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## HANERGY THIN FILM POWER GROUP LIMITED

### 漢能薄膜發電集團有限公司

(Incorporated in Bermuda with limited liability)

(Stock Code: 566)

### INTERIM RESULTS FOR THE SIX MONTHS ENDED 30 JUNE 2018

#### UNAUDITED INTERIM RESULTS

The board of directors (the “Board”) of Hanergy Thin Film Power Group Limited (the “Company”) announces the unaudited interim results of the Company and its subsidiaries (collectively, the “Group”) for the six months ended 30 June 2018, together with the unaudited comparative figures for the corresponding period in 2017 and selected explanatory notes are as follows:

#### INTERIM CONDENSED CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

FOR THE SIX MONTHS ENDED 30 JUNE 2018

		Six months ended 30 June	
	Notes	2018 HK\$'000 (Unaudited)	2017 HK\$'000 (Unaudited)
<b>Revenue from contracts with customers</b>	4	<b>20,414,526</b>	2,853,914
Cost of sales		<u>(8,203,214)</u>	<u>(1,761,407)</u>
Gross profit		<b>12,211,312</b>	1,092,507
Other income and gains		<b>52,709</b>	79,474
Selling and distribution expenses		<b>(549,784)</b>	(156,986)
Administrative expenses		<b>(901,133)</b>	(474,807)
Research and development costs		<b>(502,104)</b>	(248,263)
Loss on disposal of a subsidiary		—	(581)
Other expenses		<b>(228,694)</b>	(14,331)
Finance costs		<b>(23,645)</b>	(30,104)
<b>PROFIT BEFORE TAX</b>	5	<b>10,058,661</b>	246,909
Income tax expense	6	<b>(2,729,632)</b>	(2,112)
<b>PROFIT FOR THE PERIOD</b>		<b><u>7,329,029</u></b>	<b><u>244,797</u></b>

		<b>Six months ended</b>	
		<b>30 June</b>	
	<i>Notes</i>	<b>2018</b>	2017
		<b>HK\$'000</b>	<b>HK\$'000</b>
		<b>(Unaudited)</b>	<b>(Unaudited)</b>
<b>OTHER COMPREHENSIVE INCOME TO BE RECLASSIFIED TO PROFIT OR LOSS IN SUBSEQUENT PERIODS</b>			
Exchange differences on translation of foreign operations		<u>284,039</u>	<u>208,148</u>
<b>OTHER COMPREHENSIVE INCOME FOR THE PERIOD, NET OF TAX</b>		<u><b>284,039</b></u>	<u><b>208,148</b></u>
<b>TOTAL COMPREHENSIVE INCOME FOR THE PERIOD</b>		<u><b>7,613,068</b></u>	<u><b>452,945</b></u>
Profit for the period attributable to:			
Owners of the parent		7,328,970	244,812
Non-controlling interests		<u>59</u>	<u>(15)</u>
		<u><b>7,329,029</b></u>	<u><b>244,797</b></u>
Total comprehensive income for the period attributable to:			
Owners of the parent		7,613,009	452,960
Non-controlling interests		<u>59</u>	<u>(15)</u>
		<u><b>7,613,068</b></u>	<u><b>452,945</b></u>
		<b>HK Cents</b>	<b>HK Cents</b>
		<b>(Unaudited)</b>	<b>(Unaudited)</b>
<b>EARNINGS PER SHARE ATTRIBUTABLE TO OWNERS OF THE PARENT</b>			
Basic	7	<u><b>17.39</b></u>	<u><b>0.58</b></u>
Diluted	7	<u><b>16.67</b></u>	<u><b>0.57</b></u>

**INTERIM CONDENSED CONSOLIDATED STATEMENT OF FINANCIAL POSITION***AS AT 30 JUNE 2018*

		<b>30 June</b>	31 December
		<b>2018</b>	2017
	<i>Notes</i>	<b>HK\$'000</b>	<b>HK\$'000</b>
		<b>(Unaudited)</b>	<b>(Audited)</b>
<b>NON-CURRENT ASSETS</b>			
Property, plant and equipment		<b>706,554</b>	581,302
Intangible assets		<b>60,162</b>	35,467
Available-for-sale financial investments		—	66,097
Other investments		<b>65,534</b>	—
Restricted cash		<b>4,120</b>	4,104
Deferred tax assets		<b>33,179</b>	—
Other non-current assets		<b>90,741</b>	85,471
		<hr/>	<hr/>
<b>Total non-current assets</b>		<b>960,290</b>	772,441
		<hr/>	<hr/>
<b>CURRENT ASSETS</b>			
Inventories		<b>2,527,761</b>	1,689,670
Trade receivables	<i>8</i>	<b>9,289,373</b>	7,232,791
Tax recoverable		<b>2,742</b>	2,766
Contract assets	<i>9</i>	<b>12,774,190</b>	—
Gross amount due from contract customers	<i>9</i>	—	2,400,660
Other receivables	<i>10</i>	<b>484,173</b>	1,437,143
Bills receivable		<b>66,311</b>	27,363
Deposits and prepayments	<i>11</i>	<b>4,595,108</b>	3,369,336
Restricted cash		<b>136,630</b>	140,236
Cash and cash equivalents		<b>1,183,267</b>	2,496,760
		<hr/>	<hr/>
<b>Total current assets</b>		<b>31,059,555</b>	18,796,725
		<hr/>	<hr/>

		<b>30 June</b>	31 December
		<b>2018</b>	2017
	<i>Notes</i>	<b><i>HK\$'000</i></b>	<i>HK\$'000</i>
		<b>(Unaudited)</b>	(Audited)
<b>CURRENT LIABILITIES</b>			
Trade and bills payables	<i>12</i>	<b>3,436,040</b>	1,737,876
Other payables and accruals	<i>13</i>	<b>4,127,963</b>	7,073,562
Contract liabilities		<b>3,383,806</b>	—
Interest-bearing bank and other borrowings		<b>84,142</b>	597,610
Tax payable		<b>1,742,658</b>	1,005,374
Deferred income		<b>46,040</b>	20,447
		<u><b>12,820,649</b></u>	<u>10,434,869</u>
Total current liabilities			
		<u><b>12,820,649</b></u>	<u>10,434,869</u>
<b>NET CURRENT ASSETS</b>			
		<u><b>18,238,906</b></u>	<u>8,361,856</u>
<b>TOTAL ASSETS LESS CURRENT LIABILITIES</b>			
		<u><b>19,199,196</b></u>	<u>9,134,297</u>
<b>NON-CURRENT LIABILITIES</b>			
Deferred tax liabilities		<b>2,522,973</b>	478,048
Interest-bearing bank and other borrowings		<b>543,435</b>	528,398
Other non-current liabilities		<b>12,527</b>	20,049
		<u><b>3,078,935</b></u>	<u>1,026,495</u>
Total non-current liabilities			
		<u><b>3,078,935</b></u>	<u>1,026,495</u>
Net assets		<u><b>16,120,261</b></u>	<u>8,107,802</u>
<b>EQUITY</b>			
<b>Equity attributable to the owners of the parent</b>			
Issued capital	<i>14</i>	<b>105,364</b>	105,364
Reserves		<b>16,014,302</b>	8,001,902
		<u><b>16,119,666</b></u>	<u>8,107,266</u>
<b>Non-controlling interests</b>		<b>595</b>	536
		<u><b>16,120,261</b></u>	<u>8,107,802</u>
Total equity			
		<u><b>16,120,261</b></u>	<u>8,107,802</u>

**NOTES TO THE INTERIM CONDENSED CONSOLIDATED FINANCIAL STATEMENTS**  
*FOR THE SIX MONTHS ENDED 30 JUNE 2018*

**1. BASIS OF PREPARATION**

These unaudited interim condensed consolidated financial statements are prepared in accordance with Hong Kong Accounting Standard (“**HKAS**”) 34 Interim Financial Reporting issued by the Hong Kong Institute of Certified Public Accountants (the “**HKICPA**”) and the disclosure requirements of Appendix 16 of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the “**Listing Rules**”).

The accounting policies and the basis of preparation adopted in the preparation of these unaudited interim condensed consolidated financial statements are consistent with those adopted in the annual financial statements for the year ended 31 December 2017, except for the adoption of the new and revised HKFRSs as disclosed in note 2 below.

These unaudited interim condensed consolidated financial statements have been prepared under historical cost convention. They are presented in Hong Kong dollars and all values are rounded to the nearest thousand except when otherwise indicated.

As at 30 June 2018, the Group had a cash and cash equivalents balance of HK\$ 1,183,267,000 and its current assets were in excess of current liabilities by HK\$18,238,906,000 which, as set out in notes 8 and 9, included trade receivables and contract assets with a total amount of HK\$22,063,563,000.

The directors of the Company are considering measures to monitor and improve the cash flows of the Group, including but not limited to the collection of trade receivables due from Hanergy Holding Group Limited (“**Hanergy Holding**”) and its affiliates (collectively referred to as “**Hanergy Affiliates**”) and the third-party customers developed for the manufacturing business, as well as development in the downstream business. The Group received HK\$2,283,175,000 and HK\$194,394,000 from Hanergy Affiliates for the full repayment of trade receivables and the interest penalty of the overdue trade receivables by 27 March 2018. The Group also received HK\$616,396,000 from a third-party customer who has a long ageing and overdue receivables due to the Group to settle part of the due trade receivables during the first half of 2018. In addition, the Group also received periodical repayments from third-party customers of the manufacturing business for repayment of the due trade receivables. Subsequent to 30 June 2018 and up to 30 August 2018 (the date when the financial statements were approved for issuance), the Group has received a total of HK\$6,083,817,000 from the turnkey production line customers. The Group has also put a lot of resources and efforts in the downstream photovoltaic applications, mobile products and solar poverty alleviation projects. The Group has approximately more than one thousand active distributors, covering most of the markets at city and county level across Mainland China as at 30 June 2018.

In light of the measures of the Group described above, the directors of the Company are of the view that the Group will have sufficient working capital to finance its operations and is able to meet with its liabilities as and when they fall due in the foreseeable future. Accordingly, the directors of the Company consider that it is appropriate to prepare these interim condensed consolidated financial statements on a going concern basis.

The interim condensed consolidated financial statements do not include all the information and disclosures required in the annual financial statements, and should be read in conjunction with the Group’s annual financial statements for the year ended 31 December 2017. The Group’s independent auditor issued a qualified opinion on the Group’s consolidated financial statements for the year ended 31 December 2017.

## 2. CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES

The adoption of new accounting standards and interpretations (which includes all new and revised Hong Kong Financial Reporting Standards, HKASs and Interpretations issued by the HKICPA, collectively the “**HKFRSs**”) that are relevant and effective for the current accounting period of the Group, are summarised as below:

Amendments to HKFRS 2	<i>Classification and Measurement of Share-based Payment Transactions</i>
HKFRS 9	<i>Financial Instruments</i>
HKFRS 15	<i>Revenue from Contracts with Customers</i>
Amendments to HKFRS 15	<i>Classification to HKFRS 15 Revenue from Contracts with Customers</i>
HK(IFRIC)-Int 22 <i>Annual Improvements 2014-2016 Cycle</i>	<i>Foreign Currency Translation and Advance Consideration Amendments to HKFRS 1 and HKFRS 28</i>

Other than as explained below regarding the impact of HKFRS 9, HKFRS 15 and Amendments to HKFRS 15, the adoption of the above revised standards has had no significant financial effect on the interim condensed consolidated financial statements of the Group.

The nature and the impact of the changes are described below:

### **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 adoption of HKFRS 9 from 1 January 2018 resulted in changes in accounting policies and adjustments to the amounts recognised in the financial statements. In accordance with the transitional provisions in HKFRS 9, comparative figures have not been restated. The impacts relate to the classification and measurement and the impairment requirements are summarised as follows:

#### **(1) *Classification and measurement***

Except for receivables, under HKFRS 9, the Group initially measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs.

Under HKFRS 9, debt financial instruments are subsequently measured at fair value through profit or loss, amortised cost, or fair value through other comprehensive income (FVOCI). The classification is based on two criteria: the Group’s business model for managing the assets; and whether the instruments’ contractual cash flows represent “solely payments of principal and interest” on principal amount outstanding (the “**SPPI criterion**”).

The new classification and measurement of the Group’s debt financial assets are as follows:

- *Debt instruments at amortised cost* that are held within a business model with the objective to hold the financial assets in order to collect contractual cash flows that meet the SPPI criterion. This category includes the Group’s trade receivables, contract assets, bill receivables, and financial assets included in other receivables and deposits.

Other financial assets are classified and subsequently measured, as follows:

- *Equity instruments at FVOCI with no recycling* of gains or losses to profit or loss on derecognition. This category only includes equity instruments, which the Group intends to hold for the foreseeable future and which the Group has irrevocably elected to so classify

upon initial recognition or transition. The Group classified its unquoted equity instruments as equity instruments at FVOCI. Equity instruments at FVOCI are not subject to an impairment assessment under HKFRS 9. Under HKAS 39, the Group's unquoted equity instruments were classified as available-for-sale financial investments and measured at cost less impairment losses.

The assessment of the Group's business models was made as of the date of initial application, 1 January 2018, and then applied retrospectively to those financial assets that were not derecognised before 1 January 2018. The assessment of whether contractual cash flows on debt instruments are solely comprised of principal and interest was made on the facts and circumstances as at the initial recognition of the assets.

The accounting for the Group's financial liabilities remains largely the same as it was under HKAS 39. Similar to the requirements of HKAS 39, HKFRS 9 requires contingent consideration liabilities to be treated as financial instruments measured at fair value, with the changes in fair value recognised in profit or loss.

The Group elected to present in OCI changes in the fair value of all its equity investments previously classified as available-for-sale, because these investments are held as long-term strategic investments that are not expected to be sold in the short to medium term. As a result, the consolidated statement of financial position as at 1 January 2018 was restated, assets with carrying amount of HK\$66,097,000 were reclassified from available-for-sale financial investments to financial assets at FVOCI with no recycling as presented as other investments. Meanwhile, since these investees were still under construction phase without any operation since the Group has invested in, therefore their fair values approximate to their costs as at 1 January 2018 without any fair value changes being recognised as at 1 January 2018.

## **(2) Impairment**

HKFRS 9 requires an impairment on trade receivables, contract assets, other receivables and bills receivables 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 applied the simplified approach and recorded lifetime expected losses on its trade receivables and contract assets. The Group applied general approach and recorded twelve month expected losses on its other receivables and bills receivables. The adoption of HKFRS 9 has had no significant impact on the impairment of the financial assets of the Group.

## **HKFRS 15 Revenue from Contracts with Customers**

HKFRS 15 supersedes HKAS 11 *Construction Contracts*, HKAS 18 *Revenue* and related Interpretations and it applies to all revenue arising from contracts with customers, unless those contracts are in the scope of other standards. The new standard establishes a 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 standard requires entities to exercise judgement, taking into consideration all of the relevant facts and circumstances when applying each step of the model to contracts with their customers. The standard also specifies the accounting for the incremental costs of obtaining a contract and the costs directly related to fulfilling a contract.

The Group elected to adopt HKFRS 15 using the modified retrospective method which allows the Group to recognize the cumulative effects of initially applying HKFRS 15 as an adjustment to the opening balance of retained earnings at 1 January 2018. The Group elects to apply the practical expedient for completed contracts and did not restate the contracts completed before 1 January 2018, thus the comparative figures have not been restated.

## **Revenue recognition**

Revenue is recognised when or as the control of the asset is transferred to the customer. Depending on the terms of the contract and the laws that apply to the contract, control of the asset may be transferred over time or at a point in time. Control of the asset is transferred over time if the Group's performance:

- provides all of the benefits received and consumed simultaneously by the customer;
- creates and enhances an asset that the customer controls as the Group performs; or
- do not create an asset with an alternative use to the Group and the Group has an enforceable right to payment for performance completed to date.

If control of the asset transfers over time, revenue is recognised over the period of the contract by reference to the progress towards complete satisfaction of that performance obligation. Otherwise, revenue is recognised at a point in time when the customer obtains control of the asset.

The progress towards complete satisfaction of the performance obligation is measured based on the Group's efforts or inputs to the satisfaction of the performance obligation, by reference to the contract costs incurred up to the end of reporting period as a percentage of total estimated costs for each contract.

### *(a) Accounting for revenue from construction contracts*

Prior to the adoption of HKFRS 15, revenue from fixed price construction contracts is recognised using the percentage of completion method, measured by reference to the proportion of costs incurred to date to the estimated total cost of the relevant contract.

Upon adoption of HKFRS 15, the Group's performance creates or enhances an asset or work in progress that the customer controls as the asset is created or enhanced, thus the Group satisfies a performance obligation and continue to recognise revenue over time, by reference to completion of the specific transaction assessed on the basis of the actual costs incurred up to the end of the reporting period as a percentage of total estimated costs for each contract. The adoption of HKFRS 15 has had the following impact on the opening accumulated losses as at 1 January 2018:

	<b>Accumulated losses</b> <i>HK\$'000</i>
Closing balance as at 31 December 2017	(3,429,313)
Adjustment from adoption of HKFRS 15 on 1 January 2018 ( <i>note</i> )	<u>392,359</u>
Opening balance as of 1 January 2018	<u><u>(3,036,954)</u></u>

*Note:* The adjustment was arising from 1) the change of accounting for assurance type warranties for the manufacture of turnkey production lines which was previously accounted for as part of the total estimated budget costs under HKAS 11, whereas now was accounted for as deferred liabilities to be recorded in other payables according to HKAS 37 Provisions Contingent Liabilities and Contingent Assets, and 2) the change of accounting for uninstalled materials for the manufacture of turnkey production lines which was previously accounted for according to the percentage of completion method, however now was accounted for as revenue to the extent of actual costs incurred for the uninstalled materials with no corresponding profit to be recognised.



(b) *Sale of goods (including the photovoltaic power generation projects)*

The Group's contracts with customer for the sale of goods generally include one performance obligation.

Under HKFRS 15, revenue is recognized at the point in time when control of the asset is transferred to the customer, generally on delivery of the goods. Sale of photovoltaic power generation projects whose non-current assets are classified as inventories is recognised under "Revenue from contracts with customers" in the consolidated statement of profit or loss and other comprehensive income for the total price of the shares of the photovoltaic power generation projects plus the amount of the net borrowings relating to the facility (total debt less current assets). At the same time, the related inventories are derecognised with a charge to the consolidated statement of profit or loss and other comprehensive income. The difference between the two amounts represents the operating profit or loss obtained from the sale. Each photovoltaic power generation project adopts the legal structure of a private limited liability company, the financial statements of which are fully consolidated in the accompanying consolidated financial statements.

(c) *Sales to distributors*

The Group sells rooftop solar power systems through distributors and provides some volume discount upon certain pre-conditions have been met by distributors.

Under HKFRS 15, the Group assesses there are two identifiable performance obligations for the sales to distributors: (i) sales revenue of delivered rooftop solar power systems is recognised at the point in time when control of the rooftop solar power systems have been transferred to the customers, generally upon the delivery of these systems; (ii) installation service revenue is deferred and then recognised as revenue at the point in time when the installation service is performed.

A transaction price is considered variable if a customer is provided with volume discounts. The Group is required to estimate the amount of consideration to which it will be entitled in the sales of delivered rooftop solar power systems and the estimated amount of variable consideration will be included in the transaction price only to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue recognised will not occur when the uncertainty associated with the variable consideration is subsequently resolved. The Group has decided to use the expected value method to estimate the amount of volume discount to be granted as this method better predicts the amount of variable consideration to which the Group will be entitled. The Group has assessed that, when it adopts HKFRS 15, the transition adjustment to reduce revenue for the volume discount is nil since all the volume discount have been delivered before the end of 2017. The Group accounts for the revenue deduction impact from provision of volume discount to distributors as deferred income in the consolidated statement of financial position upon the adoption of HKFRS 15.

(d) *Sale of electricity*

Under HKFRS 15, revenue from sale of electricity is recognized at the point in time upon transmission of electricity to the electricity purchasing companies or provincial grid companies.

(e) *Rendering of services*

Under HKFRS 15, revenue from rendering of services is recognized at the point over time when the services are rendered.

(f) *Advances received from customers*

Prior to the adoption of HKFRS 15, the Group presented advances from customers in connection with the Group's turnkey production line construction contracts and downstream distributors under other payables and accruals, in the consolidated statement of financial position.

Upon adoption of HKFRS 15, for short-term advances, the Group used the practical expedient and did not recognise the effects of a significant financing component with a customer if the time period is one year or less. In addition, reclassifications have been made from other payables and accruals to contract liabilities for the outstanding balance of advances from customers. The adoption of HKFRS 15 has had no significant impact on the opening retained profits as at 1 January 2018. Advances from customers of HK\$5,239,848,000 that previously classified under other payables and accruals has been reclassified to contract liabilities as at 1 January 2018.

(g) *Presentation and disclosure requirements*

As required for the interim condensed financial statements, the Group disaggregated revenue recognised from contracts with customers into categories that depict how the nature, amount, timing and uncertainty of revenue and cash flows are affected by economic factors. The Group also disclosed information about the relationship between the disclosure of disaggregated revenue and revenue information disclosed for each reportable segment. Refer to Note 4 for the disclosure on disaggregated revenue.

Upon adoption of HKFRS 15, the consolidated statement of financial position as at 1 January 2018 was reclassified, resulting in recognition of current contract liabilities amounting to HK\$5,239,848,000 and decreases in other payables and accruals amounting to HK\$5,239,848,000, and in recognition of contract assets amounting to HK\$2,400,660,000 and decrease in gross amount due from contract customers amounting to HK\$2,400,660,000. The effect on the opening balance of accumulated losses is HK\$392,359,000, the other items affected by the opening balance restatement including increase in trade receivables amounting to HK\$224,030,000, increase in contract assets amounting to HK\$418,864,000, increase in other payables and accruals amounting to HK\$118,850,000 and increase in deferred tax liabilities amounting to HK\$131,685,000.

The Group has not early applied any of the new and revised HKFRSs, that have been issued but are not yet effective, in the interim condensed consolidated financial statements.

Amendments to HKFRS 9	<i>Prepayment Features with Negative Compensation</i> <sup>1</sup>
Amendments to HKFRS 10 and HKAS 28 (2011)	<i>Sale or Contribution of Assets between an Investor and its Associate or Joint Venture</i> <sup>3</sup>
HKFRS 16	<i>Leases</i> <sup>1</sup>
HKFRS 17	<i>Insurance contract</i> <sup>2</sup>
Amendments to HKAS 19	<i>Employee Benefits — Actuarial Gains and Losses, Group Plans and Disclosures</i> <sup>1</sup>
Amendments to HKAS 28	<i>Long-term Interests in Associate or Joint Venture</i> <sup>1</sup>
HK(IFRIC)-Int 23	<i>Uncertainty over Income Tax Treatments</i> <sup>1</sup>
<i>Annual Improvements 2015-2017 Cycle</i>	<i>Amendments to HKFRS 3, HKFRS 11, HKAS 12 and HKAS 23</i> <sup>1</sup>

<sup>1</sup> Effective for annual periods beginning on or after 1 January 2019

<sup>2</sup> Effective for annual periods beginning on or after 1 January 2021

<sup>3</sup> No mandatory effective date yet determined but available for adoption

The Group is in the process of making assessment of the impact of the new and revised HKFRSs upon initial application, certain of which may be relevant to the Group's operation and may result in changes in the Group's accounting policies, and changes in presentation and measurement of certain items of the Group's interim condensed consolidated financial statements.

### 3. OPERATING SEGMENT INFORMATION

The Group identifies operating segments and prepares segment information based on the regular internal financial information reported to the executive directors for their decisions about resources allocation to the Group's business components and for their review of the performance of those components. The business components in the internal financial information reported to the executive directors are determined according to the Group's major product and service lines.

For management purposes, the Group is organized into business units based on their products and services and has two reportable operating segments as follows:

- manufacture of equipment and turnkey production lines for the manufacture of both amorphous silicon based and Copper Indium Gallium Selenium (“**CIGS**”) thin film solar photovoltaic modules and the technological development and production of Gallium Arsenide (“**GaAs**”) thin film power turnkey production lines (“**Manufacturing**”);
- construction of solar farms, rooftop power stations, household systems, small to medium-sized enterprises (“**SME**”) commercial systems etc., and sale of power stations, operation of rooftop power stations, sale of solar photovoltaic modules, application products and electricity, and provision of engineering service (“**Downstream**”)

Management monitors the results of the Group's operating segments separately for the purpose of making decisions about resources allocation and performance assessment. Segment performance is evaluated based on reportable segment profit or loss, which is a measure of adjusted profit or loss before tax. The adjusted profit or loss before tax is measured consistently with the Group's profit before tax except for certain of the interest income and head office and corporate expenses are excluded from such measurement.

Segment assets exclude deferred tax assets, other investments and other unallocated head office and corporate assets as these assets are managed on a group basis.

Segment liabilities exclude deferred tax liabilities and other unallocated head office and corporate liabilities as these liabilities are managed on a group basis.

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

<b>For the six months ended 30 June 2018 (Unaudited)</b>	<b>Manufacturing HK\$'000</b>	<b>Downstream HK\$'000</b>	<b>Total HK\$'000</b>
<b>Segment Revenue</b>			
Sales to external customers	19,084,486	1,330,040	20,414,526
<b>Segment Results</b>	11,189,817	(1,033,225)	10,156,592
Including:			
Interest income	4,701	8,305	13,006
Finance costs	(20,614)	(2,109)	(22,723)
Research and development costs	(387,140)	(114,964)	(502,104)
<i>Reconciliation of segment results:</i>			
Segment results			10,156,592
Interest income			4,139
Unallocated other income and gains			10,763
Finance cost			(922)
Corporate and other unallocated expense			<u>(111,911)</u>
Profit before tax			<u><u>10,058,661</u></u>
<b>As at 30 June 2018 (Unaudited)</b>	<b>Manufacturing HK\$'000</b>	<b>Downstream HK\$'000</b>	<b>Total HK\$'000</b>
<b>Segment Assets</b>	29,657,396	4,029,143	33,686,539
<i>Reconciliation:</i>			
Elimination of intersegment receivables			(2,276,371)
Other investments			65,534
Deferred tax assets			33,179
Corporate and other unallocated assets			<u>510,964</u>
Total Assets			<u><u>32,019,845</u></u>
<b>Segment Liabilities</b>	10,257,085	5,315,423	15,572,508
<i>Reconciliation:</i>			
Elimination of intersegment payables			(2,276,371)
Deferred tax liabilities			2,522,973
Corporate and other unallocated liabilities			<u>80,474</u>
Total Liabilities			<u><u>15,899,584</u></u>

<b>For the six months ended 30 June 2018 (Unaudited)</b>	<b>Manufacturing HK\$'000</b>	<b>Downstream HK\$'000</b>	<b>Total HK\$'000</b>
<b>Other Segment Information</b>			
Depreciation and amortisation	10,429	27,007	37,436
<i>Reconciliation:</i>			
Corporate and other unallocated depreciation and amortisation			<u>147</u>
Total depreciation and amortisation			<u><u>37,583</u></u>
Capital expenditure*	109,279	74,403	183,682
<i>Reconciliation:</i>			
Corporate and other unallocated capital expenditure			<u>6</u>
Total capital expenditure			<u><u>183,688</u></u>

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

<b>For the six months ended 30 June 2017 (Unaudited)</b>	<b>Manufacturing HK\$'000</b>	<b>Downstream HK\$'000</b>	<b>Total HK\$'000</b>
<b>Segment Revenue</b>			
Sales to external customers	1,726,175	1,127,739	2,853,914
<b>Segment Results</b>			
Including:	565,713	(274,595)	291,118
Interest income	631	966	1,597
Finance costs	(27,192)	(2,912)	(30,104)
Research and development costs	(247,758)	(505)	(248,263)
<i>Reconciliation of segment results:</i>			
Segment results			291,118
Interest income			8,670
Unallocated other income and gains			51,185
Corporate and other unallocated expense			<u>(104,064)</u>
Profit before tax			<u><u>246,909</u></u>

<b>As at 30 June 2017 (Unaudited)</b>	<b>Manufacturing HK\$'000</b>	<b>Downstream HK\$'000</b>	<b>Total HK\$'000</b>
<b>Segment Assets</b>	12,560,204	5,766,470	18,326,674
<i>Reconciliation:</i>			
Elimination of intersegment receivables			(2,845,292)
Corporate and other unallocated assets			<u>359,333</u>
Total Assets			<u><u>15,840,715</u></u>
<b>Segment Liabilities</b>	5,046,284	5,368,333	10,414,617
<i>Reconciliation:</i>			
Elimination of intersegment payables			(2,845,292)
Deferred tax liabilities			401,220
Corporate and other unallocated liabilities			<u>63,503</u>
Total Liabilities			<u><u>8,034,048</u></u>
<b>For the six months ended 30 June 2017 (Unaudited)</b>	<b>Manufacturing HK\$'000</b>	<b>Downstream HK\$'000</b>	<b>Total HK\$'000</b>
<b>Other Segment Information</b>			
Depreciation and amortisation	1,979	26,032	28,011
<i>Reconciliation:</i>			
Corporate and other unallocated depreciation and amortisation			<u>228</u>
Total depreciation and amortisation			<u><u>28,239</u></u>
Capital expenditure*	15,874	4,772	20,646
<i>Reconciliation:</i>			
Corporate and other unallocated capital expenditure			<u>—</u>
Total capital expenditure			<u><u>20,646</u></u>

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

## Geographical information

### (a) Revenue from external customers

	Six months ended	
	30 June	
	2018	2017
	HK\$'000	HK\$'000
	(Unaudited)	(Unaudited)
Mainland China	20,371,946	2,840,857
United Kingdom	440	1,491
United States	29,187	7,431
Others	12,953	4,135
	<u>20,414,526</u>	<u>2,853,914</u>

The customers information above is based on the locations to which the goods were delivered or the services were provided.

### (b) Non-current assets

	30 June	31 December
	2018	2017
	HK\$'000	HK\$'000
	(Unaudited)	(Audited)
Mainland China	416,401	315,213
United States	446,952	365,272
Hong Kong	417	566
United Kingdom	9,535	10,254
Others	21,451	15,039
	<u>894,756</u>	<u>706,344</u>

The non-current assets information above is based on the locations of the assets.

#### 4. REVENUE FROM CONTRACTS WITH CUSTOMERS

Set out below is the disaggregation of the Group's revenue from contracts with customers:

For the six months ended 30 June 2018 (unaudited)

Segments	Manufacturing <i>HK\$'000</i>	Downstream <i>HK\$'000</i>	Total <i>HK\$'000</i>
<b>Type of goods or services</b>			
Contract revenue from construction contracts	19,055,336	387,492	19,442,828
Sales of solar photovoltaic panels	29,150	389,411	418,561
Sales of rooftop solar power systems	—	518,516	518,516
Sales of photovoltaic application	—	21,720	21,720
Sales of electricity	—	12,901	12,901
	<hr/>	<hr/>	<hr/>
<b>Total revenue from contracts with customers</b>	<b>19,084,486</b>	<b>1,330,040</b>	<b>20,414,526</b>
	<hr/>	<hr/>	<hr/>
<b>Geographical markets</b>			
Mainland China	19,055,336	1,316,610	20,371,946
United Kingdom	—	440	440
United States	29,150	37	29,187
Others	—	12,953	12,953
	<hr/>	<hr/>	<hr/>
<b>Total revenue from contracts with customers</b>	<b>19,084,486</b>	<b>1,330,040</b>	<b>20,414,526</b>
	<hr/>	<hr/>	<hr/>
<b>Timing of revenue recognition</b>			
Construction contracts delivered over time	19,055,336	387,492	19,442,828
Goods or services transferred at a point in time	29,150	942,548	971,698
	<hr/>	<hr/>	<hr/>
<b>Total revenue from contracts with customers</b>	<b>19,084,486</b>	<b>1,330,040</b>	<b>20,414,526</b>
	<hr/>	<hr/>	<hr/>



For the six months ended 30 June 2017 (unaudited)

<b>Segments</b>	<b>Manufacturing</b> <i>HK\$'000</i>	<b>Downstream</b> <i>HK\$'000</i>	<b>Total</b> <i>HK\$'000</i>
<b>Type of goods or services</b>			
Contract revenue from construction contracts	1,718,768	82,651	1,801,419
Sales of solar photovoltaic panels	7,407	2,154	9,561
Sales of rooftop solar power systems	—	1,017,831	1,017,831
Sales of photovoltaic application	—	4,657	4,657
Sales of electricity	—	20,446	20,446
	<hr/>	<hr/>	<hr/>
<b>Total revenue from contracts with customers</b>	<b>1,726,175</b>	<b>1,127,739</b>	<b>2,853,914</b>
	<hr/> <hr/>	<hr/> <hr/>	<hr/> <hr/>
<b>Geographical markets</b>			
Mainland China	1,718,768	1,122,089	2,840,857
United Kingdom	—	1,491	1,491
United States	7,407	24	7,431
Others	—	4,135	4,135
	<hr/>	<hr/>	<hr/>
<b>Total revenue from contracts with customers</b>	<b>1,726,175</b>	<b>1,127,739</b>	<b>2,853,914</b>
	<hr/> <hr/>	<hr/> <hr/>	<hr/> <hr/>
<b>Timing of revenue recognition</b>			
Construction contracts delivered over time	1,718,768	82,651	1,801,419
Goods or services transferred at a point in time	7,407	1,045,088	1,052,495
	<hr/>	<hr/>	<hr/>
<b>Total revenue from contracts with customers</b>	<b>1,726,175</b>	<b>1,127,739</b>	<b>2,853,914</b>
	<hr/> <hr/>	<hr/> <hr/>	<hr/> <hr/>

Set out below, is the reconciliation of the revenue from contracts with customers with the amounts disclosed in the segment information:

For the six months ended 30 June 2018 (unaudited)

<b>Revenue</b>	<b>Manufacturing</b> <i>HK\$'000</i>	<b>Downstream</b> <i>HK\$'000</i>
External customers	19,084,486	1,330,040
<b>Total revenue from contracts with customers</b>	<b>19,084,486</b>	<b>1,330,040</b>

For the six months ended 30 June 2017 (unaudited)

<b>Revenue</b>	<b>Manufacturing</b> <i>HK\$'000</i>	<b>Downstream</b> <i>HK\$'000</i>
External customers	1,726,175	1,127,739
<b>Total revenue from contracts with customers</b>	<b>1,726,175</b>	<b>1,127,739</b>

## 5. PROFIT BEFORE TAX

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

	<b>Six months ended</b>	
	<b>30 June</b>	
	<b>2018</b>	<b>2017</b>
	<b>HK\$'000</b>	<b>HK\$'000</b>
	<b>(Unaudited)</b>	<b>(Unaudited)</b>
Reversal of impairment of other receivables	—	(11,222)
Reversal of inventories provision	<b>(44,402)</b>	(3,229)
Reversal of impairment of trade receivables ( <i>note 8</i> )	<b>(54,165)</b>	(729)
Loss on disposal of items of property, plant and equipment	<b>837</b>	210
Loss on disposal of a subsidiary	—	581
Impairment of trade receivables ( <i>note 8</i> )	<b>101,018</b>	917
Impairment of prepayment	—	1,156
Write-off of other receivables ( <i>note 10</i> )	<b>12,132</b>	2,217
Write-down of inventories to net realisable value	<b>43,386</b>	23,855
Equity-settled share option expenses	<b>7,032</b>	12,700
Depreciation of items of property, plant and equipment	<b>36,141</b>	27,560
Amortisation of intangible assets	<b>1,442</b>	679
Product warranty provision ( <i>note 13</i> )	<b>242,505</b>	31,065

## 6. INCOME TAX

The Group calculates the income tax expense for the period using the tax rate that would be applicable to the expected total annual earnings. The major components of income tax expense in the interim condensed consolidated statement of profit or loss and other comprehensive income are:

	Six months ended	
	30 June	
	2018	2017
	HK\$'000	HK\$'000
	(Unaudited)	(Unaudited)
Current tax:		
— The PRC		
Income tax expense for the period	844,261	2,112
Deferred tax charge:		
Current period	<u>1,885,371</u>	<u>—</u>
Total tax charge for the period	<u><u>2,729,632</u></u>	<u><u>2,112</u></u>

## 7. EARNINGS PER SHARE ATTRIBUTABLE TO OWNERS OF THE PARENT

The calculations of basic and diluted earnings per share are based on:

	Six months ended	
	30 June	
	2018	2017
	HK\$'000	HK\$'000
	(Unaudited)	(Unaudited)
<b>Earnings for the period</b>		
Profit attributable to owners of the parent, for the purpose of basic and diluted earnings per share calculations	<u><u>7,328,970</u></u>	<u><u>244,812</u></u>

The Group had share options and subscription rights outstanding which could potentially dilute basic earnings per share in the future but these share options were excluded from the computation of diluted earnings per share for the six months ended 30 June 2018 as their effects would have been anti-dilutive.

	<b>Number of shares</b>	
	<b>Six months ended</b>	
	<b>30 June</b>	
	<b>2018</b>	2017
	<b>'000</b>	<b>'000</b>
<b>Shares</b>		
Weighted average number of ordinary shares in issue during the period used in basic earnings per share calculation	<b>42,145,676</b>	41,859,051
Effect of dilution — weighted average number of ordinary shares:		
Assumed issue at no consideration on deemed exercise of all share options outstanding during the period	—	—
Deemed exercise by Hanergy Holding of all outstanding subscription rights	<u><b>1,831,592</b></u>	<u>920,004</u>
Weighted average number of ordinary shares in issue during the period used in diluted earnings per share calculation	<u><b>43,977,268</b></u>	<u>42,779,055</u>

## 8. TRADE RECEIVABLES

	<b>30 June</b>	31 December
	<b>2018</b>	2017
	<b>HK\$'000</b>	<b>HK\$'000</b>
	<b>(Unaudited)</b>	<b>(Audited)</b>
Trade receivables:		
— Due from Hanergy Affiliates	—	2,283,175
— Due from third parties	<u><b>9,404,424</b></u>	<u>5,009,089</u>
	<b>9,404,424</b>	7,292,264
<i>Less:</i> impairment of amounts due from third parties	<u><b>(115,051)</b></u>	<u>(59,473)</u>
	<u><b>9,289,373</b></u>	<u>7,232,791</u>

The credit period for different customers varies from three days to one month, extending up to three months for certain customers.

Based on the invoice date, the ageing analysis of the Group's trade receivables is as follows:

	<b>30 June 2018 HK\$'000 (Unaudited)</b>	31 December 2017 HK\$'000 (Audited)
Within 3 months	6,081,797	2,771,724
3 to 6 months	135,434	111,839
6 months to 1 year	1,366,552	735,433
More than 1 year	<u>1,820,641</u>	<u>3,673,268</u>
	<b>9,404,424</b>	7,292,264
Less: Impairment	<u>(115,051)</u>	<u>( 59,473)</u>
	<b><u>9,289,373</u></b>	<b><u>7,232,791</u></b>

The ageing analysis of the net trade receivables that are not individually nor collectively considered to be impaired is as follows:

	<b>30 June 2018 HK\$'000 (Unaudited)</b>	31 December 2017 HK\$'000 (Audited)
Neither past due nor impaired	6,078,448	2,013,826
Less than 3 months past due	104,903	797,308
3 to 6 months past due	1,100,129	715,585
6 months to 1 year past due	344,733	1,568,700
More than 1 year past due	<u>1,661,160</u>	<u>2,137,372</u>
	<b><u>9,289,373</u></b>	<b><u>7,232,791</u></b>

The movements of provision for impairment of trade receivables are as follows:

	<b>30 June 2018 HK\$'000 (Unaudited)</b>	31 December 2017 HK\$'000 (Audited)
At 1 January	59,473	57,930
Impairment losses recognised ( <i>note 5</i> )	101,018	934
Reversal during the period/year ( <i>note 5</i> )	(54,165)	( 1,399)
Exchange realignment	<u>8,725</u>	<u>2,008</u>
At 30 June 2018/31 December 2017	<b><u>115,051</u></b>	<b><u>59,473</u></b>

The Group applies the simplified approach to provide for expected credit losses prescribed by HKFRS 9. As at 30 June 2018, credit loss of HK\$115,051,000 (31 December 2017: HK\$59,473,000) was made against the gross amount of trade receivables.

Receivables that were neither past due nor impaired relate to a large number of diversified customers for whom there was no recent history of default.

Receivables that were past due but not impaired relate to a number of independent customers that have a good track record with the Group. Based on past experience, the directors of the Company are of the opinion that no provision for impairment is necessary in respect of these balances as there has not been a significant change in credit quality and the balances are still considered fully recoverable.

Subsequent to 30 June 2018 and up to 30 August 2018 (the date when the financial statements were approved for issuance), the Group has received a total of HK\$6,083,817,000 from the turnkey production line customers.

## 9. CONTRACT ASSETS (PREVIOUSLY NAMED AS GROSS AMOUNT DUE FROM CONTRACT CUSTOMERS)

The Group's contract assets (previously named as gross amount due from contract customers) were related to construction contracts with turnkey production line customers, and the construction of solar power stations for certain small to medium-sized enterprises and poverty alleviation projects. The movement of contract assets is as follows:

	<b>30 June 2018 HK\$'000 (Unaudited)</b>	31 December 2017 HK\$'000 (Audited)
At 1 January	2,819,523	1,547,405
Contract costs incurred plus recognised profits less recognised losses	21,863,862	5,366,670
Progress billings	(11,475,706)	(4,708,435)
Exchange realignment	(433,489)	195,020
	<u>12,774,190</u>	<u>2,400,660</u>
At 30 June 2018/31 December 2017	<u>12,774,190</u>	<u>2,400,660</u>

As at 30 June 2018, the Group's contract assets that were shown in manufacturing segment were listed as follows:

	<b>30 June 2018 HK\$'000 (Unaudited)</b>	31 December 2017 HK\$'000 (Audited)
Jingzhou Shunbai Solar Power Co., Ltd.	1,539,605	810,941
Huafengyuan (Chengdu) New Energy Technology Co., Ltd.	1,350,736	—
Shandong Zibo Hanergy Thin Film Power Co., Ltd.	1,264,298	724,271
Huaxia Yineng (Nanjing) New Energy Co., Ltd.	1,133,746	—
Huaxia Yineng (Heilongjiang) New Energy Technology Co., Ltd.	896,962	—
Shandong Macrolink Co., Ltd	1,292,833	865,448
Dezhou Yineng New Energy Technology Co., Ltd.	880,774	—
Huaxia Yineng (Guangdong) New Energy Technology Co., Ltd.	807,709	—
Mianyang Jinneng Mobile Energy Co., Ltd	541,095	—
Other turnkey production line customers	3,066,432	—
	<u>12,774,190</u>	<u>2,400,660</u>

#### 10. OTHER RECEIVABLES

	<b>30 June 2018 HK\$'000 (Unaudited)</b>	31 December 2017 HK\$'000 (Audited)
Other receivables:		
— Due from Hanergy Holding	648	194,879
— Due from Hanergy Affiliates	4,638	4,210
— Due from third parties	491,509	1,262,590
	<u>496,795</u>	<u>1,461,679</u>
<i>Less: Impairment</i>	<u>(12,622)</u>	<u>(24,536)</u>
	<u>484,173</u>	<u>1,437,143</u>

The movements in provision for impairment of other receivables are as follows:

	<b>30 June 2018 HK\$'000 (Unaudited)</b>	31 December 2017 HK\$'000 (Audited)
At 1 January	24,536	22,923
Write-off ( <i>note 5</i> )	(12,132)	—
Exchange realignment	218	1,613
	<u>12,622</u>	<u>24,536</u>
At 30 June 2018/31 December 2017	<u><b>12,622</b></u>	<u><b>24,536</b></u>

The Group applies the general approach to provide for expected credit losses prescribed by HKFRS 9. As at 30 June 2018, credit loss of HK\$12,622,000 (31 December 2017: HK\$24,536,000) was made against the gross amount of other receivables.

Except for those other receivables already impaired, the financial assets included in the above balance are related to receivables for which there was no recent history of default and no fixed term of repayment.

## 11. DEPOSITS AND PREPAYMENTS

	<b>30 June 2018 HK\$'000 (Unaudited)</b>	31 December 2017 HK\$'000 (Audited)
Deposits	138,794	69,405
Prepayments paid to:		
— Hanergy Affiliates	(i) 95,295	112,665
— Third parties	4,406,031	3,232,179
	<u>4,501,326</u>	3,344,844
<i>Less:</i> impairment	(45,012)	(44,913)
	<u><b>4,595,108</b></u>	<u><b>3,369,336</b></u>

Included in the above assets, HK\$390,152,000 (31 December 2017: HK\$441,379,000) of the prepayments are aged over 1 year, whereas all the remaining deposits and prepayments are aged less than 1 year.

Except for those prepayments already impaired and prepayments paid to Hanergy Affiliates, assets included in the above balance are related to prepayments for certain uncompleted purchase contracts.



*Note:*

- (i) The balances mainly represented the prepayments for the purchase of photovoltaic (“PV”) modules under the master agreement signed on 11 April 2012. The master agreement was effective for three years from 1 January 2012 to 31 December 2014. During 2013, the Company’s subsidiaries entered into several PV module purchase subcontracts (“Subcontracts”) with Hanergy Affiliates, nominees of Hanergy Holding, to purchase PV modules with a total capacity of 677.9MW for construction of the downstream photovoltaic power generation projects. According to the terms of the Subcontracts, approximately 50% of the total contract amounts have been paid by the Company’s subsidiaries on the placement of the orders in 2013. As of 31 December 2013, a total of 58.5MW PV modules have been delivered by Hanergy Affiliates.

The delay of delivery of the PV modules was mainly due to the production arrangement by Hanergy Affiliates, which has caused the delay in the construction of the photovoltaic power generation projects by the Group. Accordingly, the Group reached mutual agreement with Hanergy Affiliates to return the prepayments of HK\$1,262,629,000 before 31 December 2014 in relation to a total capacity of 459.4MW PV modules and terminate these Subcontracts simultaneously.

During 2014, the Company’s subsidiaries also entered into several new PV module purchase Subcontracts with Hanergy Affiliates to purchase PV modules with a total capacity of 558MW for construction of the downstream photovoltaic power generation projects. According to the terms of the Subcontracts, approximately 50% of the total contract amounts have been paid by the Company’s subsidiaries on the placement of the orders in 2014.

A total of 28.8MW PV modules have been delivered by Hanergy Affiliates in 2014. As of 31 December 2014, there were a total capacity of 689.2MW PV modules have not been delivered by Hanergy Affiliates.

On 20 January 2015, the Company entered into a supplemental agreement to the 150MW PV modules supply contract signed on 23 December 2013 with Hanergy Holding on the settlement of prepayments made in 2013 by offsetting this with the payables of delivered PV modules under the 150MW PV modules supply contract, and the original total capacity of 150MW was reduced to 80.9MW.

The Company and Hanergy Holding entered into a PV module supply agreement on 30 April 2015 for purchase of PV modules for the year ended 31 December 2015.

During 2015, the Company’s subsidiaries aforementioned entered into several new Subcontracts with Hanergy Affiliates under the PV module supply agreement to purchase PV modules with a total capacity of 57.7MW for construction of the downstream photovoltaic power generation projects. According to the terms of the Subcontracts, approximately 50% of the total contract sum have been paid by the Company’s subsidiaries on the placement of the orders in 2015.

PV modules with a total capacity of 315MW had been delivered by Hanergy Affiliates in the year 2015. As of 31 December 2015, PV modules with a total capacity of 362.8MW had not been delivered by Hanergy Affiliates.

During 2016, the Company signed certain new purchase orders with Hanergy Affiliates for PV modules with a total capacity of 1.2MW. PV modules with a total capacity of 136.0MW had been delivered by Hanergy Affiliates in 2016. As at 31 December 2016, PV modules with a total capacity of 228.0MW had not been delivered by Hanergy Affiliates.

On 31 December 2017, the Group reached two mutual agreements with Hanergy Affiliates. One was to return the prepayments of HK\$6,939,000 in relation to PV modules with a total capacity of 10MW and to terminate the Subcontract simultaneously. The other was to net off the prepayments of HK\$225,925,000 with trade payables in relation to the purchase of the PV modules from Hanergy Affiliates before 31 December 2017 and the undelivered PV modules under the subcontract would still be delivered in the future.

During 2017, the Company did not sign any new purchase contracts with Hanergy Affiliates. PV modules with a total capacity of 64.6MW had been delivered by Hanergy Affiliates in 2017. As of 31 December 2017, PV modules with a total capacity of 153.4MW had not been delivered by Hanergy Affiliates.

On 26 March 2018, the Company reached a mutual agreement with Hanergy Holding. Pursuant to the agreement, the parties mutually agreed that if Hanergy Affiliates could not deliver the PV modules to the Group before 31 December 2018, then the remaining unsettled other receivables due from Hanergy Affiliates and the unsettled prepayments made to Hanergy Affiliates by then will be settled against trade payables and other payables due to Hanergy Affiliates by the Group. Meanwhile, Hanergy Affiliates are not entitled to call for repayment of the aforementioned trade payables and other payables to the extent of the other receivables due from Hanergy Affiliates and prepayments made to Hanergy Affiliates that are outstanding before 31 December 2018.

During the first half of 2018, the Company did not sign any new purchase contracts with Hanergy Affiliates. PV modules with a total capacity of 29.7MW have been delivered by Hanergy Affiliates in this period. As of 30 June 2018, PV modules with a total capacity of 123.7MW have not been delivered by Hanergy Affiliates.

## 12. TRADE AND BILLS PAYABLES

	<b>30 June 2018</b>	31 December 2017
	<b>HK\$'000</b>	HK\$'000
	<b>(Unaudited)</b>	(Audited)
Trade and bills payables due to:		
— Related parties	<b>298,221</b>	268,708
— Third parties	<b>3,137,819</b>	1,469,168
	<b><u>3,436,040</u></b>	<u>1,737,876</u>

Based on the invoice date, the ageing analysis of the Group's trade and bills payables is as follows:

	<b>30 June 2018 HK\$'000 (Unaudited)</b>	31 December 2017 HK\$'000 (Audited)
0 — 30 days	1,606,843	583,185
31 — 60 days	452,666	102,969
61 — 90 days	133,890	51,916
Over 90 days	1,242,641	999,806
	<b><u>3,436,040</u></b>	<b><u>1,737,876</u></b>

The trade payables are non-interest-bearing and the credit terms are normally 60 days.

### 13. OTHER PAYABLES AND ACCRUALS

	<i>Notes</i>	<b>30 June 2018 HK\$'000 (Unaudited)</b>	31 December 2017 HK\$'000 (Audited)
Deposits		5,000	5,970
Other payables due to:			
— Hanergy Holding	<i>(i)</i>	3,970	5,115
— Hanergy Affiliates	<i>(ii)</i>	119,887	128,748
— Third parties		3,282,841	1,334,288
		<b><u>3,406,698</u></b>	<b><u>1,468,151</u></b>
Sub-total			
Accruals	<i>(iii)</i>	323,955	316,419
Provision for product warranties	<i>(iv)</i>	392,310	43,174
Advances from customers	<i>(v)</i>	—	5,239,848
		<b><u>4,127,963</u></b>	<b><u>7,073,562</u></b>

Notes:

- (i) The payables to Hanergy Holding represent the advances from Hanergy Holding to the Group for the purpose of daily operation. The balances are unsecured, interest-free and repayable on demand.
- (ii) The balance mainly included the payable of HK\$83,340,000 (31 December 2017: HK\$79,914,000) from Hanergy Affiliates to the Group for the purpose of daily operation, and the balance of HK\$36,547,000 (31 December 2017: HK\$48,834,000) payable to Sichuan Hanergy Photovoltaic Limited (“**Sichuan Hanergy**”), Hanergy Holding’s affiliate, relating to the rental of a production line, office premises, factory premises and staff dormitory, and the usage of relevant equipment, material and facilities, etc. The above balances are unsecured, interest-free and repayable on demand.
- (iii) The balance included an amount of HK\$42,059,000 (31 December 2017: HK\$20,056,000) which represented the maximum expense which the Group would be charged on certain current lawsuits.
- (iv) Provision for warranties

	<b>Product warranties</b>	
	<b>30 June</b>	31 December
	<b>2018</b>	2017
	<b>HK\$’000</b>	HK\$’000
	<b>(Unaudited)</b>	(Audited)
Beginning balance (as previously reported)	43,174	26,762
Adjustment upon adoption of HKFRS 15	<b>118,850</b>	—
	<hr/>	<hr/>
Beginning balance (restated)	<b>162,024</b>	26,762
Provided during the period/year ( <i>note 5</i> )	<b>242,505</b>	38,468
Amounts utilised during the period/year	<b>(11,468)</b>	(24,454)
Exchange realignment	<b>(751)</b>	2,398
	<hr/>	<hr/>
At 30 June 2018/31 December 2017	<b>392,310</b>	43,174
	<hr/> <hr/>	<hr/> <hr/>

The Group provides assurance type warranties to its customers on the turnkey production lines during the warranty period as specified in the contracts. The Group provides three to ten years’ warranties to its customers on certain of its photovoltaic modules, inverter and rooftop power stations, under which faulty products are repaired or replaced. The amount of the provision for warranties is estimated based on sales volumes and past experience of the level of repairs and returns. The estimation basis is reviewed on an ongoing basis and revised where appropriate.

- (v) Advances from customers represent receipts from the Group’s turnkey production line construction contract customers and downstream distributors. The opening balance as at 1 January 2018 has been reclassified to contract liabilities as detailed in note 2.

Save for those disclosed above, other payables and accruals are non-interest-bearing and normally have no fixed term of settlement.

## 14. SHARE CAPITAL

### Shares

	<b>Number of shares '000</b>	<b>Nominal value HK\$'000</b>
Authorised:		
At 1 January 2017, 31 December 2017 and 30 June 2018 (ordinary shares of HK\$0.0025 each)	<u>64,000,000</u>	<u>160,000</u>
Issued and fully paid:		
At 1 January 2017 (ordinary shares of HK\$0.0025 each)	41,859,051	104,647
Exercise of share options	<u>286,625</u>	<u>717</u>
At 31 December 2017 and 1 January 2018 (ordinary shares of HK\$0.0025 each, audited)	<u>42,145,676</u>	<u>105,364</u>
At 30 June 2018 (ordinary shares of HK\$0.0025 each, unaudited)	<u>42,145,676</u>	<u>105,364</u>

The Company did not issue or repurchase any shares during the six months ended 30 June 2018.

## MANAGEMENT DISCUSSION AND ANALYSIS

### BUSINESS MODEL

Hanergy Thin Film Power Group Limited (the “Group”) is a high-tech new energy enterprise listed on the Hong Kong Stock Exchange engaging in the thin-film solar energy industry since 2009. The Group’s principal businesses include (i) research and development, design, assembling, sales and delivery of thin-film solar energy cells/modules production equipment and turnkey production lines, as well as the provision of supporting technical services; (ii) the research and development, design, sales and delivery of thin-film solar energy generation systems and mobile energy application products; and (iii) provision of technical services and support, construction and maintenance services to the upstream production lines and downstream applications and products.

Continuously focusing on the thin-film solar energy sector, the Group has been actively involved in the investment and research and development of the world’s advanced thin-film solar energy technology. It has currently acquired copper indium gallium selenium (CIGS), gallium arsenide (GaAs) and high efficiency silicon heterojunction (SHJ) technologies which are among the most advanced in the world. We believe that these technologies constitute one of our major competitive advantages. The Group deploys research and development teams of scientists at various locations around the globe, including the United States, Germany, Sweden and China, for continuous improvement in the conversion rate of thin-film cells and technological research and development capabilities, enabling the Group to provide customers with advanced solutions in “turnkey” production lines of thin-film solar energy.

The Group has successfully expanded innovative business and diversified its income streams and business segments, without sole reliance on the connected transactions with Hanergy Holdings and its affiliates (“Hanergy Affiliates”). All secured indebtedness owed by Hanergy Affiliates to the Group was repaid in full by the end of March 2018, which was one and a half year earlier than scheduled.

In recent years, the Group has achieved satisfactory progress in upstream and downstream business. For upstream business, in line with the national energy restructuring and local economic transformation, the Group has entered into a number of equipment and services sales contracts with “mobile energy industrial parks” since 2017. During the economic transformation and upgrade, local governments established the modern “high-tech + energy” industry chain, which embodied the research and development of thin-film cell technologies, high-end equipment manufacturing, module production and research and development of application products, indicating its proactive planning for the strategic emerging industries, as well as its confidence and support to the advanced and new thin-film solar technology.

As for downstream solar energy applications, the Group has made satisfactory achievements for the business model with distributors, which has become an important sales channel in downstream business. The Group has also commenced the expansion to foreign distributors in recent years, laying a solid foundation for the Group's future development. Besides, with the focus on the research and development of downstream application, the Group established a research and development center and laboratory for its downstream business with an area of 10,000 square meters, putting effort into developing downstream solar energy application solutions and products. Along with the development of science and technology, the green concept has been integrated into all aspects of life. Leveraging on the edge of its own innovative technology and through enormous input of resources, the Group applied thin-film solar technology in daily life, introducing a variety of pioneering products with the application of distributed thin film power, including the "Humbrella" (漢傘) launched in April this year which is the first multi-functional umbrella based on flexible thin-film solar technology in the world, featuring four major functions of off-grid power supply, power storage, lighting at night and terminal charging; the single glass "HanTile" (漢瓦) launched in the same month, which features lighter, thinner, more appealing appearance and more outstanding performance as compared with the double glass launched last year, creating significant commercial and environmentally-friendly values to the usage of construction materials.

Thomson Reuters, a multinational media and consultancy company, issued the "Top 100 Global Energy Leaders" Report in November 2017, pursuant to which, the Group was selected as the Top 25 Energy Subsector Honorees in Renewable Energy, which was the only thin-film solar power company listed in China.

The Group will continue to maintain its position as the world's most advanced thin-film power generation and high-tech energy company and adopt the "One Base and Two Fronts" as its long-term strategic deployment. That is, the Group bases itself on the continuous innovation of thin-film solar technology. On the one hand, it delivers "turnkey" solutions for high-end equipment and production lines as one of the fronts, and on the other hand, it provides distributed energy and mobile energy solutions as the other front. The upstream equipment production line business will be maintained as its core, and the downstream distributed energy business will be its strategic direction, with an aim to vigorously foster mobile energy as the Group's main direction.

## **FINANCIAL REVIEW**

During the six months ended 30 June 2018, the Group recorded a revenue of HK\$20,414,526,000, representing an increase of approximately 615% as compared with the corresponding period of 2017, achieving a significant growth of business. Among which, the Group's revenues for the period attributable to upstream and downstream revenues were 93% and 7% respectively. Gross profit for the period significantly increased from HK\$1,092,507,000 in the corresponding period last year to HK\$12,211,312,000.

During the period, the Group recorded a profit of HK\$7,329,029,000, representing a year-on-year increase of 30 times as compared with the profit of HK\$244,797,000 recorded in the corresponding period last year, which was primarily attributable to the great technological breakthrough of the Group, strong support from national policies on the industries of thin film power generation, mobile energy, high-end equipment manufacturing as well as new energies and new materials, development of new markets and obtaining a number of new clients and innovative projects, enabling the upstream business of the Company to achieve significant progress during the period.

## BUSINESS REVIEW

In the first half of 2018, the global macro economy continued to improve and the economy in China maintained steady growth. Currently, solar energy generation has become the strategic direction of the clean energy industry in China. The capability of power generation brought about by solar energy technology is also one of the fastest-growing markets of renewable energy in the world and China. The annual average newly-installed capacity continues to rise. According to the statistics from the China Photovoltaic Industry Association, the newly-installed photovoltaic capacity in China was approximately 24GW from January to June this year; distributed installed capacity was approximately 12GW, representing an increase of about 72% year-on-year, whereas the pace of residential photovoltaic development was faster than expected.

Meanwhile, as the industry has realized leapfrog in its development, bottleneck problems of solar power curtailment and electricity consumption exist in certain regions, reflecting more clearly the failure of power grid coordination. To facilitate a more healthy and orderly development for the industry, the PRC National Energy Administration issued the “Notice on Matters Relevant to Photovoltaic Power Generation in 2018” (《關於2018年光伏發電有關事項的通知》) in 31 May, which posed challenges to traditional solar energy enterprises that rely on national subsidies and confine their development to a single-package approach, accelerating the solar energy industry reshuffle.

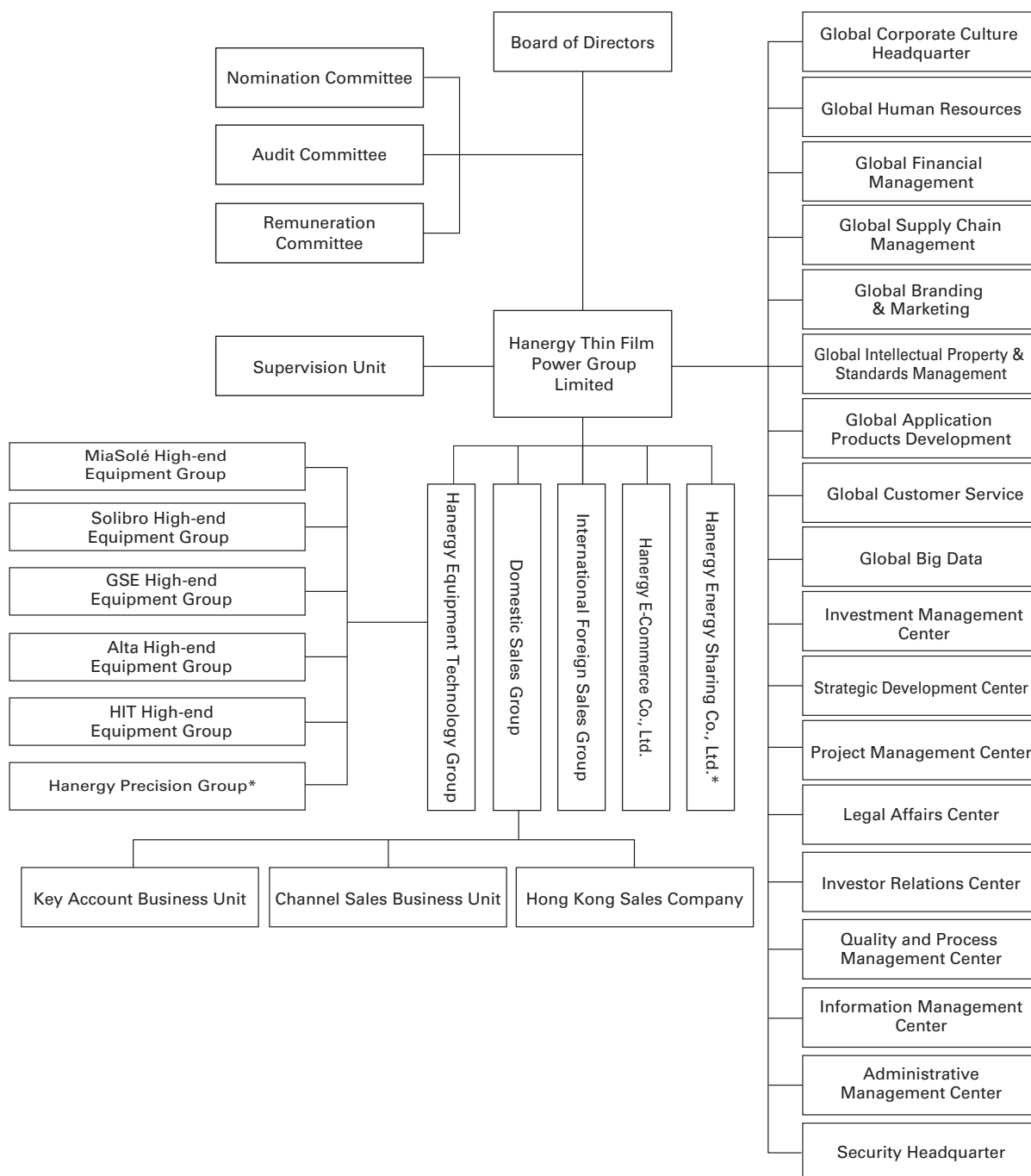
Maintaining thin-film solar energy as its core technology, Hanergy Thin Film Power strategically focuses on the research and development of the core technology, delivery of production equipment in the upstream; as well as the diversified application of thin-film solar energy in the downstream, building an exosphere of mobile energy and providing solutions for “Eco-City”. Besides, having not placed excessive reliance on the national subsidy policy, Hanergy Thin Film Power is affected by such new requirement to a lesser extent. The Group believes that this adjustment will provide room for development of the advanced solar technology and high-quality projects of solar energy generation, creating opportunities for the Group to further enhance its market position.



## A. Organization Structure:

The Group carried out an organizational restructuring during the period to optimize the corporate structure of internal governance on a continuous basis and promote the upstream and downstream business development. The upstream business units were restructured and integrated into “Hanergy Equipment Technology Group”, and differentiated by production line technologies, so as to establish a more efficient structure. The business units include MiaSolé, Solibro, Global Solar Energy (GSE), Alta Devices, HIT and Hanergy Precision Group\* (漢能精工設備). As for the downstream business, to align with the Group’s development in Hong Kong, “Hong Kong Sales Company” was newly established during the period, and formed as “Domestic Sales Group” together with “Key Account Business Unit” and “Channel Sales Business Unit”. Besides, the Group added “Global Big Data Headquarter”, “Investment Management Center” and “Supervision Unit” etc, to meet the business and operation needs and further improve the corporate structure.

The organization structure of the Group as at 30 June 2018 is as follows:



\* For identification purpose only

## **B. Upstream Business:**

The upstream business of the Group mainly includes the research and development, design, sales and delivery of thin-film solar energy cells/modules production equipment and whole production lines, as well as the provision of supporting technical services. To be in line with the trend of the vigorous promotion of energy structure transformation and development of new energy industrial parks in various regions of China, the Group also cooperated with multiple mobile energy industrial parks, actively promoting the turnkey projects and large-scale localization of production lines for the thin-film solar energy module production equipment.

During the period, the Group worked closely with customers to design and assemble the turnkey solution production lines of thin-film solar energy cells and modules based on the specification required by the customers. As at 30 June 2018, the Group's upstream business recorded revenue of approximately HK\$19.084 billion, contributed by the research and development, design and sales of high-end equipment production lines for thin-film solar energy, including MiaSolé, Solibro, Global Solar Energy (GSE), Alta Devices and SHJ.

### ***Innovative and Leading Thin-film Solar Technology***

As one of the global leaders in the thin-film solar energy industry, the Group continues to make technological breakthroughs and innovative research and development. It has set up professional research and development teams at various locations around the globe, including the United States, Germany, Sweden and China for the enhancement of various technologies. In the first half of 2018, the conversion efficiency of the Group's thin-film solar energy modules reached another new high.

In particular, Solibro's top mass production of winner glass-based CIGS modules of the Group reached a conversion efficiency of 18.72%, ranking the highest in the CIGS modules which currently adopt the co-evaporation process around the world; the conversion efficiency of MiaSolé cells reached 19.4%; the research and development conversion efficiency of GSE cells reached 18.7%, while the conversion efficiency of top mass production of winner modules reached 16.3%; the efficiency of Alta Devices's GaAs single junction modules reached 25.1%, which obtained Fraunhofer ISE CalLab solar energy modules certification on 14 November 2017. Alta Devices once held the world record holder for the conversion efficiencies of GaAs single junction cell (as of April 2018) and modules (as of December 2017). In addition, the research and development efficiency of the Group's SHJ Cell was as high as 23.1% and has obtained SGS-TUV certification.

The 2018 Chinese Renewable Energy Conference issued the annual solar energy cell certification records on 23 August. Among the 8 certifications records, Hanergy ranked the first in respect of GaAs single junction, GaAs double junctions, CIGS, heterojunction solar energy cell, of which SHJ solar cells has made a record of 23.7% of conversion rate, which was certified by Japan Electrical Safety and Environment Technology Laboratories (JET), and demonstrating the constant technology advancement of Hanergy in the past year and the recognition of our leading technological advantages in the industry.

### ***Active Promotion of Strategic Development of Industrial Parks Projects***

The mobile energy industrial park is an active arrangement of thin-film solar and other high-tech new technologies and strategic emerging industries made by the local government in the process of local economy transformation and upgrade. In recent years, the government has put effort into promoting the energy transformation, low-carbon development, as well as public-private partnerships (PPP). In general, Hanergy Affiliates, together with a state-owned company of the local government (“Local Government Company”) and an independent third party (usually an enterprise in the related province) (“Independent Third Party”), became the initial promoters and shareholders in the Industrial Park joint venture (“JV”). Each party shall make initial capital contribution of the company. Hanergy Affiliates, as the initial founder and the minority shareholder of the project company, will not appoint the directors of the project company, nor control the operation of the JV company in a practical manner.

With the support of local government, the JV company commences mass production of thin film modules. The local government and the Local Government Company believes, such projects not only bring the benefits of developing renewable energy from advanced thin film solar energy technology, but will also deliver successful commercial results.

According to market researches, the sales of both thin film solar energy cells and modules is driven by the growth of demand for thin film application products, which have been widely used by the end users. Taking Mianyang Industrial Park Project and Datong Industrial Park Project as examples, the local governments encouraged their own provinces and cities to use the thin-film solar energy products supplied by the industrial park projects for their new construction projects, such as distributed solar energy power generation system and agriculture solar energy application system, BIPV building application, urban lighting system, public transportation, electric vehicles, highway, solar energy poverty alleviation projects, and other local charitable projects. Therefore, the majority of the products from industrial park projects are planned to sell to local customers in the provinces. We believe the downstream application of thin film solar energy products will generate considerable sales revenue to ensure the operation and sustainable development of industrial park projects.

The Group’s advanced thin-film solar energy is widely recognized in the upstream and downstream solar energy markets, attracting attention and interest of many local governments. For the first half of 2018, Hanergy Thin Film Power continued to provide the industrial parks with a series of turnkey production lines, including CIGS, GaAs and SHJ, in order to facilitate the local governments to utilize solar technology, attract other high-tech companies to enter new industrial parks, and thus boost the regional economic development.

During the period from January to June 2018, the Group’s customers of industrial park projects mainly consisted of Mianyang Industrial Park, Datong Industrial Park and Zibo Industrial Park. During the period, the delivery of contract projects was carried out and part of the payments was received. The Group is currently in negotiation with more industrial parks and expects that more similar industrial park contract projects will be signed in the future. This will contribute to the results in 2018 and onwards.

The industry park JV company (as the purchaser of equipment and technology) and the Group entered into the purchase agreement for the production lines of thin-film solar energy cells, to purchase thin-film solar energy cells production lines from the Group.

### ***Sichuan Mianyang Industrial Park Project***

On 18 May 2017, Mianyang Fucheng district government and Hanergy Affiliates entered into a cooperation agreement in relation to a mobile energy industrial park project (“Mianyang Industrial Park Project”). According to the cooperation agreement, Mianyang Industrial Park Project plans to invest in the construction and installation of CIGS and GaAs thin-film solar energy modules production lines in Fucheng District, Mianyang City, Sichuan Province. Mianyang Industrial Park Project shall comprise four phases, of which phase I involves 600MW CIGS thin film solar energy modules and 20MW flexible GaAs thin film solar energy modules production lines, with the total investment amount of RMB6.6 billion.

In June 2017, the Group entered into a sales contract with Mianyang Industrial Park JV company. According to the terms and conditions of the agreements, we shall provide the 600MW GSE CIGS thin-film production lines to Mianyang Industrial Park at an aggregate price of RMB2.73 billion, including a former contract of approximately RMB2,466.5 million and latter contract of approximately RMB263.5 million.

For the six months ended 30 June 2018, revenue generated from the contract amounted to HK\$917 million.



### ***Shanxi Datong Industrial Park Project***

In July 2017, Datong municipal government of Shanxi Province, Datong Coal Mine Group Co., Ltd. and Hanergy Mobile Energy Holding Co., Ltd., (a Hanergy Affiliate) entered into a strategic cooperation agreement in relation to a mobile energy industrial park project (“Datong Industrial Park Project”). Pursuant to the strategic cooperation agreement, Datong Industrial Park Project plans to invest in the construction and installation of CIGS thin-film solar power modules production lines in Datong, Shanxi Province. The overall project comprises three phases, including phase I of 250MW glass-based CIGS thin-film modules production lines and 50MW flexible CIGS thin-film modules production lines; the phase II of 300MW flexible CIGS thin-film modules production lines; and phase III of 20MW high-performance GaAs thin-film modules production line. Datong municipal government will support Datong Industrial Park Project, through provision of relevant planning information and formulation of preferential

policies on utilities such as water, electricity and heating supply. As of 30 June 2018, phase I of the project is under construction, with a total investment amount of RMB2.272 billion.

On 19 October 2017, the Group entered into a sales and services contract with Datong Industrial Park in Shanxi Province. According to the terms and conditions of the contract, we shall provide 300MW MiaSolé CIGS thin-film production lines to Datong Industrial Park Project at the price of RMB1.82 billion. The first 50MW thin-film modules production lines were targeted to commence large-scale production in June 2018, depending on the availability of equipment, the timelines of equipment delivery by suppliers, the conditions of the plant etc., and the remaining 250MW production lines will start mass production in March 2019.

For the six months ended 30 June 2018, revenue generated from the contract amounted to HK\$146 million.



### ***Shandong Zibo Industrial Park Project***

In December 2014, Zibo municipal government of Shandong Province entered into a cooperation framework agreement in relation to a solar energy industrial park project (“Zibo Industrial Park Project”) with Hanergy Holding. Pursuant to the framework agreement, Zibo Industrial Park Project plans to invest in the construction and installation of 3GW CIGS thin film solar energy modules production lines in Zibo, Shandong Province. In October 2017, Hanergy Holding transferred 57% equity interests of Zibo industrial Park Project company to Huafengyuan Investment (Beijing) Co., Ltd. (“Huafengyuan”).

In January 2016, the Group entered into a sales contract with Zibo Industrial Park JV Company to sell the 300MW MiaSolé CIGS thin film solar energy production lines to Zibo industrial Park Project company at the price of US\$390 million. On 27 April 2017, the Group entered into another sales contract with Zibo Industrial Park JV Company. According to the terms and conditions of the agreement, we shall sell the 300MW Solibro CIGS thin film solar energy production lines to Zibo Industrial Park JV Company at the price of US\$390 million.

As of 30 June 2018, the equipment of 300MW MiaSolé and 300MW Solibro CIGS production lines have been delivered and in the process of installation. The total revenue from the contracts related to the two technology mentioned above amounted to approximately HK\$1.677 billion.



### ***Proactively Exploring Other New Significant Customers***

In addition to the industrial parks, the Group also took an active approach in exploring significant customers who are the third parties in order to diversify our upstream business.

#### ***Jingzhou Shunbai***

In May 2017, the Group entered into a 300MW amorphous silicon BIPV thin film modules production lines sales contract and the corresponding technical support and services agreement with Jingzhou Shunbai Solar Power Company Limited (“Jingzhou Shunbai”) for the provision of 300MW amorphous silicon BIPV thin film production lines and corresponding technical support and services at the prices of US\$57 million and US\$156 million respectively. The equipment has been delivered and is now under installation, and the stage payments will be made subject to the progress of delivery.

For the six months ended 30 June 2018, revenue generated from the contract was approximately HK\$185 million.

In September 2017, the Group entered into a 150MW Solibro CIGS thin film modules production lines sales contract and the corresponding technical support and services agreement with Jingzhou Shunbai Industrial Park project company for the provision of Solibro 150MW CIGS thin film production lines and the corresponding technical support and services at the prices of RMB\$619.2 million and RMB\$333.4 million respectively. Part of the equipment has been delivered and is now under installation, and the stage payments will be made subject to the progress of delivery.

For the six months ended 30 June 2018, revenue generated from the contract was approximately HK\$688 million.

In January 2018, the Group entered into a 150MW MiaSolé CIGS thin film modules production lines sales contract and a services and technical support agreement with Jingzhou Shunbai Industrial Park Project Company, at an aggregate price of RMB746.9 million. The delivery of part of the equipment has commenced since June 2018, and it is now under installation. The stage payments will be made subject to the progress of the delivery.

For the six months ended 30 June 2018, revenue generated from this contract was of approximately HK\$261.5 million.

### ***Chengdu Huafengyuan***

On 26 October 2017, the Group entered into a 600MW SHJ thin film modules production line sales contract with Huafengyuan (Chengdu) New Energy Technology Co., Ltd. (“Chengdu Huafengyuan”) to install and develop its SHJ thin film modules production lines for agricultural solar energy applications in Chengdu, the PRC. Pursuant to the terms and conditions of the contract, the Group shall provide 600MW SHJ thin film solar power modules production lines to Chengdu Huafengyuan at the price of approximately RMB1.4 billion.

The Group entered into the corresponding technical support and service agreements subsequently on 27 October 2017 and 23 March 2018, respectively, for the provision of technical service to 120MW and 480MW SHJ production lines, at the prices of RMB176 million and RMB 703.8 million, respectively. For the six months ended 30 June 2018, revenue from the above production lines and technical services contracts was approximately HK\$1.725 billion.

On 2 May 2018, the Group entered into a sales contract and a technical support and service agreement with Chengdu Huafengyuan, for the provision of 150MW MiaSolé CIGS thin film modules production lines and the corresponding technical support and service, at a total price of RMB892.51 million. For the six months ended 30 June 2018, the revenue generated from these contracts was approximately HK\$125 million.

### ***Nanjing Yineng***

By 12 June 2018, the Group entered into a 300MW Solibro CIGS thin film modules sales contract and a technical support and services agreement with Huaxia Yineng (Nanjing) New Energy Co., Ltd (“Nanjing Yineng”) for the provision of 300MW Solibro CIGS thin film modules production lines and the corresponding technical support and services to Nanjing Yineng at the prices of RMB1.24 billion and RMB667 million respectively. As of 30 June 2018, part of the equipment has been delivered and is now under installation, and the stage payments will be made subject to the progress of the delivery. For the six months ended 30 June 2018, revenue generated from this contract was approximately HK\$1.768 billion.

### ***Heilongjiang Yineng***

On 29 September 2017, the Group entered into a sales contract and a technical support and services agreement with Heilongjiang Huaxia Yineng New Energy Technology Limited (“Heilongjiang Yineng”) for the provision of 300MW Solibro CIGS thin film solar energy modules production lines and the corresponding technical support and services to Heilongjiang Yineng at the prices of RMB938 million and RMB768 million respectively.

As at 30 June 2018, the part of the equipment has been delivered, and it is now under installation. The stage payments will be made subject to the progress of the delivery. For the six months ended 30 June 2018, revenue generated from this contract was of approximately HK\$1.285 billion.

### ***Dezhou Yineng***

On 13 November 2017, the Group entered into a sales contract and a technical support and services agreement with Dezhou Yineng New Energy Technology Co., Ltd. (“Dezhou Yineng”) for the provision of 300MW Solibro CIGS thin film solar power modules production line and the corresponding technical support and services to Dezhou Yineng at the prices of RMB938 million and RMB768 million respectively.

As of 30 June 2018, part of the equipment has been delivered and is now under installation, and the stage payments will be made subject to the progress of the delivery. For the six months ended 30 June 2018, revenue generated from the contract was approximately HK\$1.261 billion.

## **C. Downstream Business**

The downstream business of the Group mainly includes development, design, integration and sales of thin film solar power generation systems, mobile energy application products as well as provision of related services, including: (i) sales of distributed power generation systems, which consist of household rooftop power generation systems, industrial/commercial rooftop power generation systems, Building-integrated solar energy systems and solar energy agricultural application systems; (ii) sales of mobile energy application products; (iii) provision of construction and maintenance services of solar power generation stations; and (iv) EPC work.

As at 30 June 2018, the downstream business recorded a revenue of approximately HK\$1.33 billion. The continuous growth of the downstream business is in line with our strategy of expanding the downstream business. By virtue of the technologies applied in our products, the Group’s thin film solar energy products fully demonstrate their competitive strengths of flexibility, lightness and good performance under weak light conditions.



As at 30 June 2018, the Group has introduced four types of household distributed thin film power generation systems, including (1) standard product series designed for household use; (2) small-scale industrial/commercial product series which utilize idle rooftops of industrial/commercial buildings for small power stations; (3) solar shed series applicable to sunshades and gazebos; and (4) Hantile series power generation modules which take the shape of the arched roof tiles used in the traditional Chinese architecture for general roofing.

### ***Eco-city Comprehensive Solutions***

In line with the national new energy development strategy, Hanergy Eco-city Comprehensive Solutions aims to reduce energy consumption in cities and provide a package of energy solutions by entailing a comprehensive layout of energy in cities from the aspects of macro planning, business consulting, program design, construction and implementation as well as operation and maintenance services. Through development of ecological environment for mobile energy and provision of “eco-city” solutions, the Group strives to explore the diversity of urban cities by implementing smart energy conservation, develop a new lifestyle by leading the energy revolution and create an urban mechanism, by which nature, cities and human being can co-exist in a harmonious way.

### ***Swift Deployment in Hong Kong Market***

In April this year, the Hong Kong government announced a feed-in tariff program. It was proposed that two power companies shall purchase electricity from the owners of solar power generation systems at a price from HK\$3 to HK\$5 per kWh of electricity for a term of 15 years, which was nearly the highest amount around the world. As the Group’s flexible thin film solar products possess the characteristics of lightness, thinness and flexibility, which contributes to the significant reduction of labor costs during installation and transportation, it is greatly suitable for the Hong Kong market. During the period, the Group has completed several rooftop power station projects in Hong Kong, which are located in New Territories. We will also actively explore solar power application business in Hong Kong through cooperation with distributors and business partners.

### ***Case: 4.14KW Rooftop Project in Sha Tau Kok, Hong Kong***

The rooftop project in Sha Tau Kok farm, Hong Kong was officially completed in May 2018, which is the first solar power demonstrative project completed by Hanergy in Hong Kong. The modules applies Hanergy’s MiaSolé flexible thin film power generation technology with installed capacity of 4.14KW. The project falls within the systems with installed capacity below 10KW or less. Pursuant to the “Scheme of Control Agreement” (《管制計劃協議》) entered into by the Hong Kong government and two power companies, project parties can sell the electricity at HK\$5 per kWh of electricity to the power companies. It is expected that the average annual power generation capacity will reach 5000KWh of electricity, and the annual income from sales of electricity will be approximately HK\$25,000, therefore, the payback

period will be only around 5 to 6 years. In the future, leveraging on its advanced technologies and high-quality products, Hanergy will continue to contribute to the green development in Hong Kong.



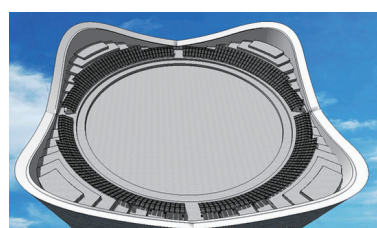
### ***Industrial/Commercial Rooftop Power Generation Systems***

The Group continues to devote great efforts in the development and sales of the distributed power generation systems in the rooftops of industrial/commercial buildings, which make use of rooftop areas to construct power station with thin film power generation modules. Our aim is to provide green energy solutions to the owners of industrial/commercial buildings through provision of project design, development, sales, and construction and maintenance services. During the period, the sales of rooftop power generation systems contributed revenue of HK\$518,516,000.

### ***Case: “China Zun Building” Project in the Core Area of Beijing CBD***

Located in the core area of Beijing Central Business District, China Zun Building will be the highest landmark in Beijing city after its completion, with 108 storeys at a height of 528 meters. The project land occupies an area of 11,478 square meters with GFA of 437,000 square meters. It is funded by Beijing CITIC Heye Investment Company Limited (北京中信和業有限公司) with estimated total investment of RMB24 billion.

The project utilizes 640 pieces of Solibro modules of the Group, occupying the rooftops projection areas of approximately 900 square meters with total installed capacity of 92.8KW. The installation approach of project modules was supposed to be top-clamping system, however, after consideration of the building height amounting to 528 meters, wind loading capacity of rooftops and a higher level of other unforeseeable risks, the installation approach was changed to adopt rail mounting system with the aim of improving the module layouts and wind loading capacity, preventing the impact from extreme weather on thin film solar power generation systems, and in this case, the systems are more safe and reliable. The preparation of China Zun thin film solar power rooftop projects is now in full swing, where the delivery of thin film modules has been completed and subject to the construction by the owners.



### ***Case: Landscape Gardening Construction Project in the Third Landscape Expo of Hebei Province***

In April 2018, the Group signed a sales contract with Cangzhou Municipal Engineering Company Limited (沧州市市政工程公司) in respect of the solar energy panels construction project in the third Landscape Expo of Hebei Province. Embracing the planning concept of “Ecological Priority, Energy Conservation and Environmental Protection, Combination of Chinese Elements and Western Elements and Sustainable Development”, the project aims to develop the Garden Expo Park into a theme park where “the curtain never falls” and a new milestone in Chinese landscapes. As the major project in the province, the landscape exhibition is of great demonstrative significance to promote the application of Hanergy products in green buildings projects.



### ***Building-Integrated Photovoltaics: Combination of Aesthetics and Energy Conservation***

In terms of the construction of thin film solar power generation buildings, BIPV project adopts the BIPV technology and achieves the combination of practical aspects (power generation systems) and aesthetics of buildings through installation of such thin film solar energy systems as solar energy tile roofs, solar energy sunroofs, solar energy walls, solar energy railings, solar energy sunshades and solar energy parking sheds, and provides free clean electricity to the buildings by taking advantages of solar power resources.

### ***Case: Solar Energy Sunroof System in the Atrium of Shanxi National Power Generation Dispatching Complex Building***

During the period, the installation of solar energy sunroof system in the atrium of Shanxi National Power Generation Dispatching Complex Building has been completed and it is subject to grid connection. With the installation areas amounting to 800 square meters, the project adopts large-size hollow BIPV sunroofs. In this way, it does not only maintain its attractive appearance, but also achieve energy conservation and environmental protection. The size of a single module is approximately 8 square meters. As the demonstrative project of national grid, it is expected to be delivered in October this year.

Using the modules with high sunlight-to-electricity conversion efficiency, the project effectively utilizes the solar energy irradiated on the surface of the building. By virtue of the material properties of dual-silver-layer glass, it ensures high light transmittance while reducing the heat transfer coefficient by 21%, which reduces largely the indoor temperature and the temperature difference between the north and south sides. It is expected to reduce air-conditioning power consumption by 15%.



***Case: Solar Power Flower Umbrellas Project in the International Pavilion at the Beijing International Horticultural Exhibition***

The International Horticultural Exhibition 2019, Beijing, China (referred to as “Beijing IHE”) is one of the international exhibitions organized by the Chinese government (as the organizer) and Beijing City. As one of the three core buildings within the exhibition and the largest stadium construction, the International Pavilion has a GFA of approximately 22,000 square meters. Leveraging on the “flower umbrellas” as its basic elements, it connects steel bollards with overhanging steel beams to create “flower umbrellas” which connect with each other on the top, presenting a rooftop clustering with “flowers”. The “flower umbrellas” consist of 6 aluminum veneers in leaf shapes. By paving the Group’s MiaSolé flexible solar energy modules on top of the aluminum veneers, the combination becomes flakes of solar energy flowers with total installed capacity of 10KW. According to the estimation, after paving the Hanergy flexible modules, one flower umbrellas can generate around 10,100 kWh of electricity, reduce standard coal consumption of 3.23 tones and carbon emissions of 9.41 tones, equivalent to planting 514 trees. This result fully echoes the theme of “Green life — A Beautiful Home” of Beijing IHE.



## ***Ecological Hantile, the Ancient Heritage to Light up the Future***

At present, half of the world's raw materials and energy are consumed by buildings. Energy-saving construction is an inevitable trend of development in the future. Paying attention to solar energy application in architecture, the Group has creatively launched the “Hantile” and BIPV (Building Integrated Photovoltaic) projects to fully exploit the advantages of thin film solar energy. It provides one-stop solutions for product development, product supply, system design, installation and construction, operation and maintenance, and reduces the consumption of traditional energy sources and pollutant emissions while ensuring an effective energy supply.

In 2017, the Company launched an innovative green building material — “Hantile”, and in April this year, it also launched a new generation of single glass “HanTile” which features lighter, thinner, more appealing appearance and outstanding performance as compared with the double glass launched last year, creating significant commercial and environmental values to construction materials usage. Hantile is the perfect combination of high-efficiency thin film solar modules and laminated glass. The CIGS thin film solar chip is encapsulated into the inner layer of highly transmissive glass via an internal and external dual-layer encapsulation process. In this way, it achieves efficient power generation capacity, high level of buildings safety and rooftop solar power generation. The design also combines the shape of Chinese traditional arched tiles. Hantile's energy-saving and emission-reducing effects are significant. According to certain data, one Hantile's current power is 35 watts, generating around 40kWh of electricity a year.

HanTile is positioned as a middle to high-end product which can be used in the construction of commodity villas, urban and rural public buildings, self-built residences in rural areas, beautiful villages or featured towns, targeted at various types of customers including real estate developers, local governments, high net worth groups and others. Currently, HanTile is used in various construction designs, including the villa project in Sweden, the elderly homes in Jilin, the project in Shunyi Beijing, the project in Si County Anhui and the project in Yunnan.

HanTile successfully passed the SGS-TÜV (SGS and TÜV Saarland) certification, signifying that HanTile has met the requirements of the international solar energy product certification and possessed the qualifications for application in the European solar energy market. HanTile has stepped into European market during the Period.

### ***Case: Villa Project in Stockholm, Sweden***

HanTile receives much attention and enquiries from customers around the world since the commencement of marketing promotion in Europe. The first double glasse HanTile 36KW pilot project in Europe was completed in June 2018, which involved the construction of a five high-end newly built villas in Stockholm, Sweden.

Our construction team completed the five high quality high-end villas with high efficiency by implementing strict control throughout the construction in accordance with the Double-glasses HanTile System Installation Guideline and Manuel. Leveraging on its premium and smooth appearance and outstanding power generation efficiency, HanTile is well-recognized by cooperation partners and local construction developers; in addition, cooperation partners decided to adopt HanTile as standard equipment for the medium- and high-end villa projects in the future.



***Case: Single Glass HanTile Wood-house Project in Wuxi***

The Group has signed a sales contract with 上海奧寧電子科技有限公司 in April 2018 in relation to HanTile system project. The construction of Wuxi resort wood-house project is duly commenced on 15 May and successfully connected to the grid and commenced power generation on 19 May. As the first Hantile villa project, it demonstrates an essential role model for non-polluting projects. The construction of HanTile wood-house is decorative, functional and well-performed in power generation under weak light condition. In addition to these three HanTile wood-house villas, the Group will also provide more technology and products support such as Humbrella and flexible thin-film modules for resorts during the process of project construction in the future.



## ***Green Transportation to Create a Low Carbon City***

Green Transportation solution aims to ease the tension of energy supply for transportation and to plan the whole energy supply of transportation system. The thin film solar energy technology can be applied to new energy vehicles, smart bus station platforms, parking shed signal systems, lighting, highway energy, cruise port and other fields. Electricity is generated at day-time and supplied at night to reduce utility power supply for urban transportation in order to minimize energy consumption and pollution.

### ***Case: Dali Smart Bus Station Platforms Project***

In March 2018, the Group signed a sales contract in relation to Dali smart bus platforms with the government of Haidong district in Dali City of Yunnan Province, and the installed capacity is 2.5KW.

Dali smart bus station solar energy platforms can supply energy for screens, video surveillance, stops announcements, interactive queries and lightbox advertisements through solar energy power generation. Smart bus stations can generate power as long as they are exposed to sunlight and are free of pollutants emission, realizing low carbon energy saving and green concept. A storage battery solution has been installed in smart bus station solar energy platforms in order to adapt to different weather in the world. The storage battery can store as 3 days long for electricity use to perfectly ensure that smart bus station solar energy platforms can operate as normal even if there is cloudy or rainy weather.

The two thin film bus station platforms were delivered to customers with the acceptance procedure performed by the government of Haidong district in Dali City. Payments have also been made.



## ***Reformation of Mobile Energy to Create New Era of Green Life***

With the development of science and technology, green concept has been integrated into different aspects of life. Hanergy Thin Film Power applies solar energy power generation to daily life through continuous technological breakthroughs and innovative research and development. We have introduced various types of portable mobile energy products, such as new thin film solar energy power generation paper, power generation pack, power generation backpack and small off-grid power generation system to cover different aspects of the daily life of urban and rural residents including smart wear, home life, electronic devices and outdoor sports gear, so as to provide users with a more convenient and efficient mobile power usage experience as well as satisfying the demand for mobile energy solutions from markets including mobile communications, outdoor sports, field operations and emergency rescue.

In April 2018, the Group introduced new thin film solar energy product “Humbrella”. During the process of developing Humbrella, a total of 159 patents were created, of which application process is underway. Being the first multifunctional umbrella with flexible thin-film solar energy technology in the world, Humbrella utilizes the flexible CIGS thin-film cell chips produced through the co-evaporation technique with the highest conversion efficiency in the world, featuring four major functions of off-grid power supply, power storage, lighting at night and terminal charging, to fulfill the basic electricity demands of the regions with power supply difficulty and to make contribution to environment conservation in these regions. Furthermore, the Group started the Humbrella community project “Lighting Africa” to provide mobile energy solutions for Africa regions by way of free donation of Humbrella.

For sales channels, save as the offline network, the Group also sells thin film power generation products through our own dedicated online network channel, including the self-operated official online shop website “Hanergy Shop”, online flagship store Tmall, online flagship store JD.com, other major e-commerce platform franchise stores, network distributor channel, online agent channel and vertical industries and website channels, to establish a multifaceted sales channel platform with online and offline nation-wide coverage. In the first half year of 2018, sales of thin film solar energy application products contributed a revenue of HK\$21.72 million for the Group.

## ***Application of Mobile Solar Energy Products for Consumer Goods***

### **Humbrella: Thin Film Solar Energy Power Generation umbrella**

The first multifunctional umbrella with flexible thin-film solar energy technology in the world, featuring four major functions of off-grid power supply, power storage, lighting at night and terminal charging.







### **HanPack: Portable Thin-Film Solar Energy Power Generation Backpack**

The outer layer of backpack is made of nylon and cowhide. The front is a solar sheet using MiaSolé chip, and a pull-out power sheet may be attached underneath for some of the HanPack to increase the light receiving area and improve the power generation efficiency.

### **HanPaper: Thin-film Solar Energy Power Generation Paper**

HanPaper adopts MiaSolé CIGS chips and is equipped with magnetic power storage modules of 5000mAh by utilizing flexible co-evaporation thin film solar energy technology for supporting Qi standard wireless charging and performing wireless charging. Of which, threefold design is applied on M12 thin-film solar energy power generation paper featuring thin, flexible, waterproof, anti-stain, area smaller than a A4 paper when it is folded and only 1 mm thickness. HanPaper is also additionally equipped with 4 hang buckles for hanging it up on the tent or backpack to generate power when you are walking.



### **Portable Thin-Film Solar Energy Emergency Power Box**

A multi-dimensional, three-in-one solution of power generation, lighting and recharging accompanies you to go hiking, adventure or outing. Black surface with brick wall pattern reveals the cool personality. The box includes 50W-100W thin-film solar energy foldable recharging paper, 30000mAh portable power supply kit and 8800mAh camping light.

### **Thin-film Solar Energy Clothing**

The new solar energy clothing is specifically designed for outdoor extreme sport by connecting the illuminant via a solar energy power recharging and supply devices, and is composed of flexible panel for transferring light to electricity, light batteries and meshed heating fibre. The function includes lighting, warning and warming.



### ***Unmanned Aircrafts***

Solar energy powered aircrafts mainly include drones spacecraft and hot air balloons and airships, among which drones are the most typical applications. Hanergy's 4.4-meter fixed-wing drones extend its battery life to 6 to 10 hours and a working area of 400 to 700 kilometers after paving with thin-film solar energy cells. It is an industrial solar drone that can be widely used in military, civilian and commercial markets, such as petroleum and natural gas pipeline patrol, agricultural monitoring, military police patrols, disaster and emergency rescue, aerial photograph and land survey and mapping, natural resource inspection, border and shoreline patrols, mining monitoring.

### ***Solar Energy Poverty Alleviation and Promotion of Economic Development***

The Group continues to respond the "PV poverty alleviation" policy jointly led by National Energy Administration and The State Council Leading Group Office of Poverty Alleviation and Development. The Group conscientiously implements the national policy of anti-poverty development, conducts research on PV policy, establish regional anti-poverty strategies and explore a sustainable way of PV poverty alleviation. Making full use of the land resources of rural poor households, we transfer the most ordinary sunlight to "wealth" in poor households' road of poverty alleviation, realizing the transformation of poverty alleviation from "blood transfusion" model to "blood creation" model and helping the poor to realize precise poverty alleviation.

We attach great importance to the combination of PV poverty alleviation and local specific situations in order to fully implement "targeted poverty alleviation". The poor households who participate in PV poverty alleviation can not only obtain the ownership of solar energy-powered equipment, but also gain the economic benefits brought by excess electricity power apart from in-house electricity. Besides, on the premise of not affecting agricultural production, we combine thin film solar power technology with fish ponds and livestock sheds to build a large-scale modern intelligent agriculture project which integrates photovoltaic power generation, fish fishery and husbandry. Combining thin film solar power generation technology with fruit tree plantation, we establish solar energy power stations on red date solar energy greenhouses to solve the cracking problem of red dates on the basis of clean power generation. Combining the light and lucent thin film solar power generation system with nursery greenhouse, we bring extra power generation benefits without affecting seedling in the greenhouses.

Hanergy Thin Film Power continued its efforts in the development of solar energy poverty alleviation projects. For the six months ended 30 June 2018, the Group has signed and completed 4 poverty alleviation projects.

***Case: PV Poverty Alleviation Project in Boli County, Qitaihe City***

Hanergy Thin Film Power is the chief EPC contractor of 615KW PV poverty alleviation project in Boli County, Qitaihe City, Heilongjiang Province while the local government is responsible for 20% free capital of the project. The remaining 80% capital comes from Agricultural Development Bank loans. All the investment is used to establish a village-level PV poverty alleviation power station on collective abandoned land. After the grid connection, the power station is expected to generate an annual revenue of approximately RMB3,000 for each underprivileged household and practically achieve the poverty alleviation of the entire village.



**D. Delivery of Production Lines to Hanergy Holdings Group**

Apollo Precision (Fujian) Limited (“Fujian Apollo”, a subsidiary of the Company) entered into two master sales contracts (each of them “Master Sales Contract”) in 2010 and 2011 respectively, to sell the equipment and the entire production line for manufacturing thin film solar PV modules to Hanergy Holding, its subsidiaries and its affiliates companies (“Hanergy Holding Group”). Details of those contracts are set out on the circulars dated 8 July 2010 and 14 November 2011 respectively.

As at 31 October 2013, Fujian Apollo entered into supplementary sales contracts of two Master Sales Contracts with Hanergy Holding. Details of those supplementary sales contracts are set out on the circular dated 12 December 2013.

	<b>Master Sales Contract entered into in 2010 (as supplemented in 2013)</b>	<b>Master Sales Contract entered into in 2011 (as supplemented in 2013)</b>
Total purchase capacity as stipulated in the sales contracts	3,000MW	7,000MW
Purchase capacity of module equipment and production lines committed by Hanergy Holding Group as at 30 June 2018	1,300MW	7,000MW
	<i>HK\$'mil</i>	<i>HK\$'mil</i>
Total contract sum	25,800	61,270
Total cumulative advance payment made by Hanergy Holding Group as at 30 June 2018	1,998	1,560
Contract revenue recognized in:		
For the year ended 31 December 2010	2,310	0
For the year ended 31 December 2011	1,446	1,009
For the year ended 31 December 2012	0	2,756
For the year ended 31 December 2013	0	3,243
For the year ended 31 December 2014	3,102	2,853
For the year ended 31 December 2015	134	(88)
For the year ended 31 December 2016	39	865
For the year ended 31 December 2017	628	434
For the period ended 30 June 2018	0	0

## **FUTURE OUTLOOK**

### **A. Global Solar Energy Market**

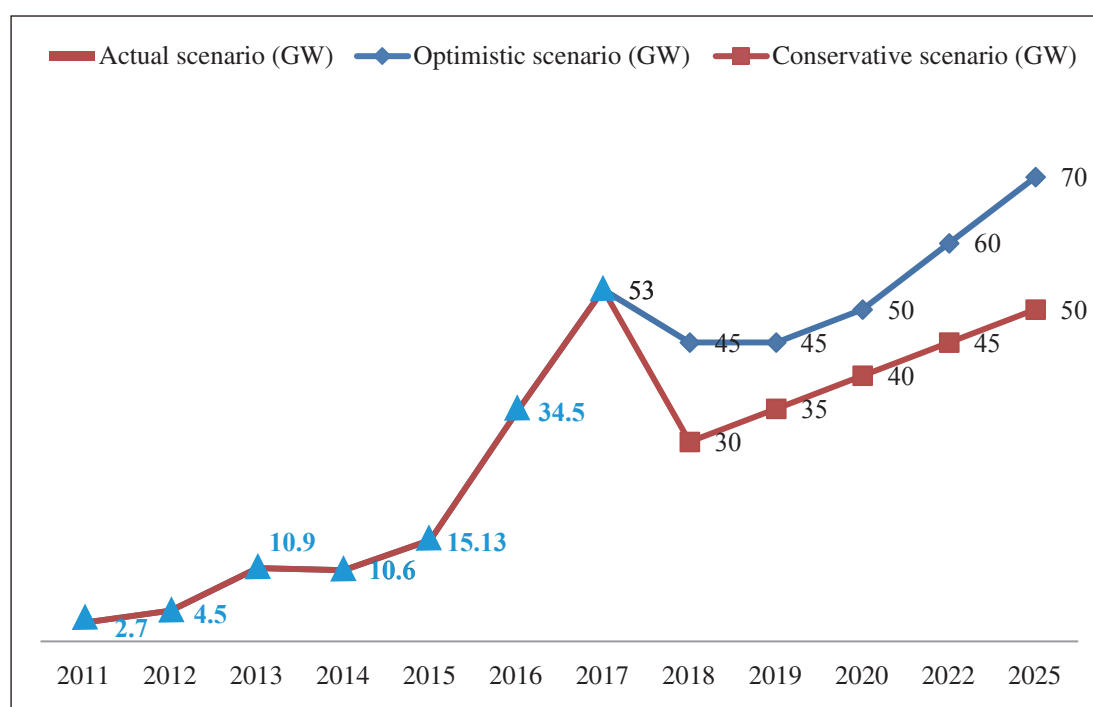
The solar energy power generation is one of the renewable energy markets with the most rapid growth rate in the world. Riding on the momentum from the record-breaking installed solar energy capacity of over 100GW for the global solar energy market in 2017, the global solar energy market experienced growths under various changes in market conditions in the first half of 2018. According to the statistics of IHS, for the first half of 2018, the global newly installed capacity has reached approximately 54GW. Of which, according to the statistics of China Photovoltaic Industry Association (“CPIA”), China’s newly installed capacity has reached 24GW in the first half of the year, which is relatively stable as compared to the same period last year, indicating a more stable momentum. At the same time, the global corporate funding for solar energy sector has seen strong growth. According to the data of Mercom Capital Group, the total global corporate funding for the solar energy sector in the first half of 2018 has reached US\$5.3 billion, representing a year-on-year growth of 15%.

In January 2018, the U.S. government declared a 30% tariff on the imported solar panels, which shocked the solar energy industry. On 31 May 2018, the “Notice on Matters Relevant to Photovoltaic Power Generation in 2018” (“531 Notice”) was jointly issued by China’s National Development and Reform Commission (NDRC), the Ministry of Finance, and National Energy Administration (NEA), which provided strict regulatory measures for the development of the solar energy industry and attracted international attention. Looking ahead into the full year of 2018, a number of industrial institutions have made downward adjustments to their previous forecasts under the 531 Notice. Such as Energy Trend, a market research company based in Taiwan analyzed the new policy was expected to cause a significant decrease in domestic demand of solar energy capacity to 29-35 GW, and the first negative growth in the global demand of solar energy capacity which is forecasted to fall below 100GW. Nevertheless, many institutions remained confident towards the global solar energy market. In the latest published “Global PV Market Report” by PV Market Alliance (PVMA), it was indicated that despite the declined installed capacity in China for the year resulted from the sudden policy changes by the China’s government recently, material impact was not expected for the global solar energy market. For the markets other than China, the installed capacity is forecasted to increase from 45GW of 2017 to over 60GW this year, of which India, Europe and various emerging markets are expected to see strong growths in 2018. The global solar energy market (excluding China) is expected to record a new high of newly installed capacity of 100GW by 2019 and the capacity will continue to grow.

## The Solar PV Market in China

Being one of the major clean energy, solar energy plays an important role in the transformation of China's energy structure. China's solar energy industry has a promising prospect as being the top player in the globe. In recent years, the cost of China's solar energy industry chain has been decreasing, which of increasingly demonstrated its economic benefits. China has been in the leading position in the world for 5 consecutive years in terms of the newly installed capacity of solar energy power generation, with the highest accumulative installed capacity in the world for 3 consecutive years. With the advancing, innovative and world-leading solar energy technology, a well-established industrial chain which is highly competitive in the global market has been completed. According to the statistics of the NEA, up to the first half of 2018, the national installed solar energy capacity for power generation reached 154.51GW, of which, solar energy power stations and distributed solar energy accounted for 112.6GW and 41.9GW respectively.

**Chart 1: Historical newly installed capacity in China and forecasts**

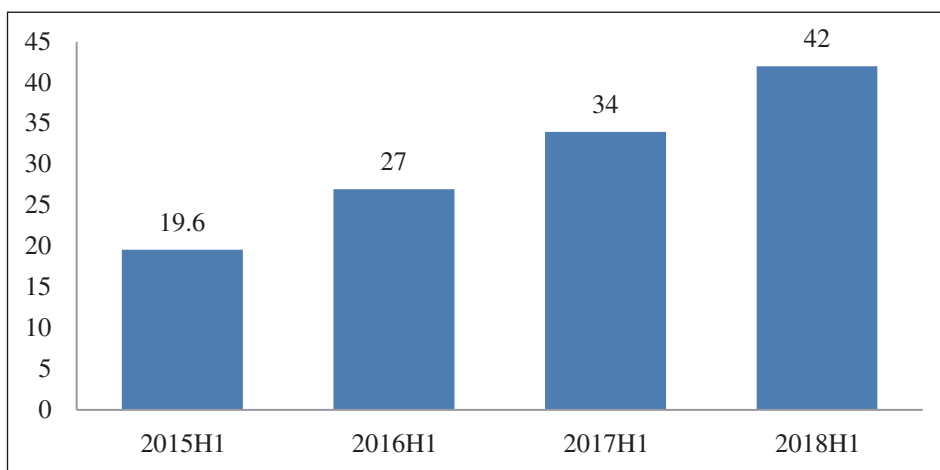


Source of data: CPIA

According to the statistics of CPIA, China's newly installed solar energy capacity has reached approximately 24.3GW in the first half of the year, demonstrating stable year-on-year performance. Distributed installed capacity amounted to approximately 12.2GW, representing a year-on-year growth of 72%. The output of solar energy modules in China reached 42GW, representing a growth of about 24%, as mainly attributable to overseas orders. Modules exports increased more than 25% to reach approximately 19GW. As driven by the strong momentum of solar energy power generation development, the installed capacity of thin film solar energy power generation has been increasing. From the end of 2017 to present, a number of

policies including “Notice on the implementation of pilot marketized transaction spots for the distributed power generation\* (《關於開展分佈式發電市場化交易試點》)” and “Administrative measures for distributed power generation projects (Draft for comments)\* (《分佈式發電項目管理辦法(徵求意見稿)》)” were introduced to accelerate the commercialization of solar energy power generation, provide guidance on, and encourage, the stable development of solar energy industry in the long run. Looking ahead to the whole year of 2018, the cost of solar energy, which is currently lower than that of the conventional power in many countries, will be decreasing in the global market, and the market potentials of solar energy is yet to be released. Stable performance or even growth momentum is forecasted for the global market.

**Chart 2: Domestic production of photovoltaic modules in half-year (GW)**



Source of data: CPIA

## B. Related Policies in China

### ***Action Plan for the Development of Intelligent Photovoltaic Industry (2018-2020)\* (《智慧光伏產業發展行動計劃(2018-2020年)》)***

“The Action plan for the development of intelligent photovoltaic industry (2018-2020)” issued by six authorities, including the Ministry of Information and Technology and NEA on 19 April 2018 expressively states the acceleration of the development of advanced manufacturing industry, the enhancement of intelligent manufacturing of solar energy industry, the promotion of profound integration of internet, big data and artificial intelligence with the solar energy industry, the encouragement of solar energy intelligent applications in distinctive industry and the facilitation for the development of China’s solar energy industry towards the middle and high end of global value chain.

***Notice on Matters Concerning Easing Burden of Enterprises in Renewable Energy Sector\****  
**(《關於減輕可再生能源領域企業負擔有關事項的通知》)**

In April 2018, NEA issued the “Notice on Matters Concerning Easing Burden of Enterprises in Renewable Energy Sector”, which requires the stringent compliance of the Renewable Energy Law to ensure the healthy development of the renewable energy sector; the optimization of investment environment to reduce the development cost of renewable energy exploitation; implementation of the initiative of “simplified procedures, supervision enhancement and service optimization” for public services in a bid to stimulate market. The notice provides favorable conditions in aspects of market consumption and grid connections, land use measures, financial supports and enhancement of government services and functions for the renewable energy industry, which will ease the investment and operational burden of enterprises in the renewable energy sector, and lead to further cost reduction of renewable energy.

***Notice on Matters Relevant to Photovoltaic Power Generation in 2018*** 《關於二零一八年光伏發電有關事項的通知》

On 31 May 2018, the “Notice on Matters Relevant to Photovoltaic Power Generation in 2018” was jointly issued by NDRC, the Ministry of Finance and NEA, which states that no planned capacity projects for general solar energy power stations construction is arranged for 2018, and approximately 10GW capacity is deployed for the distributed solar energy projects; the on-grid tariff is reduced — the standard on-grid tariff of newly operated solar energy power stations is reduced to RMB0.05 per kWh.

Despite the fact that the 531 Notice has adjusted the growth model of distributed solar energy power generation for the year 2018, the Group believes that the government’s long-term planning of the solar energy sector and the support to the distributed solar energy power generation will continue to promote the solar energy industry development in China. The release of such notice accelerates the shuffle in the solar energy industry, which will facilitate the transformation and innovation of enterprises and optimize the resource allocation of the solar energy industry in the long run, contributing to a sustainable development of the industry going forward.

Thin film solar energy technology is the key focus of government supportive policies. The Group has been using its best endeavors to develop thin film solar energy technology, as well as mobile energy applications and product innovation. Due to the limited over-reliance on the government subsidy, the impact of the new policy on the Group is limited. The Group also believes that, such adjustment to the distributed solar energy power generation will provide opportunities for further promotion and development of our mobile energy application products, which are not subject to the capacity restrictions on distributed solar energy projects as imposed by 531 Notice. Given the above, the Group is able to strengthen the current market position and expand the current sales network of mobile energy application products in downstream market. With the acknowledgment that the development of the solar energy industry cannot fully rely on the government subsidy, the Group has been well-prepared in terms of technology and market deployment. In respect to the conventional business which is being affected, the Group has stronger resilience due to its acclaimed brand and well-established channels.



## C. The Company's Vision on Future Development

### *Continue to implement the “One Base and Two Fronts” strategy and expand diversified customer base*

During the period, the Group continued the corporate restructuring and governance improvement, establishing a clearer and more efficient governance structure, a more scientifically regulated business process and a customer-oriented sales culture. The Group has adopted the strategic deployment of “One Base Two Fronts”, that is, based on the continuous innovation of thin film solar technology, and with ‘turnkey’ solutions for high-end equipment and production lines on the left front, and solutions for distributed energy and mobile energy on the right front, with focusing on the upstream business of equipment production lines, and the downstream business of distributed and mobile energy.

For the upstream business, we actively developed industrial park projects and independent third party clients, and provided integrated “turnkey” solutions for thin film solar equipment and production lines. The Group believes that industrial park projects will be the most important major clients for the upstream business in the future. During the period, the Group was committed to expanding its client base of new industrial park projects, while maintaining good relationships with our three major industrial park clients (Mianyang Industrial Park, Datong Industrial Park and Zibo Industrial Park) , with certain stage payments and payments collection completed during the period. With the combination of partnerships with distributors and direct sales to large clients, the downstream business focused on providing “one-stop” services and solutions to clients, thereby implementing new cooperation projects of innovative application of mobile energy and further developing business including industrial and commercial power generation, PV poverty alleviation, BIPV and agricultural applications. Meanwhile, we promoted downstream products in overseas markets, boosted the sales of various downstream products and broadened the markets by utilizing close cooperation relationships with overseas business partners, laying a solid foundation for the Group's future development.

### *Continue to research and develop new products*

In alignment with the global trend of clean energy and environmental protection, we maintained our strong foothold as the global pioneer of mobile energy and achieved significant progress in research and development of thin film solar energy products. For instance, after the debut of the new type of construction material double-glass HanTile last year, the Group launched a new generation of single-glass HanTile this year. Besides, the curve-shaped double-glass HanTile has successfully passed the certification tests of TUV, CE, CQC, CCC,UL and related certificates were obtained. On top of these, two enterprise standards have been released, while one group standard and 147 patent applications have been approved. The first showcase of HanTile in Europe completed in the first half of 2018 also paved the way for the promotion of HanTile products in overseas market.

The Humbrella launched at the end of April 2018 is the first multi-functional umbrella based on flexible thin-film solar power generation technology in the world and its first batch of production were donated to Tanzania for the charity project “Lighting Africa”. Apart from this, HanPack and HanPaper were also introduced in June this year. This array of new products cover different aspects of the daily life, including smart wear, home life, electronic devices and outdoor sports gear, providing more convenient and rapid mobile energy experience for users, thereby meeting the market demand for mobile energy solutions for mobile communication, outdoor sport and activities as well as emergency rescue.

### ***Strong development momentum of mobile solar energy***

The Group has developed a large variety of mobile energy application products as underpinned by the strong momentum. Other than portable mobile energy supply products such as folded thin film solar energy power generation paper, power generation pack and power generation backpack, the Group’s thin film solar cell is widely applied in various mobile transportations, including shared bikes, logistics fleets, unmanned aircraft and solar-powered driverless car.

In March 2018, Hanergy commenced cooperation with FAW Group Corporation in relation to the application of Hanergy’s thin film solar car roof panels for FAW Group Corporation’s Red Flag series. The Group’s MiaSolé technology is broadly applied by a large number of well-known brands. In May this year, Korea-based Hyundai Motor Company utilized flexible solar modules based on the Group’s MiaSolé technology for the roof of its newly released commercial vehicle. Besides, the Group’s flexible CIGS thin-film modules technology is respectively applied for the delivery fleets and express fleets of DHL in the United Kingdom, the express fleets of SF Express and the solar-powered intelligent delivery vehicle launched recently by JD.com, which were successively put into use. The robust development of mobile solar energy contributes to energy conservation, emission reduction and environmental protection. The Group also intends to expand the business and cooperation in this sector in the future.

In the first half of 2018, in line with the new regulations of the industry, the Group has aligned itself with the market trend and put strenuous efforts in expanding and developing core businesses and adhered to independent innovation which made significant achievement in the market. Looking forward to the second half of the year, the Group will continue to closely follow the trend of the solar energy market and keep a close eye on the changes in domestic and international environment, aiming to maintain its position as the thin film solar energy solutions provider of the most advanced and sophisticated technology. Leveraging on the existing scale, we will enhance operational efficiencies and proactively tap into new domestic and overseas markets, so as to maintain stable growth. In respect to our upstream business, we will continue to push forward the “turnkey” projects of thin film solar production lines for mobile energy industrial parks and other new clients, and place the solar energy applications business including mobile energy and distributed energy as the focus for downstream business. In pursuit of being a pioneer of the industry and the market, we will devote to technology research and development and new product development, in order to promote the upgrade of the technology and product of thin film solar power generation.

## **INTERIM DIVIDEND**

The Board does not recommend declaration of any interim dividend for the six months ended 30 June 2018 (2017: Nil).

## **LIQUIDITY AND FINANCIAL RESOURCES**

As at 30 June 2018, the Group have interest-bearing bank and other borrowings of HK\$627,577,000 (31 December 2017: HK\$1,126,008,000) while the cash and cash equivalents amounted to approximately HK\$1,183,267,000 (31 December 2017: approximately HK\$2,496,760,000).

Gearing ratio (total debt less cash and cash equivalent, tax payable, deferred income, other non-current liabilities and deferred tax liabilities (“Net Debt”) over equity attributable to the owners of the parent and Net Debt) as at 30 June 2018 was 39.20% (31 December 2017: 47.86%).

## **TREASURY POLICIES AND EXCHANGE & OTHER EXPOSURES**

The Group’s monetary transactions and deposits continued to be denominated in US dollars, Renminbi and Hong Kong dollars. The Group expected that the exposure to exchange rates fluctuation was not significant and therefore had not engaged in any hedging activities.

## **CONTINGENT LIABILITIES**

The Group did not have any significant contingent liabilities as at 30 June 2018 (31 December 2017: Nil).

## **PERSONNEL**

The number of employees of the Group as at 30 June 2018 was 6,541 (31 December 2017: 4,250) of whom 1,645 (31 December 2017: 695) were office administration staff.

Remuneration of employees and directors are determined according to individual performance and the prevailing trends in different areas and reviewed on an annual basis. The Group has also contributed mandatory provident fund retirement funds and provided medical insurance to its employees.

Bonuses are awarded based on individual performance and overall Group performance and are made to certain employees of the Group.

## **COMPLIANCE WITH THE CORPORATE GOVERNANCE CODE**

The Company has complied with the code provisions of the Corporate Governance Code as set out in Appendix 14 of the Listing Rules throughout the six months ended 30 June 2018.

## **PURCHASE, SALE OR REDEMPTION OF LISTED SECURITIES OF THE COMPANY**

During the six months ended 30 June 2018, neither the Company nor any of its subsidiaries purchased, redeemed or sold any of the Company's listed securities.

## **MODEL CODE FOR SECURITIES TRANSACTIONS BY DIRECTORS**

The Company has adopted a code of conduct regarding securities transactions by directors on terms no less exacting than the required standard set out in the Model Code for Securities Transactions by Directors of Listed Issuers (the "Model Code") as set out in Appendix 10 of the Listing Rules. Having made specific enquiry of all the Directors, all the Directors confirmed that they have complied with the required standard set out in the Model Code and the code of conduct regarding securities transactions by Directors adopted by the Company during the reporting period.

## **REVIEW OF INTERIM FINANCIAL STATEMENTS**

The audit committee of the Company (the "Audit Committee") has reviewed the unaudited consolidated financial statements of the Group for the six months ended 30 June 2018 (the "Interim Financial Statements") and discussed internal control and financial reporting matters with senior management relating to the preparation of the Interim Financial Statements.

As at the date of this announcement, the Audit Committee comprises all independent non-executive directors of the Company, namely, Professor Zhang Qiusheng (Chairperson), Mr. Lo Man Tuen, Professor He Xiaofeng and Mr. Wang Dan.

## **SUSPENSION OF TRADING IN SHARES**

On 20 May 2015, the trading in the Company's shares has been suspended with effect from 10:40 a.m. on 20 May 2015. According to the letter received from the Securities and Futures Commission (the "SFC") by the Company dated 15 July 2015 in relation to the Rule 8(1) direction of Stock Market Rules, in which SFC directed the Stock Exchange to suspend trading in the securities of the Company.

Based on the discussion between the SFC and the Company, the SFC has imposed two resumption requirements on the Company. The first resumption requirement is to complete the civil proceedings under section 214 of the Securities and Futures Ordinance (Cap. 571) (the "Section 214 Proceedings") and seek court orders by the SFC. The second resumption requirement is the publication of a disclosure document by the Company (the "Disclosure Document") which will provide detailed disclosures of the information on, amongst others, the Company's activities, businesses, assets, liabilities, financial performance and prospects, and the engagement of a financial adviser to conduct due diligence, for the consideration of the SFC in regards to the Company's application for the lifting of suspension pursuant to Rule 9 of the Securities and Futures (Stock Market Listing) Rules (Chapter 571V of the Laws of Hong Kong) (the "Stock Market Rules"). The powers of the SFC under Rule 9 of the Stock Market Rules may only be exercised by a meeting of

the SFC and are not delegable. The SFC's first resumption requirement was fulfilled on 4 September 2017. In respect of the second resumption requirement, as disclosed in the Company's announcement published on 4 April 2018, the Company has submitted the Disclosure Document to the SFC. The Company is currently responding and addressing to the issues and concerns raised by the SFC in respect to the Disclosure Document, which will be subsequently submitted to the board of directors of the SFC for the consideration and approval of the Company's application for the lifting of suspension pursuant to Rule 9 of the Stock Market Rules.

Amendments to the delisting framework under the Rules Governing the Listing of Securities (the "Listing Rules") on The Stock Exchange of Hong Kong Limited (the "Stock Exchange") have been made, with the effect from 1 August 2018 ("Effective Date"). The transitional arrangements for the amendments to the delisting framework will apply to the Company. As the Shares of the Company will have been suspended from trading for more than 12 months as at the Effective Date of the amendments to the delisting framework under the Listing Rule, in accordance with Rule 6.01A(2)(b)(ii) of the Listing Rules, the Stock Exchange may cancel the Company's listing if trading in the Shares has remained suspended for 12 continuous months from the Effective Date. The 12-month period will expire on 31 July 2019. If the Company fails to resume trading in the Shares of the Company by 31 July 2019, the Listing Department of the Stock Exchange will recommend the Listing Committee of the Stock Exchange to proceed with the cancellation of the Company's listing. This is subject to the Stock Exchange's right to impose a shorter specific remedial period under Rule 6.10 of the Listing Rules where appropriate.

The Group has addressed the SFC's concerns by solving its two previous core issues and suspension reasons, namely (1) the indebtedness due from Hanergy Holding and its affiliates to the Group, and (2) the exceedingly high income from connected transactions.

The Company has and will continue to use its best endeavours to fulfill the resumption requirements imposed by the SFC on the Company and seek the resumption of trading in its shares on the Stock Exchange as soon as possible. The Company will make further announcement(s) on the progress of the second resumption requirement when appropriate, to inform the Company's shareholders and potential investors.

## **PUBLICATION OF INTERIM RESULTS AND INTERIM REPORT**

This results announcement is published on the websites of the Stock Exchange ([www.hkexnews.hk](http://www.hkexnews.hk)) and the Company ([www.hanergythinfilmpower.com](http://www.hanergythinfilmpower.com)). The interim report of the Company for the six months ended 30 June 2018 will be dispatched to the shareholders of the Company and will be available at the above websites in due course.

By order of the Board  
**Hanergy Thin Film Power Group Limited**  
**Yuan Yabin**  
*Chairman*

Hong Kong, 30 August 2018

*As at the date of this announcement, the executive directors of the Company are Mr. Yuan Yabin (Chairman), Dr. Lam Yat Ming Eddie (Vice Chairman), Mr. Si Haijian (Chief Executive Officer), Mr. Huang Songchun (Financial Controller), Mr. Xu Xiaohua and Mr. Zhang Bin; and the independent non-executive directors of the Company are Mr. Lo Man Tuen, G.B.S., JP, Professor He Xiaofeng, Professor Zhang Qiusheng and Mr. Wang Dan.*