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## Solargiga Energy Holdings Limited 陽光能源控股有限公司

(Incorporated in the Cayman Islands with limited liability) (Stock Code: 757)

## ANNOUNCEMENT OF ANNUAL RESULTS FOR THE YEAR ENDED 31 DECEMBER 2018

## FINANCIAL HIGHLIGHTS

- Shipment of major products for the year amounted to 2,797MW, a growth of 15.2% comparing to 2,428MW of last year. However, due to the unanticipated magnitude in the drop in unit selling price, revenue slightly increased by 0.6% to RMB4,022.452 million (2017: RMB3,999.616 million).
- Due to the unanticipated decline in sales price caused by the new photovoltaic industry policy released by the Chinese government and the recognition of inventory provision loss during the year, gross profit decreased to RMB397.55 million (2017: RMB657.873 million). Gross profit margin decreased from 16.4% for the year ended 31 December 2017 to 9.9% for the year ended 31 December 2018.
- Due to the reasons above, net loss attributable to the equity shareholders of the Company for the year amounted to RMB222.402 million (2017: Net profit of RMB107.462 million).
- During the year, the net cash inflow from operating activities was RMB921.479 million, a significant increase of RMB910.73 million from RMB10.749 million of last year.
- Basic loss per share amounted to RMB6.92 cents (2017: RMB3.35 cents earnings per share).
- Net asset value per share amounted to RMB0.22 (HKD0.26) (note: translated at HKD1.17 to every RMB1).
- The board of directors of the Company does not recommend to declare a final dividend for the year ended 31 December 2018 (2017: Nil).

#### ANNUAL RESULTS

The directors (the "Directors") of Solargiga Energy Holdings Limited (the "Company") present herewith the results of the Company and its subsidiaries (collectively, the "Group") for the financial year ended 31 December 2018 and the comparative figures as follows.

#### CONSOLIDATED STATEMENT OF PROFIT OR LOSS

for the year ended 31 December 2018

	Notes	2018 <i>RMB'000</i>	2017 <i>RMB'000</i>
Revenue Cost of sales	3	4,022,452 (3,624,902)	3,999,616 (3,341,743)
Gross profit		397,550	657,873
Other income and gains, net Selling and distribution expenses Administrative expenses Impairment losses on financial and	4	53,752 (77,447) (377,609)	72,418 (67,701) (392,095)
contract assets, net Impairment of property, plant and equipment		(44,497) (47,020)	(18,900)
(Loss)/profit from operations Share of losses of associates Finance costs	6	(95,271) (1,461) (136,012)	251,595 (14,996) (121,702)
(Loss)/profit before tax Income tax credit	5 7	(232,744) 12,157	114,897 8,860
(Loss)/profit for the year		(220,587)	123,757
Attributable to: Equity holders of the Company Non-controlling interests		(222,402) 1,815	107,462 16,295
(Loss)/profit for the year		(220,587)	123,757
Basic and diluted (loss)/earnings per share attributable to ordinary equity holders of the	0		2.25
Company (RMB cents)	9	(6.92)	3.35

## CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

for the year ended 31 December 2018

	2018 <i>RMB'000</i>	2017 <i>RMB'000</i>
(Loss)/profit for the year	(220,587)	123,757
Other comprehensive (loss)/income for the year (after tax and reclassification adjustments):		
Items that may be reclassified subsequently to profit or loss: – Currency translation differences	(14,659)	32,984
Total comprehensive (loss)/income for the year, after tax	(235,246)	156,741
Attributable to: Equity holders of the Company Non-controlling interests	(237,061) 1,815	140,446 16,295
Total comprehensive (loss)/income for the year	(235,246)	156,741

# **CONSOLIDATED STATEMENT OF FINANCIAL POSITION** *at 31 December 2018*

at 31 December 2018			
	Notes	2018 <i>RMB'000</i>	2017 <i>RMB'000</i>
Non-current assets Property, plant and equipment Prepayments for acquisitions of property,		1,517,027	1,531,099
plant and equipment Land lease prepayments Prepayments for raw materials Investments in associates	10	62,451 141,989 33,557 5,591	14,245 146,233 55,298 5,251
Equity investment designated at fair value through other comprehensive income Available-for-sale investments	11 11	2,430	2,430
Deferred tax assets		48,009	34,763
Total non-current assets		1,811,054	1,789,319
Current assets Inventories Trade and bills receivables Contract assets Prepayments, deposits and other receivables Current tax recoverable Pledged deposits Cash and cash equivalents	12 13 14	$\begin{array}{r} 347,368\\ 1,483,723\\ 15,205\\ 240,935\\ 2,695\\ 425,309\\ 239,712\end{array}$	$\begin{array}{r} 403,531\\ 1,648,608\\ \hline \\ 347,327\\ 12,143\\ 219,097\\ 191,185\\ \end{array}$
Total current assets		2,754,947	2,821,891
<b>Current liabilities</b> Interest-bearing borrowings Trade and bills payables Other payables and accruals Contract liabilities Current tax payable Provision for inventory purchase commitments Finance lease payables	15 16 17 18	$1,773,140 \\ 1,441,065 \\ 104,025 \\ 64,466 \\ 193 \\ 48,883 $	1,922,322 1,055,536 134,476 3,618 46,539 8,000
Total current liabilities		3,431,772	3,170,491
Net current liabilities		(676,825)	(348,600)
Total assets less current liabilities		1,134,229	1,440,719
Non-current liabilities Interest-bearing borrowings Deferred tax liabilities Deferred income Finance lease payables Other non-current liabilities	15	17,317 2,678 197,225  109,018	124,758 2,781 163,272 1,840 112,639
Total non-current liabilities		326,238	405,290
Net assets		807,991	1,035,429
Equity Equity attributable to equity holders of the Company Share capital Reserves		276,727 438,999	276,727 673,612
Non-controlling interests		715,726 92,265	950,339 85,090
Total equity		807,991	1,035,429

## CONDENSED CONSOLIDATED STATEMENT OF CASH FLOWS

for the year ended 31 December 2018

	2018 <i>RMB'000</i>	2017 <i>RMB'000</i>
Cash generated from operations	916,648	14,659
The PRC income tax credit/(paid)	4,831	(3,910)
Net cash flows generated from operating activities	921,479	10,749
Net cash flows used in investing activities	(275,932)	(78,486)
Net cash flows used in financing activities	(600,879)	(30,205)
Net increase/(decrease) in cash and cash equivalents	44,668	(97,942)
Effect of foreign exchange rate changes, net	3,859	(4,501)
Cash and cash equivalents at the beginning of the year	191,185	293,628
Cash and cash equivalents at the end of the year	239,712	191,185

## NOTES TO THE FINANCIAL INFORMATION

#### 1. BASIS OF PREPARATION

The annual results set out in the announcement do not constitute the Group's financial statements for the year ended 31 December 2018 but are extracted from those financial statements.

These financial statements have been prepared in accordance with Hong Kong Financial Reporting Standards ("HKFRSs") (which include all Hong Kong Financial Reporting Standards, Hong Kong Accounting Standards ("HKASs") and Interpretations) issued by the Hong Kong Institute of Certified Public Accountants ("HKICPA"), accounting principles generally accepted in Hong Kong and the disclosure requirements of the Hong Kong Companies Ordinance. They have been prepared under the historical cost convention. These financial statements are presented in Renminbi ("RMB") and all values are rounded to the nearest thousand except when otherwise indicated.

As at 31 December 2018, the Group's current liabilities exceeded its current assets by RMB676,825,000. The liquidity of the Group is primarily depending on its ability to maintain adequate cash flows from operations, to renew its short-term bank loans and to obtain adequate external financing to support its working capital and meet its obligations and commitments when they become due.

The Group has carried out a review of its cash flow forecast for the twelve months ending 31 December 2019. Based on such forecast, the directors believe that adequate sources of liquidity exist to fund the Group's working capital and capital expenditure requirements, and to meet its short term debt obligations and other liabilities and commitments as they become due in the twelve months ending 31 December 2019. In preparing the cash flow forecast, management has considered historical cash requirements of the Group, as well as other key factors, including anticipated sales in the twelve months ending 31 December 2019, unutilised banking facilities as at 31 December 2018 from the Group's major banks with an amount of RMB1,716,533,000 which will expire on 31 December 2020.

Based on the above factors, the directors are confident that the Group will have sufficient funding to enable the Group to operate as a going concern and meet its financial obligations as and when they fall due for at least 12 months from the reporting date. Accordingly, the financial statements have been prepared on a going concern basis.

#### 2. CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES

The Group has adopted the following revised HKFRSs for the first time for the current year's financial statements.

Amendments to HKFRS 2	Classification and Measurement of Share-based
	Payment Transactions
Amendments to HKFRS 4	Applying HKFRS 9 Financial Instruments with
	HKFRS 4 Insurance Contracts
HKFRS 9	Financial Instruments
HKFRS 15	Revenue from Contracts with Customers
Amendments to HKFRS 15	Clarifications to HKFRS 15 Revenue from Contracts
	with Customers
Amendments to HKAS 40	Transfers of Investment Property
HK(IFRIC)-Int 22	Foreign Currency Transactions and Advance
	Consideration
Annual Improvements 2014–2016 Cycle	Amendments to HKFRS 1 and HKAS 28

Except for the Amendments to HKFRS 2, Amendments to HKFRS 4, Amendments to HKAS 40 and *Annual Improvements to HKFRS 2014–2016 Cycle*, which are not relevant to the preparation of the Group's financial statements, the nature and the impact of the new and revised HKFRSs are described below:

#### a. HKFRS 9 Financial Instruments

HKFRS 9 *Financial Instruments* replaces HKAS 39 *Financial Instruments: Recognition and Measurement* for annual periods beginning on or after 1 January 2018, bringing together all three aspects of the accounting for financial instruments: classification and measurement, impairment and hedge accounting.

The comparative information is not restated and the Group recognised any transition adjustments in relation to the adoption of HKFRS 9 against the opening balance of equity at 1 January 2018 as further disclosed below.

#### **Classification and measurement**

On initial application of HKFRS 9, the available-for-sale equity investments have been reclassified and measured at fair value through other comprehensive income ("OCI"). These equity investments are subsequently measured at fair value. Dividends from the investments are recognised in profit or loss unless the dividend clearly represents a recovery of part of the cost of the investments. Other net gains and losses are recognised in OCI and are never reclassified to profit or loss.

All other financial assets previously measured at amortised cost continue to be measured at amortised cost upon the adoption of HKFRS 9.

On 1 January 2018 (the date of initial application of HKFRS 9), the Group's management has assessed and classified its financial assets into the appropriate HKFRS 9 categories. The main effects resulting from the reclassification were as follows:

	Equity investments designated at fair value through other comprehensive income <i>RMB'000</i>	Available- for-sale investments RMB'000
Closing balance as at 31 December 2017 Reclassification from available-for-sale investments to equity investments designated at fair value through	_	2,430
other comprehensive income	2,430	(2,430)
Re-measurement of financial assets		
Opening balance as at 1 January 2018	2,430	

The financial assets of RMB2,430,000 that were previously classified as available-for-sale investments under HKAS 39 have been reclassified as equity investments designated at fair value through other comprehensive income under HKFRS 9. No gain or loss was recognised in profit or loss.

#### Impairment

HKFRS 9 requires an impairment of debt instruments recorded at amortised cost or at fair value through other comprehensive income, lease receivables, loan commitments and financial guarantee contracts that are not accounted for at fair value through profit or loss under HKFRS 9, to be recorded based on an expected credit loss model either on a twelve-month basis or a lifetime basis. The Group has applied the simplified approach and recorded lifetime expected losses that were estimated based on the present values of all cash shortfalls over the remaining life of all of its trade debtors. Furthermore, the Group has applied the general approach and recorded twelve-month expected credit losses that were estimated based on the possible default events on its other receivables within the next twelve months. The adoption of HKFRS 9 has had no significant impact on the financial position or performance of the Group except the reclassification mentioned above.

#### b. HKFRS 15 Revenue from Contracts with Customers and its amendments

HKFRS 15 and its amendments replace HKAS 11 Construction Contracts, HKAS 18 Revenue and related interpretations and it applies, with limited exceptions, to all revenue arising from contracts with customers. HKFRS 15, establishes a new five-step model to account for revenue arising from contracts with customers. Under HKFRS 15 revenue is recognised at an amount that reflects the consideration to which an entity expects to be entitled in exchange for transferring goods or services to a customer.

The Group adopted HKFRS 15 using the modified retrospective method to all contracts that are not completed at the date of initial application. The Group concluded that there was no transitional adjustment made on 1 January 2018 to retained earnings upon initial adoption of HKFRS 15 and the comparative information is not restated. It is because the Group recognised revenue upon the transfer of significant risks and rewards before the adoption, which coincides with the fulfilment of performance obligations. From 1 January 2018, revenue is recognised when a customer obtains control of a good or service and the customer has the ability to direct the use and obtain the benefits from the good or service. Additionally, the Group's contracts with customers generally have only one performance obligation.

The impact on the Group's consolidated statement of financial position as at 1 January 2018 is as follows:

	Under HKAS 18 <i>RMB'000</i>	Reclassification RMB'000	Under HKFRS 15 <i>RMB'000</i>
Contract assets		35,125	35,125
Trade and bills receivables	1,648,608	(35,125)	1,613,483
Contract liabilities	—	43,850	43,850
Other payables and accruals	134,476	(43,850)	90,626

Prior to the adoption of HKFRS 15, the conditional right to receive consideration in exchange for goods or services and the obligation to transfer goods or services were represented in "trade and bills receivables" and "other payables and accruals" in the consolidated statement of financial position, respectively. Upon the adoption of HKFRS 15, the Group reclassified the above right and obligation to "contract assets" and "contract liabilities", respectively.

#### c. HK(IFRIC)-Int 22 Foreign Currency Transactions and Advance Consideration

HK(IFRIC)-Int 22 provides guidance on how to determine the date of the transaction when applying HKAS 21 to the situation where an entity receives or pays advance consideration in a foreign currency and recognises a non-monetary asset or liability. The interpretation clarifies that the date of the transaction for the purpose of determining the exchange rate to use on initial recognition of the related asset, expense or income (or part of it) is the date on which an entity initially recognises the non-monetary asset (such as a prepayment) or non-monetary liability (such as deferred income) arising from the payment or receipt of the advance consideration. If there are multiple payments or receipts in advance of recognising the related item, the entity must determine the transaction date for each payment or receipt of the advance consideration. The interpretation has had no impact on the Group's financial statements as the Group's accounting policy for the determination of the exchange rate applied for initial recognition of non-monetary assets or non-monetary liabilities is consistent with the guidance provided in the interpretation.

#### 3. OPERATING SEGMENT INFORMATION

In a manner consistent with the way in which information is reported internally to the Group's most senior executive management for the purposes of resource allocation and performance assessment, the Group has identified four reportable segments: (i) the manufacture of, trading of, and provision of processing services for polysilicon and monocrystalline and multicrystalline silicon solar ingots/wafers ("Segment A"); (ii) the manufacture and trading of photovoltaic modules ("Segment B"); (iii) the manufacture and trading of photovoltaic solar cells ("Segment C"); and (iv) the construction and operating of photovoltaic power plants ("Segment D"). No operating segments have been aggregated to form these reportable segments. Comparative figures have been provided on a basis consistent with the current year's segment analysis. Revenue, costs and expenses are allocated to those reportable segments with reference to sales generated by those segments and the costs and expenses incurred by those segments.

#### (a) Segment results, assets and liabilities

For the purpose of assessing segment performance and allocating resources between segments, the Group's most senior executive management monitors the results, assets and liabilities attributable to each reportable segment on the basis as they are presented in the Group's financial statements.

Intersegment sales and transfers are transacted with reference to the selling prices used for sales made to third parties at the then prevailing market prices.

Information regarding the Group's reportable segments as provided to the Group's most senior executive management for the years ended 31 December 2018 and 2017 is set out below:

	Segme	ent A	Segme	ent B	Segme	ent C	Segme	ent D	Tot	al
	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000	RMB'000
Revenue from external										
customers	808,499	1,054,333	3,070,648	2,843,331	85,123	73,491	58,182	28,461	4,022,452	3,999,616
Intersegment revenue	1,070,901	1,487,875	2,241,010	1,613,989	340,326	320,092	849	2,185	3,653,086	3,424,141
Reportable segment revenue	1,879,400	2,542,208	5,311,658	4,457,320	425,449	393,583	59,031	30,646	7,675,538	7,423,757
Reportable segment (loss)/										
profit	(221,124)	111,759	70,488	29,666	(52,893)	1,140	(17,058)	(18,808)	(220,587)	123,757
Reportable segment assets	3,159,913	3,204,874	544,437	578,659	672,223	674,060	189,428	153,617	4,566,001	4,611,210
Reportable segment liabilities	2,649,294	2,461,294	636,327	690,585	373,507	302,967	98,882	120,935	3,758,010	3,575,781
Other segment information: Interest income from bank										
deposits	1,293	1,113	3,354	7,445	927	558	42	28	5,616	9,144
Finance costs	(55,191)	(49,837)	(57,816)	(45,794)	(16,501)	(15,660)	(6,504)	(10,411)	(136,012)	(121,702)
Depreciation and	( ) /	( ) )	( ) )	( ) )	( ) )	( ) )	() )	( ) )	( ) )	( ) )
amortisation	(179,872)	(169,516)	(44,512)	(17,958)	(9,040)	(8,838)	(246)	(823)	(233,670)	(197,135)
Impairment of property,										
plant and equipment	(35,100)	-	_	_	(11,920)	_	_	_	(47,020)	-
Share of losses of associates	(1,461)	(14,996)	_	_	_	_	—	_	(1,461)	(14,996)
Impairment losses on financial and contract										
assets, net	(17,577)	_	(14,887)	(18,900)	(2,321)	_	(9,712)	_	(44,497)	(18,900)
(Write-down)/reversal of	(17,577)		(14,007)	(10,700)	(2,521)		(),/12)		(14,17)	(10,700)
write-down of inventories	(21,771)	7,195	(7,803)	_	1,973	(2,913)	(20)	_	(27,621)	4,282
Capital expenditure*	166,431	83,863	164,605	31,178	5,623	14,574	5	_	336,664	129,615
Investments in associates	5,591	5,251							5,591	5,251

\* Capital expenditure consists of additions to property, plant and equipment and intangible assets.

#### (b) Geographic information

(ii)

Substantially all of the Group's property, plant and equipment, lease prepayments, goodwill, intangible assets and interests in associates are located or operated in the PRC. The following table sets out information about the Group's revenue from external customers and the Group's non-current prepayments by geographical location. The geographical location of a customer is based on the location to which the goods were delivered or the services were provided.

#### (i) Revenue from external customers

	2018 <i>RMB'000</i>	2017 <i>RMB'000</i>
Mainland China	2,963,496	2,950,762
Export sales		
– Japan	662,962	895,486
– Taiwan	6,621	36,686
- Other Asian Regions	377,267	115,368
– Europe	12,106	714
– America		600
Sub-total	1,058,956	1,048,854
Total	4,022,452	3,999,616
Non-current prepayments		
	2018	2017
	2018 RMB'000	<i>RMB'000</i>
	KIVID 000	KMD 000
Mainland China	62,451	14,245
Overseas		
– Taiwan	33,557	55,298
Sub-total	33,557	55,298
Total	96,008	69,543

#### 4. OTHER INCOME AND GAINS, NET

	2018 <i>RMB'000</i>	2017 <i>RMB'000</i>
Other income		
Government grants	46,184	29,089
Interest income from bank deposits	5,616	9,144
Gain on disposal of a subsidiary	—	32,520
Gain on previously held equity interest remeasured		
at acquisition-date fair value	—	8,819
Bargain purchase gain on acquisition of a subsidiary		159
	51,800	79,731
Other gains/(losses), net		
Net foreign exchange gain/(loss)	787	(2,105)
Net loss on disposal of property, plant and equipment	(2,774)	(1,053)
Gain/(loss) from sales of other materials	1,021	(9,794)
Others	2,918	5,639
	1,952	(7,313)

#### 5. (LOSS)/PROFIT BEFORE TAX

The Group's (loss)/profit before tax is arrived at after charging/(crediting):

	2018 <i>RMB'000</i>	2017 <i>RMB'000</i>
(a) Staff costs <sup>#</sup> (including directors'		
and chief executive's remuneration)	201 274	102 (47
Salaries, wages and other benefits Contributions to retirement schemes	201,374 20,273	192,647 27,356
Contributions to remement schemes	20,275	27,330
	221,647	220,003
	2018	2017
	RMB'000	RMB'000
(b) Auditor's remuneration		
Audit services	2,791	2,641
Tax services		52
Other services	272	335
	3,063	3,028
	2018	2017
	RMB'000	RMB'000
(c) Other items	4.244	2.972
Amortisation of lease prepayments	4,244	3,862
Depreciation <sup>#</sup>	229,426	193,273
(Reversal)/provision for warranties <sup>#</sup> Operating lease charges — properties	(3,621) 1,914	28,446 1,778
Research and development costs	210,252	223,975
Impairment losses on financial and contract assets, net	44,497	18,900
Impairment of property, plant and equipment	47,020	
Net loss on disposal of property, plant and equipment	2,774	1,053
Cost of inventories sold <sup>#</sup>	2,953,556	2,831,712
Cost of services rendered <sup>#</sup>	671,346	510,031

<sup>#</sup> Cost of inventories sold and cost of services rendered include, in aggregate, RMB364,086,000 (2017: RMB371,039,000) for the year ended 31 December 2018, relating to staff costs, depreciation and provision for warranties which amounts are also included in the respective total amounts disclosed separately above or in note 5(a) for each of these types of expenses.

#### 6. FINANCE COSTS

	2018	2017
	RMB'000	RMB'000
Interest on bank and other loans wholly repayable within five years	135,469	120,631
Interest on finance leases	543	1,071
Total interest expenses on financial liabilities not at fair value through		
profit or loss	136,012	121,702
INCOME TAV		

#### 7. INCOME TAX

Income tax in the consolidated statement of profit or loss represents:

	2018 <i>RMB'000</i>	2017 <i>RMB'000</i>
Current tax – the PRC		
Provision for the year	177	5,856
Under-provision in respect of prior years	1,015	601
	1,192	6,457
Deferred tax	(13,349)	(15,317)
Income tax credit for the year	(12,157)	(8,860)

#### 8. DIVIDENDS

The board does not recommend to declare a final dividend for the year ended 31 December 2018 (2017: Nil).

## 9. (LOSS)/EARNINGS PER SHARE ATTRIBUTABLE TO ORDINARY EQUITY HOLDERS OF THE COMPANY

#### (a) Basic (loss)/earnings per share

The calculation of basic (loss)/earnings per share is based on the loss attributable to the ordinary equity holders of the Company of RMB222,402,000 (2017: profit of RMB107,462,000) and the weighted average of 3,211,780,566 (2017: 3,211,780,566) ordinary shares of the Company in issue during the year.

#### (b) Diluted (loss)/earnings per share

No adjustment has been made to the basic (loss)/earnings per share amounts presented for the years ended 31 December 2018 and 2017 in respect of a dilution as the Group had no dilutive potential ordinary shares in issue during the years ended 31 December 2018 and 2017.

#### **10. PREPAYMENTS FOR RAW MATERIALS**

In order to secure a stable supply of polysilicon materials, the Group entered into short-term and long-term contracts with certain raw material suppliers and made advance payments to these suppliers which are to be offset against future purchases. Prepayments for raw materials where the Group expects to receive the raw materials more than twelve months after the end of the reporting period are classified as non-current assets and to receive within one year are classified as current assets. There was no prepayment for raw materials made to a related party as at 31 December 2018 (31 December 2017: Nil).

As at 31 December 2014, management reassessed the prepayments for potential impairment and identified one of the suppliers, from which the Group allegedly failed to purchase the quantities of polysilicon under the long-term supply contract, and therefore provided a provision of RMB70,369,000.

Based on the updated assessment by management for the year ended 31 December 2018, no further impairment or reversal of impairment was made during the year ended 31 December 2018. The movement in the impairment provision during the year merely represented exchange adjustments.

#### 11. EQUITY INVESTMENTS DESIGNATED AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME/AVAILABLE-FOR-SALE INVESTMENTS

	2018 <i>RMB'000</i>	2017 <i>RMB'000</i>
Equity investments designated at fair value through other comprehensive income Unlisted equity investments, at fair value Jinzhou Xincheng Yangguang Power Plants Co., Ltd. <sup>#</sup>	2,430	_
Available-for-sale investments	2,450	
Unlisted equity investments, at fair value		2,430

The equity investment is the investment in an unlisted company which is a limited liability company established in the PRC. On 1 January 2018 (the initial application date of HKFRS 9), the Group's management has assessed and classified the equity investment into equity investment through other comprehensive income and measured it at fair value, as the Group considers this investment to be strategic in nature.

*the for identification only* 

#### **12. TRADE AND BILLS RECEIVABLES**

	2018 <i>RMB'000</i>	2017 <i>RMB'000</i>
Trade receivables Bills receivable Less: Impairment	1,387,746 213,893 (117,916)	1,345,780 376,178 (73,350)
	1,483,723	1,648,608

An ageing analysis of the trade and bills receivables as at the end of the reporting period, based on the invoice date and net of loss allowance, is as follows:

	2018	2017
	RMB'000	RMB'000
Within 1 month	546,396	672,937
1 to 3 months	349,844	358,121
4 to 6 months	164,867	233,068
7 to 12 months	339,784	298,998
Over 1 year	82,832	85,484
	1,483,723	1,648,608

The Group normally allows a credit period of 30-90 days to its customers. However, regarding domestic photovoltaic module sales, some trade receivables are granted longer credit periods of up to 180 days depending on the construction period of photovoltaic power plants. In addition, 10% of the total amount of receivables are retained as warranties in some domestic contracts, and will generally be recovered in around one year. As a result, the trade receivable turnover days of module sales are generally longer.

The movements in the allowance for doubtful debts during the year are as follows:

	2018 <i>RMB'000</i>	2017 <i>RMB'000</i>
At 1 January Effect of adoption of HKFRS 9	73,350	57,248
At 1 January (restated) Exchange adjustments Impairment losses (note 5) Amount written off as uncollectible	73,350 1,248 44,211 (893)	57,248 (1,260) 18,900 (1,538)
At 31 December	117,916	73,350

#### Impairment under HKFRS 9 for the year ended 31 December 2018

An impairment analysis is performed at each reporting date using a provision matrix to measure expected credit losses. The calculation reflects the probability-weighted outcome, the time value of money and reasonable and supportable information that is available at the reporting date about past events, current conditions and forecasts of future economic conditions. Generally, trade receivables are written off if the Group is satisfied that recovery of the amount is remote.

The Group sells its products to large-scale Chinese state-owned and multinational composite enterprises, which have been maintaining good credit ratings with high reputations all over the world. The Group traded with such enterprises and never had any receivables that could not be recovered. Therefore, the directors were of the opinion that no impairment allowance was necessary for large-scale Chinese state-owned enterprises and multinational composite enterprises.

The Group applies the simplified approach to the provision for expected credit losses prescribed by HKFRS 9, which permits the use of lifetime expected loss provision for all trade debtors. To measure the expected credit loss on trade debtors excluding receivables from large-scale Chinese State-owned and multinational composite enterprises, trade debtors have been grouped based on shared credit risk characteristics and the ageing.

Set out below is the information about the credit risk exposure on the Group's trade receivables using a provision matrix:

	Large-scale Chinese state-owned and multinational composite enterprises	Within 1 year	Between 1 and 2 years	Between 2 and 3 years	Between 3 and 4 years	Over 4 years	Total
Expected credit loss rates Gross carrying amount	—	13.46%	44.03%	64.12%	89.76%	100%	
( <i>RMB'000</i> ) Expected credit losses	1,122,979	152,140	5,663	24,567	30,410	51,987	1,387,746
(RMB'000)	_	20,478	2,493	15,752	27,296	51,897	117,916

#### As at 31 December 2018

#### Impairment under HKAS 39 for the year ended 31 December 2017

Included in the above provision for impairment of trade receivables, which was measured based on incurred credit losses under HKAS 39, as at 31 December 2017, was a provision for individually impaired trade receivables of RMB73,350,000 with a carrying amount before provision of RMB1,345,780,000. The individually impaired trade receivables relate to customers that were in financial difficulties or were in default in principal payments and none of the receivables is expected to be recovered.

The ageing analysis of trade and bills receivables as at 31 December 2017 that were not individually nor collectively considered to be impaired under HKAS 39 is as follows:

	2017
	RMB'000
Not past due	1,368,439
Less than 1 month past due	90,543
1 to 3 months past due	118,350
4 to 6 months past due	13,609
7 to 12 months past due	10,516
Over 1 year past due	47,151
	1,648,608

Receivables that were neither past due nor impaired related to a large number of diversified customers for whom there was no recent history of default. Receivables that were past due but not impaired related to a number of independent customers that had a good track record with the Group. Based on past experience, the directors of the Company were of the opinion that no provision for impairment under HKAS 39 was necessary in respect of these balances as there had not been a significant change in credit quality and the balances were still considered fully recoverable.

As at 31 December 2018, bills receivable amounting to RMB141,283,000 (31 December 2017: RMB53,196,000), together with pledged deposits amounting to RMB243,284,000 (31 December 2017: RMB42,801,000) had been pledged as security to banks for acquiring interest-bearing bank borrowings amounting to Nil (31 December 2017: RMB219,749,000), for issuing bills payable to suppliers amounting to RMB661,518,000 (31 December 2017: RMB95,700,000), and for issuing letters of guarantee amounting to RMB46,984,000 (31 December 2017: RMB20,000,000).

#### **13. CONTRACT ASSETS**

	31 December 2018 <i>RMB'000</i>	1 January 2018 <i>RMB'000</i>	31 December 2017 <i>RMB'000</i>
Contract assets arising from:			
Processing services	13,364	35,125	
Construction services	2,127		
Impairment	(286)		
	15,205	35,125	

#### 14. PREPAYMENTS, DEPOSITS AND OTHER RECEIVABLES

	2018 <i>RMB'000</i>	2017 <i>RMB'000</i>
Prepayments for raw materials	174,486	142,686
Deductible value-added tax	53,146	180,412
Other receivables	20,103	31,029
Less: Impairment allowance	(6,800)	(6,800)
	240,935	347,327

The other receivables mainly represent deposits and staff advances, and an impairment analysis is performed at each reporting date by considering the probability of default. Except the separate item of prepayments already impaired, as the financial assets included in the above balances relate to receivables for which there was no recent history of default, no impairment was provided during the year.

#### **15. INTEREST-BEARING BORROWINGS**

			2018			2017	
		Effective interest			Effective interest		
	Notes	rate (%)	Maturity	RMB'000	rate (%)	Maturity	RMB'000
Current:							
Bank loans — secured	(a)	7.14-8.3075	2019	794,500	2.3744-7.14	2018	1,024,880
Bank loans — guaranteed	(b)	5.02-8.3075	2019	851,630	2.5-7.14	2018	895,763
Current portion of long-term borrowings							
Third parties — guaranteed	(b)	1.6-7.5	2019	127,010	1.6-3.3	2018	1,679
Total				1,773,140			1,922,322
<b>Non-current:</b> Third parties — guaranteed	(b)	1.6-7.5	2020-2023	17,317	1.6-6	2019-2020	124,758
Total				17,317			124,758

(a) The bank borrowings are secured, among which RMB794,500,000 (2017: RMB1,024,880,000) was secured by certain of the Group's property, plant and equipment and land lease prepayments with the net book value of RMB506,640,000 (2017: RMB604,297,000).

(b) Certain subsidiaries' borrowings are guaranteed by the other subsidiaries of the Group.

	2018 <i>RMB'000</i>	2017 <i>RMB'000</i>
Analysed into:		
Bank loans repayable:		
Within one year or on demand	1,646,130	1,920,643
Other borrowings repayable:		
Within one year	127,010	1,679
In the second year	4,700	122,994
In the third to fifth years, inclusive	12,617	1,764
	144,327	126,437
	1,790,457	2,047,080
16. TRADE AND BILLS PAYABLES		
	2018	2017
	RMB'000	RMB'000
Trade payables	546,547	611,729
Bills payable	894,518	443,807

payable 894,518 443,807 1,441,065 1,055,536

(a) The ageing analysis of trade and bills payables at the end of the reporting period, based on the invoice date, is as follows:

	2018 <i>RMB'000</i>	2017 <i>RMB'000</i>
Within 1 month	449,254	413,868
1 to 3 months	319,128	285,633
4 to 6 months	267,889	292,278
7 to 12 months	365,662	18,226
Over 1 year	39,132	45,531
	1,441,065	1,055,536

(b) As at 31 December 2018, the Group's bills payable of RMB661,518,000 (31 December 2017: RMB95,700,000) were secured by Group's bills receivable of RMB141,283,000 (31 December 2017: RMB53,196,000) and by Group's pledged deposits of RMB196,300,000 (31 December 2017: Nil).

#### 17. OTHER PAYABLES AND ACCRUALS

	2018 <i>RMB'000</i>	2017 <i>RMB'000</i>
Other payables and accrued expenses	82,730	67,040
Other tax payables	21,147	23,444
Receipts in advance		43,850
Dividends payable	148	142
	104,025	134,476

#### **18. CONTRACT LIABILITIES**

Details of contract liabilities as at 31 December 2018 and 1 January 2018 are as follows:

	31 December	1 January
	2018	2018
	RMB'000	RMB'000
Sale of industrial products	64,466	43,850

## MANAGEMENT DISCUSSION AND ANALYSIS

## Market Overview

In 2018, despite the challenges faced by the global photovoltaic, such as the U.S. Section 201 tariffs, China's "531 New Policy", India's safeguard duty, the global photovoltaic market was still growing. According to the preliminary data from Bloomberg New Energy Finance (BNEF), the global solar cost continues to decline and the cost of installing a megawatt of photovoltaic capacity fell by as much as 12% in 2018. However, the global installed capacity of solar photovoltaics reached 109GW, which is 6% higher than 102GW in 2017. BNEF has forecasted that the global solar demand will increase by 15% in 2019, and the installed capacity of solar photovoltaics is expected to reach 125GW, indicating that the photovoltaic industry is constantly maturing.

According to data from the China Photovoltaic Industry Association\* (CPIA) (中國光伏 行業協會), Chinese photovoltaic companies are affected by the "531 New Policy" and accelerated their expansion of overseas markets in 2018. More than 20 Chinese photovoltaic companies have deployed capacity overseas through joint ventures, mergers and acquisitions, and investment, hence gradually increasing the industrial supporting capacity of overseas bases. Chinese photovoltaic companies have also expanded their power station development, EPC, operational services, and energy storage businesses overseas. According to preliminary statistics from CPIA, China's newly-installed capacity for photovoltaic power generation exceeded 43GW in 2018. Although it dropped 18% year-on-year, it continues to rank first in the world. Distributed photovoltaic power plants accounted for 20GW (5% increase year-on-year) while centralised photovoltaic power plants accounted for 23GW (down 31% year-on-year). Accumulated photovoltaic capacity reach exceeds 170GW. On the other hand, polysilicon production exceeded 250,000 tons (over 3.3% increase year-on-year), silicon wafer production was 109.2GW (19.1% increase year-on-year), cell production was 87.2 GW(approximately 21.1% increase year-on-year), and the module production was approximately 85.7GW (14.3% increase vear-on-year). Trendforce predicts that, in the next one to two years, the Photovoltaic Power Generation Top Runner Program\* (領跑者計劃), or simply the "Top Runners Program", photovoltaic poverty alleviation program (光伏扶貧項目) and distributed photovoltaics will be the biggest drive to the growth of new photovoltaic installations. According to the China "13th Five-Year Plan for Solar Energy Development", it is expected that by the end of 2020, the cumulative installed capacity of photovoltaic power generation in China will reach 250GW.

Accelerated replacement of previous generations of technology, rapid drop in power generation costs, and the critical point of grid parity is fast approaching. In 2018, the benchmark electricity price for some Application Top Runners Programs (應用領跑者項目) has begun to reach parity in power generation. The lowest bid price for two projects in Qinghai Province has got lower than the local thermal power benchmark price, and it is also comprehensively lower than the local wind power feed-in tariff. Photovoltaic grid parity has become the major drive in the photovoltaic market and continues to promote

rapid iteration of new technologies. N-type mono-crystalline silicon will become the fastest growing technology in further enhancing efficiencies. Photovoltaic targets and subsidy policies for 2019 are currently under rigorous discussions. Direction of development for projects reaching photovoltaic grid parity is becoming more clear. Unsubsidised photovoltaic projects are expected to materialise during the year in price biddings of the fourth batch of "Top Runners Program". According to the National Energy Administration's "Guidance on Energy-related Work for 2018" (二零一八年能源 工作指導意見) issued by the National Energy Bureau (中國國家能源局), installation of village-level photovoltaic poverty-alleviation\* (光伏扶貧) power stations will be spread out in three years (2018–2020). In 2018, the village-level photovoltaic poverty-alleviation power stations will be around 15GW and is expected to benefit population of around 2 million from poverty-stricken households. This photovoltaic poverty-alleviation program places its focus on the distributed power plant market. After the completion of the power stations, it will demonstrate the full advantages of the photovoltaic industry and enhance the economic strength of the poor villages and is also conducive to the continued growth in the Group's market share of the monocrystalline silicon products.

Mono-crystalline silicon technology has already been regarded as the mainstream of the future by the market. Enhancement of technology to effectively reduce costs has led to a rapid reduction in the cost of mono-crystalline silicon. Strong demands drives the effect of economies of scale. The future development trend towards mono-crystalline silicon has become clearer. Global demand for mono-crystalline silicon products is increasing rapidly. The global market share of mono-crystalline silicon ratio was 18% in 2015, 27% in 2016 and 36% in 2017. It is expected that the market share of mono-crystalline silicon modules, in 2019, overtaking multi-crystalline silicon modules in market share.

The United States is currently the second largest solar photovoltaic market in the world, with Wood Mackenzie Power & Renewables (formerly GTM Research) and Solar Energy Industries Association (SEIA) releasing a joint report showing that in the third quarter of 2018, U.S. new photovoltaic installations reached 1.7GW. It is estimated that the new photovoltaic installations will be around 11.1GW for the year, which will be the same as in 2017, with a total installed capacity reaching 60GW. It is also expected that the total photovoltaic capacity in the United States will more than double in the next five years. By 2023, the United States will install more than 14GW of new photovoltaic installation capacity per year. According to the US Energy Information Administration (EIA), nonhydro renewables such as solar and wind will become the fastest growing sources of power generation in the United States in the next two years. In 2019, the U.S. power sector plans to add more than 4GW of photovoltaic installed capacity and nearly 6GW in 2020. In addition to utility-scale solar power in the power sector, small-scale solar photovoltaic systems installed by homes and businesses, and EIA predicts that small-scale solar power capacity will grow by nearly 9GW in the next two years, representing an increase of 44%.

In the Indian market, the cumulative installed capacity at the end of the third quarter of 2018 has reached 25GW. According to data from Bridge to India research, India's new utility-grade photovoltaic installed capacity in 2018 was 6.8GW, down 19.5% from 2017 (8.5GW). It was due to the uncertainty brought about by the government's implementation of the goods and services tax. The Ministry of New and Renewable Energy said that India will target the installed capacity of all renewable energy technologies to 500GW by 2030, of which 350GW will be solar energy power generation. It is planned to have 100GW of solar energy by 31 March 2022. It is estimated that India's renewable energy installed capacity will increase by 15.86GW in 2019, which is likely to surpass the U.S. as the world's second largest photovoltaic market.

In the Japanese market, although the FIT subsidy was further lowered from 1 April 2018, it is estimated that the installed capacity of new photovoltaics in 2018 will be between 6GW and 9GW. It was mainly driven by the government strengthening the deployment of lithium battery energy storage system applications and vigorously advocating zero-energy residential (ZEH) programs. The government passed the newly revised "Energy Basic Plan" on 3 July 2019, aiming to position renewable energy sources such as solar energy and wind energy as the main power source. It targets, by 2030, the proportion of renewable energy power generation in total power generation will be increased to 22% to 24%, of which photovoltaic power generation will reach the target of 7%, and making renewable energy the mainstream in 2050.

In European markets, European Union ended anti-dumping and anti-subsidy measures on Chinese solar imports and the Minimum Import Prices (MIP) measures. According to Photovoltaic Market Alliance (Photovoltaic MA) research, the European market was mainly led by Germany and Denmark, with an installation of about 8.5GW, which is more than 40% compared to 5.9GW in 2017. By eliminating the trade measures for solar panels and ensuring a very positive solar framework through a clean energy package, it is expected that Europe will see strong demand for solar energy in the next two years and become the starting point for a long-term upward trend in European solar development. In the emerging markets, several emerging and mature markets on the different continents, including Australia, South Korea, United Arab Emirates, Egypt, Mexico and Brazil, have begun to increase their effort, with a total of at least 19.5GW already installed. IHS Markit's research and analysis showed that 2018 was a key year for photovoltaic installations in the Middle East and North Africa, with approximately 3.6GW of photovoltaic installed in the region, marking a four times increase to that of less than 1GW in 2017.

According to the forecast of EnergyTrend, the new energy research center of Trendforce, with the encouragement of policies and supply chain prices in 2019, global demand for the photovoltaic market will continue to increase. It is expected that the new grid connection volume in 2019 will increase by 7.7% to 111.3GW, hitting another record high. China and the United States remain to be the top two markets, while India, benefiting from innate development advantages and active promotion by government policies, will continue to be the third largest market. Japan will remain the fourth. The

number of GW-level markets will increase from six in 2016 to fifteen in 2019. As the number of GW-level markets increases, the global market will continue to become more dispersed. Emerging markets such as Southeast Asia, North Africa, the Middle East and Latin America are beginning to emerge in 2018. Demand in the Middle East is expected to increase by about 100% in 2018 and will further increase in 2019. In particular, the European market, which has seen a significant recovery since 2018, has the fastest growth, possibly exceeding 50%.

## **Operations review**

The Group focuses on the vertical integration for photovoltaic monocrystalline products, providing one-stop solutions for the photovoltaic industry ranging from the manufacturing and sales of silicon ingots and wafers, photovoltaic cells and photovoltaic modules, the installation of photovoltaic system and the development, design, construction, operation and maintenance of photovoltaic generation plants. Apart from not self-manufacturing polysilicon, the scope of its business covers the whole industry chain of the photovoltaic industry.

Although the Group possesses the capacities to manufacture the aforementioned monocrystalline silicon ingots, mono-crystalline silicon wafers, solar cells and modules, the production capacity of each is not exactly the same. Currently, the Group's production capacities for monocrystalline silicon ingots and monocrystalline silicon wafers are both 1.8GW respectively. Monocrystalline solar cell annual production capacity remains at 400MW with photovoltaic module production capacities at 2.2GW. Through this capacity allocation strategy, the Group's strategy can be manifested. Through satisfying the external demands for its photovoltaic modules while, at the same time, boosting the internal demands for its monocrystalline silicon ingots/wafers, and through the strategy of partly self-manufacturing and partly externally procuring the mid-stream solar cells, under the abovementioned strategy to drive the Group's overall capacity utilisation from bottom up, the Group is able to better mitigate the market risks arising from fluctuant sales of upstream silicon wafers or unstable supply of mid-stream solar cells. In addition, with a focus on the production of upstream mono-crystalline silicon ingots and silicon wafers, and planning the downstream module production capacity, in order to focus on the production of upstream niche products, mono-crystalline silicon ingots and wafers, and through significant module production capacity, the Group not only maintains direct contact with downstream customers, but also keeping a finger on the pulse of the enduser market, and can also bring out the upstream high-end mono-crystalline silicon ingot and wafer products. Through the potential of continuous improvement in production costs of the upstream high-end mono-crystalline ingot and wafer products, the Group's innate advantage will be demonstrated.

In terms of operating results, in 2018, although the market was generally affected by the news of the "531 New Policy", especially those inefficient photovoltaic products in the market. However, reaping the benefits of the results from strengthening the customer relationship of downstream module products over the years, the Group's high-end photovoltaic products continued to be welcomed by domestic state-owned enterprises and multinational enterprises. Total shipment increased from 2,428MW in 2017 to 2,797MW in 2018, a growth reaching 15.2%.

In terms of price, affected by the news of the "531 New Policy", the sudden and rapid freezing of market demand caused the supply side to irrationally cut prices in the short term. However, not only did the price cuts failed to immediately stimulate demand, it even caused deferrals in procurement by the demand side, hence resulting in substantial inventory provision. As such, the Group's overall gross profit was greatly compressed. The gross profit margin reduced from 16.4% in 2017 to 9.9% in 2018, resulting in an operating loss of RMB95.271 million in 2018, whereas an operating profit of RMB251.595 million was recorded in 2017.

However, despite the sudden and irrational factors of the aforementioned market, and even though the average unit price of the product in the future is still expected to gradually decrease with the advent of grid parity, the Group can rely on (1) the comparative advantages from technological superiority of its diversified product lines; (2) the highly competitive supporting outsourced production, to significantly drive its production costs down; and (3) the progressive commissioning of the high-efficiency production equipment, in particularly, with regard to the Group's first phase 600MW mono-crystalline ingot and wafer project located in Qujing City, Yunnan Province, China, in the actual trial production stage, the finished products of mono-crystalline products being also in line with expectations, the costs having been reduced by one-third compared with the finished products produced in Jinzhou, it is expected that the magnitude of decrease in cost of the Group's gross profit will return to a normal level.

While maintaining its own leading technological advantage in monocrystalline products, and adhering to the vertical integration strategy, through external demand for the Group's downstream modules driving the internal demand of its upstream ingots and wafers, also through establishing and strengthening strategic partnerships, the Group and its partners will be able to leverage their respective strengths and experiences in laying a solid foundation for broader co-operation in the future. For example, particularly in our solar cell segment with a lower internal capacity, under the vertical integration strategy of the Group, the Group has established strong strategic alliances with local and overseas manufacturers, through which the Group's photovoltaic wafers are sold to our strategic partners and the Group in turn purchase solar cells from them. According to our needs, this arrangement provides stable sales channels for our photovoltaic wafers and a secure source for our solar cells if there is any turbulence in the market. On the other hand, with a focus on the production of upstream mono-crystalline silicon ingots and silicon wafers, and planning the downstream module production capacity, in order to focus on the production of upstream niche products, mono-crystalline silicon ingots and wafers, retaining only the existing scale or slightly increasing the solar cell manufacturing capacity, and through significant module production capacity, the Group not only maintains direct contact with downstream customers, but also keeping a finger on the pulse of the end-user market, and can also bring out the upstream high-end monocrystalline silicon ingot and wafer products. Through the potential of continuous improvement in production costs of the upstream high-end monocrystalline ingot and wafer products.

Therefore, the Group will be more able to focus on the market development and sales of upstream mono-crystalline silicon ingots and wafers and downstream end-user module products, thereby giving full play to the existing advantages of vertical integration of the Group's upstream and downstream mono-crystalline products.

#### Silicon ingot and wafer business

Apart from not producing its own polysilicon, a chemical product, in the scope of its business, the Group covers an all-rounded photovoltaic industry production chain under its vertically integrated business model. As such, the Group both self-manufactures and process upstream of ingots, wafers and solar cells for the utilisation by its downstream modules, in order to enhance the respective external market competitiveness of each product segment, and to allow for their external sales. During the period, demand for monocrystalline products had continuously increased which led to rapid growing market share of monocrystalline products. In addition to the traditional monocrystalline P-type products, shipment volume of monocrystalline N-type products with higher conversion efficiencies are also increasing. With the continued realisation of advantages in better improvement in conversion efficiency, more stable decay rate in its photovoltaic systems. continued reduction in unit costs, etc. of monocrystalline products, it is expected that the advantages of monocrystalline products will become more obvious in the field of photovoltaic power generation, and the market share of monocrystalline silicon products will further increase significantly. Guided by this advantageous environment in the industry, the Group, through its long-term strategic partnerships with well-known solar cell-focused manufacturers, not only enjoys priority distribution channels for the sales of its monocrystalline wafers, but also ensures the long-term stable utilisation of the Group's capacity and shipment volume. The benefits of the Group's upstream and downstream vertical integration are fully realised.

The Group have consolidated its leading position in the mono-crystalline silicon solar ingot and wafer manufacture industry in terms of technology and product quality. The quality stability of its monocrystalline silicon products is amongst those of the industry leaders. During the year, the external shipment volume of mono-crystalline silicon ingots was 413.8MW, representing an increase of 32% compared to 313.5MW in 2017. External shipment volume of mono-crystalline silicon wafers has remained stable at 850.3MW (822.3MW in 2017). Major customers of external sales included Aikosolar Group (愛旭太陽能集團), TW Solar Group (通威太陽能集團), Motech Industries, Inc. (MOTECH) and huge state-owned enterprises in China, such as State Power Investment Corporation (中國國家電力投資集團公司) ("SPIC").

In addition, phase one 600MW monocrystalline silicon solar ingot and wafer project, newly invested by the Group, located in Quijng City, Yunnan Province, China has gradually commenced production. In addition to the local electricity costs at the new plant being lower than that at our major production base, the manufacturing facilities of the new generation silicon ingots, researched and developed in association with a specialist manufacturer, has commenced production. It facilitated the lowering of manufacturing cost of ingots and wafers; strong support from the local government are available, in particular financial support obtained for land, warehouses and a variety of factory facilities, the construction and follow-up operation, in order to improve the operating efficiency of the new plant. In the actual trial production stage, the finished products of mono-crystalline silicon products are also in line with expectations. The costs has been reduced by one-third compared with the finished products produced in Jinzhou. The Group expects the Oujing Project will become the new layout point of the Group. further improving the Group's overall manufacturing costs, and paving the way for the improvement in the Group's gross profit. The Group is currently actively planning phase two 600MW of the project.

## Solar cell business

The Group's production lines of solar cells are located at the Group's manufacturing base in Jinzhou, Liaoning. During the year, the annual production capacity of solar cells was 400MW (2017: 400MW). Solar cells are mainly provided internally to the downstream module business of the Group. Only a small portion of solar cells with special specifications are sold to our selected customers in China and Japan. The Group's solar cell manufacturing capacity is highly flexible. Our products range is hence extensive, which includes mono-crystalline, multi-crystalline, P-type high end, N-type double-sided solar cells, etc. Focusing on the implementation of the vertical integration strategy on monocrystalline products, most of the solar cells are mainly provided to the use of the Group's downstream solar modules companies.

In addition, the Group has also been collaborating with university teams of the highest levels in the field of global perovskite (鈣鈦礦) research in projects to jointly develop perovskite solar cells in order to pave the way for solar cell development in the next decade and keep abreast of the latest trends in the photovoltaic industry.

## Module business

During the first half of 2018, the Group's photovoltaic module shipments maintained an upward trend of 4%. However, since the unit price of the modules was irrationally lowered, it led to a decrease in total sales by 9%. Yet contrasted it to the full-year performance, the Group's external shipment during the year was 1,466.2MW, a 17% increase from the 1,251.7MW in 2017. Total sales for the year also increased from 2,843.33 million in 2017 to 3,070.65 million in 2018. This highlights the Group's strategy of adding 1GW per year high-efficiency module capacity in the second half of the year, making the Group's total production capacity 2.2 GW, was indeed in the right direction.

By continuously lowering production costs, not only will the economies of scale be more distinguished, through commencement of production by the newly added capacity, the flexibility in scheduling of high-end products is also enhanced. Unit production costs and product yield will also continuously be improved significantly. This also shows that even though the overall solar market demand in China has been compressed, the excellent quality of the Group's products and price competitiveness offered by the Group have led to an increase in the Group's external shipments and total annual sales. Profitability of the module segment has grown significantly, marking new heights.

External sales was mainly made to huge Chinese state-owned enterprises and Japanese multinational enterprises, such as China Huadian Corporation (中國華電集團公司) ("Huadian"), Beijing Enterprises Holdings Limited (北京控股集團有限公司) ("BEGCL"), SHARP Corporation and SANSHIN ELECTRONICS CO., LTD., etc.

On the other hand, following the increasing awareness of the benefits of higher conversion efficiency and more competitive costs offered by the Group's focused monocrystalline photovoltaic modules, there is a stronger demand for high conversion efficiency photovoltaic modules and a rapid growth in this market. With the introduction of the "Top Runner Program", "Super Runner Program" and other favourable policies, coupled with the further growth in the market share of mono-crystalline silicon products with higher photovoltaic conversion efficiencies, demand for N-type mono-crystalline photovoltaic modules has surged. Being the company with the largest number of successful bids in the third batch of the Top Runner Program, China National Power Investment Corporation\* (中國國家電力投資集團) announced in July 2018 that the Group has become one of the three major module suppliers of the project, and will supply modules such as N-type monocrystalline silicon and P-type PERC modules for the project.

As a company focusing on monocrystalline silicon photovoltaic products, equipped with high-quality, self-produced upstream monocrystalline silicon ingots and monocrystalline silicon wafers, customers' demand for the Group's monocrystalline modules has always remained high. The proportion of sales of the Group's mono-to-multicrystalline silicon photovoltaic modules has remained at 70:30. In addition to flexibly supporting the manufacturing of mono- and multi-crystalline photovoltaic modules, the Group will continue to expand and strengthen the development and sales of monocrystalline silicon high-efficiency module products such as N-type double-sized glass photovoltaic modules, half-cell photovoltaic modules, P-type monocrystalline solar cell Passivate Emitter and Rear Cell (PERC), smart photovoltaic modules, and Super Runner Program-related highend products. Among them, installation of the new production lines of our BS modules of N-type monocrystalline IBC solar cell, which produces higher current output, open circuit voltage, fill factor and other electrical performance advantages, have been completed. It will become one of the Group's major module products in 2019. BS modules utilises, first in the country, this internationally-leading FPC manufacturing technique, with SHARP Corporation ("SHARP"), the Group's key strategic partner, being its major sales customer. It is expected that the Group's overseas shipments will further increase.

In summary, through customer demand for the Group's downstream modules, it has not only driven the internal demand for the Group's upstream monocrystalline ingots and monocrystalline wafers, but also helps to realise the benefits arising from the Group's vertical integration strategy, and to better mitigate the market risks arising from fluctuant sales of upstream silicon wafers or unstable supply of mid-stream solar cells.

#### Construction and operation of photovoltaic system business

To consolidate its advantages of the business model of vertical integration, the Group actively expanded the business of end-user market apart from its efforts in stabilising its upstream and midstream business development, thereby driving demand for products from downstream to upstream. As such, in respect of the business opportunity derived from the construction of distributed power plants, apart from establishing internal photovoltaic power plant system companies of the Group, the Group also plans to establish joint venture companies with companies from other industries in order to share the profits and also provide extra distribution channels for the Group's module sales. In respect of large-scale centralised power plants, the Group will, through investing as minority shareholders, seek construction opportunities as an EPC service provider and help to drive the sales of the Group's modules.

#### Financial Review

#### Revenue

The cost of photovoltaic power generation must continue to decline as technology continues to improve in order to replace traditional petrochemical energy in a larger scale and to effectively achieve the goal of green and clean energy. As such, although the average selling price during the year declined substantially over last year, as a result of successful customer development, the size of the customer base and the purchases by individual customers are showing continuous growing trends. The external shipment volume increased significantly by 15.2% compared to last year. As a result, for the year ended 31 December 2018, the Group recorded revenue of RMB4,022.452 million, a moderate increase from RMB3,999.616 million in 2017, and continued to maintain a growth trend.

## Cost of sales

Up to 31 December 2018, cost of sales increased from RMB3,341.743 million last year to RMB3,624.902 million, representing an increase of 8.5%, which resulted from the increase in shipment volume. Cost of sales represented 90.1% of total revenue, representing an increase of 6.5 percentage points from 2017. The increase in this ratio was mainly a result of the market selling prices being affected by the news of the "531 New Policy", which caused the supply side to irrationally cut prices in the short term.

## Gross profit and gross profit margin

The Group recorded a gross profit of RMB397.55 million and a gross profit margin of 9.9% in 2018, as compared to a gross profit of RMB657.873 million and a gross profit margin of 16.4% in 2017. Both gross profit and the gross profit margin recorded declines. They were mainly affected by the news of the "531 New Policy", the sudden and rapid freezing of market demand causing the supply side to irrationally cut prices in the short term. However, not only did the price cuts failed to immediately stimulate demand, it even caused deferrals in procurement by the demand side resulting in substantial inventory provision. The Group's overall gross profit was hence greatly compressed.

## Selling and distribution expenses

Selling and distribution expenses mainly comprised packaging expenses, freight charges and insurance expenses. Selling and distribution expenses increased to RMB77.447 million in 2018 from RMB67.701 million in 2017. The increase in selling and distribution expense was mainly due to the increase in volume of external shipment in 2018.

## Administrative expenses

Administrative expenses mainly comprised staff costs and research and development expenses. The administrative expenses in 2018 amounted to RMB377.609 million, which decreased by 3.7% as compared to RMB392.095 million in 2017.

## Finance costs

Finance costs represented mainly bank loan interests. The Group's finance costs increased from RMB121.702 million in 2017 to RMB136.012 million in 2018, an increase of 11.8%. As mentioned above, external shipment of the Group has grown significantly by 15.2%. Given the significant increase in corresponding shipments, increase of a lesser percentage in the Group's finance cost was recorded. It was a result of better financial control on the use of funds during the year. With a turnover in profit, the financial structure of the Group has been further improved, creating more room for negotiation of finance costs. The Group expects to continue reducing finance costs in the future and will obtain various different financing channels.

## Income tax

Income tax credit was RMB12.157 million in 2018, while an income tax credit amounted to RMB8.86 million was recorded in 2017. Income tax credit recorded in 2018 was mainly due to the recognition of the Group's deferred tax assets.

## Loss/profit attributable to the equity holders

In 2018, the Group recorded a loss attributable to the equity shareholders of RMB222.402 million, as compared to a profit attributable to the equity shareholders of RMB107.462 million in 2017.

#### Inventory turnover days

In order to replace traditional petrochemical energy in a larger scale and to effectively achieve the ultimate goal of green and clean energy, continuous technological advancement has driven down the prices of photovoltaic products over the years. This led to declining trends in prices of many related raw and auxiliary materials for production and finished products. Hence, in terms of inventory reserve strategy, the Group has been focusing its efforts in raising inventory turnover and lowering the inventory turnover days in order to mitigate the risk of a sudden decline in inventory prices, help reduce committed capital and, at the same time, further strengthen the Group's operation working capital. As a result, the Group's inventory turnover days has been lowered to 37 days during the year (31 December 2017: 58 days).

## Trade receivable turnover days

The Group completed the vertical integration of upstream and downstream monocrystalline silicon products since 2011. Apart from not producing polysilicon inhouse, the scope of the Group's business covers self-production of monocrystalline silicon ingots, monocrystalline silicon wafers, solar cells and solar modules. However, due to the large capacity of upstream products in earlier years, external sales were at the time dominated by monocrystalline silicon wafers. Hence, to get closer to the customer needs of the module end-user market, the capacity of module production gradually increased from 400MW in 2013 to 2.2GW in 2018. Under the rapid growth of the capacity of module production, the solar modules sales accounted for over 70% of the Group's overall sales.

According to the terms of the industry's general module sales contract, the recovery of module receivable depends on the construction progress of the photovoltaic power plant. For instance, some trade receivables can only be recovered after the customer's photovoltaic power plant is connected to the grid. In addition, 10% of the total amount of receivables are retained as warranties. These warranties will generally be recovered in around one year. As a result, the trade receivables turnover days of module business are generally longer. As the Group's module sales has sustained rapid growth in the

proportion of operating income, the trade receivables turnover days increased. From the rapid growth of the ratio of revenue in modules sales of the Group, the trade receivables turnover days of the Group increased to 141 days (31 December 2017: 96 days) in 2018.

## Trade payable turnover days

The trade payables turnover day was 124 days, which rose significantly comparing to 96 days of last year, was mainly due to the strategic partnerships established with our major suppliers, under stable and frequent co-operations, and the suppliers have gradually increased our lines of credits and payment terms.

## Liquidity and financial resources

The principal sources of working capital of the Group during the year were cash flows from bank borrowings. As at 31 December 2018, the current ratio (current assets divided by current liabilities) of the Group was 0.80 (31 December 2017: 0.89). The Group had net borrowings of RMB1,125.436 million as at 31 December 2018 (31 December 2017: RMB1,636.798 million), including cash in bank and on hand of RMB239.712 million (31 December 2017: RMB191.185 million), pledged deposits of RMB425.309 million (31 December 2017: RMB191.097 million), bank loans due within one year of RMB1,773.140 million (31 December 2017: RMB192.322 million) and non-current bank and other loans of RMB17.317 million (31 December 2017: RMB124.758 million). The net debt to equity ratio (net debt divided by total equity) was 139.3% (31 December 2017: 158.1%).

## Earnings before interest, taxes, depreciation and amortisation ("EBITDA")

During the period, earnings before interest, taxes, depreciation and amortisation ("EBITDA") was RMB136.938 million (3.4% to revenue) (2017: RMB433.734 million, 10.8% to revenue). The main reason for the decrease in EBITDA was due to the Group's net loss during the year.

## Foreign currency risk

The Group is exposed to foreign currency risk primarily through sales and purchases, cash, bank deposits and bank loans that are denominated in a currency other than the functional currency, Renminbi, of the operations to which they relate. The currencies giving rise to this risk are primarily the US Dollar and Euro. The Directors do not expect any significant impact from the change in exchange rates since the Group uses foreign currencies received from customers to settle the amounts due to suppliers which naturally mitigates the exchange rate risk. In addition, the Group will consider the difference in interest rates and fluctuations in the exchange rates of foreign currency denominated and local currency-denominated loan balance, and the need to mitigate the risk through low-risk forward contracts, in order to strike a balance between the exposure to the variations in interest costs and fluctuations in foreign exchange rates.

#### Human resources

As at 31 December 2018, the Group had 3,669 (31 December 2017: 3,565) employees.

#### Future prospects and strategies

It is always the darkest before dawn. "531 New Policy" will accelerate the early arrival of grid parity. The market is currently undergoing a structural transformation, in terms of production capacity and product quality improvement, to encourage high-end and high-efficiency products, and promote technological advancement, reduce costs of power generation, reduce dependence on subsidies, promote industry to high quality development, and accelerate to reach grid parity. The problems in the power grid and energy storage are also improving continuously. Therefore, after reaching gird parity, without the need for government subsidies, it is expected that the photovoltaic market will prosper and those operators who survive shall enjoy fruitful results.

Analysts expect that, by the end of 2020, culminated installation will surge above 250GW. The advantage of high conversion ratios, stable decay rate in its photovoltaic systems, continued reduction in unit cost, etc. of monocrystalline products are highlighted. In addition, with the increased attention by national policy on distributed solar power plants, markets of monocrystalline products are expected to grow continually. Hence, monocrystalline products are becoming the popular choice in solar projects and the market share of monocrystalline products is improving. The proportion of solar plants installing monocrystalline photovoltaic systems and the monocrystalline products used by distributed power plants have increased as a result.

Further, since the introduction of the "Top Runner Program" (the "Program"), the Program has promoted healthy competition through high standards of technical certification and efficiency requirements. In view of this, the National Energy Bureau launched an upgraded version of the national "Top Runner Program", the program of application of advance technology on construction of photovoltaic power generating plants, also known as the "Super Runner Program", focusing and promoting large-scale and advanced technology companies. "Super Runner Program" considers efficient product development as its main focus, which includes N-type photovoltaic modules, double-sided photovoltaic modules, black silicon photovoltaic modules, half-cell photovoltaic modules and smart modules. The Group's high-end product, N-type doublesided and N-type IBC photovoltaic modules, is expected to gain attention from the market. Amongst all solar products, by focusing on the development of monocrystalline products, the Group commands industry-leading technology for the production of monocrystalline products. Through vertically integrating its upstream and downstream manufacturing capacities, apart from not self-producing polysilicon, the Group covers the whole industry chain of the photovoltaic industry, fully leveraging the synergy among different business segments of the Group.

As such, the focus is on the production of upstream mono-crystalline silicon ingots and silicon wafers, and planning the downstream module production capacity, in order to focus on the production of upstream niche products, mono-crystalline silicon ingots and wafers, retaining only the existing scale or slightly increasing the solar cell manufacturing capacity, and through significant module production capacity, the Group not only maintains direct contact with downstream customers, but also keeps a finger on the pulse of the end-user market, and can also bring out the upstream high-end mono-crystalline silicon ingot and wafer products. Through the potential of continuous improvement in production costs of the upstream high-end mono-crystalline ingot and wafer products, the Group's innate advantage will be demonstrated.

However, despite the sudden and irrational factors of the aforementioned market, and even though the average unit price of the product in the future is still expected to gradually decrease with the advent of grid parity, the Group can rely on (1) the comparative advantages from technological superiority of its diversified product lines; (2) the highly competitive supporting outsourced production, to significantly drive its production costs down; and (3) the progressive commissioning of the high-efficiency production equipment, particularly, with regard to the Group's first phase 600MW mono-crystalline ingot and wafer project located in Qujing City, Yunnan Province, China, in the actual trial production stage, the finished products of mono-crystalline products being also in line with expectations, the costs having been reduced by one-third compared with the finished products produced in Jinzhou, it is expected that the magnitude of decrease in cost of the Group's products will be greater than that of the decrease in unit selling price, adding to the planned mono-crystalline silicon ingot, wafer and module projects, not only does the Group expect its future external shipments and total sales to continue to grow, the Group's gross profit ratios will return to a normal level. The road to grid parity may be a painful change, but it is also an opportunity for the industry. The Group is fully prepared and will do its utmost to embrace the marketoriented sustainable development after reaching grid parity.

## AUDIT COMMITTEE

The Company's Audit Committee has reviewed the accounting principles and practices adopted by the Group and the Group's consolidated financial results for the year ended 31 December 2018, and has discussed and reviewed the risk management, internal control and reporting matters.

## DIVIDEND

No final dividend was paid in 2018 (2017: Nil). The Directors do not recommend the payment of a final dividend for 2018 (2017: Nil).

## CLOSURE OF REGISTER OF MEMBERS

The register of members of the Company will be closed from 11 June 2019 to 18 June 2019, both days inclusive, during which period no transfer of shares will be effected. In order to be eligible to attend and vote at the forthcoming annual general meeting of the Company, all transfers accompanied by the relevant share certificates must be lodged with the branch share registrar of the Company in Hong Kong, Computershare Hong Kong Investor Services Limited at Rooms 1712–16, 17th Floor, Hopewell Centre, 183 Queen's Road East, Wanchai, Hong Kong not later than 4:30 p.m. on 10 June 2019.

# PURCHASE, SALE OR REDEMPTION OF THE COMPANY'S LISTED SECURITIES

During the year, neither the Company nor any of its subsidiaries purchased, sold or redeemed any of its listed securities.

## MODEL CODE FOR SECURITIES TRANSACTIONS BY DIRECTORS

The Company has adopted the Model Code for Securities Transactions as set out in Appendix 10 to the Listing Rules as the code of conduct regarding securities transactions by the Directors. Specific enquiries have been made by the Company to confirm that all Directors have been complied with the Model Code throughout the financial year ended 31 December 2018.

## CORPORATE GOVERNANCE

The Company reviews and enhances its corporate governance practices continuously and is committed to a high standard of corporate governance. The Company has complied with the Corporate Governance Code and Corporate Governance Report (the "Corporate Governance Code") set out in Appendix 14 to the Listing Rules throughout the year ended 31 December 2018.

## PUBLICATION OF FINANCIAL INFORMATION

The 2018 annual report containing all the detailed information will be dispatched to the shareholders of the Company and published on the respective websites of the Stock Exchange (http://www.hkexnews.hk) and the Company (http://www.solargiga.com) in due course.

## SCOPE OF WORK OF AUDITOR

The figures in respect of the consolidated statement of profit or loss, consolidated statement comprehensive income, consolidated statement of financial position of the Group, and the related notes thereto for the year as set out in this announcement have been agreed by our auditors, Messrs. Ernst & Young, to the amounts set out in the Group's audited consolidated financial statements for the year.

The work performed by the Group's auditor, Ernst & Young, in this respect did not constitute audits, reviews and other assurance engagement in accordance with Hong Kong Standards on Auditing, Hong Kong Standards on Review Engagements or Hong Kong Standards on Assurance Engagements issued by the Hong Kong Institute of Certified Public Accountants and consequently no assurance has been expressed by the Group's auditor on the preliminary results announcement.

## ANNUAL GENERAL MEETING

It is proposed that the annual general meeting of the Company be held on 18 June 2019. Notice of the annual general meeting will be published and issued to shareholders in due course.

> By Order of the Board Solargiga Energy Holdings Limited Wang Junze Executive Director

Hong Kong, 29 March 2019

As at the date of this announcement, Mr. Tan Wenhua (Chairman), Mr. Tan Xin and Mr. Wang Junze are executive Directors of the Company, Mr. Hsu You Yuan is a nonexecutive Director of the Company, and Dr. Wong Wing Kuen, Albert, Ms. Fu Shuangye and Mr. Zhang Chun are independent non-executive Directors of the Company.