(666)	-
Effect of different tax rate of group entities operating in other jurisdictions	(11,138)	27,952
Unrecognized loss carryforwards	(721,010)	(519,221)
Unrecognized deductible temporary differences	17,042	53,959
Reversal of temporary difference	(275,213)	(50,658)
Adjustments for prior years' tax benefit	(788)	(1,391)
Income tax expense recognized in profit or loss	$ (62,633)	$ (23,306)

The Income Tax Act in the ROC was amended in 2018, and the corporate income tax rate was adjusted from 17% to 20%. In addition, the rate of the corporate surtax applicable to the 2018 unappropriated earnings was reduced from 10% to 5%. The applicable tax rate used by subsidiaries in China is 25%. Tax rates used by other group entities operating in other jurisdictions are based on the tax laws in those jurisdictions.

b. Current tax assets and liabilities

	For the Year Ended December 31	
	2019	2018
Current tax assets		
Tax refund receivable	$ 26,947	$ 75,426
Prepaid income tax	903	901
	$ 27,850	$ 76,327

(Continued)

	For the Year Ended December 31	
	2019	2018
Current tax liabilities		
Income tax payable	$ 16,958	$ 1,910

(Concluded)

c. Deferred tax assets and liabilities

The movements of deferred tax assets and deferred tax liabilities were as follows:

For the year ended December 31, 2019

	Balance, Beginning of Year	Recognized in Profit or Loss	Recognized in Other Comprehensive Income	Balance, End of Year
Deferred tax assets				
Investment credits	$ 11,773	$ -	$ -	$ 11,773
Loss carryforwards	422,426	(1,224)	-	421,202
Temporary differences				
Depreciation differences on property, plant and equipment	7,427	(3,086)	-	4,341
Impairment loss on property, plant and equipment	1,175	-	-	1,175
Write-downs of inventories	1,756	358	-	1,398
Others	631,812	(15,151)	-	616,661
	$ 1,076,369	$ (19,819)	$ -	$ 1,056,550
Deferred tax liabilities				
Temporary differences				
Unrealized foreign exchange gains	$ 19,800	$ (19,800)	$ -	$ -
Unrealized gains on financial instruments at fair value through profit or loss	29,605	5,551	-	35,156
Gain on disposal of subsidiaries at a percentage different from its earlier ownership percentage	6,206	1,464	-	7,670
Others	8,116	(3,210)	-	4,906
	$ 63,727	$ (15,995)	$ -	$ 47,732

For the year ended December 31, 2018

	Balance, Beginning of Year	Recognized in Profit or Loss	Recognized in Other Comprehensive Income	Balance, End of Year
Deferred tax assets				
Investment credits	$ 11,431	$ 342	$ -	$ 11,773
Loss carryforwards	-	422,426	-	422,426
Temporary differences				
Depreciation differences on property, plant and equipment	7,452	(25)	-	7,427
Credit loss on property, plant and equipment	-	1,175	-	1,175

	Balance, Beginning of Year	Recognized in Profit or Loss	Recognized in Other Comprehensive Income	Balance, End of Year
Write-downs of inventories	1,254	502	-	1,756
Others	70,392	561,573	(153)	631,812
	$ 90,529	$ 985,993	$ (153)	$ 1,076,369
Deferred tax liabilities				
Temporary differences				
Unrealized foreign exchange gains	$ 17,381	$ 2,419	$ -	$ 19,800
Unrealized gains on financial instruments at fair value through profit or loss	28,678	927	-	29,605
Gain on disposal of subsidiaries at a percentage different from its earlier ownership percentage	-	6,206	-	6,206
Others	7,066	1,050	-	8,116
	$ 53,125	$ 10,602	$ -	$ 63,727

The investment credits are mainly due to the subsidy policy of GES USA for the award of solar energy under the US policy, which gives a certain amount of investment tax credit according to the cost of the actual construction completed by the solar power plant.

d. Deductible temporary differences, unused loss carryforwards and unused investment credits for which no deferred tax assets have been recognized in the consolidated balance sheets

	December 31	
	2019	2018
Loss carryforwards		
Expiry in 2020	$ 224,309	$ 252,753
Expiry in 2021	1,651,521	1,244,132
Expiry in 2022	1,489,271	452,788
Expiry in 2023	735,702	114,308

(Continued)

	December 31	
	2019	2018
Expiry in 2024	$ 628,488	$ 24,818
Expiry in 2025	494,770	381,127
Expiry in 2026	1,401,642	1,362,318
Expiry in 2027	2,128,528	1,985,339
Expiry in 2028	3,747,677	3,096,872
Expiry in 2029	3,501,813	-
	$ 16,003,721	$ 8,914,455
Deductible temporary differences	$ 9,231,067	$ 6,050,553

(Concluded)

The tax losses of deferred taxes assets and the investment credits amounted to $358,231 and $228,922, respectively, which yet recognizes by GES USA. And the deductible year are 2020 to 2039.

Under Article 38 of the Business Mergers and Acquisitions Act, any loss of the Group and of DelSolar, Gintech Energy and Solartech Energy from within five years before the merger is tax-deductible pro rata by the shareholders' holding in the after-merger surviving company and can be deducted from its current year's profit from within 5 years. The last deduction year is due in 2018.

Under Article 43 of the Business Mergers and Acquisitions Act, amended on July 8, 2015, any loss of the Group, of Gintech Energy and of Solartech Energy from within ten years before the merger is tax-deductible pro rata by the shareholders' holding in the after-merger surviving company and can be deducted from its current year's profit from within 10 years. The last deduction year is due in 2028.

e. Information on tax - exemption

As of December 31, 2019, profits attributable to the following expansion projects were exempt from income tax for five years under the Statute for Upgrading Industries:

Statute for Upgrading Industries	Period
Third expansion of the manufacturing plant	January 1, 2015-December 31, 2019
Fourth expansion of the manufacturing plant	January 1, 2016-December 31, 2020
Fifth expansion of the manufacturing plant	January 1, 2017-December 31, 2021
Expansion of the manufacturing plant acquired through a business combination	January 1, 2017-December 31, 2021

f. Income tax assessments

The Corporation's income tax returns through 2017 have been assessed by the tax authorities.

29. LOSS PER SHARE

Unit: NT$ Per Share

	Years Ended December 31	
	2019	2018
Basic loss per share	$ (2.26)	$ (0.42)
Diluted loss per share	$ (2.26)	$ (0.42)

The loss and weighted average number of ordinary shares outstanding (in thousand shares) in the computation of loss per share were as follows:

Net loss for the year

	Years Ended December 31	
	2019	2018
Loss for the year	$ (5,686,065)	$ (577,240)
Effect of dilutive potential ordinary shares:		
Interest on convertible bonds (after tax)	-	-
Loss used in the computation of diluted loss per share	$ (5,686,065)	$ (577,240)

Weighted average number of ordinary shares outstanding (in thousand shares):

	Years Ended December 31	
	2019	2018
Weighted average number of ordinary shares used in the computation of basic loss per share	2,511,855	1,380,522
Effect of dilutive potential ordinary shares:		

	Years Ended December 31	
	2019	2018
Convertible bonds	-	-
Restricted employee share options	-	-
Employee compensation or bonuses issued to employees	-	-
Employee share options	-	-
Weighted average number of ordinary shares used in the computation of diluted loss per share	2,511,855	1,380,522

Since the Corporation is allowed to settle the remuneration of employees by cash or shares, whenever applicable, the Corporation assumes that the entire amount of the employee remuneration will be settled in shares; as the effect of the resulting potential shares is dilutive, these shares are included in the weighted average number of shares outstanding used in the computation of diluted earnings per share. This dilutive effect of the potential shares is included in the computation of diluted earnings per share until the shareholders resolve the number of shares to be distributed to employees at their meeting in the following year.

The Corporation's the outstanding convertible bonds, restricted employee share options and employee share options were anti-dilutive and were excluded from the computation of diluted loss per share.

30. SHARE-BASED PAYMENT ARRANGEMENTS

Issuance of ordinary share for cash with retained employee subscription

As of June 14, 2019, the Corporation's board of directors approved the issuance of 150,000 thousand ordinary shares for cash through a fixed-price system. The Corporation's total amount of capital was $ 26,655,774 thousand after the capital increase. Ordinary shares were issued at $6.52 per share with a par value of $10. The above issuance was approved by FSC on December 10, 2019.

The above issuance which retained employee subscription was granted on November 29, 2019.
The Corporation uses the Black-Scholes pricing model to estimate the share options for employees which were given in 2019 under the following assumptions:

	First time in 2019
Granted date price (per share)	$ 7.18
Exercise price (per share)	$ 6.52
Expected volatility	34.35%
Expected duration	21 Days
Expected dividend yield	-
Risk-free rate	0.45%

The expected volatility is based on the Corporation's historical share price to estimate the price volatility.
The Corporation's compensation cost which related to the issuance of ordinary share for cash in 2019 is 3,638 thousand.

Restricted share plan for employees

The Corporation's board of directors approved of a restricted share plan which amounted to $30,000 thousand consisted of 3,000 thousand shares with a par value of $10. Such a plan may require employees to pay a consideration at $10 or $0 per share. On June 17, 2019, the shareholders in their meeting proposed to offer the restricted share plan for employees. The issuance of 3,000 thousand shares was approved by the FSC on October 1, 2019.
The Corporation's board of directors approved of a restricted share plan amounting to $22,050 thousand, consisted of 2,205 thousand shares with a par value of $10. Such a plan may require employees to pay a consideration at $10 or $0 per share. The grant date and issuance date were November 11, 2019. The actual issued amount was $22,050 thousand which included 2,205 thousand shares with a fair value of $7.85 per share.

On March 21, 2017, the Corporation's board of directors approved of a restricted share plan which amounted to $21,000 thousand consisted of 2,100 thousand shares with a par value of $10. Such a plan may employees to pay a consideration at $10 or $0 per share. On June 14, 2017, the shareholders in their meeting proposed to offer the restricted share plan for employees. The issuance of 2,100 thousand shares was approved by the FSC on July 24, 2017.
On August 8, 2017, the Corporation's board of directors approved of a restricted share plan which amounted to $21,000 thousand consisted of 2,100 thousand shares with a par value of $10 and distributed out of earnings, which was grant on September 15, 2017 and issued on September 30, 2017. On the granted date, an actual amount of $18,550 thousand was issued, which consisted of 1,855 thousand shares with a fair value of $14.45 per share.

The Corporation replaced restricted share plan for employees due to the merger in October 1, 2018.
Replaced employee share option plan was as follows:

Restricted share plan for employees	Original Number (In Thousands)	Outstanding Number (In Thousands)	Adjustment by Percentage of Outstanding Number (In Thousands)
Gintech Energy	2,000	881	1,225
Solartech Energy	4,455	4,185	4,896

Information on issued employee restricted shares was as follows:

	Shares（In Thousands）	
	For Year Ended December 31	
	2019	2018
Beginning balance	5,252	1,761
Acquisitions through business combinations	-	6,121
Additions	2,205	-
Vested	(1,619)	(821)
Canceled	(2,626)	(1,809)
Ending balance	3,212	5,252

a. The Corporation, formerly Neo Solar Power Corp. and Gintech Energy
   To meet the vesting conditions, an employee has to meet performance conditions over the vesting period as follows:

   1) Still on service one year after the grant date with a high rating based on the current year's performance appraisal - vesting of 50% of restricted shares;
   2) Still on service two years after the grant date with a high rating based on the prior year's performance appraisal - vesting of 50% of restricted shares.

   The restrictions on the rights of the employees who acquire the restricted shares but have not met the vesting conditions are as follows:

   1) In addition to those disclosed in the restricted share plan, the employees should not sell, pledge, transfer, donate or in any other way dispose of these shares.
   2) On behalf of employees, the Corporation signed a trust contract on the restricted shares with a trust institution; thus, based on this contract, the rights of attendance, proposal, speech and voting have all been entrusted to the trust institution.

   If an employee fails to meet the vesting conditions, the Corporation will buy back the restricted shares at the offering price and have them canceled but not the share and cash dividends during the period of noncompliance with vesting conditions.

b. Formerly Solartech Energy

Employees are able to subscribe for the restricted shares at $5 per share when they meet the vesting conditions. To meet the vesting conditions, an employee has to meet performance conditions over the vesting period as follows:

1) Still on service three years after the grant date with a high rating based on the prior year's performance appraisal - vesting of 100% of restricted shares.

The restrictions on the rights of the employees who acquire the restricted shares but have not met the vesting conditions are as follows:

1) In addition to those disclosed in the restricted share plan, the employees should not sell, pledge, transfer, donate or in any other way dispose of these shares.

If an employee fails to meet the vesting conditions, the Corporation will buy back the restricted shares at the offering price and have them canceled

The Corporation reversed compensation costs of $301 thousand and recognized compensation costs of $16,492 thousand for the years ended December 31, 2019 and 2018, respectively.

31. BUSINESS COMBINATIONS

Subsidiary	Principal Activity	Date of Acquisition	Proportion of Voting Equity Interests Acquired (%)	Consideration Transferred
Gintech Energy	Solar-related business	October 1, 2018	100	$ 7,314,880
Solartech Energy	Solar-related business	October 1, 2018	100	4,399,288
				$ 11,714,168

Gintech Energy and Solartech Energy were acquired in order to continue the expansion of the Group's activities in manufacturing solar cells and other solar related business.

a. Consideration transferred

	Gintech Energy	Solartech Energy
Ordinary shares	$ 7,308,198	$ 4,386,582
Restricted shares for employees	6,682	12,706
	$ 7,314,880	$ 4,399,288

b. Assets acquired and liabilities assumed at the date of merger (disclosure in fair value)

	Gintech Energy	Solartech Energy
Current assets	$ 8,460,024	$ 2,706,596
Property, plant and equipment	7,413,796	4,784,477
Intangible assets	14,133	3,498
Other non-current assets	1,091,060	3,671,817
Current liabilities	(4,292,347)	(2,804,906)
Non-current liabilities	(4,661,519)	(2,383,978)
	$ 8,025,147	$ 5,977,504

The initial accounting for the acquisition of Gintech Energy and Solartech Energy was only provisionally determined at the end of the reporting period. The tax bases of Gintech Energy and Solartech Energy's assets were required to be reset based on the market values of the assets. At the date of issuance of these consolidated financial statements, the Group has restated the tax bases as if the initial accounting was completed on the acquisition date.

c. Non-controlling interests

The fair values of non-controlling interests of Gintech Energy and Solartech Energy (1.7% and 0.5% of total equity, respectively) were $27,179 thousand and $214 thousand measured at the acquisition date by using the market-based and asset-based approach.

The key inputs in the market-based measure were the value of cash injection and the value of non-controlling interests that was deducted to reflect the value of the company. Asset-based measure involved the evaluation of the total value of assets and liabilities of the evaluation targets and including non-controlling interests to reflect the value of the company.

d. Gain on bargain purchase due to consolidation

	Gintech Energy	Solartech Energy
Consideration transferred	$ 7,314,880	$ 4,399,288
Plus: Fair value of the acquirer’s previously held equity interest	-	-
Plus: Non-controlling interests	27,179	214
Less: Fair value of identifiable net assets acquired of Gintech Energy and Solar Energy	(6,023,001)	(5,269,758)
Less: Fair value of identifiable net assets acquired of Gintech Energy and Solar Energy’s subsidiaries	(2,002,146)	(707,746)
	$ (683,088)	$ (1,578,002)

e. Net cash inflow due to consolidation

	Gintech Energy	Solartech Energy
Consideration paid in cash	$ -	$ -
Less: Cash inflow due to consolidation	(5,057,365)	(340,165)
	$ (5,057,365)	$ (340,165)

f. Impact of acquisitions on the results of the Group
The results of the acquirees since the acquisition date included in the consolidated statements of comprehensive income are as follows:

	For the year ended December 31, 2018	
	Gintech Energy	Solartech Energy
Revenue	$ 2,016,053	$ 689,709
Loss	$ (649,676)	$ (326,322)

Had these business combinations of Gintech Energy and Solar Energy been in effect at the beginning of the annual reporting period, the Group’s revenue from continuing operations would have been $21,101,207 thousand and $3,391,601 thousand for the year ended December 31, 2018. This pro-forma information is for illustrative purposes only and is not necessarily an indication of the revenue and results of operations of the Group that actually would have been achieved had the acquisition been completed on January 1, 2018, nor is it intended to be a projection of future results.
In determining the pro-forma revenue and profit of the Group had Gintech Energy and Solar Energy been acquired at the beginning of the current reporting period, the management had:

1) Calculated depreciation of property, plant and equipment acquired on the basis of the fair values at the initial accounting for the business combination rather than the carrying amounts recognized in the respective pre-acquisition financial statements; and
2) Calculated borrowing costs on the funding levels, credit ratings and debt/equity position of the Group after the business combination.

32. DISPOSAL OF SUBSIDIARIES

ET ENERGY and TIPPING POINT, which carried out its entire solar-related business in USA, were disposed of in the first quarter of 2019.

Yong Han and Yong Yeh, which carried out its entire solar-related businesses in Taiwan, were disposed of in March 2018, and control of Yong Han and Yong Yeh passed to the acquirer, Neo Cathay, on that date.

MEGASEVEN, MEGAELEVEN and MEGAFIFTEEN, which carried out theirs entire solar-related businesses in the USA, were disposed of in June 2018, and control of MEGASEVEN, MEGAELEVEN and MEGAFIFTEEN passed to the acquirer on that date.

True Honour Limited was an investment company which was cancelled in October 2018 and returned the shares in December 2018.

GES KYUSHU carried out its entire solar-related business in Japan. The disposal was completed in October 2018, and control of GES KYUSHU was passed to the acquirer on that date.

POTTERS BAR, CLAY CROSS, BELPER, Bryncrynau and Meadowley, which carried out their entire solar-related business in the United States. The disposal was completed in October 2018, and control of the subsidiaries of NSP Indygen was passed to the acquirer on that date.

CEC Solar #1117, CEC Solar #1118, CEC Solar #1119, CEC Solar #1121, CEC Solar #1122, CEC Solar #1128, CEC Solar #1130, CEC Solar #1133, and Ewauna, which carried out their entire solar-related business in the United States. The disposal to related party CF Lessee LOB LLC was completed in the fourth quarter of 2018, and control of the subsidiaries of CFR was passed to the acquired on that date.

a. Consideration received from the disposal

	For the Year Ended December 31, 2019
	USA
Consideration received in cash and cash equivalents	$ 747,551
Total consideration received	$ 747,551

	For the Year Ended December 31, 2018			
	Taiwan	USA	Japan	UK
Consideration received in cash and cash equivalents	$ 144,476	$ 754,309	$ 279,206	$ 157,315
Sales proceeds receivable	4,960	26,325	-	-
Total consideration received	$ 149,436	$ 780,634	$ 279,206	$ 157,315

b. Analysis of asset and liabilities on the date control was lost

	For the Year Ended December 31, 2019
	USA
Current assets	
Others	$ 5,653
Non-current assets	
Property, plant and equipment	719,242
Others	19,458
Non-current liabilities	
Long-term bank loans	(192,767)
Net assets disposed of	$ 551,586

	For the Year Ended December 31, 2018			
	Taiwan	USA	Japan	UK
Current assets				
Cash and cash equivalents	$ 23,714	$ -	$ 93	$ 96,411
Lease receivables	4,456	-	18,925	-
Other receivables	2,163	-	-	-
Other receivables from related parties	64,090	-	-	-
Construction in progress	-	339,295	-	895,694
Others	6,759	650	624	-
Non-current assets				
Property, plant and equipment	341,073	432,238	480,029	-
Others	24,706	-	4,693	-
Current liabilities				
Accounts payable	-	-	-	(189,359)
Payables to contractors and equipment suppliers	(8,908)		-	-
Current tax liabilities	(392)	-	-	-
Accrued expenses	(163,013)	-	(416,601)	(739,286)
Non-current liabilities				
Long-term bank loans	(178,231)	-	-	-
Net assets disposed of	$ 116,417	$ 772,183	$ 87,763	$ 63,460

c. Gain (loss) on disposal of subsidiaries

	For the Year Ended December 31, 2019
	USA
Consideration received	$ 747,551
Realized gain	16,808
Net assets disposed of	(551,586)
Gain on disposal	$ 212,773

	For the Year Ended December 31, 2018			
	Taiwan	USA	Japan	UK
Consideration received	$ 149,436	$ 780,634	$ 279,206	$ 157,315
Realized gain	6,927	3,848	-	-
Intangible assets - contracts with customers	-	-	(72,085)	-
Net assets disposed of	(116,417)	(772,183)	(87,763)	(63,460)
Gain on disposal	$ 39,946	$ 12,299	$ 119,358	$ 93,855

d. Net cash inflow on disposal of subsidiaries

	For the Year Ended December 31, 2019
	USA
Consideration received in cash and cash equivalents	$ 747,551

	For the Year Ended December 31, 2018			
	Taiwan	USA	Japan	UK
Consideration received in cash and cash equivalents	$ 144,476	$ 754,309	$ 279,206	$ 157,315
Less: As-of-yet received accounts receivable of disposal	(23,714)	-	(93)	(96,411)
	$ 120,762	$ 754,309	$ 279,113	$ 60,904

33. CASH FLOW INFORMATION

a. Changes in liabilities arising from financing activities

For the year ended December 31, 2019

			Non-cash Changes				
	Opening Balance	Cash Flows	Exchange Rate Changes	New Leases	Rent Reductions/ Surrender of Tenancy	Others (Note)	Closing Balance
Lease liabilities (Note 3)	$1,085,503	$ (93,193)	$ (7,361)	$ 39,218	$ (39,972)	$ 34,104	$1,018,299

Note: The financing costs of lease liabilities.

34. CAPITAL MANAGEMENT

The Group manages its capital to ensure that entities in the Group will be able to continue as going concerns while maximizing the return to shareholders through the optimization of the debt and equity balance.

Key management personnel of the Group review the capital structure periodically. For this review, the key management personnel consider the cost of capital and the risks associated with each class of capital. On the basis of the recommendations of the key management personnel on balancing the overall capital structure, the Group may adjust the amount of dividends paid to shareholders, the number of new shares issued or repurchased, and/or the amount of new debt issued or existing debt redeemed.

35. FINANCIAL INSTRUMENTS

a. Fair value of financial instruments that are not measured at fair value

December 31, 2019

	Carrying Amount	Fair Value Level 1	Level 2	Level 3	Total
Financial assets					
Lease receivables (including current and non-current portions)	$ 35,140	$ -	$ -	$ 35,140	$ 35,140

December 31, 2018 (Restated)

	Carrying Amount	Fair Value Level 1	Level 2	Level 3	Total
Financial assets					
Lease receivables (including current and non-current portions)	$ 36,717	$ -	$ -	$ 36,717	$ 36,717
Financial liabilities					
Financial liabilities measured at amortized cost					
Bonds payable	3,614,497	-	-	3,561,877	3,561,877

The fair values of the financial assets and financial liabilities included in the Level 3 categories above have been determined in accordance with the income approach based on a discounted cash flow analysis, with the most significant unobservable input being the discount rate that reflects the credit risk of counterparties.

The fair value of lease receivables was determined with a discount rate in accordance with the interest rates of the sales with buyback agreements with similar terms.

The fair value of the liability component of convertible bonds, assuming redemptions on October 27, 2019 was determined with discount rate in accordance with interest rates based on loans with similar terms.

b. Fair value of financial instruments that are measured at fair value on a recurring basis

1) Fair value hierarchy

December 31, 2019

	Level 1	Level 2	Level 3	Total
Financial assets at FVTPL				
Long call options	$ -	$ -	$ 232,865	$ 232,865
Cross currency swap contracts	-	2,392	-	2,392
Put options	-	-	35,514	35,514
	$ -	$ 2,392	$ 268,379	$ 270,771
Financial assets at FVTOCI				
Investments in equity instruments at FVTOCI				
Securities listed in the ROC	$ 2,287,336	$ 141,540	$ -	$ 2,428,876
Equity securities				

	Level 1	Level 2	Level 3	Total
Domestic unlisted shares	-	-	76,594	76,594
Foreign unlisted shares	-	-	20,426	20,426
	$ 2,287,336	$ 141,540	$ 97,020	$ 2,525,896
Financial liabilities at FVTPL				
Short call options	$ -	$ -	$ 143,814	$ 143,814
Foreign exchange forward contracts	-	775	-	755
	$ -	$ 775	$ 143,814	$ 144,569

December 31, 2018

	Level 1	Level 2	Level 3	Total
Financial assets at FVTPL				
Long call options	$ -	$ -	$ 243,130	$ 243,130
Financial assets at FVTOCI				
Investments in equity instruments at FVTOCI				
Securities listed in the ROC	$ 1,477,560	$ 115,920	$ -	$ 1,593,480
Equity securities				
Domestic unlisted shares	-	-	93,661	93,661
Foreign unlisted shares	-	-	42,090	42,090
	$ 1,477,560	$ 115,920	$ 135,751	$ 1,729,231
Financial liabilities at FVTPL				
Short call options	$ -	$ -	$ 191,790	$ 191,790

There were no transfers between Level 1 and 2 in the current and prior periods.

2) Reconciliation of Level 3 fair value measurements of financial instruments
For the year ended December 31, 2019

	Financial Assets at Fair Value Through Profit or Loss		Financial Assets at Fair Value Through Other Comprehensive Income
	Long Call Options	Put Options	Equity Instruments
Financial assets			
Balance at January 1, 2019	$ 243,130	$ -	$ 135,751
Recognized in profit or loss - unrealized	(4,506)	35,514	(38,731)
Effect of exchange rate changes	(5,759)	-	-
Balance at December 31, 2019	$ 232,865	$ 35,514	$ 97,020

	Financial Liabilities at Fair Through Profit or Loss
	Short Call Options
Financial liabilities	
Balance at January 1, 2019	$ 191,790
Recognized in profit or loss - unrealized	(44,651)
Effect of exchange rate changes	(3,325)
Balance at December 31, 2019	$ 143,814

For the year ended December 31, 2018

	Financial Assets at Fair Value Through Profit or Loss		Financial Assets at Fair Value Through Other Comprehensive Income
	Long Call Options	Put Options	Equity Instruments
Financial assets			
Balance at January 1, 2018	$ 117,840	$ 23,674	$ 94,363
Acquisitions through business combinations	-	-	66,245
Purchases	127,543	-	59,086
Recognized in profit or loss - unrealized	(5,669)	-	(83,943)
Recognized in profit or loss - realized	-	(23,674)	-
Effect of exchange rate changes	3,416	-	-
Balance at December 31, 2018	$ 243,130	$ -	$ 135,751

	Financial Liabilities at Fair Through Profit or Loss
	Short Call Options
Financial liabilities	
Balance at January 1, 2018	$ 94,014
Additions	108,758
Recognized in profit or loss - unrealized	13,540
Effect of exchange rate changes	(24,522)
Balance at December 31, 2018	$ 191,790

3) Valuation techniques and inputs applied for the purpose of Level 2 fair value measurement

Financial Instruments	Valuation Techniques and Inputs
Derivatives – cross-currency swap contracts and foreign exchange forward contracts	Discounted cash flow: Future cash flows are estimated based on observable forward exchange and contract forward rates, discounted at a rate that reflects the credit risk of various counterparties.
Securities listed in the ROC	The Group's investments in private-placement shares that have quoted prices in an active market but cannot be traded during a lock-up period; their fair values were determined using market prices.

4) Valuation techniques and inputs applied for the purpose of Level 3 fair value measurement

a) Put options
The Black-Scholes model was used to determine the fair value of the put options redeemed, and the most significant unobservable input was volatility. An increase in the historical volatility used in isolation would result in an increase in the fair value of these put options. As of December 31, 2019, the volatility used was 35.58%.

Sensitivity analysis

The Group's sensitivity analysis evaluated that the fair values of financial instruments were reasonable except for the impact of possible changes in the evaluation model or evaluation parameters which may cause different outputs in the result of the evaluation. For financial instruments defined as Level 3 inputs, impacts of possible changes in the evaluation method on profit or loss and other comprehensive income or loss in the current period were as follows:

	Inputs	Increase (+)/ Decrease (-)	Profit or Loss Changes Arising from Fair Value Movements	OCI Changes Arising from Fair Value Movements
For the year ended December 31, 2019				
Financial assets at Fair value through profit or loss				
Put options	38.58%	+0.5%	$ 178	-
	38.58%	-0.5%	(178)	-
			$ -	

The favorable and unfavorable changes arose from fluctuations in the fair values, which required management inputs that are both significant to the fair value measurement and unobservable. The table above shows the impact on the fair values of financial instruments if they were affected by only one isolated input. The variability and correlation among those inputs were not taken into consideration.

b) Long call options and short call options

Long call options and short call options use the options pricing model to determine their fair value, and the most significant unobservable input was volatility. An increase in the historical volatility used in isolation would result in an increase in the fair value of these options. As of December 31, 2019 and 2018, the volatilities used were 17% ~ 18%, respectively.

Sensitivity analysis

The Group’s sensitivity analysis evaluated that the fair values of financial instruments were reasonable, except for the impact of possible changes in the evaluation model or evaluation parameters which may cause different outputs in the result of the evaluation. For financial instruments defined as Level 3 inputs, the impacts of possible changes on the evaluation method on profit or loss and other comprehensive income or loss in the current period were as follows:

	Inputs	Increase (+)/ Decrease (-)	Profit or Loss Changes Arising From Fair Value Movements	OCI Changes Arising From Fair Value Movements
For the year ended December 31, 2019				
Financial assets at fair value through profit or loss				
Short call options	17.50%-18.00%	+0.5%	$ (3,094)	-
	17.50%-18.00%	-0.5%	3,090	-
			$ (4)	
For the year ended December 31, 2018				
Financial assets at fair value through profit or loss				
Short call options	17.00%-18.00%	+0.5%	$ (3,103)	-
	17.00%-18.00%	-0.5%	3,092	-
			$ (11)	

The favorable and unfavorable changes arose from fluctuations in the fair values, which required management inputs which are both significant to the fair value measurement and are unobservable. The table above shows the impact on the fair values of financial instruments if they were affected by only one isolated input. The variability and correlation among those inputs were not taken into consideration.

c) Domestic and foreign unlisted shares

The fair values of domestic and foreign unlisted shares are mainly determined by the asset approach and the market approach.

A market approach is a method of determining the appraisal value of assets or liabilities, based on the selling price of similar items. The Black-Scholes model was used to determine the fair value of domestic and foreign unlisted shares, and the most significant unobservable inputs were price multiplier and volatility. An increase in the price multiplier used in isolation would result in an increase in the fair value of these equity instruments.

An increase in the volatility used in isolation would result in a decrease in the fair value of these equity instruments. As of December 31, 2019, the price multiplier and volatility used to determine the fair value of domestic unlisted shares were 1.6300 and 38.22%, respectively. As of December 31, 2018, the price multiplier and volatility used to determine the fair value of domestic unlisted shares were 1.4100 and 30.00%, respectively; while the price multiplier and volatility used to determine the fair value of foreign unlisted shares were 1.3100 and 35.06%, respectively.

Sensitivity analysis

The Group’s sensitivity analysis evaluated that the fair values of financial instruments were reasonable, except for the impact of possible changes in the evaluation model or evaluation parameters which may cause different outputs in the result of the evaluation. For financial instruments defined as Level 3 inputs, the impacts of possible changes in the evaluation method on profit or loss and other comprehensive income or loss in the current period are as follows:

	Input	Increase (+)/ Decrease (-)	Profit or Loss Changes Arising From Fair Value Movements	OCI Changes Arising From Fair Value Movements
For the year ended December 31, 2019				
Financial assets at fair value through other comprehensive income				
Domestic unlisted shares	1.6300	+5.0%	-	$ 1,471
	1.6300	-5.0%	-	(1,354)
	38.22%	+1.0%	-	(294)
	38.22%	-1.0%	-	294
				$ 117
Financial assets at fair value through other comprehensive income				
Domestic unlisted shares	1.4100	+5.0%	-	$ 2,236
	1.4100	-5.0%	-	(2,236)
	30.00%	+1.0%	-	(647)
	30.00%	-1.0%	-	647
Foreign unlisted shares	1.3100	+5.0%	-	967
	1.3100	-5.0%	-	(967)
	35.06%	+1.0%	-	(346)
	35.06%	-1.0%	-	349
				$ 3

d) Conversion and redemption options
The fair values of redemption and conversion options are determined using the binomial tree valuation model where the significant unobservable input is historical volatility. An increase in the historical volatility used in isolation would result in an increase in the fair value. As of December 31, 2018, the historical volatility used was 42.75%.

c. Categories of financial instruments

	December 31	
	2019	2018(After restatement)
Financial assets		
FVTPL		
Mandatorily at FVTPL	$ 270,771	$ 243,130
Financial assets at amortized cost (Note 1)	11,763,132	19,360,067
Financial assets at FVTOCI		
Equity instruments	2,525,896	1,729,231
Financial liabilities		
FVTPL		
Held for trading	144,569	191,790
Amortized cost (Note 2)	23,306,243	30,443,504

Note 1: The balances include cash and cash equivalents, notes and accounts receivable, accounts receivable from related parties, pledged time deposits, restricted deposits, other receivables, debt investments with no active market, etc. that were measured at amortized cost.

Note 2: The balances include short-term loans, short-term bills payable, notes and accounts payable, accounts payable to related parties, payables to contractors and equipment suppliers, accrued expenses, long-term loans, bonds payable, preference share liabilities, etc. and were carried at amortized cost.

d. Financial risk management objectives and policies

The Group's major financial instruments included equity, accounts receivable, accounts payable, bonds payable and borrowings. The Group's Corporate Treasury function provides services to the business, coordinates access to domestic and international financial markets, monitors and manages the financial risks relating to the operations of the Group through internal risk reports, which are tools for analyzing exposures by degree and magnitude of risks. These risks include market risk (including currency risk, interest rate risk and other price risk), credit risk and liquidity risk.

The Group seeks to minimize the effects of these risks by using derivative financial instruments to hedge against risk exposures. The use of financial derivatives is governed by the Group's policies approved by the board of directors, which provide written principles on foreign exchange risk, interest rate risk, credit risk, the use of financial derivatives and non-derivative financial instruments, and the investment of excess liquidity. Compliance with policies and exposure limits is reviewed by the internal auditors continually. The Group does not enter into financial instrument contracts or trade financial instruments, including derivative financial instruments, for speculative purposes.

The Corporate Treasury function, an independent organization that monitors risks and policies implemented to mitigate risk exposures, reports quarterly to the Group's board of directors and audit committee:

1) Market risk

The Group's activities exposed the Group primarily to the financial risks of exchange rate changes (see [a] below) and interest rates (see [b] below). The Group used a variety of derivative financial instruments to manage its exposure to foreign currency and interest rate risks.

There had been no change in the Group's exposure to market risks or the manner in which these risks were managed and measured.

a) Foreign currency risk

The Group had foreign currency-denominated sales and purchases, which exposed the Group to exchange rate risk. The Group entered into foreign exchange forward contracts, cross-currency swap contracts, etc. to manage exposures due to exchange rate and interest rate fluctuations. These instruments help reduce, but do not eliminate, the impact of adverse exchange rate movements.

The Group also holds short-term bank loans in foreign currencies in proportion to its expected future cash flows. This allows foreign-currency-denominated bank loans to be serviced with expected future cash flows and provides a partial hedge against transaction translation exposure.

<u>Sensitivity analysis</u>

The Corporation was mainly exposed to USD, EUR and JPY.

The following table details the Group's sensitivity to a 5% increase and decrease in the New Taiwan dollar (the functional currency) against the relevant foreign currency. The sensitivity analysis included only outstanding foreign currency-denominated monetary items; their translation at the end of the reporting period is adjusted for a 5% change in exchange rates. The sensitivity analysis included cash, accounts receivable, other receivables, short-term bank loans, accounts payable, other payables and long-term bank loans. A positive number below indicates an increase in profit and other equity associated with the New Taiwan dollar's strengthening 5% against a foreign currency. For a 5% weakening of the New Taiwan dollar against a foreign currency, there would be an equal and opposite impact on profit and other equity and the balances below would be negative.

	USD Impact		EUR Impact		JPY Impact	
	For the Year Ended December 31		For the Year Ended December 31		For the Year Ended December 31	
	2019	2018	2019	2018	2019	2018
Profit (loss)	$33,495	$18,851	$ 5,672	$ 8,212	$ (148)	$ (294)

The Group's sensitivity to USD exchange rates increased in the current period mainly because of the increase in assets recorded in USD. The Group's sensitivity to EUR exchange rates decreased in the current period mainly because of the decrease in assets recorded in EUR. The Group's sensitivity to JPY exchange rates decreased in the current period mainly because of the increase in liabilities recorded in JPY.

b) Interest rate risk

Long-term and short-term bank loans mainly bear floating interest rates. Thus, the fluctuations of market interest rates will result in changes in the effective interest rates for long-term and short-term bank loans and the fluctuation of future cash flows.

The carrying amounts of the Group's financial assets and financial liabilities with exposure to interest rates at the end of the reporting period were as follows.

	December 31	
	2019	2018
Fair value interest rate risk		
Financial assets	$ 1,404,547	$ 2,119,044
Financial liabilities	(7,071,976)	(9,849,642)
Cash flow interest rate risk		
Financial assets	6,975,027	12,781,956
Financial liabilities	(14,968,342)	(16,909,886)

Sensitivity analysis

The sensitivity analysis below was based on the Group's exposure to interest rates for both derivative and non-derivative instruments at the end of the reporting period. For floating rate assets and liabilities, the analysis was prepared assuming that the amount of the asset and liability outstanding at the end of the reporting period was outstanding for the whole year.

If interest rates had been 1% higher and all other variables were held constant, the Group's profit for 2019 and 2018 would (decrease) increase by $(79,933) thousand and $41,279 thousand, respectively, mainly because of the Group's exposure to interest rates on its variable-rate demand deposits and bank borrowings.

The Group's sensitivity to interest rates increased during the current period mainly because of the increase in variable-rate debt instruments.

c) Other price risk

The Group is exposed to equity price risk on financial asset at FVTOCI for the year ended December 31, 2019 and 2018.

Sensitivity analysis

The sensitivity analysis below was based on the exposure to equity price risks at the end of the reporting period.

If equity prices had been 5% lower, other comprehensive income for 2019 would decrease by $126,295 thousand as a result of the changes in the fair value of financial assets at FVTOCI.

If equity prices had been 5% lower, other comprehensive income for 2018 would decrease by $86,462 thousand as a result of the changes in the fair value of financial assets at FVTOCI.

The Group's sensitivity to price increase in the current period mainly because of the increase in financial assets at FVTOCI.

2) Credit risk

Credit risk refers to the risk that a counterparty will default on its contractual obligations, resulting in a financial loss to the Group. As at the end of the reporting period, the Group's maximum exposure to credit risk, which would cause a financial loss to the Group due to a failure to discharge an obligation by the counterparties and financial guarantees provided by the Group, could arise from:

a) The carrying amounts of the financial assets recognized in the consolidated balance sheets; and
b) The amount of contingent liabilities on financial guarantees issued by the Group.

To minimize credit risk, the Group's management has established a team responsible for determining credit limits, credit approvals and other monitoring procedures to ensure that follow-up action is taken to recover overdue debts. In addition, the Group reviews the recoverable amount of each account receivable at the end of the reporting period to ensure that adequate allowances are set aside for irrecoverable amounts. Thus, the Group's management considers the Group's credit risk as significantly reduced.

The credit risk on liquid funds and derivatives was limited because the counterparties are banks with high credit ratings assigned by international credit-rating agencies.

Accounts receivable pertains to a large number of customers, spread across diverse industries and geographical areas. Ongoing credit evaluation is performed on the financial condition of the account receivables and, where appropriate, credit guarantee insurance is purchased.

The Group did not have significant credit risk exposure to any single counterparty or any group of counterparties with similar characteristics.

The Group's customer base was large and unrelated, so the concentrations of credit risk were not high.

3) Liquidity risk

The Group manages liquidity risk by monitoring and maintaining a level of cash deemed adequate to finance the Group's operations and mitigate the effects of fluctuations in cash flows. In addition, management monitors the use of bank loans and ensures compliance with loan covenants. The Group relies on bank loans as a significant source of liquidity.

a)Liquidity and interest risk rate tables for non-derivative financial liabilities

The following table details the Group's remaining contractual maturity for its non-derivative financial liabilities with agreed repayment periods. The table has been drawn up based on the undiscounted cash flows of financial liabilities from the earliest date on which the Group can be required to pay. The table included both interest and principal cash flows. Specifically, bank loans with a repayment on demand clause were included in the earliest time band regardless of the probability of the banks choosing to exercise their rights. The maturity dates for other non-derivative financial liabilities were based on the agreed repayment dates.

To the extent that interest flows are at floating rates, the undiscounted amount was derived from the interest rate curve at the end of the reporting period.

December 31, 2019

	On Demand or Less than 1 Month	**1 - 3 Months**	**3 Months to 1 Year**	**1+ Years**
Non-derivative financial liabilities				
Non-interest bearing	$ 1,413,740	$ 498,953	$ 280,322	$ 122,315
Variable interest rate liabilities	423,600	1,296,249	1,775,763	12,282,550
Fixed interest rate liabilities	281,019	4,388,161	1,043,784	369,518
Lease liabilities	7,627	15,633	64,777	1,340,979
	$ 2,125,986	$ 6,198,996	$ 3,164,646	$ 14,115,362

Additional information about the maturity analysis for lease liabilities:

	Up to 1 Year	Over 1 Year - 5 Years	Over 5 Years - 10 Years	Over 10 Years - 15 Years	Over 15 Years - 20 Years	20+ Years
Lease liabilities	$ 88,037	$ 424,014	$ 390,971	$ 183,816	$ 103,518	$ 238,660

December 31, 2018

	On Demand or Less than 1 Month	1 - 3 Months	3 Months to 1 Year	1+ Years
Non-derivative financial liabilities				
Non-interest bearing	$ 2,016,411	$ 1,002,906	$ 658,592	$ 79,314
Variable interest rate liabilities	209,152	1,654,468	7,705,594	8,188,452
Fixed interest rate liabilities	740,290	2,797,702	4,699,751	1,743,186
	$ 2,965,853	$ 5,455,076	$ 13,063,937	$ 10,010,952

The amounts included above for variable interest rate instruments for non-derivative financial assets and liabilities were subject to change if changes in variable interest rates differed from the interest rates estimated at the end of the reporting period.

b) Liquidity and interest risk rate tables for derivative financial liabilities

The following tables show the Group's liquidity analysis for its derivative financial instruments. The tables were based on the undiscounted contractual net cash inflows and outflows on derivative instruments that settle on a net basis.

December 31, 2019

	On Demand or Less than 1 Month	1 - 3 Months	3 Months to 1 Year	1+ Years
Net settled				
Foreign exchange forward contracts	$ 755	$ -	$ -	$ -
Short call options	-	-	-	143,814
	$ 755	$ -	$ -	$ 143,814

December 31, 2018

	On Demand or Less than 1 Month	1 - 3 Months	3 Months to 1 Year	1+ Years
Net settled				
Short call options	$ -	$ -	$ -	$ 191,790

36. TRANSACTIONS WITH RELATED PARTIES

Balances and transactions between the Corporation and its subsidiaries (the Corporation's related parties) had been eliminated on consolidation and are not disclosed in this note. In addition to those disclosed in other notes, transactions between the Group and its related parties are disclosed below.

a. Names and relationships of related parties

Name of Related Party	Relationship with the Company
Delta Electronics Inc.	Investors with significant influence on certain group entities (Note 1)
Delta Electronics (Japan), Inc.	Other related parties (Note 1)
Delta Electronics (Americas) Ltd.	Other related parties (Note 1)
Delta Greentech Ltd. - Turkey	Other related parties (Note 1)
Delta Electronics (Switzerland) AG	Other related parties (Note 1)
Zhongda Electronic (Jiangsu) Co., Ltd.	Other related parties (Note 1)
Zhongda Electronic Parts And Components (Wujian) Co., Ltd.	Other related parties (Note 1)
Phanes FZ LLC	Other related parties (Note 2)
Phanes Holding	Other related parties (Note 2)
Oryx Solar System Solutions LLC	Other related parties (Note 2)
TTMC	Other related parties
SAS	Other related parties (Note 3)
TSCC	Other related parties (Note 3)
TGET	Other related parties (Note 4)
Clean Focus Management Acquisition LLC	Other related parties (Note 5)
Shanghai Surui Leasing & Financing Limited	Other related parties (Note 5)
Neo Cathay	Associates
Neo Cathay Electric Power Corp. (Neo Cathay Electric)	Associates (Note 6)
DEST	Associates
Si One Corp. (Si One)	Associates (Note 6)
Da Li Energy Co., Ltd. (Da Li Energy)	Associates (Note 6)
Yong Han	Associates (Note 7)
Yun Yeh	Associates (Note 7)
Shanghai Cenat New Energy Company Limited	Associates (Note 8)
CFY	Associates
Clean Focus Corporation (CFC)	Associates
CF Gainesville Owner One, LLC	Associates (Note 8)
CF SBC Owner One LLC	Associates (Note 8)
CF Vegas Holdings LLC	Associates (Note 8)
Greenskies Renewable Energy LLC	Associates (Note 8)
CF Lessee LOB LLC	Associates (Note 8)
Verde Solar Inc.	Associates (Note 8)
V5 Technology	Associates
Gintung	Associates (Note 9)
Sunshine PV	Associates (Note 9 and 10)
DevCo One	Joint venture
DevCo Two	Joint venture
JV2	Joint venture

Note 1: On October 15, 2018, Delta Company originally held 6.64% of the equity of the Corporation. After the election of the directors of the Corporation on November 20, 2018, the directors representing Delta Company resigned from the board of directors of the Corporation. Delta Company and its subsidiaries Delta Electronics (Americas) Ltd., Delta Electronics (Japan), Inc., Delta Electronics (Switzerland) AG, Delta Greentech Ltd. - Turkey, Zhongda Electronic (Jiangsu) Co., Ltd. and Zhongda Electronic Parts And Components (Wujian) Co., Ltd.) did not meet the definition of related parties. Therefore, only the outstanding amount as of November 20, 2018 and transactions from January 1, 2018 to November 20, 2018 were disclosed as related party transactions.

Note 2: Phanes Holding issued puttable preference shares, which were acquired by the Group on December 18, 2015, so that it meets the definition of related party. Phanes Holding's subsidiaries were disclosed as other related parties.

Note 3: After the date of merger, October 1, 2018, the Corporation and the directors of the Corporation became the shareholders of SAS and TSCC and became their directors. SAS and

TSCC meet the definition of other related parties. Therefore, the outstanding amounts and transactions after October 31, 2018 were disclosed as related party transactions.

Note 4: After the date of merger, October 1, 2018, Apex became the shareholder of TGET and became their directors. TGET meets the definition of other related parties. Therefore, the outstanding amounts and transactions after October 1, 2018 were disclosed as related party transactions.

Note 5: Same directors with CFGP, so that meet the definition of other related parties.

Note 6: The associates were Neo Cathay's subsidiaries.

Note 7: Yong Han and Yun Yeh had become subsidiaries of Neo Cathay since March 30, 2018 and were deemed associates; thus, the Group disclosed the trading transactions from March 30, 2018 and the balances as of March 30, 2018.

Note 8: The associates were CFY's subsidiaries.

Note 9: The acquisition of subsidiaries is due to absorption merging the two corporations, Gintech Energy and Solartech Energy on October 1, 2018. Therefore, the outstanding amounts and transactions after October 1, 2018 were disclosed as related party transactions.

Note 10: The Corporation resigned from the board of Sunshine PV so the Corporation no longer has influence over Sunshine PV. Therefore, Sunshine PV does not meet the definition of a related party but only outstanding balance as of May, 2019 were disclosed.

b. Revenue from the sale of goods

	For the Year Ended December 31	
Related Party Category	**2019**	**2018**
Associates	$ 1,487,725	$ 1,287,666
Other related parties	11,210	50,677
Investors with significant influence	-	79
	$ 1,498,935	$ 1,338,422

Sales of goods between the Group and related parties were based on specifically negotiated terms.

c. Other income

	For the Year Ended December 31	
Related Party Category	**2019**	**2018**
Associates	$ 14,715	$ 14,591
Other related parties	5,446	79
	$ 20,161	$ 14,670

d. Dividends

	For the Year Ended December 31	
Related Party Category	**2019**	**2018**
Other related parties		
SAS	$ 65,581	$ -
TTMC	2,800	3,680
	$ 68,381	$ 3,680

e. Interest income

	For the Year Ended December 31	
Related Party Category	**2019**	**2018**
Other related parities		
Phanes Holding	$ 9,541	$ 11,487
Associates		
CFY	2,809	13,969
Others	1,336	750
Joint ventures	390	7,092
	$ 14,076	$ 33,298

The Group's income revenue was composed of interest income from financing provided to associates and puttable preference shares with other related parties.

f. Purchase of goods

Related Party Category	For the Year Ended December 31 2019	2018
Other related parties	$ 11,620	$ 112
Investors with significant influence	-	5,406
	$ 11,620	$ 5,518

Purchases of goods between the Group and related parties were based on specifically negotiated terms.

g. Other expenses

Related Party Category	For the Year Ended December 31 2019	2018
Associates	$ 48	$ 61,206
Other related parties	-	1,574
Investors with significant influence	-	652
	$ 48	$ 63,432

h. Accounts receivable

Related Party Category	December 31 2019	2018
Associates		
CFC	$ 280,111	$ 367,956
Da Li Energy	119,371	-
Verde Solar	82,981	85,042
Others	41,470	101,454
Less: Allowance for impairment loss-Associate	(8,464)	(21,986)
	$ 515,469	$ 532,466

The outstanding trade receivables from related parties are unsecured.

i. Other receivables

Related Party Category	December 31 2019	2018
Associates		
CFC	$ 320,566	$ 113,131
CF Leases LOB LLC	836	493,797
CFY	-	133,141
Others	634	16,691
Other related parties		
Clean Focus Management Acquisition LLC	183,755	188,319
Others	20,997	13,440
Joint venture		
DevCo One	153,166	128,426
Others	11,398	16,189
Less: Allowance for impairment loss		
Joint venture	(11,398)	-
Associates	-	(8,400)
	$ 679,954	$ 1,094,734

Other receivables were temporary project fee payments that the Group paid for its associates. The outstanding receivables from related parties were unsecured.

j. Contract assets

Related Party Category	December 31 2019	December 31 2018
Associates		
Si One	$ 364,151	$ 45,789
Da Li Energy	50,967	24,261
Other	45,940	-
	$ 461,058	$ 70,050

No impairment loss was recognized for contract assets from related parties in 2019 and 2018, respectively.

k. Prepayments

Related Party Category	December 31 2019	December 31 2018
Other related parties		
SAS	$ 1,117,975	$ 1,118,451

l. Accounts payable

Related Party Category	December 31 2019	December 31 2018
Other related parties		
SAS	$ 6,652	$ (312)
TSCC	-	380
Investors with significant influence		
Delta Electronics Inc.	-	373
	$ 6,652	$ 441

The outstanding payables to related parties were unsecured. No guarantees had been given or received for payables to related parties, and these payables would be settled in cash.

m. Contract liabilities

Related Party Category	December 31 2019	December 31 2018
Associates		
Si One	$ 32,588	$ 88,306
Others	7,083	14,681
Other related parties	11	1,194
	$ 39,682	$ 104,181

n. Payables to contractors and equipment suppliers

Related Party Category	December 31 2019	December 31 2018
Other related parties	$ 964	$ -
Investors with significant influence	-	12,936
	$ 964	$ 12,936

o. Other accrued expenses

Related Party Category	December 31	
	2019	**2018**
Joint Ventures		
DevCo One	$ 138,960	$ 118,195
Other related parties	4,229	12,273
Associates	600	244,279
Investors with significant influence	-	194
	$ 143,789	$ 374,941

No guarantees had been given or received for payables to related parties, and these payables would be settled in cash.

p. Acquisitions of property, plant and equipment

	Purchase Price For the Year Ended December 31	
	2019	**2018**
Other related parties	$ 80,035	$ 164,381
Investors with significant influence	-	26,830
	$ 80,035	$ 191,211

q. Project Receipts

	For the Year Ended December 31	
	2019	**2018**
Associates	$ -	$ 132,752
Other related parties	-	14,345
	$ -	$ 147,097

The project receipts were the cost of power facility construction, the transaction between the Group and the related parties were based on specifically negotiated terms.

r. Disposal of subsidiaries
For details on disposal of subsidiaries of the Corporation, refer to Note 32.

s. Endorsements and guarantees
For details on loans to related parties and endorsements and guarantees, refer to Note 41.

t. Compensation of key management personnel

	For the Year Ended December 31	
	2019	**2018**
Short-term benefits	$ 95,720	$ 121,461
Share-based payments	1,686	1,203
Post-employment benefits	2,076	195
	$ 99,482	$ 122,859

The compensation of directors and other key management personnel was determined by the Compensation Committee on the basis of individual performance and market trends.

37. PLEDGED OR MORTGAGED ASSETS

The following assets had been pledged or mortgaged as collaterals for long-term and short-term bank loans, bonds payable and deposits for the government:

	December 31	
	2019	2018 (After Restatement)
Property, plant and equipment	$ 13,226,082	$ 18,637,247
Finance lease receivables (including current and non-current portions)	35,140	36,717
Restricted assets (classified as other current and non-current assets)	642,259	3,701,289
Financial assets at fair value through other comprehensive income	2,172,922	1,337,855
Refundable deposits	911,486	1,004,824
Investments accounted for using the equity method	559,639	598,352
Pledged time deposits (classified as other current and non-current assets)	304,846	595,018
Power facilities construction in process (classified as inventory)	290,734	99,575
Inventory	-	1,021
	$ 18,143,108	$ 26,011,898

38. SIGNIFICANT CONTINGENT LIABILITIES AND UNRECOGNIZED COMMITMENTS

In addition to those disclosed in other notes, significant commitments and contingencies of the Group were as follows:

a. Significant commitments
   1) Long-term purchase contracts:
      a) The Group entered into long-term material supply agreements with multiple suppliers of raw material for silicon chip; the longest contract duration was until December 31, 2022. The Group has to make advance payments as guarantee and such suppliers shall meet the supply of materials in accordance with contract terms. As of December 31, 2019, the Group recognized prepayments of USD56,320 thousand (roughly NT$1,764,266 thousand), EUR8,636 thousand (roughly NT$397,190 thousand) shown in the consolidated balance sheet. The Group recognized an impairment loss of NT$15,895 thousand and a reversal of the impairment loss of prepayment of NT$78,924 thousand because of poor operating conditions of suppliers for the year ended December 31, 2019 and 2018, respectively; and the Group recognized a reversal of the impairment loss of $14,129 thousand because of their supplier liquidation allocation for the year ended December 31, 2019. The Group recognized an impairment loss of $398,581 thousand because of poor operating conditions of suppliers for the year ended December 31, 2018.

   2) Material sell-buy agreements:
      As of December 31, 2019, the Group entered into irrevocable sell-buy agreements with several companies.

      The information was as follows:

Company Name	Buyer	Duration	Note
NCH Solar1	Good Energy Limited, UK	20 years	Sale of electricity to third parties without prior permission is disallowed
CEDAR FALLS	Cedar Falls Utilities	25 years	Sale of electricity to third parties without prior permission is disallowed
JRC	Dominican (Corporación	20 years	Sale of electricity to third

Company Name	Buyer	Duration	Note
	Dominicana de Empresas Eléctricas Estatales) CDEEE		parties without prior permission is disallowed
RER CT57	USA Town of East Haddam	25 years	Sale of electricity to third parties without prior permission is disallowed
GES ME	Dubai DP World FZE	20 years	Sale of electricity to third parties without prior permission is disallowed
Hashimoto	Kansai Electric Power Co., Inc.	20 years	Sale of electricity to third parties without prior permission is disallowed
Anderson N.	IMPA	25 years	Sale of electricity to third parties without prior permission is disallowed
Anderson S.	IMPA	25 years	Sale of electricity to third parties without prior permission is disallowed
Richmond	IMPA	25 years	Sale of electricity to third parties without prior permission is disallowed
Rensselare	IMPA	25 years	Sale of electricity to third parties without prior permission is disallowed

3) The group have obtained orders for power facility construction and contracted the projects out to contractors. The Group entered into construction and material contracts with the contractors with a total contract price of $2,954,972 thousand and the unpaid amount was $907,301 thousand as of December 31, 2019.
4) Unused letters of credit amounted to approximately US$3,411 thousand as of December 31, 2019.

b. Contingencies

1) The controversy associated with payment for goods between the Group and Company CD:

The Group filed an appeal with Wujiang District Intermediate People’s Court on July 3, 2015 to request CEEG (Shanghai) and CEEG (Nanjing), both are CD group companies, to return RMB48,230 thousand. Wujiang District Intermediate People’s Court ruled in the Group’s favor on September 23, 2015, but Company CD appealed to the court of second instance on October 8, 2015. During the appeal, the Group and Company CD, a CD group company, reached an agreement on December 30, 2015 after mediation. According to the agreement, CEEG (Shanghai) would propose a specific payment schedule with an expected repayment of RMB48,230 thousand and CEEG (Nanjing) assumed joint liability.

CD Group did not make payments according to the terms of the above payment schedule; hence, the Group has entrusted a law firm to apply for a compulsory enforcement of the award. The Group recognized all above mentioned account receivables as a loss. DelSolar Wu Jiang received a total of RMB20,537 thousand through cash appropriated by the enforcement of the court and cash payments received from CEEG (Shanghai) as of April 29, 2019. CEEG (Shanghai) has repaid a debt to DelSolar Wu Jian with solar cells assemblies for 3,148 thousand as of April 29, 2019; CEEG (Shanghai) will continuously to repay the outstanding amount on the basis of RMB300 thousand per month to DelSolar Wu Jiang.

In addition, the controversy associated with payment for goods between the Group and CEEG’s (Shanghai): In August 2016, the Group has entrusted a law firm to go to arbitration for the overdue payment of CD Group’s CEEG (Shanghai) in the China International Economic and Trade Arbitration Commission (CIETAC). The Group requested payment of USD1,255 thousand. The Group prevailed in the proceeding on December 23, 2016, and CEEG (Shanghai) has to pay USD1,254 thousand in overdue payments and USD25 thousand in overdue penalties to the Group. The Group has applied to the court for a compulsory enforcement of the award.

On October 28, 2019, the Shanghai Third Intermediate People's Court issued an announcement. It agreed to transfer the bankruptcy application and liquidation procedures of CLP Shanghai for bankruptcy and reorganization procedures, and on the same day ruling CLP Shanghai was reorganized. On December 24, 2019, the Group filed a claim with the bankruptcy administrator.

2) In the controversy of whether to continuously perform the supply agreement, Company K requested the help of Hsinchu district court on January 13, 2016 to demand payment of $10,000 thousand in partial claims. The Company K requested to increase the payment to $500,000 thousand in August 2016. The Corporation has filed a counterclaim against the Company K to Hsinchu district court on March 21, 2017 to reimburse prepayment and to demand payment of $20,000 thousand in partial claims.
On October 13, 2017, the Hsinchu district court ruled that the Corporation should pay Company K $500,000 thousand and accrued interest payable at 5% per annum beginning from December 23, 2015. Simultaneously, Hsinchu district court dismissed the Corporation's request for return of advance payment against supplier K. In the first court session, the Corporation considered the result of verdict as having a lot of violations; thus, the Corporation has engaged an attorney to lodge an appeal to safeguard the legitimate rights of the Corporation. Based on conservatism concept, the Corporation accrued a potential loss and necessary adjustment will be made depending on the ruling.

3) Company CE has requested an arbitration on the controversy between Company CE and its third-party vendor Company G at the Hong Kong International Arbitration Centre, where its arbitral awards are enforced and recognized by ROC courts. With respect to the enforcement of such arbitral awards, Company CE requested the issuance of an order for attachment and an order for transfer of the Corporation's debentures of payments of goods. The Corporation's made a statement that the Corporation continuously disagreed with the demand of Company CE since February 2016; therefore, Company CE advocated that the Corporation should pay a total of $60,480 thousand and an accrued interest payable at 5% per annum. In August 2017, the Hsinchu district court ruled that the Corporation should pay CE Company $60,480 thousand and accrued interest payable 5% per annum. As Company CE has applied for the implementation of debt restructuring in mainland China with its third party vendor Company G, and the Corporation instructed legal counsels to subsequently answer the charges. The Corporation considered the result of the verdict as having a lot of violation, and has engaged an attorney to lodge an appeal. The case is currently before the Taiwan High Court. The Corporation has accrued a probable losses and will adjust any amount base on the result of such verdict, if necessary.

4) The dispute over the buy-sell agreement between DelSolar Wu Jiang and Company JE, was admitted to the Shanghai Jiading People's Court on July 25, 2016, and the first, the second and the third court sessions were heard on September 7, 2016, November 25, 2016 and March 4, 2017, respectively. The total amount involved was RMB5,947 thousand, which was composed of a return of advance payments of RMB5,406 thousand, a penalty of RMB500 thousand, and interest losses of RMB41 thousand accrued as of the court filing date. Regarding to the circumstances of the case, DelSolar Wu Jiang has changed the litigation strategy and decided to withdraw the lawsuit on July 6, 2017. On July 10, 2017, DelSolar Wu Jiang has again appealed to the court requiring JE to pay back the prepayments of RMB4,071 thousand, with monetary losses in terms of interest payments incurred from June 23, 2016 to the day on which the appeal was made; the interest was based on the bank interest rate of the comparable period. Waiting for the court decision after two trials on December 5, 2017 and March 14, 2019. The judgment of the Shanghai Jiading People's Court on March 29, 2019 was for JE Company to return to DelSolar Wu Jiang $2,637 thousand as repayment of interest loss and burden case acceptance fee; Shanghai Jiading People's Court dismissed the other claims. Company JE filed an appeal in accordance with the law within the statutory period. The case entered the second instance procedure and was heard on July 29, 2019. The court dismissed the appeal and upheld the original judgment on September 25, 2019. Since JE Company did not fulfill its payment obligations, DelSolar Wu Jiang entrusted a law firm to apply to the court for enforcement.

5) JRC, a subsidiary of the Group, is required to compensate ER Company USD900 thousand due to a consultancy agreement's lawsuit; the judgment was passed in the Dominican General Court. The Group has accrued a probable losses based on accounting conservatism. The litigation case is under appeal with no latest progress.

6) The dispute over the buy-sell agreement between DelSolar Wu Jiang and Company CZ, has been filed a petition to Wu Jiang People's Court by DelSolar Wu Jiang for an order of claiming Company CZ's payment of RMB8,798 thousand, a penalty of RMB693 thousand as of February 3, 2017, the penalty from February 4, 2017 to the date of settlement, and the case acceptance fee and has reconciled on June 15, 2017. CZ Company was requested for a payment of RMB7,798 thousand by installment payment, a penalty of RMB872 thousand (as of May 8, 2017) and the case acceptance

fee RMB44 thousand. CZ Company did not make payments according to the terms of the payment schedule; hence, DelSolar Wu Jiang has entrusted a law firm to apply for a compulsory enforcement of the award. CZ Company paid the amount of RMB8,487 thousand and will continue to apply to the court for RMB227 thousand, penalty and litigation expense as of December 31, 2018. The judgement of Taichou Intermediate People's court on August 7, 2019 was to accpet the liquidation of bankruptcy application. Hence, DelSolar Wujiang Has claimed declaration to the administrator on November 27, 2019.

7) The Corporation entered into a gas distribution agreement with EQ Company on May 1, 2011. The agreement stated that EQ Company would provide nitrogen, pure oxygen and other gases to GEC factories located at the Hsinchu Industrial Science Park in Zhu-nan, Miaoli. After the business combination between the Corporation and GEC, the Corporation undertook all the rights, obligations and liabilities of the above mentioned agreement. The Corporation terminated the contract earlier in accordance with the agreement due to the factories in Zhu-nan was closed on October 31, 2016. Thus, no consensus has been reached about the amount of early termination. EQ Company has filed an application for arbitration to request a payment of $60,900 thousand with an annual interest of 5%. The Corporation has instructed counsel to respond the request. This arbitration judgment was obtained in August 2019 which required the Corporation to pay EQ Company $18.51 million with an annual interest rate of 5% on the settlement date. The Corporation appealed to revoke the arbitration judgment on September 19, 2019 and the court accepted it. The Corporation has accrued a probable losses and will adjust any amount base on the result of such verdict, if necessary.

8) On May 6, 2019, the board of directors of the Corporation resolved and signed a settlement agreement with Sunshine PV on the mutual debts of the two parties. As of June 30, 2019, Sunshine PV owed a number of items from the Corporation such as goods, rental payment and capital loans, and additional interest was $446,768 thousand, which was fully recognized as allowance for losses. The plant of Hsinchu of Solartech Energy suffered a fire disaster in October 2017, which caused damages to the machinery and equipment of Sunshine PV (referred to as "damaged equipment"). Sunshine PV applied for compensation from the insurance company, but the insurance company has not submitted an appraisal report to prove the damage yet. In order to evaluate the equipment as mentioned earlier, the Corporation requested an independent expert to evaluate the value of the damaged equipment of Sunshine PV. According to the opinion of the independent expert, the possible compensation loss was about $460,000 thousand to $510,000 thousand. Based on the long-term negotiation and the past cooperation relationship between the two parties and taking into account the current state of operation and solvency of Sunshine PV, the Corporation claimed that compensation can be obtained from Sunshine PV. The Corporation reconciled with Sunshine PV for the damages claimed, and they signed the settlement agreement on May 6, 2019. Based on the settlement agreement, the two parties no longer have any rights and obligations on the creditor's rights and debts.

39. SIGNIFICANT EVENTS AFTER REPORTING PERIOD

On January 8, 2020, according to the shareholder agreement between the Group and CFY, the Group requested CFY to redeem the CFY shares held by the Corporation at a contract price of USD 54,792.

40. SIGNIFICANT DENOMINATED IN FOREIGN CURRENCIES ASSETS AND LIABILITIES

The Group entities' significant financial assets and liabilities denominated in foreign currencies are aggregated by the foreign currencies other than functional currencies and the related exchange rates between foreign currencies and respective functional currencies were as follows:

	December 31			
	2019		2018	
	Foreign Currencies (In Thousands)	Exchange Rate (Note 1)	Foreign Currencies (In Thousands)	Exchange Rate (Note 1)
Financial assets				
Monetary assets				
USD	$ 176,175	29.9950	$ 224,768	30.7400

	December 31			
	2019		2018	
	Foreign Currencies (In Thousands)	Exchange Rate (Note 1)	Foreign Currencies (In Thousands)	Exchange Rate (Note 1)
USD (Note 2)	635	6.9756	260	6.8677
USD (Note 3)	14,645	29.7186	25,523	32.2222
EUR	4,183	33.6200	14,999	35.2200
JPY	618,318	0.2760	836,703	0.2781
RMB	11,007	4.3000	50,346	4.4760
GBP	187	39.3900	2,058	38.9500
DOP	26	0.5669	386	0.6116
Non-monetary assets				
USD	1,159	29.9950	1,144	30.7400
USD	681	29.9950	763	28.9978
EUR	-	-	600	32.2300
MYR	28,860	7.0380	52,054	7.1190

(Continued)

	December 31			
	2019		2018	
	Foreign Currencies (In Thousands)	Exchange Rate (Note 1)	Foreign Currencies (In Thousands)	Exchange Rate (Note 1)
Financial liabilities				
Monetary liabilities				
USD	$ 150,007	29.9950	$ 229,154	30.7400
USD (Note 2)	4,653	6.9756	-	-
USD (Note 3)	14,461	29.7186	9,132	32.2222
EUR	550	33.6200	10,097	35.2200
EUR (Note 2)	210	7.8186	210	7.8686
EUR (Note 3)	49	33.3102	29	36.9182
JPY	629,041	0.2760	857,838	0.2781
GBP	27	39.3900	38	38.9500
RMB	1,853	4.3000	536	4.4760
DOP	1,322	0.5669	1,576	0.6116
NTD (Note 3)	-	-	146	1.0482

(Concluded)

Note 1: Exchange rates between foreign currencies and the New Taiwan dollar, except where specified.
Note 2: Exchange rates between foreign currencies and RMB.
Note 3: Exchange rates between foreign currencies and THB.

For the year ended December 31, 2019 and 2018, realized and unrealized foreign exchange gains (losses) were $25,950 thousand and $(61,243) thousand, respectively. It is impractical to disclose net foreign exchange gains (losses) by each significant foreign currency due to the variety of the foreign currency transactions of the group entities.

41. SEPARATELY DISCLOSED ITEMS

The following are the additional disclosures required by the Securities and Futures Bureau for the Corporation:

a. Financing provided to others: Table 1 (attached)
b. Endorsements/guarantees provided: Table 2 (attached)
c. Marketable securities held (not including investments in subsidiaries, associates, and joint ventures): Table 3 (attached)

d. Marketable securities acquired and disposed of at costs or prices of at least $300 million or 20% of the paid-in capital: Table 4 (attached)
e. Acquisition of individual real estate at costs of at least $300 million or 20% of the paid-in capital: None
f. Disposal of individual real estate at prices of at least $300 million or 20% of the paid-in capital: None
g. Total purchases from or sales to related parties of at least $100 million or 20% of the paid-in capital: Table 5 (attached)
h. Receivables from related parties amounting to at least $100 million or 20% of the paid-in capital: Table 6 (attached)
i. Trading in derivative instruments: Table 7 (attached)
j. Related information of investees over which the Corporation exercises significant influence: Table 7 (attached)
k. Investments in mainland China:
   1) Information on any investee company in mainland China, showing the name, principal business activities, paid-in capital, method of investment, inward and outward remittance of funds, shareholding ratio, investment gain or loss, carrying amount of the investment at the end of the period, repatriated investment gains, and limit on the amount of investment in the mainland China area: Table 8 (attached)
   2) Any of the following significant transactions with investee companies in mainland China, either directly or indirectly through a third party, and their prices, payment terms, and unrealized gains or losses: Table 9 (attached)

l. Intercompany relationships and significant intercompany transactions: Table 10 (attached)

42. SEGMENT INFORMATION

Financial information reported to the Group's chief operating decision maker for the purpose of resource allocation and assessment of segment performance focuses on sales from each type of products. The measurement basis of the reportable segments are the same as the Group's consolidated financial statements. The Group's main reportable segments are solar cells, modules and power facilities.

a. Segment revenue and results

	Segment Revenue			
	For the Year Ended December 31			
	2019		2018 (Restated)	
	From External Customers	Inter-segment Sales	From External Customers	Inter-segment Sales
Modules	$ 9,522,440	$ 238,409	$ 7,190,802	$ 328,292
Solar cells	5,684,108	316,232	3,315,166	67,031
Power facilities	2,518,512	144,397	2,232,290	10,806
Others	414,052	1,358,279	398,767	93,258
Total for continuing operations	$ 18,139,112	$ 2,057,317	$ 13,137,025	$ 499,387

	Segment Profit or Loss	
	For the Year Ended December 31	
	2019	2018 (Restated)
Modules	$ 842,568	$ (55,837)
Solar cells	(1,576,855)	(1,279,860)
Power facilities	217,738	460,477
Others	(465,982)	(101,887)
Gross loss of reportable segments	(982,531)	(977,107)
Unrealized intercompany profit	(1,792)	92,971
	(984,323)	(884,136)
Unallocated amount		
Operating expenses	(2,470,935)	(1,718,847)
Other income and expenses	(1,766,692)	(260,378)
Non-operating income and expenses	(484,606)	2,281,499
Net loss profit before income tax	$ (5,706,556)	$ (581,862)

Segment profit or loss represents profit or loss created by each segment without the allocation of operating expenses and non-operating income expenses. This is the measure reported to the Group's chief operating decision maker for the purposes of resource allocation and assessment of segment performance.

b. Segment assets

The Group does not provide information on assets regularly to the Group's chief operating decision maker; thus, the measure of assets is zero.

c. Revenue from major products and services

The following is an analysis of the Group's revenue from its major products and services.

	For the Year Ended December 31	
	2019	2018 (Restated)
Modules	$ 9,522,440	$ 7,190,802
Solar cells	5,684,108	3,249,827
Power facilities	802,662	712,943
Others	2,129,902	1,983,453
	$ 18,139,112	$ 13,137,025

d. Geographical information

The Group's revenue from continuing operations from external customers by location of customers' countries and information about its non-current assets by location of assets are detailed below.

	Revenue from External Customers For the Year Ended December 31		Non-current Assets December 31	
	2019	2018 (Restated)	2019	2018 (Restated)
Taiwan	$ 6,031,214	$ 6,743,458	$ 12,506,476	$ 15,615,721
USA	2,810,770	1,027,606	2,415,878	5,180,655
India	2,404,830	-	-	-
Germany	2,319,921	1,991,574	-	-
Others	4,572,377	3,374,387	4,142,604	4,423,132
	$ 18,139,112	$ 13,137,025	$ 19,064,958	$ 25,219,508

Non-current assets exclude investments accounted for using the equity method, prepaid investments in shares, financial instruments, deferred tax assets, goodwill, brands and other assets.

e. Information about major customers

Single customers who contributed 10% or more to the Group's revenue were as follows:

	For the Year Ended December 31			
	2019		2018	
	Amount	%	Amount	%
Customer DP	NA (Note)	NA (Note)	$ 1,795,032	14
Customer CO	NA (Note)	NA (Note)	1,386,659	11

Note: Revenue less than 10% of the Group's revenue.

TABLE 1

UNITED RENEWABLE ENERGY CO., AND SUBSIDIARIES

FINANCING PROVIDED TO OTHERS
FOR THE YEAR ENDED DECEMBER 31, 2019
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

No.	Lender	Borrower	Financial Statement Account	Related Party	Highest Balance for the Period	Ending Balance	Actual Borrowing Amount	Interest Rate (%)	Nature of Financing	Business Transaction Amount	Reasons for Short-term Financing	Allowance for Impairment Loss	Collateral		Financing Limit for Each Borrower	Aggregate Financing Limit	Note
													Item	Value			
0	GES JAPAN	GES UK	Other receivables from related party	YES	$ 265,140	$ 248,400	$ 248,400	2.900	2	$ -	Operating capital	$ -	–	$ -	$ 714,485 (Notes 2, 3 and 4)	$ 714,485	Note 2
4	DelSolar Wu Jiang	NSP Nanchang	Other receivables from related party	YES	820,395	473,000	473,000	2.730	2	-	Operating capital	-	–	-	362,364 (Notes 2, 3 and 4)	362,364	Note 2

Note 1: Nature of Financing:
1) For business;
2) For short-term financing.

Note 2: The financing company's total financing amount for one counterparty should not exceed 40% of the financing company's net asset value. The net asset value of GES UK, GES JAPAN and DelSolar Wu Jiang is based on the latest audited or reviewed financial statement.

Note 3: The financing company's total financing should not exceed 20% of its net asset value. A single financing should not exceed the transaction amount between the financing company and counterparty within one year and should not exceed the highest amount of purchases or sales.

Note 4: The Corporation's total amount of financing for short-term financing should not exceed 20% of its net asset value and the financing for a counterparty should not exceed 10% of its net asset value.

Note 5: Overseas subsidiaries wholly-owned directly or indirectly by the Corporation and GES are not subject to Note 2. The financing company's total financing should not exceed three years and the total amount of financing and the financing for a counterparty should not exceed 100% of its net asset value.

TABLE 2

UNITED RENEWABLE ENERGY CO., AND SUBSIDIARIES

ENDORSEMENTS/GUARANTEES PROVIDED
FOR THE YEAR ENDED DECEMBER 31, 2019
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

No.	Endorser/Guarantor	Endorsee/Guarantee		Limit on Endorsement/ Guarantee Given on Behalf of Each Party	Maximum Amount Endorsed/ Guaranteed During the Period	Outstanding Endorsement/ Guarantee at the End of the Period	Actual Borrowing Amount	Amount Endorsed/ Guaranteed by Collateral	Ratio of Accumulated Endorsement/ Guarantee to Net Equity in Latest Financial Statements (%)	Aggregate Endorsement/ Guarantee Limit	Endorsement/ Guarantee Given by Parent on Behalf of Subsidiaries	Endorsement/ Guarantee Given by Subsidiaries on Behalf of Parent	Endorsement/ Guarantee Given on Behalf of Companies in Mainland China
		Name	Relationship										
0	The Corporation	Zhongyang	Subsidiary	$ 4,144,399	$ 770,000	$ -	$ -	-	-	$ 10,360,997	YES	–	–
		GES UK	Subsidiary	4,144,399	674,348	584,903	448,560	-	2.82	10,360,997	YES	–	–
		Gintech (Thailand)	Subsidiary	4,144,399	653,535	632,735	169,078	-	3.05	10,360,997	YES	–	–
		GES USA	Subsidiary	4,144,399	580,362	555,012	330,050	-	2.68	10,360,997	YES	–	–
		NSP System	Subsidiary	4,144,399	500,000	500,000	374,400	-	2.41	10,360,997	YES	–	–
		Yong Liang	Subsidiary	4,144,399	417,250	347,250	191,564	-	1.68	10,360,997	YES	–	–
		NSP Indygen	Subsidiary	4,144,399	364,500	354,510	354,510	-	1.71	10,360,997	YES	–	–
		CFR	Subsidiary	4,144,399	307,400	-	-	-	-	10,360,997	YES	–	–
		Apex	Subsidiary	4,144,399	263,000	263,000	261,000	-	1.27	10,360,997	YES	–	–
		The Corporation	Subsidiary	4,144,399	51,120	51,120	-	-	0.25	10,360,997	YES	–	–
		NSP NEVADA	Subsidiary	4,144,399	46,110	46,110	-	-	0.22	10,360,997	YES	–	–
1	GES USA	TEV solar	Subsidiary	1,465,613	315,218	301,450	299,950	-	20.57	2,931,226	YES	–	–
		MEGASIXTEEN	Subsidiary	1,465,613	266,603	254,958	254,958	-	17.40	2,931,226	YES	–	–
		MUNISOL	Subsidiary	1,465,613	139,261	133,178	133,178	-	9.09	2,931,226	YES	–	–

Note 1: In accordance with the "Rules of Guarantees by the Corporation," the ceiling for the total guaranteed amount was 50% of the Corporation's net asset value, and the limit on the guaranteed amount for a single party was 20% of the Corporation's net asset value. But for business purposes, the limit of the guaranteed amount was the total of the purchases from or sales to the Corporation within the most recent year.

Note 2: Based on the "Rules of Guarantees by the Corporation and GES USA," the ceiling for the total guaranteed amount was 200% of the Corporation's and GES USA's net asset value, and the limit of the guaranteed amount for a single party was 100% of the Corporation's net asset value. But for business purposes, the limit on the guaranteed amount was the total of the purchases from or sales to the Corporation and GES USA within the most recent year. The Corporation and GES USA's net asset value is based on its latest financial statements.

Note 3: In accordance with the "Regulations Governing Loaning of Funds and Making of Endorsements/Guarantees by Public Companies" Article 4.1.1. (3), although, the guaranteed party is the Corporation, the Corporation issued a separate promissory note to a non-financial enterprise to meet the financing needs, which is still in accordance with the term "endorsements/guarantees" under Article 4 of the regulations.

TABLE 3

UNITED RENEWABLE ENERGY CO., AND SUBSIDIARIES

MARKETABLE SECURITIES HELD
DECEMBER 31, 2019
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Holding Company Name	Type and Name of Marketable Securities	Relationship with the Holding Company	Financial Statement Account	December 31, 2018				Note
				Number of Shares	Carrying Amount	Percentage of Ownership (%)	Fair Value	
The Corporation	Shares							
	CTCI	Investee	Financial assets at fair value through other comprehensive income- current	3,003	$ 114,414	0.39	$ 114,414	-
	SAS	Investee	Financial assets at fair value through other comprehensive income- non-current	21,860	2,172,922	3.73	2,172,922	Note 1
	TTMC	Investee	Financial assets at fair value through other comprehensive income- non-current	4,000	80,880	5.44	80,880	Notes 2 and 3
	EXOJET	Investee	Financial assets at fair value through other comprehensive income- non-current	5,885	28,896	12.06	28,896	-
	TSCC	Investee	Financial assets at fair value through other comprehensive income- non-current	1,691	18,601	0.58	18,601	-
	NTNU	Investee	Financial assets at fair value through other comprehensive income- non-current	200	2,000	2.00	2,000	-
	ASIA GLOBAL VENTURE CAPITAL II CO., LTD.	Investee	Financial assets at fair value through other comprehensive income- non-current	1,000	20,426	10.00	20,426	-
	SUN APPENNINO CORPORATION	Investee	Financial assets at fair value through other comprehensive income- non-current	-	-	26.09	-	-
	FICUS CAPITAL CORPORATION	Investee	Financial assets at fair value through other comprehensive income- non-current	-	-	28.07	-	-
	Puttable preference shares－Phanes Holding	Other related party	Financial assets at amortized cost- non-current	24	149,975	100.00	149,975	-
New Ray Investment	Shares							
	TTMC	Investee	Financial assets at fair value through other comprehensive income- non-current	3,000	60,659	4.08	60,659	Notes 2 and 3
Apex	Shares							
	TOP GREEN ENERGY TECHNOLOGIES INC.	Investee	Financial assets at fair value through other comprehensive income- non-current	8,889	27,098	7.11	27,098	-

Note 1: The asset has been pledged as collaterals for long-term bank loans and financing facilities. For the details refer to Note 43.

Note 2: The above amount is based on fair value. For those pertaining to private-placement shares, the amount is based on quoted market prices; and for those that cannot be traded during the lock-up period, the amount is based on relevant market prices.

Note 3: TTMC's shares held by the Corporation and New Ray Investment through private equity placement were restricted under Article 43-8 of the Securities and Exchange Act.

Note 4: Except for the above mentioned, the above marketable securities had not been pledged or mortgaged as of December 31, 2019.

ABLE 4

UNITED RENEWABLE ENERGY CO., AND SUBSIDIARIES

MARKETABLE SECURITIES ACQUIRED AND DISPOSED AT COSTS OR PRICES OF AT LEAST $300 MILLION OR 20% OF THE PAID-IN CAPITAL
FOR THE YEAR ENDED DECEMBER 31, 2019
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Company Name	Type and Name of Marketable Securities	Financial Statement Account	Counterparty	Relationship	Beginning Balance		Acquisition		Disposal				Ending Balance	
					Shares	Amount	Shares	Amount	Shares	Shares	Carrying Amount	Gain (Loss) on Disposal	Shares	Amount
	Shares													
GES USA	ET ENERGY	Investment accounted for using the equity method	-	Subsidiary	4,800	$ 139,843	-	$ -	4,800	$ 712,865	$ 509,012	$ 203,853	-	$ -
GES UK	GES USA	Investment accounted for using the equity method	-	Subsidiary	39,680	1,185,163	13,736	387,161	-	-	-	-	53,416	1,572,325

Note : Included the investments in subsidiaries using equity method in this period.

TABLE 5

UNITED RENEWABLE ENERGY CO., AND SUBSIDIARIES

TOTAL PURCHASES FROM OR SALES TO RELATED PARTIES AMOUNTING TO AT LEAST $100 MILLION OR 20% OF THE PAID-IN CAPITAL
FOR THE YEAR ENDED DECEMBER 31, 2019
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Buyer	Related Party	Relationship	Transaction Details				Abnormal Transaction		Notes/Accounts Receivable (Payable)		Note
			Purchase/ Sale	Amount	% to Total	Payment Terms	Unit Price	Payment Terms	Ending Balance	% to Total	
The Corporation	Utech	Subsidiary	Purchase	$ 371,714	2.38	OA 7 days after receipt	$ -	-	$ (49,218)	(3.24)	-
	CFC	Associate	Sale	194,765	1.31	60 days from the invoice date	-	-	105,197	4.79	-
	NSP System	Subsidiary	Sale	177,287	1.19	60 days from the invoice date	-	-	94,616	4.31	-
	Gintech (Thailand)	Subsidiary	Purchase	156,068	1.00	15 days from the invoice date	-	-	(275,810)	(18.17)	-
			Sale	1,004,950	6.74	60 days from the invoice date	-	-	158,620	7.22	-
NSP System	Si One	Associate	Sale	697,723	60.82	15 days from the invoice date	-	-	25,559	4.49	-
	Da Li Energy	Associate	Sale	415,205	36.19	15 days from the invoice date	-	-	119,371	20.97	-

Note 1: The amounts were based on total notes or accounts receivable (payable) or total purchase (sale) amounts of the buyer (seller).
Note 2: The amounts were based on total sale amounts of the seller or total amount due from customers for construction contracts.

TABLE 6

UNITED RENEWABLE ENERGY CO., AND SUBSIDIARIES

RECEIVABLES FROM RELATED PARTIES AMOUNTING TO AT LEAST NT$100 MILLION OR 20% OF THE PAID-IN CAPITAL
DECEMBER 31, 2019
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Company Name	Related Party	Relationship	Ending Balance (Note 1)	Turnover Rate	Overdue		Amount Received in Subsequent Period	Allowance for Impairment Loss
					Amount	Actions Taken		
The Corporation	DelSolar US	Subsidiary	$ 969,633	-	$ 969,633	Receivable according to the financial situation	$ -	$ -
	GES ME	Subsidiary	629,372	-	629,372	Receivable according to the financial situation	-	-
	NSP NEVADA	Subsidiary	562,020	-	562,020	Receivable according to the financial situation	-	-
	GES USA	Subsidiary	189,162	-	189,162	Receivable according to the financial situation	-	-
	Gintech (Thailand)	Subsidiary	179,885	4.52	111,711	Receivable according to the financial situation	-	-
	NSP Nanchang	Subsidiary	139,578	-	139,578	Receivable according to the financial situation	-	-
	NSP System	Subsidiary	116,666	-	48,324	Receivable according to the financial situation	48,419	-
	CFC	Associate	105,197	1.74	105,197	Receivable according to the financial situation	28,275	8,434
DelSolar WuJiang	NSP Nanchang	Subsidiary	542,118	-	-	Receivable according to the financial situation	-	-
NSP NEVADA	GES USA	Subsidiary	243,620	-	-	Receivable according to the financial situation	-	-
CFR	CFC	Associate	391,126	0.21	-	Receivable according to the financial situation	17,997	-
	Clean Focus Management Acquisition LLC	Associate	183,755	-	-	Receivable according to the financial situation	-	-
	DevCo One	Associate	121,040	-	-	Receivable according to the financial situation	-	-
GES JAPAN	GES UK	Parent company	248,400	-	-	Receivable according to the financial situation	-	-
	Hashimoto	Subsidiary	211,028	-	211,028	Receivable according to the financial situation	-	-
	The Corporation	The ultimate parent of the company	169,202	-	169,202	Receivable according to the financial situation	-	-
GES UK	JRC	Subsidiary	438,475	-	438,475	Receivable according to the financial situation	-	-
GES USA	MUNISOL	Grandson company	842,290	-	-	Receivable according to the financial situation	-	-
TEV II	TEV Solar	Subsidiary	590,155	-	590,155	Receivable according to the financial situation	-	-
NSP System	Da Li	Associate	117,305	-	-	Receivable according to the financial situation	117,305	-

UNITED RENEWABLE ENERGY CO., AND SUBSIDIARIES

NAMES, LOCATIONS, AND OTHER INFORMATION OF INVESTEES ON WHICH THE COMPANY EXERCISES SIGNIFICANT INFLUENCE
FOR THE YEAR ENDED DECEMBER 31, 2019
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Investor Company	Investee Company	Location	Main Businesses and Products	Investment Amount		Balance as of December 31, 2019			Net Income (Loss) of the Investee	Investment Gain (Loss)	Note
				December 31, 2019	December 31, 2018	Shares (Thousands)	% of Ownership	Carrying Value			
The Corporation	UES	Independent State of Somoa	Investment company	$ 1,910,636	$ 1,910,636	61,930	100.00	$ 1,987,414	$ 18,742	$ 18,742	-
	DelSolar Cayman	Cayman Islands	Investment company	4,906,789	4,597,639	155,126	100.00	923,603	(1,132,534)	(1,132,132)	-
	NSP BVI	British Virgin Islands	Investment company	1,426,179	1,426,179	45,001	100.00	1,411,425	41,205	41,205	-
	GES	Hsin-chu, Taiwan	Electronic component manufacturing and selling	-	-	-	-	-	-	-	Note 2
	GES ME	Dubai	Solar related business	418,805	418,805	4	100.00	357,850	148	148	-
	Apex	Hsin-chu, Taiwan	Solar related business	165,994	145,994	50,500	100.00	190,890	13,549	13,549	-
	NSP UK	London, UK	Investment company	138,967	138,967	3,580	100.00	182,919	38,317	38,317	-
	NSP System	Tainan, Taiwan	Solar related business	144,200	144,200	14,420	100.00	140,877	55,126	14,378	-
	Prime Energy	Tainan, Taiwan	Electronic component manufacturing and selling	90,000	90,000	9,000	100.00	79,992	2	2	-
	New Ray Investment	Tainan, Taiwan	Investment company	115,000	115,000	11,500	100.00	72,524	1,192	1,192	-
	Zhongyang	Hsin-chu, Taiwan	Solar related business	24,121	24,121	3,500	100.00	37,104	5,665	5,665	-
	Huiyang	Hsin-chu, Taiwan	Solar related business	30,427	30,427	3,100	100.00	14,489	(318)	(318)	Note 5
	UREE	Kaohsiung, Taiwan	Solar related business	20,000	-	2,000	100.00	18,565	(5,511)	(5,511)	Note 3
	DelSolar Singapore	Singapore	Investment company	29,743	29,743	1,250	100.00	14,489	(109)	(109)	-
	BPS	Tainan, Taiwan	Solar related business	6,000	6,000	600	60.00	21,353	11,388	6,473	-
	SMC	Hsin-chu, Taiwan	Solar related business	9,720	9,720	1,000	100.00	9,844	186	186	-
	Solartech Japan	Japan	Solar related business	-	36,205	-	-	-	(25,587)	(25,587)	Note 5
	Utech	Miaoli, Taiwan	Electronic component manufacturing	337,114	57,169	39,324	99.49	(264,541)	(429,066)	(409,616)	-
	Yong Liang	Hsin-chu, Taiwan	Solar related business	249,000	249,000	24,900	100.00	246,742	7,625	7,625	Note 2
	Yong Zhou	Hsin-chu, Taiwan	Solar related business	46,500	41,500	-	100.00	5,829	(6,063)	(6,063)	Note 2
	Ever Lite	Hsin-chu, Taiwan	Electronic component selling	-	6,000	-	100.00	1	3,960	3,960	Notes 2 and 5
	Yong Shun	Hsin-chu, Taiwan	Solar related business	2,000	2,000	200	100.00	799	(115)	(115)	Note 2
	JRC	Domincan	Solar related business	3,717	3,717	1	1.00	466	(14,472)	(125)	Note 2
	GES UK	London, UK	Investment company	3,170,893	3,170,893	103,890	100.00	2,443,709	44,824	44,824	-
	Neo Cathay	Tainan, Taiwan	Investment company	600,000	600,000	60,000	40.00	608,967	43,102	17,241	-
	TSST	Malaysia	Solar related business	417,692	417,692	97,701	42.12	86,638	(394,955)	(166,356)	-
	V5 Technology	Hsin-chu, Taiwan	Electronic component manufacturing and selling	114,084	114,084	7,789	41.43	66,769	360	(3,091)	-
	Gintung	Taoyuan, Taiwan	Electronic component manufacturing	34,341	34,341	13,460	36.38	-	(44,424)	(44,424)	-
	DSET	Taipei,Taiwan	Solar related business	10,500	10,500	1,050	35.00	3,604	(11,227)	(3,929)	-
	Solar PV	Cayman Islands	Investment company	-	-	30,500	19.92	-	(1,769)	-	Note 4
	Dashiangying	Kaohsiung, Taiwan	Solar related and agriculture related business	100	-	10	100.00	71	(29)	(29)	Note 3
	Shinkai	Kaohsiung, Taiwan	Solar related and agriculture related business	100	-	10	100.00	71	(29)	(29)	Note 3
	Shanshang	Kaohsiung, Taiwan	Solar related and agriculture related business	100	-	10	100.00	71	(29)	(29)	Note 3
	Jiangung	Kaohsiung, Taiwan	Solar related and agriculture related business	100	-	10	100.00	71	(29)	(29)	Note 3
	Dungshr	Kaohsiung, Taiwan	Solar related and agriculture related business	100	-	10	100.00	71	(29)	(29)	Note 3
	yanshan	Kaohsiung, Taiwan	Solar related and agriculture related business	100	-	10	100.00	71	(29)	(29)	Note 3
UES	RES	Independent State of Somoa	Investment company	1,971,918	1,971,918	61,930	100.00	1,951,370	18,742	18,742	-
RES	Gintech (Thailand)	Thailand	Solar related business	1,964,202	1,964,202	20,840	100.00	1,943,986	18,714	18,714	-
GES UK	GES USA	Nevada, US	Investment company	1,572,325	1,185,163	53,416	100.00	1,420,097	110,295	110,295	-
	NCH Solar 1	London, UK	Solar related business	395,106	414,684	7,447	100.00	309,166	7,660	7,660	-
	GES Solar 2	London, UK	Solar related business	61,326	61,326	1,022	100.00	26,892	214	214	-
	GES Solar 3	London, UK	Solar related business	3,328	3,328	67	100.00	(3,799)	(832)	(832)	-
	GES CANADA	Yaboda, Canada	Investment company	371,356	371,356	10,540	100.00	79,118	(15,359)	(15,359)	-
	GES JAPAN	Kitakyushu, Japan	Investment company	665,781	665,781	276	100.00	714,485	(4,238)	(4,238)	-
GES USA	ET ENERGY	Indiana, US	Solar related business	-	141,220	-	-	-	-	(9,911)	Note 5
	TIPPING POINT	Ohio, US	Solar related business	-	34,471	-	-	-	-	(125)	Note 5
	MEGATWO	California, US	Solar related business	535,187	441,462	17,723	100.00	429,114	(8,625)	(8,625)	-
	MEGATHREE	Delaware, US	Solar related business	38,606	38,606	1,284	40.00	34,759	1,861	1,841	-
	MEGAFIVE	California, US	Solar related business	19,527	19,527	635	100.00	19,144	674	674	-
	MEGASIX	California, US	Solar related business	81,496	-	2,627	100.00	71,441	(5,923)	(5,923)	Note 6
	MEGAEIGHT	California, US	Solar related business	25,843	25,843	790	100.00	20,897	(1,156)	(1,156)	-
	MEGATWELVE	Indiana, US	Solar related business	5,204	5,204	168	100.00	2,570	(928)	(928)	-
	MEGATHIRTEEN	Indiana, US	Solar related business	58,031	58,890	2,000	100.00	55,891	(910)	(910)	-
	MEGASIXTEEN	Indiana, US	Solar related business	351,772	351,772	11,981	100.00	324,611	(16,682)	(16,682)	Note 7
	MEGASEVENTEEN	Indiana, US	Solar related business	-	-	51	100.00	-	(1,544)	(1,544)	Note 6
	MEGANINETEEN	California, US	Solar related business	4,025	4,025	132	100.00	2,202	(302)	(302)	-
	MEGATWENTY	California, US	Solar related business	3,769	3,769	124	100.00	4,527	287	287	-
	ASSET ONE	California, US	Solar related business	34,229	34,229	1,060	100.00	30,039	245	245	-
	ASSET TWO	California, US	Solar related business	-	-	-	-	(296)	(102)	(102)	Note 6

(Continued)

Investor Company	Investee Company	Location	Main Businesses and Products	Investment Amount		Balance as of December 31, 2019			Net Income (Loss) of the Investee	Investment Gain (Loss)	Note
				December 31, 2019	December 31, 2018	Shares (Thousands)	% of Ownership	Carrying Value			
GES USA	ASSET THREE	Hawaii, US	Solar related business	$ 87,289	$ 87,289	2,839	100.00	$ 55,684	$ (7,595)	$ (7,595)	-
	ASSET FOUR	California, US	Solar related business	-	-	-	-	-	(102)	(102)	Note 6
	CENERGY	California, US	Solar related business	-	-	-	-	-	(77)	(77)	Note 6
	SH4	California, US	Solar related business	20,665	20,665	619	100.00	17,716	24	24	-
	CEDAR FALLS	Iowa, US	Solar related business	70,428	70,428	2,287	100.00	60,601	(777)	(777)	-
	Schenectady	New York, US	Solar related business	-	-	-	-	(5,761)	(338)	(338)	Note 6
	VOC	New York, US	Solar related business	-	-	-	-	(1,539)	(241)	(241)	Note 6
	SEG	New York, US	Solar related business	24,144	24,144	800	100.00	21,078	(2,532)	(2,532)	-
	KINECT	Hawaii, US	Solar related business	8,143	8,143	266	100.00	9,164	718	718	-
	RER CT 57	Connecticut, US	Solar related business	62,093	62,093	2,031	100.00	58,128	2,293	2,293	-
	TEV II	Indiana, US	Solar related business	3,018	3,018	100	50.00	(30,084)	(7,337)	(2,201)	Note 9
	Illini Power LLC	California, US	Solar related business	-	-	-	-	(23)	(24)	(24)	-
	PS CS LLC	California, US	Solar related business	-	-	-	-	(23)	(24)	(24)	-
	LITH CS LLC	California, US	Solar related business	-	-	-	-	(23)	(24)	(24)	-
	ZION CS LLC	California, US	Solar related business	-	-	-	-	(26)	(26)	(26)	-
	HEYWOOD	Massachusetts, US	Solar related business	55,424	55,424	-	55.00	32,012	(1,172)	(645)	-
	Energy Group NY 63	New York, US	Solar related business	-	-	-	100.00	-	-	-	-
	MP Solar	California, US	Solar related business	99,128	99,128	-	55.00	97,156	(171)	(94)	-
	Ventura	California, US	Solar related business	91,867	91,867	3,013	55.00	90,145	(143)	(78)	-
NSP NEVADA	HEYWOOD	Massachusetts, US	Solar related business	43,433	43,433	-	45.00	42,386	(1,172)	(528)	-
	MP Solar	California, US	Solar related business	79,787	79,787	-	45.00	79,491	(170)	(77)	-
	Ventura	California, US	Solar related business	73,938	73,938	-	45.00	73,755	(143)	(64)	-
	Livermore	Delaware, US	Solar related business	4,499	4,499	-	75.00	1,538	(18)	(14)	-
	Industrial Park	US	Solar related business	11,998	11,998	-	100.00	11,836	(167)	(167)	-
	Hillsboro	US	Solar related business	55,858	55,858	-	100.00	55,667	389	389	-
GES JAPAN	Hashimoto	Wakayama, Japan	Solar related business	55,893	55,893	5	100.00	58,887	3,016	3,016	-
GES CANADA	JRC	Dominican	Solar related business	371,967	371,967	74	99.00	33,648	(14,472)	(14,347)	-
MEGATWO	MUNISOL	Mexico	Solar related business	512,519	418,778	17,153	100.00	450,081	(8,419)	(8,419)	-
ASSET THREE	SHIMA'S	Hawaii, US	Solar related business	4,496	4,496	153	100.00	3,986	(282)	(282)	-
	WAIMEA	Hawaii, US	Solar related business	16,185	16,185	526	100.00	16,466	440	440	-
	HONOKAWAI	Hawaii, US	Solar related business	12,260	12,260	418	100.00	13,420	668	668	-
	ELEELE	Hawaii, US	Solar related business	19,589	19,589	637	100.00	20,149	490	490	-
	HANALEI	Hawaii, US	Solar related business	8,595	8,595	280	100.00	7,669	(207)	(207)	-
	KAPAA	Hawaii, US	Solar related business	23,391	23,391	761	100.00	22,206	(348)	(348)	-
	KOLOA	Hawaii, US	Solar related business	17,506	17,506	569	100.00	17,782	252	252	-
MEGASIXTEEN	GES AC	Indiana, US	Solar related business	738,518	738,518	-	68.00	747,819	(16,640)	(166)	Note 7
GES AC	ANDERSON N.	Indiana, US	Solar related business	410,752	410,752	13,507	100.00	393,920	(5,677)	(5,677)	Note 7
	ANDERSON S.	Indiana, US	Solar related business	348,325	348,325	11,454	100.00	334,197	(4,744)	(4,744)	Note 7
	Flora	Indiana, US	Solar related business	58,235	58,235	1,915	100.00	56,279	(635)	(635)	Note 7
	Greenfield	Indiana, US	Solar related business	262,480	262,480	8,631	100.00	251,393	(3,986)	(3,986)	Note 7
	Spiceland	Indiana, US	Solar related business	38,767	38,767	1,275	100.00	37,276	(495)	(495)	Note 7
TEV II	TEV Solar	Indiana, US	Solar related business	3,018	3,018	100	100.00	2,813	(86)	(86)	Note 9
TEV Solar	AC GES Solar	Indiana, US	Solar related business	593,754	593,754	19,675	66.19	590,066	(2,966)	(30)	Note 10
AC GES Solar	Richmond	Indiana, US	Solar related business	581,226	581,226	19,259	100.00	574,499	(1,897)	(1,897)	Note 10
	Rensselaer	Indiana, US	Solar related business	299,760	299,760	9,933	100.00	596,664	(596)	(596)	Note 10
	Advance	Indiana, US	Solar related business	16,106	16,106	534	100.00	15,891	(78)	(78)	Note 10
NSP BVI	CFY	Cayman Islands	Investment company	1,169,805	1,169,805	9,672	26.01	1,375,399	507,140	115,313	-
	CFGP	British Virgin Islands	Solar operation management services	179,970	179,970	30	60.00	491	(18,235)	(17,238)	-
	NSP Stars	British Virgin Islands	Trust company	-	-	-	-	-	-	-	-
	NSP HK	Hong Kong	Solar related business	-	-	-	100.00	-	97	97	Note 11
DelSolar Cayman	DelSolar HK	Hong Kong	Investment company	3,755,374	3,755,374	125,200	100.00	315,142	(870,656)	(870,656)	-
	DelSolar US	Delaware, US	Investment company	743,876	443,926	3	100.00	444,233	(259,583)	(259,583)	-
	NSP NEVADA	Nevada, US	Solar related business	153,724	153,724	5,125	100.00	159,008	(5,073)	(5,073)	-
	URE NSP	California, US	Solar related business	14,998	14,998	500	100.00	22,630	7,866	7,866	-
DelSolar Singapore	NSP Malaysia	Malaysia	Technical management services	22,796	22,796	760	100.00	4,119	(247)	(247)	-
	NSP Vietnam	Vietnam	Technical management services	4,799	4,799	-	100.00	(82)	694	694	-
NSP UK	NSP Germany	Cologne, Germany	Solar related business	670	670	25	90.00	1,178	(1,530)	(1,377)	-
	PV Power Park	Frankfurt, Germany	Solar related business	788	788	-	100.00	700	(28)	(28)	-
	NSP Indygen	UK	Solar related business	-	-	-	100.00	60,152	41,095	41,095	-
NSP System	Hsin Jin Optoelectronics	Tainan, Taiwan	Solar related business	10,647	10,647	1,331	80.00	10,282	1,040	832	-
	Hisn Jin Solar Energy	Tainan, Taiwan	Solar related business	13,981	13,981	2,330	60.00	13,503	2,921	1,753	-
	Si Two	Tainan, Taiwan	Solar related business	20,000	20,000	2,000	100.00	19,436	(311)	(311)	-
	Tienyang	Tainan, Taiwan	Solar related business	100	-	10	100.00	(386)	(478)	(486)	Note 12
	Deyang	Tainan, Taiwan	Solar related business	100	-	10	100.00	(379)	(473)	(479)	Note 12
	Shanyang	Tainan, Taiwan	Solar related business	100	-	10	100.00	(379)	(473)	(479)	Note 12
	Jeyang	Tainan, Taiwan	Solar related business	100	-	10	100.00	(379)	(473)	(479)	Note 12
	Lianzhang	Hsinchu, Taiwan	Solar related business	100	-	10	100.00	82	(18)	(18)	Note 12
	Lianxi	Hsinchu, Taiwan	Solar related business	100	-	10	100.00	82	(18)	(18)	Note 12
	Liancheng	Hsinchu, Taiwan	Solar related business	100	-	10	100.00	82	(18)	(18)	Note 12

(Continued)

Investor Company	Investee Company	Location	Main Businesses and Products	Investment Amount		Balance as of December 31, 2019			Net Income (Loss) of the Investee	Investment Gain (Loss)	Note
				December 31, 2019	December 31, 2018	Shares (Thousands)	% of Ownership	Carrying Value			
NSP HK	XYH Suzhou	Jiangsu, China	Solar related business	$ -	$ -	-	100.00	$ -	$ (195)	$ (195)	-
UREE	UAE	Kaohsiung, Taiwan	Solar and agriculture related business	100	-	10	100.00	71	(29)	(29)	Note 8
CFGP	CFGP (HK)	Hong Kong	Solar operation management services	15,897	15,897	-	100.00	(10,606)	(4,106)	(4,106)	-
DelSolar HK	DelSolar Wu Jiang	Jiangsu, China	Solar related business	3,599,400	3,599,400	-	100.00	362,364	(763,397)	(763,397)	Note 11
	NSP JAPAN	Osaka, Japan	Solar related business	2,910	2,910	1	100.00	10,522	(198)	(198)	-
	NSP Nanchang	Jiangxi, China	Solar related business	149,975	149,975	-	11.36	63,755	(983,902)	(111,771)	Note 11
DelSolar US	DelSolar Development	Delaware, US	Solar related business	145,476	145,476	-	100.00	111,565	(7,767)	(7,767)	-
	CFR	Delaware, US	Solar related business	431,028	131,078	-	100.00	3,319	(202,678)	(202,678)	-
	USD1	Delaware, US	Solar related business	107,442	107,442	-	100.00	197,620	(1,056)	(1,056)	-
	JV2	Delaware, US	Solar related business	24,897	24,897	-	67.00	-	(126,877)	-	Note 13
	Beryl	Delaware, US	Solar related business	-	-	-	100.00	155,459	26,421	26,421	-
DelSolar Wu Jiang	NSP Nanchang	Jiangxi, China	Solar related business	1,169,805	1,169,805	-	88.64	(497,468)	(983,902)	(872,131)	-
DelSolar Development	DSS-USF PHX LLC	US	Solar related business	41,093	41,093	-	100.00	43,760	(1,242)	(1,242)	-
	DSS-RAL LLC	US	Solar related business	76,637	76,637	-	100.00	69,368	(7,230)	(7,230)	-
CFR	Rugged solar LLC	California, US	Solar related business	83,511	58,645	-	-	83,511	-	-	Note 6
USD1	DevCo One	US	Solar related business	13,324	13,324	-	40.00	1,804	-	-	-
	DevCo Two	US	Solar related business	13,324	13,324	-	40.00	1,804	-	-	-
CFGP (HK)	CFGP (Shanghai)	Shanghai, China	Solar operations management services	15,897	15,897	-	100.00	(10,606)	(4,106)	(4,106)	-
NSP Stars	CFY	Cayman Islands	Investment company	-	-	-	2.66	1,375,399	507,140	-	Note 14

Note 1: Subsidiaries mentioned above were recognized on the basis of unaudited financial statements as December 31, 2019.

Note 2: The Corporation which was the surviving company had a short-form merge with its 100% owned subsidiary, GES, as of March 31, 2019. The subsidiaries held by the formerly GES were transferred to the Corporation.

Note 3: UREE was approved to be established in January 2019. In July, 2019, 100% subsidiary Dashiangying, Shanshang, Yanshan, Shinkai, Jiangung and Dungshr were newly established.

Note 4: The Corporation recognized an impairment loss on equity investment in Solar PV, associates; therefore, the Group did not recognize any share of profit or loss of the associate.

Note 5: ET ENERGY and TIPPING POINT were disposed of in the first quarter of 2019. The registration of Solartech Japan was cancelled in the second quarter of 2019. Huiyang and Ever Lite applied for liquidation procedures in the third quarter of 2019.

Note 6: The Group's structured entities.

Note 7: MEGASIXTEEN was established for taxation purposes based on an agreement. MEGASIXTEEN established GES AC with MPC AC 2017 Energy Fund, LLC ("MPC"), and acquired 67.59% of the shares of GES AC in December 2017. Through GES AC, MEGASIXTEEN owned 5 Power Facilities LLC under GES AC.

Note 8: UREE had invested capital in UAE in July 2019; UAE became 100%-owned subsidiaries of UREE.

Note 9: GES USA and non-related party, Telamon Enterprise Ventures ("Telamon") established TEV II and each acquired 50% of the shares of TEV II based on an agreement. GES USA is responsible for all relevant events and the risk of fluctuating return, thus, GES USA obtains substantial control over TEV II.

Note 10: TEV II acquired 100% of the shares of TEV Solar. TEV Solar and non-related party, Advantage Capital Solar Partners II, LLC ("ACS") established AC GES Solar. TEV Solar acquired 66.19% of the shares of AC GES Solar which is the 100% owner of three LLC solar power facilities engaged in solar-related business.

Note 11: For investments in Mainland China, refer to Table 8.

Note 12: NSP System had injected capital in Tienyang, Deyang, Shanyang, Jeyang in January 2019, and had invested capital in Lianzhang, Lianxi, Liancheng in June 2019. Tienyang, Deyang, Shanyang, Jeyang, Lianzhang, Lianxi, Liancheng became a 100%-owned subsidiary of NSP System.

Note 13: The Group's ownership interest in JV2 was 67% and the Group accounted for two thirds of the members of the board. According to the agreement, any material operation and management decision of JV2 shall be agreed by board of directors, which means DelSolar US does not have control over JV2. As specified in the agreement, the percentage interest of both members were 50% and 50%, respectively.

Note 14: NSP Stars Limited has no right to the share of CFY's profit before meeting specific conditions.

Note 15: The original investment amount and proportion of ownership are listed according to legal qualifications.

(Concluded)

UNITED RENEWABLE ENERGY CO., AND SUBSIDIARIES

INFORMATION ON INVESTMENTS IN MAINLAND CHINA
FOR THE YEAR ENDED DECEMBER 31, 2019
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Investee Company	Main Businesses and Products	Paid-in Capital	Method of Investment	Accumulated Outward Remittance for Investment from Taiwan as of January 1, 2019	Remittance of Fund		Accumulated Outward Remittance for Investment from Taiwan as of December 31, 2019	Net Income (Loss) of the Investee	% Ownership of Direct or Indirect Investment	Investment Gain (Loss)	Carrying Amount as of December 31, 2019	Accumulated Repatriation of Investment Income as of December 31, 2019
					Outward	Inward						
DelSolar Wu Jiang	Solar related business	USD 120,000 $ 3,599,400	Indirect investments through the Group's 100% - owned subsidiary	USD 120,000 $ 3,599,400	$ -	$ -	USD 120,000 $ 3,599,400	(USD 24,697) ($ 763,397)	100	(USD 24,697) ($ 763,397) (Note 1)	USD 12,081 $ 362,364 (Note 1)	$ -
NSP Nanchang	Solar related business	USD 44,000 $ 1,319,780	Indirect investments through the Group's 100% - owned subsidiary	USD 5,000 $ 149,975	-	-	USD 5,000 $ 149,975	(USD 31,830) ($ 983,902)	100	(USD 31,830) ($ 983,902) (Note 1)	USD (18,711) $ (561,223) (Note 1)	-
JiangXi Solar PV Corp. (Note 2)	Solar related business	USD 18,450 $ 553,408	Indirect investments through the Group's 100% - owned subsidiary	USD 18,450 $ 553,408	-	-	USD 18,450 $ 553,408	(USD 61) ($ 1,889)	19.92	USD - $ -	USD - $ -	-

Accumulated Outward Remittance for Investment in Mainland China as of December 31, 2019	Investment Amount Authorized by Investment Commission, MOEA	Upper Limit on the Amount of Investment Stipulated by Investment Commission, MOEA
USD 143,450 $ 4,302,783	USD 149,618 (Note 3) $ 4,487,788	$ 12,433,195

Note 1: Amount was recognized on the basis of reviewed financial statements.

Note 2: The Group had recognized impairment loss on the equity investment in JiangXi Solar PV Corp., an associate, so that the Group did not recognize any share of profit or loss of associates.

Note 3: The exchange rate used is the rate on December 31, 2019.

UNITED RENEWABLE ENERGY CO., AND SUBSIDIARIES

SIGNIFICANT TRANSACTIONS WITH INVESTEE COMPANIES IN MAINLAND CHINA, EITHER DIRECTLY OR INDIRECTLY THROUGH A THIRD PARTY, AND THEIR PRICES, PAYMENT TERMS, AND UNREALIZED GAINS OR LOSSES
FOR THE YEAR ENDED DECEMBER 31, 2019
(In Thousands of New Taiwan Dollars, Unless Stated Otherwise)

Investee Company	Transaction Type	Purchase/Sale		Price	Transaction Details		Notes/Accounts Receivable (Payable)		Unrealized (Gain) Loss	Note
		Amount	%		Payment Term	Comparison with Normal Transaction	Ending Balance	%		
NSP Nanchang	Other operating revenue	$ 1,203	0.01	Specifically negotiated terms	Specifically negotiated terms	Specifically negotiated terms	$ -	-	$ -	-
	Purchase goods	69,640	0.45	Specifically negotiated terms	Specifically negotiated terms	Specifically negotiated terms	(17,487)	(1.15)	-	-

Note: Amount was recognized on the basis of reviewed financial statements.

UNITED RENEWABLE ENERGY CO., AND SUBSIDIARIES

INTERCOMPANY RELATIONSHIPS AND SIGNIFICANT INTERCOMPANY TRANSACTIONS
FOR THE YEAR ENDED DECEMBER 31, 2019 AND 2018
(In Thousands of New Taiwan Dollars)

No.	Company Name	Counterparty	Flow of Transactions (Note 1)	Intercompany Transactions			
				Financial Statements Items	Amount	Terms	Percentage to Consolidated Total Gross Sales or Total Assets
	For the year ended December 31, 2019						
0	The Corporation	Gintech (Thailand)	1	Sales	$ 1,004,950	Note 2	5%
			1	Accounts payable	275,810	Note 2	1%
			1	Purchase	156,068	Note 2	1%
			1	Sale of property, plant and equipment	123,304	Note 2	1%
		DelSolar US	1	Other receivables	969,633	Note 2	2%
		GES ME	1	Other receivables	629,372	Note 2	1%
		NSP NEVADA	1	Other receivables	562,020	Note 2	1%
		Utech	1	Purchase	371,714	Note 2	2%
		NSP System	1	Sales	177,287	Note 2	1%
		NSP Nanchang	1	Sale of property, plant and equipment	142,510	Note 2	1%
1	DelSolar Wu Jiang	NSP Nanchang	3	Other receivables	542,118	Note 2	1%
2	GES UK	JRC	3	Other receivables	438,475	Note 2	1%
		GES Japan	3	Accrued expense	248,400	Note 2	1%
3	GES USA	MUNISOL	3	Other receivables	842,290	Note 2	2%
4	TEV II	TEV Solar	3	Other receivables	590,155	Note 2	1%
5	NSP NEVADA	GES USA	3	Other receivables	243,620	Note 2	1%
	For the year ended December 31, 2018						
0	The Corporation	DelSolar US	1	Other receivables	993,716	Note 2	2%
		NSP NEVADA	1	Other receivables	578,952	Note 2	1%
		GES ME	1	Other receivables	571,235	Note 2	1%
		NSP System	1	Sales	127,546	Note 2	1%
		Utech	1	Purchase	76,633	Note 2	1%
		NSP Nanchang	1	Purchase	66,279	Note 2	1%
1	DelSolar Wu Jiang	NSP Nanchang	3	Other receivables	320,348	Note 2	1%
2	DelSolar US	CFR	3	Other receivables	943,364	Note 2	2%
3	GES UK	GES USA	3	Other receivables	398,276	Note 2	1%
		JRC	3	Other receivables	445,217	Note 2	1%
4	GES USA	MUNISOL	3	Other receivables	773,580	Note 2	1%
5	TEV II	TEV Solar	3	Other receivables	609,000	Note 2	1%

Note 1: No. 1 represents the transaction from parent company to subsidiary; No. 2 represents the transaction from subsidiaries to parent company; No. 3 represents the transactions between subsidiaries.

Note 2: At normal commercial prices and terms.