

HANERGY THIN FILM POWER GROUP LIMITED
漢能薄膜發電集團有限公司

(Incorporated in Bermuda with limited liability)

(於百慕達註冊成立之有限公司)

(Stock Code 股份代號: 566)

Interim Report 中期報告 2018



EXECUTIVE DIRECTORS

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
Mr. Zhang Bin

INDEPENDENT NON-EXECUTIVE DIRECTORS

Mr. Lo Man Tuen, *G.B.S., JP*
Professor He Xiaofeng
Professor Zhang Qiusheng
Mr. Wang Dan

AUDIT COMMITTEE

Professor Zhang Qiusheng (*Chairperson*)
Mr. Lo Man Tuen, *G.B.S., JP*
Professor He Xiaofeng
Mr. Wang Dan

REMUNERATION COMMITTEE

Professor He Xiaofeng (*Chairperson*)
Mr. Lo Man Tuen, *G.B.S., JP*
Professor Zhang Qiusheng
Mr. Wang Dan

NOMINATION COMMITTEE

Mr. Lo Man Tuen, *G.B.S., JP* (*Chairperson*)
Professor He Xiaofeng
Professor Zhang Qiusheng
Mr. Wang Dan

COMPANY SECRETARY

Ms. Lee Wai Yee

AUDITOR

Ernst & Young

執行董事

袁亞彬先生(主席)
林一鳴博士(副主席)
司海健先生(首席執行官)
黃松春先生(財務總監)
徐曉華先生
張彬先生

獨立非執行董事

盧文端先生, *G.B.S., 太平紳士*
何小鋒教授
張秋生教授
王丹先生

審核委員會

張秋生教授(主席)
盧文端先生, *G.B.S., 太平紳士*
何小鋒教授
王丹先生

薪酬委員會

何小鋒教授(主席)
盧文端先生, *G.B.S., 太平紳士*
張秋生教授
王丹先生

提名委員會

盧文端先生, *G.B.S., 太平紳士*(主席)
何小鋒教授
張秋生教授
王丹先生

公司秘書

李慧兒女士

核數師

安永會計師事務所

CORPORATE INFORMATION

公司資料

PRINCIPAL BANKERS

Bank of Communications
Industrial and Commercial Bank of China (Asia) Limited
Industrial Bank Co., Ltd.
China Construction Bank
China Merchant Bank
Bank of China
ABN AMRO

REGISTERED OFFICE

Clarendon House
2 Church Street
Hamilton HM 11
Bermuda

HEAD OFFICE AND PRINCIPAL PLACE OF BUSINESS

Room 2204-06
22/F, World Trade Centre
280 Gloucester Road
Causeway Bay
Hong Kong

PRINCIPAL SHARE REGISTRAR AND TRANSFER OFFICE

MUFG Fund Services (Bermuda) Limited
26 Burnaby Street
Hamilton HM 11
Bermuda

BRANCH SHARE REGISTRAR AND TRANSFER OFFICE IN HONG KONG

Tricor Tengis Limited
Level 22, Hopewell Centre
183 Queen's Road East
Wanchai
Hong Kong

STOCK CODE

566

WEBSITE

www.hanergythinfilmpower.com

主要往來銀行

交通銀行
中國工商銀行(亞洲)有限公司
興業銀行股份有限公司
中國建設銀行
招商銀行
中國銀行
荷蘭銀行

註冊辦事處

Clarendon House
2 Church Street
Hamilton HM 11
Bermuda

總辦事處及主要營業地點

香港
銅鑼灣
告士打道280號
世貿中心22樓
2204-06室

股份過戶及登記總處

MUFG Fund Services (Bermuda) Limited
26 Burnaby Street
Hamilton HM 11
Bermuda

股份過戶及登記香港分處

卓佳登捷時有限公司
香港
灣仔
皇后大道東183號
合和中心22樓

股份代號

566

網址

www.hanergythinfilmpower.com

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

中期簡明綜合損益及其他全面收益表

FOR THE SIX MONTHS ENDED 30 JUNE 2018

截至二零一八年六月三十日止六個月

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:

漢能薄膜發電集團有限公司(「本公司」)董事會(「董事會」)公佈本公司及其附屬公司(統稱「本集團」)截至二零一八年六月三十日止六個月之未經審核中期業績與二零一七年同期之未經審核比較數字及經選定之說明附註如下：

		Six months ended 30 June 截至六月三十日止六個月	
		2018 二零一八年	2017 二零一七年
		HK\$'000 千港元	HK\$'000 千港元
		(Unaudited) (未經審核)	(Unaudited) (未經審核)
	Notes 附註		
Revenue from contracts with customers	與客戶簽訂合同之收入		
Cost of sales	銷售成本	4	
		20,414,526	2,853,914
		(8,203,214)	(1,761,407)
Gross profit	毛利		
Other income and gains	其他收入及收益	5	
Selling and distribution expenses	分銷費用		
Administrative expenses	行政費用		
Research and development costs	研發成本		
Loss on disposal of a subsidiary	出售一間附屬公司虧損		
Other expenses	其他費用		
Finance costs	財務費用	6	
		12,211,312	1,092,507
		52,709	79,474
		(549,784)	(156,986)
		(901,133)	(474,807)
		(502,104)	(248,263)
		—	(581)
		(228,694)	(14,331)
		(23,645)	(30,104)
PROFIT BEFORE TAX	稅前溢利	7	
Income tax expense	所得稅支出	8	
		10,058,661	246,909
		(2,729,632)	(2,112)
PROFIT FOR THE PERIOD	本期間溢利		
		7,329,029	244,797
OTHER COMPREHENSIVE INCOME TO BE RECLASSIFIED TO PROFIT OR LOSS IN SUBSEQUENT PERIODS	於其後期間重新分類至損益之其他全面收益		
Exchange differences on translation of foreign operations	換算海外業務之匯兌差額		
		284,039	208,148
OTHER COMPREHENSIVE INCOME FOR THE PERIOD, NET OF TAX	本期間其他全面收益，扣除稅項		
		284,039	208,148
TOTAL COMPREHENSIVE INCOME FOR THE PERIOD	本期間全面收益總額		
		7,613,068	452,945

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

中期簡明綜合損益及其他全面收益表

FOR THE SIX MONTHS ENDED 30 JUNE 2018

截至二零一八年六月三十日止六個月

		Six months ended 30 June	
		截至六月三十日止六個月	
		2018	2017
		二零一八年	二零一七年
Notes		HK\$'000	HK\$'000
附註		千港元	千港元
		(Unaudited)	(Unaudited)
		(未經審核)	(未經審核)
Profit for the period attributable to:	應佔本期間溢利：		
Owners of the parent	母公司擁有人	7,328,970	244,812
Non-controlling interests	非控股權益	59	(15)
		7,329,029	244,797
Total comprehensive income	應佔本期間全面收益總額：		
for the period attributable to:			
Owners of the parent	母公司擁有人	7,613,009	452,960
Non-controlling interests	非控股權益	59	(15)
		7,613,068	452,945
		HK Cents	HK Cents
		港仙	港仙
		(Unaudited)	(Unaudited)
		(未經審核)	(未經審核)
EARNINGS PER SHARE	母公司擁有人應佔每股盈利		
ATTRIBUTABLE TO OWNERS OF			
THE PARENT			
Basic	基本	10	0.58
Diluted	攤薄	10	0.57

Details of dividend are disclosed in note 9 to the interim condensed consolidated financial statements.

股息之詳情於中期簡明綜合財務報表附註9披露。

INTERIM CONDENSED CONSOLIDATED STATEMENT OF FINANCIAL POSITION

中期簡明綜合財務狀況表

AS AT 30 JUNE 2018
於二零一八年六月三十日

			30 June 2018 二零一八年 六月三十日	31 December 2017 二零一七年 十二月三十一日
	Notes 附註		HK\$'000 千港元 (Unaudited) (未經審核)	HK\$'000 千港元 (Audited) (經審核)
NON-CURRENT ASSETS				
非流動資產				
Property, plant and equipment	11	物業、廠房及設備	706,554	581,302
Intangible assets		無形資產	60,162	35,467
Available-for-sale financial investments		可供出售金融投資	—	66,097
Other investments		其他投資	65,534	—
Restricted cash		受限制現金	4,120	4,104
Deferred tax assets		遞延稅項資產	33,179	—
Other non-current assets		其他非流動資產	90,741	85,471
Total non-current assets		非流動資產總額	960,290	772,441
CURRENT ASSETS				
流動資產				
Inventories	12	存貨	2,527,761	1,689,670
Trade receivables	13	貿易應收款項	9,289,373	7,232,791
Tax recoverable		可收回稅項	2,742	2,766
Contract assets	14	合同資產	12,774,190	—
Gross amount due from contract customers	14	應收合同客戶總額	—	2,400,660
Other receivables	15	其他應收款項	484,173	1,437,143
Bills receivable		應收票據	66,311	27,363
Deposits and prepayments	16	按金及預付款項	4,595,108	3,369,336
Restricted cash		受限制現金	136,630	140,236
Cash and cash equivalents		現金及現金等價物	1,183,267	2,496,760
Total current assets		流動資產總額	31,059,555	18,796,725
CURRENT LIABILITIES				
流動負債				
Trade and bills payables	17	貿易及票據應付款項	3,436,040	1,737,876
Other payables and accruals	18	其他應付款項及應計費用	4,127,963	7,073,562
Contract liabilities		合同負債	3,383,806	—
Interest-bearing bank and other borrowings	19	銀行及其他附息借款	84,142	597,610
Tax payable		應付稅項	1,742,658	1,005,374
Deferred income		遞延收入	46,040	20,447
Total current liabilities		流動負債總額	12,820,649	10,434,869
NET CURRENT ASSETS		流動資產淨額	18,238,906	8,361,856
TOTAL ASSETS LESS CURRENT LIABILITIES		資產總額減流動負債	19,199,196	9,134,297

INTERIM CONDENSED CONSOLIDATED STATEMENT OF FINANCIAL POSITION

中期簡明綜合財務狀況表

AS AT 30 JUNE 2018

於二零一八年六月三十日

			30 June 2018 二零一八年 六月三十日 HK\$'000 千港元 (Unaudited) (未經審核)	31 December 2017 二零一七年 十二月三十一日 HK\$'000 千港元 (Audited) (經審核)
NON-CURRENT LIABILITIES	非流動負債			
Deferred tax liabilities	遞延稅項負債		2,522,973	478,048
Interest-bearing bank and other borrowings	銀行及其他付息借款	19	543,435	528,398
Other non-current liabilities	其他非流動負債		12,527	20,049
Total non-current liabilities	非流動負債總額		3,078,935	1,026,495
Net assets	資產淨額		16,120,261	8,107,802
EQUITY	權益			
Equity attributable to the owners of the parent	母公司擁有人應佔權益			
Issued capital	已發行股本	20	105,364	105,364
Reserves	儲備		16,014,302	8,001,902
Non-controlling interests	非控股權益		16,119,666	8,107,266
			595	536
Total equity	權益總額		16,120,261	8,107,802

INTERIM CONDENSED CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

中期簡明綜合權益變動表

FOR THE SIX MONTHS ENDED 30 JUNE 2017

截至二零一七年六月三十日止六個月

Attributable to owners of the parent 母公司擁有人應佔											
	Issued capital	Share premium account*	Capital redemption reserve* 資本贖回儲備*	Reserve funds*	Contributed surplus*	Exchange reserve*	Share option reserve*	Retained profits/ (Accumulated losses)* 留存溢利/ (累計虧損)*	Sub-total	Non-controlling interests	Total
	已發行股本	股份溢價賬*	贖回儲備*	儲備金*	實繳盈餘*	匯兌儲備*	購股權儲備*	購股權儲備*	小計	非控股權益	總額
	HK\$'000	HK\$'000	HK\$'000	HK\$'000	HK\$'000	HK\$'000	HK\$'000	HK\$'000	HK\$'000	HK\$'000	HK\$'000
	千港元	千港元	千港元	千港元	千港元	千港元	千港元	千港元	千港元	千港元	千港元
At 1 January 2017 於二零一七年一月一日	104,647	11,244,621	7,684	135,089	53,295	(606,091)	58,177	(3,657,003)	7,340,419	603	7,341,022
Profit for the period 本期間溢利	—	—	—	—	—	—	—	244,812	244,812	(15)	244,797
Other comprehensive income for the period: 本期間其他全面收益：											
Exchange differences on translation of foreign operations 換算海外業務之匯兌差額	—	—	—	—	—	208,148	—	—	208,148	—	208,148
Total comprehensive income for the period 本期間全面收益總額	—	—	—	—	—	208,148	—	244,812	452,960	(15)	452,945
Share option expense 購股權費用	—	—	—	—	—	—	12,700	—	12,700	—	12,700
At 30 June 2017 (Unaudited) 於二零一七年六月三十日 (未經審核)	104,647	11,244,621	7,684	135,089	53,295	(397,943)	70,877	(3,412,191)	7,806,079	588	7,806,667

INTERIM CONDENSED CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

中期簡明綜合權益變動表

FOR THE SIX MONTHS ENDED 30 JUNE 2018

截至二零一八年六月三十日止六個月

	Attributable to owners of the parent 母公司擁有人應佔										
	Share capital	Share premium account*	Capital redemption reserve* 資本贖回儲備*	Reserve funds*	Contributed surplus*	Exchange reserve*	Share option reserve*	Retained profits/ (Accumulated losses)* 留存溢利/ (累計虧損)*	Sub-total	Non-controlling interests	Total
	股本	股份溢價賬*	贖回儲備*	儲備金*	實繳盈餘*	匯兌儲備*	購股權儲備*	留存溢利/ (累計虧損)*	小計	非控股權益	總額
	HK\$'000	HK\$'000	HK\$'000	HK\$'000	HK\$'000	HK\$'000	HK\$'000	HK\$'000	HK\$'000	HK\$'000	HK\$'000
	千港元	千港元	千港元	千港元	千港元	千港元	千港元	千港元	千港元	千港元	千港元
At 1 January 2018 (as previously reported)											
於二零一八年一月一日(如前呈報)	105,364	11,315,561	7,684	168,498	53,295	(191,475)	77,652	(3,429,313)	8,107,266	536	8,107,802
Adjustment from adoption of HKFRS 15 (note 2.2)											
採納香港財務報告準則第15號之調整(附註2.2)	—	—	—	—	—	—	—	392,359	392,359	—	392,359
At 1 January 2018 (restated)											
於二零一八年一月一日(重列)	105,364	11,315,561	7,684	168,498	53,295	(191,475)	77,652	(3,036,954)	8,499,625	536	8,500,161
Profit for the period											
本期間溢利	—	—	—	—	—	—	—	7,328,970	7,328,970	59	7,329,029
Other comprehensive income for the period:											
本期間其他全面收益:											
Exchange differences on translation of foreign operations											
換算海外業務之匯兌差額	—	—	—	—	—	284,039	—	—	284,039	—	284,039
Total comprehensive income for the period											
本期間全面收益總額	—	—	—	—	—	284,039	—	7,328,970	7,613,009	59	7,613,068
Share option expense											
購股權費用	—	—	—	—	—	—	7,032	—	7,032	—	7,032
At 30 June 2018 (Unaudited)											
於二零一八年六月三十日(未經審核)	105,364	11,315,561	7,684	168,498	53,295	92,564	84,684	4,292,016	16,119,666	595	16,120,261

* These reserve accounts comprise the consolidated reserves of HK\$16,014,302,000 (31 December 2017: HK\$8,001,902,000) in the condensed consolidated statement of financial position.

* 該等儲備賬目包括在簡明綜合財務狀況表之綜合儲備16,014,302,000港元(二零一七年十二月三十一日: 8,001,902,000港元)。

INTERIM CONDENSED CONSOLIDATED STATEMENT OF CASH FLOWS

中期簡明綜合現金流量報表

FOR THE SIX MONTHS ENDED 30 JUNE 2018

截至二零一八年六月三十日止六個月

		Six months ended 30 June	
		2018	2017
		二零一八年	二零一七年
		HK\$'000	HK\$'000
		千港元	千港元
		(Unaudited)	(Unaudited)
		(未經審核)	(未經審核)
CASH FLOWS FROM OPERATING ACTIVITIES	經營項目現金流量		
Profit before tax:	稅前溢利：	10,058,661	246,909
Adjustments for:	調整：		
Finance costs	財務費用	6	30,104
Interest income from banks and other interest income from third parties	銀行及其他第三方應收款項之利息收入	5	(10,267)
Amortisation of intangible assets	無形資產攤銷	7	679
Depreciation of items of property, plant and equipment	物業、廠房及設備項目之折舊	7	27,560
Write-down of inventories to net realisable value	存貨撇減至可變現淨值	7	23,855
Reversal of inventory provision	存貨撥備轉回	7	—
Loss on disposal of items of property, plant and equipment	出售物業、廠房及設備項目之虧損	7	210
Loss on disposal of a subsidiary	出售一間附屬公司虧損	7	581
Impairment of trade receivables	貿易應收款項減值	7	917
Reversal of impairment of trade receivables	貿易應收款項減值轉回	7	—
Impairment of prepayment	預付賬款減值	7	1,156
Write-off of other receivables	撇銷其他應收款項	7	2,217
Product warranty provision	產品保養撥備	7	31,065
Equity settled share option expenses	以權益結算的股份期權開支	7	12,700
		10,411,087	367,686
Changes in working capital	營運資金變動	(11,812,482)	1,839,533
CASH (USED IN)/GENERATED FROM OPERATIONS	經營項目(使用)/產生之現金	(1,401,395)	2,207,219
Income taxes paid	已付所得稅	(111,196)	(27,964)
Interest paid to banks	已付銀行之利息	(43,932)	(16,068)
NET CASH FLOWS (USED IN)/FROM OPERATING ACTIVITIES	經營項目(使用)/產生之現金流量淨額	(1,556,523)	2,163,187

INTERIM CONDENSED CONSOLIDATED STATEMENT OF CASH FLOWS

中期簡明綜合現金流量報表

FOR THE SIX MONTHS ENDED 30 JUNE 2018

截至二零一八年六月三十日止六個月

		Six months ended 30 June 截至六月三十日止六個月	
		2018 二零一八年	2017 二零一七年
		HK\$'000 千港元	HK\$'000 千港元
		(Unaudited) (未經審核)	(Unaudited) (未經審核)
Notes 附註			
CASH FLOWS FROM INVESTING ACTIVITIES		投資項目現金流量	
	Purchase of items of property, plant and equipment	(115,501)	(20,541)
	Purchase of intangible assets	(27,558)	(105)
	Proceeds from disposal of items of property, plant and equipment	1,193	3,692
	Interest received	26,606	10,267
	Proceeds from disposal of intangible assets	—	20
	Redemption of financial products	320,787	—
	NET CASH FLOWS FROM/(USED IN) INVESTING ACTIVITIES	205,527	(6,667)
CASH FLOWS FROM FINANCING ACTIVITIES		融資項目現金流量	
	Advance (to)/from Hanergy Holding	(1,145)	121
	Advance (to)/from related parties	(27,339)	7,938
	Proceeds from interest-bearing bank borrowings	4,916	10,184
	Repayment of interest-bearing bank borrowings	(8,603)	(19,519)
	Proceeds from other borrowings due to related parties	896	31,113
	Repayment of other borrowings due to a related party	(514,916)	(4,096)
	Proceeds from other borrowings due to an unrelated third party	31,956	72,534
	Repayment of other borrowings due to unrelated third parties	(2,351)	(15,987)
	NET CASH FLOWS (USED IN)/FROM FINANCING ACTIVITIES	(516,586)	82,288
	NET (DECREASE)/INCREASE IN CASH AND CASH EQUIVALENTS	(1,867,582)	2,238,808

INTERIM CONDENSED CONSOLIDATED STATEMENT OF CASH FLOWS

中期簡明綜合現金流量報表

FOR THE SIX MONTHS ENDED 30 JUNE 2018

截至二零一八年六月三十日止六個月

		Six months ended 30 June	
		截至六月三十日止六個月	
		2018	2017
		二零一八年	二零一七年
		HK\$'000	HK\$'000
		千港元	千港元
		(Unaudited)	(Unaudited)
		(未經審核)	(未經審核)
Cash and cash equivalents as stated in the statement of financial position	於財務狀況表列賬之現金及現金等價物	2,496,760	248,674
Cash and bank balance attributed to a disposal group classified as held for sale	應佔分類為待售之出售組合之現金及銀行結餘	—	5
Cash and cash equivalent as stated in the statement of cash flows at beginning of the period	期初之於現金流量表列賬之現金及現金等價物	2,496,760	248,679
Effect of foreign exchange rate changes, net	外幣匯率變動之影響，淨額	554,089	33,802
CASH AND CASH EQUIVALENTS AT END OF THE PERIOD	期末之現金及現金等價物	1,183,267	2,521,289
ANALYSIS OF THE BALANCES OF CASH AND CASH EQUIVALENTS	現金及現金等價物結餘之分析		
Cash and cash equivalents	現金及現金等價物	1,183,267	2,521,289

NOTES TO THE INTERIM CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

中期簡明綜合財務報表附註

FOR THE SIX MONTHS ENDED 30 JUNE 2018

截至二零一八年六月三十日止六個月

1. CORPORATE INFORMATION

Hanergy Thin Film Power Group Limited (the “Company”) is an exempted company with limited liability incorporated in Bermuda. The address of its registered office is Clarendon House, 2 Church Street, Hamilton HM11, Bermuda and its principal place of business is located at Room 2204-06, 22/F, World Trade Centre, 280 Gloucester Road, Causeway Bay, Hong Kong.

During the period, the Company and its subsidiaries (collectively referred to as the “Group”) were principally involved in (i) the manufacture of equipment and turnkey production lines for the manufacture of amorphous silicon and Copper Indium Gallium Selenium (“CIGS”) based thin-film power modules (“Manufacturing”); (ii) the technological development and production of Gallium Arsenide (“GaAs”) thin-film power turnkey production lines (“Manufacturing”); (iii) building ground-mounted power stations or rooftop power stations for sale and sale of thin-film power modules (“Downstream”); (iv) the research, development and sale of thin-film power application products (“Downstream”); (v) sale of electricity (“Downstream”); and (vi) providing engineering service (“Downstream”).

The Company’s shares are listed on the main board of The Stock Exchange of Hong Kong Limited (the “Stock Exchange”). The Group’s current operations are principally based in Hong Kong, the People’s Republic of China (the “PRC” or “Mainland China”), the Kingdom of Sweden (“Sweden”), the Federal Republic of Germany (“Germany”), the United States of America (the “United States”) and the United Kingdom of Great Britain and Northern Ireland (the “United Kingdom”).

1. 公司資料

漢能薄膜發電集團有限公司(「本公司」)於百慕達註冊成立為獲豁免有限公司。其註冊辦事處地址為Clarendon House, 2 Church Street, Hamilton HM11, Bermuda，其主要營業地點位於香港銅鑼灣告士打道280號世貿中心22樓2204-06室。

本期間，本公司及其附屬公司(統稱「本集團」)，年內主要從事(i)製造矽基及銅銦鎵硒(「CIGS」)薄膜發電組件製造用設備及整線生產線(「製造」)；(ii)砷化鎵(「GaAs」)薄膜發電整線生產線技術開發及生產(「製造」)；(iii)建造太陽能地面電站和屋頂電站以供銷售並銷售薄膜組件(「下游」)；(iv)研究、開發及銷售薄膜發電應用產品(「下游」)；(v)銷售電力(「下游」)；及(vi)提供工程服務(「下游」)。

本公司股份於香港聯合交易所有限公司(「聯交所」)主板上市。本集團現時以香港、中華人民共和國(「中國」或「中國內地」)、瑞典共和國(「瑞典」)、德意志聯邦共和國(「德國」)、美利堅合眾國(「美國」)及大不列顛及北愛爾蘭聯合王國(「英國」)為主要營運基地。

NOTES TO THE INTERIM CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

中期簡明綜合財務報表附註

FOR THE SIX MONTHS ENDED 30 JUNE 2018

截至二零一八年六月三十日止六個月

1. CORPORATE INFORMATION (continued)

On 20 May 2015, the stock price of the Company plunged 47% to HK\$3.91 per share from HK\$7.38 per share before a suspension was announced by the Company on that day. Then on 15 July 2015, the Securities and Futures Commission (“SFC”) directed the Stock Exchange to extend the trading suspension. As at the date of approval of these financial statements, the trading of stock of the Company is still suspended.

As of 30 June 2018, the immediate holding company of the Company is Hanergy Investment Limited (“Hanergy Investment”), which was incorporated in the British Virgin Islands (“BVI”) and the ultimate holding company of the Company is 漢能光伏科技有限公司 (“Hanergy Photovoltaic”), which was established in the PRC. Both the immediate holding company and the ultimate holding company of the Company are ultimately controlled by Mr. Li Hejun. In the opinion of the directors, the ultimate controlling person of the Company is Mr. Li Hejun, who holds 73.96% of the issued share capital of the Company.

1. 公司資料(續)

於二零一五年五月二十日，在本公司於同日宣佈暫停買賣前，本公司股價由每股7.38港元下挫47%至每股3.91港元。於二零一五年七月十五日，證券及期貨事務監察委員會(「證監會」)指令聯交所延長買賣停牌。於本財務報表之批准日期，本公司股票買賣仍然暫停。

於二零一八年六月三十日，本公司之直接控股公司為於英屬處女群島(「英屬處女群島」)註冊成立之Hanergy Investment Limited (「Hanergy Investment」)，而本公司之最終控股公司為於中國成立之漢能光伏科技有限公司(「漢能光伏」)。本公司之直接控股公司及最終控股公司均由李河君先生最終控制。董事認為，本公司之最終控制人士為李河君先生，其持有本公司已發行股本之73.96%。

NOTES TO THE INTERIM CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

中期簡明綜合財務報表附註

FOR THE SIX MONTHS ENDED 30 JUNE 2018

截至二零一八年六月三十日止六個月

2.1. 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 2.2 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 13 and 14, included trade receivables and contract assets with a total amount of HK\$22,063,563,000.

2.1. 編製基準

此等未經審核中期簡明綜合財務報表乃根據香港會計師公會(「香港會計師公會」)頒佈之香港會計準則(「香港會計準則」)第34號中期財務報告及香港聯合交易所有限公司證券上市規則(「上市規則」)附錄16之披露規定而編製。

編製此等未經審核中期簡明綜合財務報表時採納之會計政策及編製基準與截至二零一七年十二月三十一日止年度之年度財務報表所採用者一致，惟如下文附註2.2所披露採納之新訂及經修訂香港財務報告準則除外。

此等未經審核中期簡明綜合財務報表乃根據歷史成本慣例編製。除另有指明外，均以港元呈列，而所有價值均調整至最接近千位數。

於二零一八年六月三十日，本集團之現金及現金等價物為1,183,267,000港元，而其流動資產比流動負債超出18,238,906,000港元，誠如附註13及14所載，已計入貿易應收款項及合同資產總額為22,063,563,000港元。

NOTES TO THE INTERIM CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

中期簡明綜合財務報表附註

FOR THE SIX MONTHS ENDED 30 JUNE 2018

截至二零一八年六月三十日止六個月

2.1. BASIS OF PREPARATION (continued)

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.

2.1. 編製基準(續)

本公司董事現正考慮監察及改善本集團現金流量之措施，其包括但不限於收回應收漢能控股集團有限公司(「漢能控股」)及其聯屬公司(統稱「漢能聯屬公司」)及製造業務所開發之第三方客戶之貿易應收款項，以及發展下游業務。本集團於二零一八年三月二十七日收到漢能聯屬公司之貿易應收款項以及逾期貿易應收款項之罰息的全數還款，金額分別為2,283,175,000港元及194,394,000港元。本集團亦收到一名擁有長賬齡及欠付本集團之逾期應收款項之第三方客戶所支付的616,396,000港元，以結付部分於二零一八年上半年到期之貿易應收款項。此外，本集團亦收到製造業務之第三方客戶定期還款，以償付到期貿易應收款項。於二零一八年六月三十日後及直至二零一八年八月三十日(財務報表獲批准刊發之日期)，本集團已自整線生產線客戶收取總額6,083,817,000港元。本集團亦已投放大量資源及精力於下游光伏應用、移動產品及太陽能扶貧項目。於二零一八年六月三十日，本集團約有超過一千名活躍的經銷商，涵蓋中國內地大部分城鎮市場。

鑑於上述本集團之措施，本公司董事認為本集團將擁有充足營運資金撥支其營運，且可應付可見將來之到期負債。故此，本公司董事認為此等中期簡明綜合財務報表以持續經營基準編製乃屬恰當。

NOTES TO THE INTERIM CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

中期簡明綜合財務報表附註

FOR THE SIX MONTHS ENDED 30 JUNE 2018

截至二零一八年六月三十日止六個月

2.1. BASIS OF PREPARATION (continued)

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.

2.2. 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>Foreign Currency Translation and Advance Consideration</i>
Annual Improvements 2014-2016 Cycle	<i>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.

2.1. 編製基準(續)

中期簡明綜合財務報表並不包括年度財務報表須作出之一切資料及披露，且應與本集團截至二零一七年十二月三十一日止年度之年度財務報表一併閱覽。本集團之獨立核數師已就本集團截至二零一七年十二月三十一日止年度之綜合財務報表發表有保留意見。

2.2. 會計政策及披露資料變動

本集團於本會計期間採納之相關及生效新訂會計準則及詮釋(包括香港會計師公會所頒佈之所有新訂及經修訂香港財務報告準則、香港會計準則及詮釋，統稱「香港財務報告準則」)概述如下：

香港財務報告準則第2號之修訂本	以股份支付之交易分類及計量
香港財務報告準則第9號	金融工具
香港財務報告準則第15號	與客戶簽訂合同之收入
香港財務報告準則第15號之修訂本	香港財務報告準則第15號與客戶簽訂合同之收入之澄清
香港(國際財務報告詮釋委員會)一詮釋第22號	外幣交易及預付代價
二零一四年至二零一六年週期之年度改進	香港財務報告準則第1號及香港財務報告準則第28號之修訂本

除下文闡釋有關香港財務報告準則第9號、香港財務報告準則第15號及香港財務報告準則第15號修訂本之影響外，採納上述經修訂準則對本集團之中期簡明綜合財務報表並無重大財務影響。

NOTES TO THE INTERIM CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

中期簡明綜合財務報表附註

FOR THE SIX MONTHS ENDED 30 JUNE 2018

截至二零一八年六月三十日止六個月

2.2. CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES (continued)

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").

2.2. 會計政策及披露資料變動(續)

該等變動之性質及影響闡述如下：

香港財務報告準則第9號金融工具

香港財務報告準則第9號金融工具取代香港會計準則第39號金融工具：確認及計量，於二零一八年一月一日或之後開始之年度期間，匯集金融工具入賬之全部三個方面，即分類及計量、減值及對沖會計。自二零一八年一月一日起採納香港財務報告準則第9號導致會計政策之改變及財務報表已確認金額之調整。根據香港財務報告準則第9號之過渡條文，比較數字並未重列。有關分類及計量以及減值規定之影響概述如下：

(1) 分類及計量

除應收款項以外，根據香港財務報告準則第9號，本集團金融資產初步按公平值加(倘若並非按公平值計入損益之金融資產)交易成本。

根據香港財務報告準則第9號，債務金融工具其後以按公平值計入損益、攤銷成本或按公平值計入其他全面收益。該分類乃根據兩項標準而定：本集團管理資產的業務模式；及工具的約定現金流量是否為未償付本金之「僅支付本金及利息」(「SPPI標準」)。

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截至二零一八年六月三十日止六個月

2.2. CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES (continued)

HKFRS 9 *Financial Instruments* (continued)

(1) *Classification and measurement* (continued)

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, bills receivable, 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.

2.2. 會計政策及披露資料變動(續)

香港財務報告準則第9號金融工具(續)

(1) 分類及計量(續)

本集團債務金融資產之新分類及計量如下：

- 按攤銷成本計量之債務工具指於目的為持有金融資產以收取符合SPPI標準之約定現金流量之業務模式內持有。此類別包括本集團之貿易應收款項、合同資產、應收票據及計入其他應收款項及按金之金融資產。

其他金融資產分類及其後計量如下：

- 按公平值計入其他全面收益計量之權益工具於終止確認時並不會回撥收益或虧損至損益。此分類值包括本集團擬為可見將來持有及於初始確認或過渡後本集團不可撤回選擇如此分類之權益工具。本集團將其無報價權益工具分類為按公平值計入其他全面收益之權益工具。按公平值計入其他全面收益之權益工具毋須根據香港財務報告準則第9號作出減值評估。根據香港會計準則第39號，本集團之無報價權益工具已分類為可供出售金融投資及按成本減去減值虧損計量。

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截至二零一八年六月三十日止六個月

2.2. CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES (continued)

HKFRS 9 *Financial Instruments* (continued)

(1) *Classification and measurement* (continued)

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.

2.2. 會計政策及披露資料變動(續)

香港財務報告準則第9號金融工具(續)

(1) 分類及計量(續)

本集團於首次應用日期(即二零一八年一月一日)評估業務模式，且其後對於二零一八年一月一日前並未終止確認之金融資產追溯應用該準則。評估債務工具之約定現金流量是否僅包括本金及利息乃基於初步確認有關資產時之事實及情況作出。

本集團金融負債之入賬與香港會計準則第39號大致相同。與香港會計準則第39號之規定類似，香港財務報告準則第9號規定或然代價負債以按公平值計量之金融工具處理，其公平值變動於損益確認。

本集團選擇將其所有先前分類為可供出售之權益投資公平值變動於其他全面收益中呈列，原因是該等投資乃持作長期策略投資及預期不會於中短期內出售。因此，於二零一八年一月一日之綜合財務狀況表已重列，賬面值為66,097,000港元之資產已由可供出售金融投資重新分類至按公平值計入其他全面收益之金融資產及並無回撥，以其他投資呈列。同時，由於該等被投資方自本集團作出投資以來仍在建設階段及並無營運，故其公平值與其於二零一八年一月一日之成本相若，且於二零一八年一月一日並無確認任何公平值變動。

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2.2. CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES (continued)

HKFRS 9 *Financial Instruments* (continued)

(2) Impairment

HKFRS 9 requires an impairment on trade receivables, contract assets, other receivables and bills receivable 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.

2.2. 會計政策及披露資料變動(續)

香港財務報告準則第9號金融工具(續)

(2) 減值

香港財務報告準則第9號規定須就並無根據香港財務報告準則第9號按公平值計入損益入賬之貿易應收款項、合同資產、其他應收款項及應收票據作出減值，而有關減值按十二個月或年期之預期信貸虧損入賬。本集團就其貿易應收款項及合同資產應用簡易方法及按年期預期虧損入賬。本集團就其其他應收款項及應收票據應用一般方法及按十二個月預期虧損入賬。採納香港財務報告準則第9號對本集團之金融資產減值並無重大影響。

香港財務報告準則第15號與客戶簽訂合同之收入

香港財務報告準則第15號取代香港會計準則第11號建設合同、香港會計準則第18號收入及相關詮釋，並適用於所有與客戶簽訂合同之收入，除非有關合同屬於其他準則的範圍。該新準則建立一個五步模式，將與客戶簽訂合同之收入入賬。根據香港財務報告準則第15號，收入按反映實體預期就轉讓貨品或服務予客戶可得代價之金額確認。

該準則規定實體行使判斷，並考慮就客戶合同應用該模式之每一步驟時之所有相關事實及情況。該準則亦訂明取得合同之遞增成本以及與履行合同直接相關之成本之入賬。

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2.2. CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES (continued)

HKFRS 15 *Revenue from Contracts with Customers* (continued)

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.

2.2. 會計政策及披露資料變動(續)

香港財務報告準則第15號與客戶簽訂合同之收入(續)

本集團選擇使用經修訂追溯方法採納香港財務報告準則第15號，令本集團可確認初次應用香港財務報告準則第15號之累計影響，並對於二零一八年一月一日之保留溢利期初結餘作出調整。本集團選擇就已完成合同應用可行權宜方法，且並無重列於二零一八年一月一日前已完成之合同，因此並無重列比較數字。

確認收入

收入於資產的控制權轉移至客戶時確認。視乎合同條款及適用於合同的法律，資產的控制權可能隨時間或於某一時點轉移。倘本集團的履約符合以下條件，則資產的控制權隨時間轉移：

- 當客戶同時接獲及消耗本集團履約時提供的所有利益；
- 當本集團履約時創造及提升由客戶控制的資產；或
- 當本集團履約所創造的資產並無為本集團提供其他用途及本集團擁有可強制執行權利收取迄今已完成履約的款項。

倘資產的控制權於一段時間內轉移，則收入按完成履行有關履約責任的進度於合同期間確認。否則，收入於客戶取得資產控制權之時點確認。

完成履行履約責任的進度按本集團為履行履約責任的支出或投入，參照每份合同截至報告期末已產生合同成本佔該合同總估計成本的百分比計量。

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2.2. CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES (continued)

HKFRS 15 *Revenue from Contracts with Customers* (continued)

(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:

		Accumulated losses 累計虧損 HK\$'000 千港元
Closing balance as at 31 December 2017	於二零一七年十二月三十一日之 期末結餘	(3,429,313)
Adjustment from adoption of HKFRS 15 on 1 January 2018 (note)	自二零一八年一月一日起採納香港財務報告準則第15號之調整 (附註)	392,359
Opening balance as of 1 January 2018	於二零一八年一月一日之 期初結餘	(3,036,954)

2.2. 會計政策及披露資料變動(續)

香港財務報告準則第15號與客戶簽訂合同之收入(續)

(a) 與客戶簽訂建設合同之收入的入賬

於採納香港財務報告準則第15號之前，來自固定價格建設合同的收入使用完成百分比的方法確認，並參考迄今已產生成本佔相關合同估計總成本的比例計量。

採納香港財務報告準則第15號後，本集團之履約創造或提升於有關資產獲創造或提升時由客戶控制的資產或在建工程，故此，本集團於一段時間內履行履約責任及參照特定交易的完成情況(按每份合同截至報告期末已產生成本佔該合同總估計成本的百分比評估)繼續隨時間確認收入。採納香港財務報告準則第15號對於二零一八年一月一日之期初累計虧損有以下影響：

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2.2. CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES (continued)

HKFRS 15 *Revenue from Contracts with Customers* (continued)

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

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.

2.2. 會計政策及披露資料變動(續)

香港財務報告準則第15號與客戶簽訂合同之收入(續)

(a) 與客戶簽訂建設合同之收入的入賬(續)

附註: 有關調整乃由於1)製造整線生產線之保證保養入賬有所變動，根據香港會計準則第11號，保證保養先前按估計預算成本總額之一部分入賬，而根據香港會計準則第37號撥備、或然負債及或然資產，其現時按遞延負債於其他應付款項入賬；及2)製造整線生產線之未安裝材料之入賬有所變動，未安裝材料先前按完成百分比方法入賬，惟現時按未安裝材料產生之實際成本入賬為收入及不會確認相關溢利。

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2.2. CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES (continued)

HKFRS 15 *Revenue from Contracts with Customers* (continued)

(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.

2.2. 會計政策及披露資料變動(續)

香港財務報告準則第15號與客戶簽訂合同之收入(續)

(b) 銷售貨品(包括光伏發電項目)

本集團有關銷售貨品之客戶合同一般包括一項履約責任。

根據香港財務報告準則第15號，收入於資產控制權轉移至客戶(一般為交付貨品時)之時點確認。銷售其非流動資產分類為存貨之光伏發電項目於綜合損益及其他全面收益表中「與客戶簽訂合同之收入」項下，並按於有關光伏發電項目份額之總價格加與有關設施之淨借貸(總債務減流動資產)之金額確認。同時，相關存貨終止確認，並於綜合損益及其他全面收益表中支銷。該兩筆金額之間的差額為銷售獲得之營運溢利或虧損。每個光伏發電項目採納私人有限公司的法律架構，其財務報表於隨附綜合財務報表全數綜合入賬。

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2.2. CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES (continued)

HKFRS 15 *Revenue from Contracts with Customers*
(continued)

(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.

2.2. 會計政策及披露資料變動(續)

香港財務報告準則第15號與客戶簽訂合同之收入(續)

(c) 銷售予經銷商

本集團透過經銷商銷售屋頂太陽能系統及於經銷商符合若干先決條件下提供批量折扣。

根據香港財務報告準則第15號，本集團評估就銷售予經銷商存有兩項可識別履約責任：(i) 已交付屋頂太陽能系統之銷售收入於屋頂太陽能系統之控制權轉移至客戶之時點(一般為交付該等系統時)確認；(ii) 遞延安裝服務收入及其後於履行安裝服務之時點確認收入。

倘客戶獲提供批量折扣，則交易價格被視為可變。僅在有關可變代價之不確定因素其後已解決，令已確認累計收入金額不太可能出現重大回撥之情況下，本集團須估計其於出售已交付屋頂太陽能系統可收取之代價金額及將計入交易價格之估計可變代價金額。本集團已決定使用預期價值方法估計將授出批量折扣之金額，原因是此方法可更佳預測本集團可取得之可變代價金額。本集團評估於其採納香港財務報告準則第15號時，減少批量折扣收入之過渡調整為零，原因是所有批量折扣已於二零一七年底前提供。本集團於採納香港財務報告準則第15號後，於綜合財務狀況表將向經銷商提供批量折扣之收入減少影響入賬為遞延收入。

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2.2. CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES (continued)

HKFRS 15 *Revenue from Contracts with Customers* (continued)

(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.

2.2. 會計政策及披露資料變動(續)

香港財務報告準則第15號與客戶簽訂合同之收入(續)

(d) 銷售電力

根據香港財務報告準則第15號，銷售電力之收入於傳輸電力予購買電力公司或省級電網公司之時點確認。

(e) 提供服務

根據香港財務報告準則第15號，提供服務之收入於提供服務之時點確認。

(f) 客戶預付款

採納香港財務報告準則第15號之前，本集團於綜合財務狀況表之其他應付款項及應計費用下呈列有關本集團整線生產線建設合同及下游經銷商之客戶預付款。

採納香港財務報告準則第15號後，就短期墊款而言，本集團使用可行權宜的方法，且倘涉及之期間為一年或以下，則不會確認與客戶之重大融資部分之影響。此外，已將客戶預付款之未償付結餘由其他應付款項及應計費用重新分類至合同負債。採納香港財務報告準則第15號對於二零一八年一月一日之期初保留溢利並無重大影響。先前分類為其他應付款項及應計費用項下之客戶預付款5,239,848,000港元已重新分類至於二零一八年一月一日之合同負債。

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2.2. CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES (continued)

HKFRS 15 *Revenue from Contracts with Customers*
(continued)

(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.

2.2. 會計政策及披露資料變動(續)

香港財務報告準則第15號與客戶簽訂合同之收入(續)

(g) 呈列及披露規定

由於中期簡明財務報表規定，本集團將就客戶合同確認之收入分拆，並按描述有關收入之性質、金額、時間及不確定因素以及現金流量如何受經濟因素影響之類別劃分該等收入。本集團亦披露已分拆收入及各個可呈報分部披露之收入資料之間關係之資料。已分拆收入之披露資料請參閱附註4。

採納香港財務報告準則第15號後，於二零一八年一月一日之綜合財務狀況表已重新分類，導致確認即期合同負債5,239,848,000港元及其他應付款項及應計費用減少5,239,848,000港元，以及確認合同資產2,400,660,000港元及應收合同客戶總額減少2,400,660,000港元。累計虧損之期初結餘影響為392,359,000港元，受經重列期初結餘影響之其他項目包括貿易應收款項增加224,030,000港元、合同資產增加418,864,000港元、其他應付款項及應計費用增加118,850,000港元以及遞延稅項負債增加131,685,000港元。

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2.2. CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES (continued)

HKFRS 15 *Revenue from Contracts with Customers* (continued)

(g) *Presentation and disclosure requirements* (continued)

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

¹ Effective for annual periods beginning on or after 1 January 2019

² Effective for annual periods beginning on or after 1 January 2021

³ No mandatory effective date yet determined but available for adoption

2.2. 會計政策及披露資料變動(續)

香港財務報告準則第15號與客戶簽訂合同之收入(續)

(g) 呈列及披露規定(續)

本集團並無於中期簡明綜合財務報表提早應用任何已頒佈但尚未生效之新訂及經修訂香港財務報告準則。

香港財務報告準則第9號之修訂本	具有負補償的預付款特性 ¹
香港財務報告準則第10號及香港會計準則第28號之修訂本(二零一一年)	投資者及其聯營公司或合資企業之間之資產出售或注資 ³
香港財務報告準則第16號	租賃 ¹
香港財務報告準則第17號	保險合同 ²
香港會計準則第19號之修訂本	僱員福利 — 精算收益及虧損、集團計劃及披露 ¹
香港會計準則第28號之修訂本	於聯營公司或合資企業之長期權益 ¹
香港(國際財務報告詮釋委員會) — 詮釋第23號	所得稅處理之不確定性 ¹
二零一五年至二零一七年週期之年度改進	香港財務報告準則第3號、香港財務報告準則第11號、香港會計準則第12號及香港會計準則第23號之修訂本 ¹

¹ 於二零一九年一月一日或之後開始之年度期間生效

² 於二零二一年一月一日或之後開始之年度期間生效

³ 尚未釐定強制生效日期，惟可供採納

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2.2. CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES (continued)

HKFRS 15 *Revenue from Contracts with Customers*
(continued)

(g) *Presentation and disclosure requirements*
(continued)

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");

2.2. 會計政策及披露資料變動(續)

香港財務報告準則第15號與客戶簽訂合同之收入(續)

(g) 呈列及披露規定(續)

本集團現正評估首次應用新訂及經修訂香港財務報告準則後之影響，當中可能與本集團之營運有關及可能導致本集團會計政策變動，以及本集團中期簡明綜合財務報表若干項目之呈列及計量有所變動。

3. 經營分部資料

本集團根據向執行董事呈報以供彼等就分配資源至本集團業務部分及審核該等部分表現作出決定之定期內部財務資料識別經營分部及編製分部資料。向執行董事呈報之內部財務資料內之業務部分乃按本集團主要產品及服務類別釐定。

就管理目的而言，本集團根據其產品及服務組織業務單位，並有兩個可呈報經營分部如下：

- 製造矽基及銅銦鎵硒(「CIGS」)薄膜太陽能光伏組件製造用設備及整線生產線及砷化鎵(「GaAs」)薄膜發電整線生產線技術開發及生產(「製造」)；

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3. OPERATING SEGMENT INFORMATION

(continued)

- 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.

3. 經營分部資料(續)

- 建造太陽能電場、屋頂電站、戶用系統、中小企業(「中小企」)商用系統等，並銷售發電站、經營屋頂電站、銷售太陽能光伏組件、應用產品及電力，及提供工程服務(「下游」)

管理層獨立監察本集團經營分部之業績以作出有關資源分配及評估分部表現之決策。分部表現乃根據可呈報分部溢利或虧損(即經調整稅前溢利或虧損計量基準)而評估。經調整稅前溢利或虧損之計量方式與本集團之稅前溢利之計算方式貫徹一致，惟該計量不包括某些利息收入以及總辦事處及企業開支。

分部資產不包括遞延稅項資產，其他投資及其他未分配總辦事處及企業資產，原因是該等資產乃集體管理。

分部負債不包括遞延稅項負債及其他未分配總辦事處及企業負債，原因是該等負債乃集體管理。

分部間銷售乃參考按當時之現行市價銷售予第三方所使用之銷售價進行交易。

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3. OPERATING SEGMENT INFORMATION

(continued)

3. 經營分部資料(續)

For the six months ended 30 June 2018 (Unaudited)	截至二零一八年六月三十日 止六個月(未經審核)	Manufacturing 製造 HK\$'000 千港元	Downstream 下游 HK\$'000 千港元	Total 合計 HK\$'000 千港元
Segment Revenue	分部收入			
Sales to external customers	向外部客戶銷售	19,084,486	1,330,040	20,414,526
Segment Results	分部業績	11,189,817	(1,033,225)	10,156,592
Including:	包括:			
Interest income	利息收入	4,701	8,305	13,006
Finance costs	財務費用	(20,614)	(2,109)	(22,723)
Research and development costs	研發成本	(387,140)	(114,964)	(502,104)
<i>Reconciliation of segment results:</i>	<i>分部業績對賬:</i>			
Segment results	分部業績			10,156,592
Interest income	利息收入			4,139
Unallocated other income and gains	未分配其他收入及收益			10,763
Finance cost	財務費用			(922)
Corporate and other unallocated expense	企業及其他未分配費用			(111,911)
Profit before tax	稅前溢利			10,058,661
As at 30 June 2018 (Unaudited)	於二零一八年六月三十日 (未經審核)	Manufacturing 製造 HK\$'000 千港元	Downstream 下游 HK\$'000 千港元	Total 合計 HK\$'000 千港元
Segment Assets	分部資產	29,657,396	4,029,143	33,686,539
<i>Reconciliation:</i>	<i>對賬:</i>			
Elimination of intersegment receivables	對銷分部間應收款項			(2,276,371)
Other investments	其他投資			65,534
Deferred tax assets	遞延稅項資產			33,179
Corporate and other unallocated assets	企業及其他未分配資產			510,964
Total Assets	資產總額			32,019,845
Segment Liabilities	分部負債	10,257,085	5,315,423	15,572,508
<i>Reconciliation:</i>	<i>對賬:</i>			
Elimination of intersegment payables	對銷分部間應付款項			(2,276,371)
Deferred tax liabilities	遞延稅項負債			2,522,973
Corporate and other unallocated liabilities	企業及其他未分配負債			80,474
Total Liabilities	負債總額			15,899,584

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3. OPERATING SEGMENT INFORMATION

(continued)

For the six months ended 30 June 2018 (Unaudited)	截至二零一八年六月三十日 止六個月(未經審核)	Manufacturing 製造 HK\$'000 千港元	Downstream 下游 HK\$'000 千港元	Total 合計 HK\$'000 千港元
Other Segment Information	其他分部資料			
Depreciation and amortisation	折舊及攤銷	10,429	27,007	37,436
<i>Reconciliation:</i>	<i>對賬:</i>			
Corporate and other unallocated depreciation and amortisation	企業及其他未分配折舊及 攤銷			147
Total depreciation and amortisation	折舊及攤銷總額			37,583
Capital expenditure*	資本開支*	109,279	74,403	183,682
<i>Reconciliation:</i>	<i>對賬:</i>			
Corporate and other unallocated capital expenditure	企業及其他未分配資本開支			6
Total capital expenditure	資本開支總額			183,688

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

* 資本開支包括添置物業、廠房及設備以及無形資產。

For the six months ended 30 June 2017 (Unaudited)	截至二零一七年六月三十日 止六個月(未經審核)	Manufacturing 製造 HK\$'000 千港元	Downstream 下游 HK\$'000 千港元	Total 合計 HK\$'000 千港元
Segment Revenue	分部收入			
Sales to external customers	向外部客戶銷售	1,726,175	1,127,739	2,853,914
Segment Results	分部業績	565,713	(274,595)	291,118
<i>Including:</i>	<i>包括:</i>			
Interest income	利息收入	631	966	1,597
Finance costs	財務費用	(27,192)	(2,912)	(30,104)
Research and development costs	研發成本	(247,758)	(505)	(248,263)
<i>Reconciliation of segment results:</i>	<i>分部業績對賬:</i>			
Segment results	分部業績			291,118
Interest income	利息收入			8,670
Unallocated other income and gains	未分配其他收入及收益			51,185
Corporate and other unallocated expense	企業及其他未分配費用			(104,064)
Profit before tax	稅前溢利			246,909

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3. OPERATING SEGMENT INFORMATION

(continued)

As at 30 June 2017 (Unaudited)	於二零一七年六月三十日 (未經審核)	Manufacturing 製造 HK\$'000 千港元	Downstream 下游 HK\$'000 千港元	Total 合計 HK\$'000 千港元
Segment Assets	分部資產	12,560,204	5,766,470	18,326,674
<i>Reconciliation:</i>	<i>對賬:</i>			
Elimination of intersegment receivables	對銷分部間應收款項			(2,845,292)
Corporate and other unallocated assets	企業及其他未分配資產			359,333
Total Assets	資產總額			15,840,715
Segment Liabilities	分部負債	5,046,284	5,368,333	10,414,617
<i>Reconciliation:</i>	<i>對賬:</i>			
Elimination of intersegment payables	對銷分部間應付款項			(2,845,292)
Deferred tax liabilities	遞延稅項負債			401,220
Corporate and other unallocated liabilities	企業及其他未分配負債			63,503
Total Liabilities	負債總額			8,034,048
For the six months ended 30 June 2017 (Unaudited)	截至二零一七年六月三十日 止六個月(未經審核)	Manufacturing 製造 HK\$'000 千港元	Downstream 下游 HK\$'000 千港元	Total 合計 HK\$'000 千港元
Other Segment Information	其他分部資料			
Depreciation and amortisation	折舊及攤銷	1,979	26,032	28,011
<i>Reconciliation:</i>	<i>對賬:</i>			
Corporate and other unallocated depreciation and amortisation	企業及其他未分配折舊及攤銷			228
Total depreciation and amortisation	折舊及攤銷總額			28,239
Capital expenditure*	資本開支*	15,874	4,772	20,646
<i>Reconciliation:</i>	<i>對賬:</i>			
Corporate and other unallocated capital expenditure	企業及其他未分配資本開支			—
Total capital expenditure	資本開支總額			20,646

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

* 資本開支包括添置物業、廠房及設備以及無形資產。

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3. OPERATING SEGMENT INFORMATION

(continued)

Geographical information

(a) Revenue from external customers

		Six months ended 30 June 截至六月三十日止六個月	
		2018 二零一八年 HK\$'000 千港元 (Unaudited) (未經審核)	2017 二零一七年 HK\$'000 千港元 (Unaudited) (未經審核)
Mainland China	中國內地	20,371,946	2,840,857
United Kingdom	英國	440	1,491
United States	美國	29,187	7,431
Others	其他	12,953	4,135
		20,414,526	2,853,914

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

上文之收入資料，乃根據交付產品或提供服務之地點呈列。

3. 經營分部資料(續)

地區資料

(a) 來自外來客戶之收入

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3. OPERATING SEGMENT INFORMATION

(continued)

Geographical information (continued)

(b) *Non-current assets*

		30 June 2018 二零一八年 六月三十日 HK\$'000 千港元 (Unaudited) (未經審核)	31 December 2017 二零一七年 十二月三十一日 HK\$'000 千港元 (Audited) (經審核)
Mainland China	中國內地	416,401	315,213
United States	美國	446,952	365,272
Hong Kong	香港	417	566
United Kingdom	英國	9,535	10,254
Others	其他	21,451	15,039
		894,756	706,344

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

上文之非流動資產資料乃根據資產之所在地呈列。

3. 經營分部資料(續)

地區資料(續)

(b) *非流動資產*

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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	分部	Manufacturing 製造 HK\$'000 千港元	Downstream 下游 HK\$'000 千港元	Total 總計 HK\$'000 千港元
Type of goods or services	貨品或服務類別			
Contract revenue from construction contracts	建設合同收入	19,055,336	387,492	19,442,828
Sales of solar photovoltaic panels	銷售太陽能光伏電池板	29,150	389,411	418,561
Sales of rooftop solar power systems	銷售屋頂太陽能系統	—	518,516	518,516
Sales of photovoltaic application	銷售光伏應用產品	—	21,720	21,720
Sales of electricity	銷售電力	—	12,901	12,901
Total revenue from contracts with customers	與客戶簽訂合同之收入總額	19,084,486	1,330,040	20,414,526
Geographical markets	地區市場			
Mainland China	中國內地	19,055,336	1,316,610	20,371,946
United Kingdom	英國	—	440	440
United States	美國	29,150	37	29,187
Others	其他	—	12,953	12,953
Total revenue from contracts with customers	與客戶簽訂合同之收入總額	19,084,486	1,330,040	20,414,526
Timing of revenue recognition	確認收入時間			
Construction contracts delivered over time	隨時間確認已交付建設合同	19,055,336	387,492	19,442,828
Goods or services transferred at a point in time	於某一時點確認已轉讓貨品或服務	29,150	942,548	971,698
Total revenue from contracts with customers	與客戶簽訂合同之收入總額	19,084,486	1,330,040	20,414,526

4. 與客戶簽訂合同之收入

以下載列本集團與客戶簽訂合同之收入的分拆：

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4. REVENUE FROM CONTRACTS WITH CUSTOMERS (continued)

For the six months ended 30 June 2017 (unaudited)

4. 與客戶簽訂合同之收入(續)

截至二零一七年六月三十日止六個月
(未經審核)

Segments	分部	Manufacturing 製造 HK\$'000 千港元	Downstream 下游 HK\$'000 千港元	Total 總計 HK\$'000 千港元
Type of goods or services	貨品或服務類別			
Contract revenue from construction contracts	建設合同收入	1,718,768	82,651	1,801,419
Sales of solar photovoltaic panels	銷售太陽能光伏電池板	7,407	2,154	9,561
Sales of rooftop solar power systems	銷售屋頂太陽能系統	—	1,017,831	1,017,831
Sales of photovoltaic application	銷售光伏應用產品	—	4,657	4,657
Sales of electricity	銷售電力	—	20,446	20,446
Total revenue from contracts with customers	與客戶簽訂合同之收入總額	1,726,175	1,127,739	2,853,914
Geographical markets	地區市場			
Mainland China	中國內地	1,718,768	1,122,089	2,840,857
United Kingdom	英國	—	1,491	1,491
United States	美國	7,407	24	7,431
Others	其他	—	4,135	4,135
Total revenue from contracts with customers	與客戶簽訂合同之收入總額	1,726,175	1,127,739	2,853,914
Timing of revenue recognition	確認收入時間			
Construction contracts delivered over time	隨時間確認已交付建設合同	1,718,768	82,651	1,801,419
Goods or services transferred at a point in time	於某一時點確認已轉讓貨品或服務	7,407	1,045,088	1,052,495
Total revenue from contracts with customers	與客戶簽訂合同之收入總額	1,726,175	1,127,739	2,853,914

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4. REVENUE FROM CONTRACTS WITH CUSTOMERS (continued)

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)

Revenue	收入	Manufacturing 製造 HK\$'000 千港元	Downstream 下游 HK\$'000 千港元
External customers	外部客戶	19,084,486	1,330,040
Total revenue from contracts with customers	與客戶簽訂合同之收入總額	19,084,486	1,330,040

For the six months ended 30 June 2017 (unaudited)

Revenue	收入	Manufacturing 製造 HK\$'000 千港元	Downstream 下游 HK\$'000 千港元
External customers	外部客戶	1,726,175	1,127,739
Total revenue from contracts with customers	與客戶簽訂合同之收入總額	1,726,175	1,127,739

4. 與客戶簽訂合同之收入(續)

下表載列與客戶簽訂合同之收入與分部資料披露金額的對賬：

截至二零一八年六月三十日止六個月
(未經審核)

截至二零一七年六月三十日止六個月
(未經審核)

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5. OTHER INCOME AND GAINS

5. 其他收入及收益

		Six months ended 30 June	
		截至六月三十日止六個月	
		2018	2017
		二零一八年	二零一七年
		HK\$'000	HK\$'000
		千港元	千港元
		(Unaudited)	(Unaudited)
		(未經審核)	(未經審核)
Government grants*	政府補貼*	21,867	944
Bank interest income	銀行利息收入	2,317	2,460
Other interest income	其他利息收入	14,828	7,807
Gain on sales of spare parts	銷售零部件之收益	163	26
Gain on provision of services	提供服務之收益	5,529	8,753
Foreign exchange gain, net	匯兌收益，淨額	—	53,525
Others	其他	8,005	5,959
		52,709	79,474

* Government grants are tax refunds and funds for the research and innovation works of the Group's subsidiaries to which the related expenses have already been incurred.

* 政府補貼指就已產生相關開支之本集團附屬公司的研究及創新工作而退回之稅款及資金。

6. FINANCE COSTS

6. 財務費用

		Six months ended 30 June	
		截至六月三十日止六個月	
		2018	2017
		二零一八年	二零一七年
		HK\$'000	HK\$'000
		千港元	千港元
		(Unaudited)	(Unaudited)
		(未經審核)	(未經審核)
Interest on other borrowings from related parties	應付關聯方其他借款之利息	6,321	7,687
Interest on other borrowings from unrelated third parties	應付無關聯第三方其他借款之利息	12,154	17,507
Interest on bank borrowings	銀行借款利息	5,170	4,910
Total interest expenses	利息開支總額	23,645	30,104
Less: Capitalised interest	減：資本化利息	—	—
		23,645	30,104

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7. PROFIT BEFORE TAX

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

7. 稅前溢利

本集團之稅前溢利已扣除/(計入)下列項目：

		Six months ended 30 June	
		截至六月三十日止六個月	
		2018	2017
		二零一八年	二零一七年
		HK\$'000	HK\$'000
		千港元	千港元
		(Unaudited)	(Unaudited)
		(未經審核)	(未經審核)
Reversal of impairment of other receivables	其他應收款項減值轉回	—	(11,222)
Reversal of inventories provision	存貨撥備轉回	(44,402)	(3,229)
Reversal of impairment of trade receivables (note 13)	貿易應收款項減值轉回 (附註 13)	(54,165)	(729)
Loss on disposal of items of property, plant and equipment (note 11)	出售物業、廠房及設備項目之虧損(附註 11)	837	210
Loss on disposal of a subsidiary	出售一間附屬公司虧損	—	581
Impairment of trade receivables (note 13)	貿易應收款項減值 (附註 13)	101,018	917
Impairment of prepayment	預付賬款減值	—	1,156
Write-off of other receivables (note 15)	撇銷其他應收款項 (附註 15)	12,132	2,217
Write-down of inventories to net realisable value	存貨撇減至可變現淨值	43,386	23,855
Equity-settled share option expenses	以權益結算的股份期權開支	7,032	12,700
Depreciation of items of property, plant and equipment	物業、廠房及設備項目之折舊	36,141	27,560
Amortisation of intangible assets	無形資產攤銷	1,442	679
Product warranty provision (note 18(iv))	產品保養撥備(附註 18(iv))	242,505	31,065

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8. 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:

8. 所得稅

本集團期內所得稅支出之計算乃使用預期年度盈利總額適用之稅率。於中期簡明綜合損益及其他全面收益表之所得稅支出之主要組成部分如下：

		Six months ended	
		30 June	
		截至六月三十日止六個月	
		2018	2017
		二零一八年	二零一七年
		HK\$'000	HK\$'000
		千港元	千港元
		(Unaudited)	(Unaudited)
		(未經審核)	(未經審核)
Current tax:	即期稅項：		
— The PRC	— 中國		
Income tax expense for the period	本期間所得稅支出	844,261	2,112
Deferred tax charge:	遞延稅項支出：		
Current period	本期間	1,885,371	—
Total tax charge for the period	本期間稅務支出總額	2,729,632	2,112

9. INTERIM DIVIDEND

The Board does not recommend to declare an interim dividend for the six months ended 30 June 2018 (2017: nil).

9. 中期股息

董事會不建議宣派截至二零一八年六月三十日止六個月之中期股息(二零一七年：無)。

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10. EARNINGS PER SHARE ATTRIBUTABLE TO OWNERS OF THE PARENT

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

10. 母公司擁有人應佔每股盈利

每股基本及攤薄盈利乃根據下列項目計算：

	Six months ended 30 June 截至六月三十日止六個月	
	2018 二零一八年 HK\$'000 千港元 (Unaudited) (未經審核)	2017 二零一七年 HK\$'000 千港元 (Unaudited) (未經審核)
Earnings for the period		
Profit attributable to owners of the parent, for the purpose of basic and diluted earnings per share calculations	7,328,970	244,812

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.

本集團的未行使購股權及認購權可能對未來的每股基本盈利構成潛在攤薄影響，但有關購股權因具有反攤薄影響，因而在計算截至二零一八年六月三十日止六個月期間的每股攤薄盈利時並未計算在內。

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10. EARNINGS PER SHARE ATTRIBUTABLE TO OWNERS OF THE PARENT (continued) 10. 母公司擁有人應佔每股盈利(續)

		Number of shares 股份數目	
		Six months ended 30 June 截至六月三十日止六個月	
		2018 二零一八年	2017 二零一七年
		'000 千股	'000 千股
Shares	股份		
Weighted average number of ordinary shares in issue during the period used in basic earnings per share calculation	用作計算每股基本盈利之本期間已發行普通股加權平均數	42,145,676	41,859,051
Effect of dilution — weighted average number of ordinary shares:	攤薄影響 — 普通股加權平均數：		
Assumed issue at no consideration on deemed exercise of all share options outstanding during the period	本期間視作行使所有未行使購股權而假設無償發行	—	—
Deemed exercise by Hanergy Holding of all outstanding subscription rights	視作漢能控股行使所有未行使認購權	1,831,592	920,004
Weighted average number of ordinary shares in issue during the period used in diluted earnings per share calculation	用作計算每股攤薄盈利之本期間已發行普通股加權平均數	43,977,268	42,779,055

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11. PROPERTY, PLANT AND EQUIPMENT

During the six months ended 30 June 2018, the Group acquired property, plant and equipment at a total cost of HK\$156,130,000 (for the six months ended 30 June 2017: HK\$20,541,000). Assets with a net book value of HK\$2,030,000 were disposed of by the Group during the six months ended 30 June 2018 (for the six months ended 30 June 2017: HK\$3,902,000), resulting in a net loss on disposal of items of property, plant and equipment of HK\$837,000 (for the six months ended 30 June 2017: HK\$210,000).

12. INVENTORIES

		30 June 2018 二零一八年 六月三十日 HK\$'000 千港元 (Unaudited) (未經審核)	31 December 2017 二零一七年 十二月三十一日 HK\$'000 千港元 (Audited) (經審核)
Raw materials	原料	2,244,542	1,432,109
Photovoltaic modules	光伏組件	380,706	370,251
Photovoltaic application products	光伏應用產品	20,812	8,749
Photovoltaic power generation projects to be sold	將予出售之光伏發電項目	198,139	195,905
		2,844,199	2,007,014
Less: impairment provision	減：減值撥備	(316,438)	(317,344)
		2,527,761	1,689,670

During the six months ended 30 June 2018, provision for impairment of inventories was HK\$316,438,000 (31 December 2017: HK\$317,344,000).

11. 物業、廠房及設備

截至二零一八年六月三十日止六個月，本集團以總成本156,130,000港元(截至二零一七年六月三十日止六個月：20,541,000港元)收購物業、廠房及設備。截至二零一八年六月三十日止六個月，本集團出售賬面淨值2,030,000港元(截至二零一七年六月三十日止六個月：3,902,000港元)之資產，產生出售物業、廠房及設備項目之淨虧損837,000港元(截至二零一七年六月三十日止六個月：210,000港元)。

12. 存貨

截至二零一八年六月三十日止六個月，存貨減值撥備為316,438,000港元(截至二零一七年十二月三十一日：317,344,000港元)。

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13. TRADE RECEIVABLES

13. 貿易應收款項

		30 June 2018 二零一八年 六月三十日 HK\$'000 千港元 (Unaudited) (未經審核)	31 December 2017 二零一七年 十二月三十一日 HK\$'000 千港元 (Audited) (經審核)
Trade receivables:	貿易應收款項：		
— Due from Hanergy Affiliates	— 應收漢能聯屬公司	—	2,283,175
— Due from third parties	— 應收第三方	9,404,424	5,009,089
		9,404,424	7,292,264
Less: impairment of amounts due from third parties	減：應收第三方款項減值	(115,051)	(59,473)
		9,289,373	7,232,791

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

不同客戶的信貸期介乎三日至一個月，部分客戶的信貸期可延長至三個月。

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13. TRADE RECEIVABLES (continued)

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

		30 June 2018 二零一八年 六月三十日 HK\$'000 千港元 (Unaudited) (未經審核)	31 December 2017 二零一七年 十二月三十一日 HK\$'000 千港元 (Audited) (經審核)
Within 3 months	3個月內	6,081,797	2,771,724
3 to 6 months	3至6個月	135,434	111,839
6 months to 1 year	6個月至1年	1,366,552	735,433
More than 1 year	超過1年	1,820,641	3,673,268
		9,404,424	7,292,264
Less: Impairment	減：減值	(115,051)	(59,473)
		9,289,373	7,232,791

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

		30 June 2018 二零一八年 六月三十日 HK\$'000 千港元 (Unaudited) (未經審核)	31 December 2017 二零一七年 十二月三十一日 HK\$'000 千港元 (Audited) (經審核)
Neither past due nor impaired	並無逾期及減值	6,078,448	2,013,826
Less than 3 months past due	逾期少於3個月	104,903	797,308
3 to 6 months past due	逾期3至6個月	1,100,129	715,585
6 months to 1 year past due	逾期6個月至1年	344,733	1,568,700
More than 1 year past due	逾期超過1年	1,661,160	2,137,372
		9,289,373	7,232,791

13. 貿易應收款項(續)

根據發票日期，本集團貿易應收款項之賬齡分析如下：

		30 June 2018 二零一八年 六月三十日 HK\$'000 千港元 (Unaudited) (未經審核)	31 December 2017 二零一七年 十二月三十一日 HK\$'000 千港元 (Audited) (經審核)
		9,404,424	7,292,264
		(115,051)	(59,473)
		9,289,373	7,232,791

並無個別或整體被視為減值之淨貿易應收款項之賬齡分析如下：

		30 June 2018 二零一八年 六月三十日 HK\$'000 千港元 (Unaudited) (未經審核)	31 December 2017 二零一七年 十二月三十一日 HK\$'000 千港元 (Audited) (經審核)
		9,289,373	7,232,791

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13. TRADE RECEIVABLES (continued)

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

		30 June 2018 二零一八年 六月三十日 HK\$'000 千港元 (Unaudited) (未經審核)	31 December 2017 二零一七年 十二月三十一日 HK\$'000 千港元 (Audited) (經審核)
At 1 January	於一月一日	59,473	57,930
Impairment losses recognised (note 7)	已確認減值虧損(附註7)	101,018	934
Reversal during the period/year (note 7)	期內/年內撥回(附註7)	(54,165)	(1,399)
Exchange realignment	匯兌調整	8,725	2,008
At 30 June 2018/ 31 December 2017	於二零一八年六月三十日/ 二零一七年十二月三十一日	115,051	59,473

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.

13. 貿易應收款項(續)

貿易應收款項之減值撥備變動如下：

	30 June 2018 二零一八年 六月三十日 HK\$'000 千港元 (Unaudited) (未經審核)	31 December 2017 二零一七年 十二月三十一日 HK\$'000 千港元 (Audited) (經審核)
At 1 January	59,473	57,930
Impairment losses recognised (note 7)	101,018	934
Reversal during the period/year (note 7)	(54,165)	(1,399)
Exchange realignment	8,725	2,008
At 30 June 2018/ 31 December 2017	115,051	59,473

本集團按香港財務報告準則第9號所規定應用簡易方法就預期信貸虧損作出撥備。於二零一八年六月三十日，已就貿易應收款項總額作出信貸虧損115,051,000港元(二零一七年十二月三十一日：59,473,000港元)。

並無逾期及減值之應收款項與近期並無拖欠記錄之大量多元化客戶有關。

逾期但無減值的應收款項與一些於本集團擁有良好往績記錄的獨立客戶有關。根據過往經驗，本公司董事認為無需就該等結餘作出減值撥備，原因是信貸質素並無重大改變及該等結餘仍被視為可全數收回。

於二零一八年六月三十日後及直至二零一八年八月三十日(財務報表獲批准刊發當日)，本集團已向整線生產線客戶收取總額6,083,817,000港元。

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14. 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:

14. 合同資產(先前稱為應收合同客戶總額)

本集團之合同資產(先前稱為應收合同客戶總額)與整線生產線客戶之建設合同及為若干中小型企業建設太陽能發電站以及扶貧項目有關。合同資產變動如下：

		30 June 2018 二零一八年 六月三十日 HK\$'000 千港元 (Unaudited) (未經審核)	31 December 2017 二零一七年 十二月三十一日 HK\$'000 千港元 (Audited) (經審核)
At 1 January	於一月一日	2,819,523	1,547,405
Contract costs incurred plus recognised profits less recognised losses	已產生合同成本加 已確認溢利減 已確認虧損	21,863,862	5,366,670
Progress billings	進度賬單款項	(11,475,706)	(4,708,435)
Exchange realignment	匯兌調整	(433,489)	195,020
At 30 June 2018/ 31 December 2017	於二零一八年六月三十日/ 二零一七年十二月三十一日	12,774,190	2,400,660

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

(continued)

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

14. 合同資產(先前稱為應收合同客戶總額)(續)

於二零一八年六月三十日，本集團就製造分部所示合同資產如下：

		30 June 2018 二零一八年 六月三十日 HK\$'000 千港元 (Unaudited) (未經審核)	31 December 2017 二零一七年 十二月三十一日 HK\$'000 千港元 (Audited) (經審核)
Jingzhou Shunbai Solar Power Co., Ltd.	荊州順佰太陽能電力有限公司	1,539,605	810,941
Huafengyuan (Chengdu) New Energy Technology Co., Ltd.	華豐源(成都)新能源科技有限公司	1,350,736	—
Shandong Zibo Hanergy Thin Film Power Co., Ltd.	山東淄博漢能薄膜太陽能有限公司	1,264,298	724,271
Huaxia Yineng (Nanjing) New Energy Co., Ltd.	華夏易能(南京)新能源有限公司	1,133,746	—
Huaxia Yineng (Heilongjiang) New Energy Technology Co., Ltd.	黑龍江華夏易能新能源科技有限公司	896,962	—
Shandong Macrolink Co., Ltd	山東新華聯新能源科技有限公司	1,292,833	865,448
Dezhou Yineng New Energy Technology Co., Ltd.	德州易能新能源科技有限公司	880,774	—
Huaxia Yineng (Guangdong) New Energy Technology Co., Ltd.	華夏易能(廣東)新能源科技有限公司	807,709	—
Mianyang Jinneng Mobile Energy Co., Ltd	綿陽金能移動能源有限公司	541,095	—
Other turnkey production line customers	其他整線生產線客戶	3,066,432	—
		12,774,190	2,400,660

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15. OTHER RECEIVABLES

15. 其他應收款項

		30 June 2018 二零一八年 六月三十日 HK\$'000 千港元 (Unaudited) (未經審核)	31 December 2017 二零一七年 十二月三十一日 HK\$'000 千港元 (Audited) (經審核)
Other receivables:	其他應收款項：		
— Due from Hanergy Holding	— 應收漢能控股	648	194,879
— Due from Hanergy Affiliates	— 應收漢能聯屬公司	4,638	4,210
— Due from third parties	— 應收第三方	491,509	1,262,590
		496,795	1,461,679
Less: Impairment	減：減值	(12,622)	(24,536)
		484,173	1,437,143

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15. OTHER RECEIVABLES (continued)

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

15. 其他應收款項(續)

其他應收款項減值撥備的變動如下：

		30 June 2018 二零一八年 六月三十日 HK\$'000 千港元 (Unaudited) (未經審核)	31 December 2017 二零一七年 十二月三十一日 HK\$'000 千港元 (Audited) (經審核)
At 1 January	於一月一日	24,536	22,923
Write-off (note 7)	撇銷(附註7)	(12,132)	—
Exchange realignment	匯兌調整	218	1,613
At 30 June 2018/ 31 December 2017	於二零一八年六月三十日/ 二零一七年十二月三十一日	12,622	24,536

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.

本集團應用一般方法就香港財務報告準則第9號規定的預期信貸虧損作出撥備。於二零一八年六月三十日，已就其他應收款項總額作出信貸虧損12,622,000港元(二零一七年十二月三十一日：24,536,000港元)。

除已減值的其他應收款項外，上述結餘所包括的金融資產與近期無拖欠記錄，及無固定還款期限的應收款項有關。

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16. DEPOSITS AND PREPAYMENTS

16. 按金及預付款項

		30 June 2018 二零一八年 六月三十日	31 December 2017 二零一七年 十二月三十一日
	Note 附註	HK\$'000 千港元 (Unaudited) (未經審核)	HK\$'000 千港元 (Audited) (經審核)
Deposits	按金	138,794	69,405
Prepayments paid to:	已付予以下人士之預付款項：		
— Hanergy Affiliates	— 漢能聯屬公司 (i)	95,295	112,665
— Third parties	— 第三方	4,406,031	3,232,179
		4,501,326	3,344,844
Less: impairment	減：減值	(45,012)	(44,913)
		4,595,108	3,369,336

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.

上述資產中包含一項為390,152,000港元(二零一七年十二月三十一日：441,379,000港元)的賬齡超過一年預付款項，其餘所有按金及預付款項之賬齡皆少於一年。

除已予減值的預付款項及預付漢能聯屬公司之款項外，上述結餘所包括的資產與若干未完成採購合同的預付款項有關。

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16. DEPOSITS AND PREPAYMENTS

(continued)

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.

16. 按金及預付款項(續)

附註：

- (i) 結餘主要指根據於二零一二年四月十一日簽署之總協議，就購入光伏(「光伏」)組件支付之預付款項。總協議於二零一二年一月一日至二零一四年十二月三十一日三個年度生效。於二零一三年，本公司之附屬公司與漢能聯屬公司，漢能控股之代理人，訂立多份光伏組件購入附屬協議(「附屬協議」)，就建設下游光伏發電項目購入總產能為677.9MW之光伏組件。根據附屬協議條款，本公司之附屬公司已於二零一三年下達訂單時支付合同總金額約50%。於二零一三年十二月三十一日，漢能聯屬公司已交付產能為58.5MW之光伏組件。

延後交付光伏組件主要是由於漢能聯屬公司之生產安排導致本集團建設光伏發電項目有所延誤所致。因此，本集團已與漢能聯屬公司達成雙方協議，以於二零一四年十二月三十一日前退回與總產能為459.4MW的光伏組件相關的預付款項1,262,629,000港元，並同時終止此等附屬協議。

二零一四年間，本公司之附屬公司與漢能聯屬公司同時訂立多份新光伏組件購買附屬協議，以購買總產能為558MW的光伏組件，用於建設下游光伏發電項目。根據該等附屬協議之條款，本公司之附屬公司已於二零一四年下達訂單時支付合同總金額約50%。

於二零一四年內，漢能聯屬公司已交付產能共28.8MW之光伏組件。於二零一四年十二月三十一日，漢能聯屬公司尚未交付產能689.2MW之光伏組件。

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16. DEPOSITS AND PREPAYMENTS

(continued)

Note: (continued)

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.

16. 按金及預付款項(續)

附註：(續)

於二零一五年一月二十日，本公司就與漢能控股於二零一三年十二月二十三日訂立的150MW光伏組件供應合同訂立補充協議，結算於二零一三年作出的預付款項以150MW光伏組件供應合同下已交付光伏組件的應付款項抵銷，原總產能150MW亦已予削減為80.9MW。

於二零一五年四月三十日，本公司與漢能控股就於截至二零一五年十二月三十一日止年度購買光伏組件訂立光伏組件供應協議。

於二零一五年，本公司上述附屬公司又根據光伏組件供應協議與漢能聯屬公司訂立多份新附屬協議，以購買總產能為57.7MW的光伏組件，用於建設下游光伏發電項目。根據該等附屬協議之條款，本公司之附屬公司已於二零一五年下達訂單時支付合同金額約50%。

於二零一五年，漢能聯屬公司已交付產能共315MW之光伏組件。於二零一五年十二月三十一日，漢能聯屬公司尚未交付產能合共362.8MW之光伏組件。

於二零一六年，本公司與漢能聯屬公司訂立若干新採購訂單，購買總產能為1.2MW之光伏組件。於二零一六年，漢能聯屬公司已交付產能共136.0MW之光伏組件。於二零一六年十二月三十一日，漢能聯屬公司尚未交付產能合共228.0MW之光伏組件。

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16. DEPOSITS AND PREPAYMENTS

(continued)

Note: (continued)

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.

16. 按金及預付款項(續)

附註：(續)

於二零一七年十二月三十一日，本集團已與漢能聯屬公司達成兩項共同協議。一項協議為退回有關總產能為10MW之光伏組件預付款項6,939,000港元及同時終止子合同。另一項協議為以從漢能聯屬公司於二零一七年十二月三十一日前購買光伏組件之預付款項225,925,000港元抵銷貿易應付款項，而子合同下未交付之光伏組件仍會於日後交付。

於二零一七年，本公司並無與漢能聯屬公司簽訂新採購訂單。於二零一七年，漢能聯屬公司已交付產能共64.6MW之光伏組件。於二零一七年十二月三十一日，漢能聯屬公司尚未交付產能共153.4MW之光伏組件。

於二零一八年三月二十六日，本公司與漢能控股達成共同協議。根據該協議，訂約方相互協定，倘漢能聯屬公司未能於二零一八年十二月三十一日前向本集團交付光伏組件，則當時應收漢能聯屬公司之剩餘未償付其他應收款項及向漢能聯屬公司作出之未償付預付款將於本集團應付漢能聯屬公司之貿易應付款項及其他應付款項中結算。同時，倘應收漢能聯屬公司之其他應收款項及向漢能聯屬公司作出之預付款於二零一八年十二月三十一日前尚未償付，則漢能聯屬公司並無權利要求償還上述貿易應付款項及其他應付款項。

於二零一八年上半年，本公司並無與漢能聯屬公司訂立任何新購買合同。於本期間，漢能聯屬公司已交付總產能為29.7MW之光伏組件。於二零一八年六月三十日，漢能聯屬公司尚未交付總產能為123.7MW之光伏組件。

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17. TRADE AND BILLS PAYABLES

17. 貿易及票據應付款項

		30 June 2018 二零一八年 六月三十日 HK\$'000 千港元 (Unaudited) (未經審核)	31 December 2017 二零一七年 十二月三十一日 HK\$'000 千港元 (Audited) (經審核)
Trade and bills payables due to:	應付予以下人士之貿易 及票據應付款項：		
— Related parties	— 關連人士	298,221	268,708
— Third parties	— 第三方	3,137,819	1,469,168
		3,436,040	1,737,876

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

根據發票日期，本集團貿易及票據應付款項之賬齡分析如下：

		30 June 2018 二零一八年 六月三十日 HK\$'000 千港元 (Unaudited) (未經審核)	31 December 2017 二零一七年 十二月三十一日 HK\$'000 千港元 (Audited) (經審核)
0 — 30 days	0 — 30日	1,606,843	583,185
31 — 60 days	31 — 60日	452,666	102,969
61 — 90 days	61 — 90日	133,890	51,916
Over 90 days	90日以上	1,242,641	999,806
		3,436,040	1,737,876

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

應付貿易款項並不附息，一般信用期限為60日。

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18. OTHER PAYABLES AND ACCRUALS

18. 其他應付款項及應計費用

			30 June 2018 二零一八年 六月三十日 Notes 附註	31 December 2017 二零一七年 十二月三十一日 HK\$'000 千港元 (Audited) (經審核)
Deposits	按金		5,000	5,970
Other payables due to:	應付予以下人士之其他 應付款項：			
— Hanergy Holding	— 漢能控股	(i)	3,970	5,115
— Hanergy Affiliates	— 漢能聯屬公司	(ii)	119,887	128,748
— Third parties	— 第三方		3,282,841	1,334,288
Sub-total	小計		3,406,698	1,468,151
Accruals	應計費用	(iii)	323,955	316,419
Provision for warranties	保養撥備	(iv)	392,310	43,174
Advances from customers	客戶預付款	(v)	—	5,239,848
			4,127,963	7,073,562

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18. OTHER PAYABLES AND ACCRUALS

(continued)

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

18. 其他應付款項及應計費用(續)

附註：

- (i) 應付漢能控股之款項指漢能控股就日常營運目的付予本集團之預付款項。該等結餘為無抵押、免息及於要求時還款。
- (ii) 結餘主要包括漢能聯屬公司就日常營運目的付予本集團之應付款項 83,340,000 港元(二零一七年十二月三十一日：79,914,000 港元)，及就租用生產線、辦公場所、工廠場所及員工宿舍以及使用相關設備、材料及設施等向漢能控股之聯屬公司四川漢能光伏有限公司(「四川漢能」)應付之餘款 36,547,000 港元(二零一七年十二月三十一日：48,834,000 港元)。上述結餘為無抵押、免息及於要求時還款。
- (iii) 結餘包括為數 42,059,000 港元(二零一七年十二月三十一日：20,056,000 港元)為本集團就若干現時訴訟將支付的最大開支。
- (iv) 保養撥備

Product warranties	
產品保養	
30 June 2018	31 December 2017
二零一八年六月三十日	二零一七年十二月三十一日
HK\$'000	HK\$'000
千港元	千港元
(Unaudited)	(Audited)
(未經審核)	(經審核)

Beginning balance (as previously reported)	期初結餘(如先前呈報)	43,174	26,762
Adjustment upon adoption of HKFRS 15	採納香港財務報告準則第 15 號後之調整	118,850	—
Beginning balance (restated)	期初結餘(經重列)	162,024	26,762
Provided during the period/year (note 7)	期內/年內撥備(附註 7)	242,505	38,468
Amounts utilised during the period/year	期內/年內所用金額	(11,468)	(24,454)
Exchange realignment	匯兌調整	(751)	2,398
At 30 June 2018/31 December 2017	於二零一八年六月三十日/ 二零一七年十二月三十一日	392,310	43,174

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18. OTHER PAYABLES AND ACCRUALS

(continued)

Notes: (continued)

(iv) Provision for warranties (continued)

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 2.2.

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

18. 其他應付款項及應計費用(續)

附註：(續)

(iv) 保養撥備(續)

本集團於合同訂明的保養期內向其客戶提供整線生產線之保證保養。本集團就若干光伏組件、變流器及屋頂電站提供三至十年保養，據此，產品如有故障，可予修理或替換。保養撥備之金額乃按銷售額及過往修理及退貨水平為基準。估計基準乃定期檢討，並在適當情況下修改。

(v) 客戶預付款指本集團自整線生產線建設合同客戶及下游經銷商之收款。誠如附註2.2所詳述，於二零一八年一月一日之期初結餘已重新分類至合同負債。

除上述披露者外，其他應付款項及應計費用為免息及一般並無固定結算期。

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19. INTEREST-BEARING BANK AND OTHER BORROWINGS

19. 銀行及其他付息借款

		30 June 2018 二零一八年六月三十日			31 December 2017 二零一七年十二月三十一日		
	Notes 附註	Effective interest rate (%) 有效息率 (%)	Maturity 到期日	HKS'000 千港元 (Unaudited) (未經審核)	Effective interest rate (%) 有效息率 (%)	Maturity 到期日	HKS'000 千港元 (Audited) (經審核)
Current:	即期：						
Bank loans — guaranteed	銀行借款 — 已擔保 (a)	8.7	2018	49,816	8.7	2018	50,245
Bank loans — guaranteed and secured	銀行借款 — 已擔保及有抵押 (b)	8.7	2018	4,744	8.7	2018	4,785
Interest-bearing other borrowings	其他付息借款						
Related parties — unsecured	關聯方 — 無抵押	—	—	—	5-6	2018	2,225
Related parties — unsecured	關聯方 — 無抵押	3	2018	897	3	2018	11,647
A Third party — unsecured	第三方 — 無抵押	—	—	—	5	2018	2,345
Current portion of long-term borrowings	長期借款之即期部分						
Bank loans — guaranteed and secured	銀行借款 — 已擔保及有抵押 (c)	5% above PBOC benchmark lending rate 人行基準貸款利率 上浮5%	2018	5,930	5% above PBOC benchmark lending rate 人行基準貸款利率 上浮5%	2018	5,982
Related parties — unsecured	關聯方 — 無抵押	3	2018	9,843	3	2018	292,361
Related parties — unsecured	關聯方 — 無抵押	—	—	—	3	2018	78,015
Related parties — unsecured	關聯方 — 無抵押	—	—	—	3	2018	137,107
A Third party — secured	第三方 — 有抵押 (d)	10	2019	12,912	10	2018	12,898
Total	合計			84,142			597,610
Non-current:	非即期：						
Bank loans — guaranteed and secured	銀行借款 — 已擔保及有抵押 (c)	5% above PBOC benchmark lending rate 人行基準貸款利率 上浮5%	2029	98,921	5% above PBOC benchmark lending rate 人行基準貸款利率 上浮5%	2019 — 2029	103,360
Interest-bearing other borrowings	其他付息借款						
Related parties — unsecured	關聯方 — 無抵押	—	—	—	3	2020	1,954
A Third party — secured	第三方 — 有抵押 (d)	10	2021	28,193	10	2021	34,287
A Third party — guaranteed	第三方 — 已擔保 (e)	PBOC benchmark lending rate 人行基準貸款利率	2022	355,830	PBOC benchmark lending rate 人行基準貸款利率	2022	358,890
A Third party — guaranteed	第三方 — 已擔保 (f)	2	2024	29,652	2	2024	29,907
A Third party — guaranteed	第三方 — 已擔保 (f)	2.3	2025	30,839	—	—	—
				543,435			528,398
Total	合計			627,577			1,126,008

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19. INTEREST-BEARING BANK AND OTHER BORROWINGS (continued)

Notes:

- (a) The loan is a short term loan and will mature on 2 September 2018 and is guaranteed by Hanergy Holding. The borrower is Apollo Precision (Fujian) Ltd. ("Apollo Fujian"), a subsidiary of the Company.
- (b) The bank borrowing is secured by fixed assets with a net book value before impairment of RMB13,482,000 (equivalent to HK\$15,991,000) held by Apollo Fujian, and guaranteed by Hanergy Holding. This loan was borrowed in January 2018 to repay a matured loan of RMB4,000,000.
- (c) The bank borrowings are guaranteed by Hanergy Holding and secured by the electricity income right of the solar power station belongs to Guangzhou Qiguang Ltd., a subsidiary of the Company.
- (d) The balances are a borrowing from Utica Lease Co. LLC., with the principal of USD6,600,000. The borrowing covers a period of 51 months and is secured by the pledged fixed assets of Alta Devices Inc. with a net book value before impairment of USD8,269,000.
- (e) The balance is a borrowing from a third party company and is guaranteed by Hanergy Holding.
- (f) The balances are 5-year long term entrusted loans from unrelated third party companies and are guaranteed by Hanergy Equipment Technology Co., Ltd., one of the Group's subsidiaries.

19. 銀行及其他付息借款(續)

附註：

- (a) 貸款為短期貸款及將於二零一八年九月二日到期，並由漢能控股擔保。借款方為本公司之附屬公司福建鉑陽精工設備有限公司(「福建鉑陽」)。
- (b) 銀行借款由福建鉑陽所持有減值前賬面淨值為人民幣13,482,000元(等值15,991,000港元)之固定資產所抵押並由漢能控股擔保。該貸款於二零一八年一月借出以償還到期貸款人民幣4,000,000元。
- (c) 銀行借款由漢能控股擔保，並由屬於本公司之附屬公司廣州啓光太陽能科技有限公司之太陽能發電站售電收入權所抵押。
- (d) 該結餘為來自Utica Lease Co. LLC. 本金額為6,600,000美元之借款。借款涵蓋之期間為51個月，並由Alta Devices Inc. 減值前賬面淨值為8,269,000美元之已抵押固定資產所抵押。
- (e) 該結餘為來自第三方公司之借款，並由漢能控股擔保。
- (f) 該結餘為來自無關連第三方公司之長期委託貸款，為期五年，並由本集團之其中一間附屬公司漢能裝備科技集團有限公司擔保。

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20. SHARE CAPITAL

20. 股本

Shares	股份	Number of shares 股份數目 '000 千股	Nominal value 面值 HK\$'000 千港元
Authorised:	法定：		
At 1 January 2017, 31 December 2017 and 30 June 2018 (ordinary shares of HK\$0.0025 each)	於二零一七年一月一日、二零一七年十二月三十一日及二零一八年六月三十日(每股面值0.0025港元之普通股)	64,000,000	160,000
Issued and fully paid:	已發行及繳足：		
At 1 January 2017 (ordinary shares of HK\$0.0025 each)	於二零一七年一月一日(每股面值0.0025港元之普通股)	41,859,051	104,647
Exercise of share options	行使購股權	286,625	717
At 31 December 2017 and 1 January 2018 (ordinary shares of HK\$0.0025 each, audited)	於二零一七年十二月三十一日及於二零一八年一月一日(每股面值0.0025港元之普通股，經審核)	42,145,676	105,364
At 30 June 2018 (ordinary shares of HK\$0.0025 each, unaudited)	於二零一八年六月三十日(每股面值0.0025港元之普通股，未經審核)	42,145,676	105,364

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

截至二零一八年六月三十日止六個月，本公司並未發行或購回任何股份。

21. OPERATING COMMITMENTS

21. 經營承擔

(a) Operating Lease Commitments

As lessee

The Group leases a number of properties, warehouses and equipment under operating leases, with leases negotiated for an initial period of six months to ten years, with an option to renew the lease and renegotiate the terms at the expiry dates or at dates as mutually agreed between the Group and the respective landlords/owners. None of the leases include contingent rentals.

(a) 經營租賃承擔

作為承租人

本集團根據經營租賃租用若干物業、倉庫及設備，租賃初步為期六個月至十年，可選擇於租約屆滿當日或本集團與有關業主／擁有者雙方同意之日續租及重新磋商條款。該等租賃概不包括或然租金。

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21. OPERATING COMMITMENTS (continued)

(a) Operating Lease Commitments (continued)

As lessee (continued)

At 30 June 2018, the Group had total future minimum lease payments under non-cancellable operating leases falling due as follows:

		30 June 2018 二零一八年 六月三十日 HK\$'000 千港元 (Unaudited) (未經審核)	31 December 2017 二零一七年 十二月三十一日 HK\$'000 千港元 (Audited) (經審核)
Within one year	一年內	392,084	223,100
In the second to fifth years, inclusive	第二至五年(包括首尾 兩年)	1,797,334	1,243,292
Over five years	五年以上	1,448,549	736,804
		3,637,967	2,203,196

(b) Other Commitments

At 30 June 2018, the Group had total other commitments of HK\$7,205,701,000 under the non-cancellable contracts to purchase equipment for turnkey production lines construction contracts from third party suppliers, raw materials for photovoltaic power generation station building projects and PV modules from Hanergy Affiliates.

At 31 December 2017, the Group had total other commitments of HK\$524,891,000 under the non-cancellable contracts of the photovoltaic power generation station building projects and PV modules from Hanergy Affiliates.

21. 經營承擔(續)

(a) 經營租賃承擔(續)

作為承租人(續)

於二零一八年六月三十日，本集團根據不可撤銷經營租賃之未來最低租金總額將於下列期限屆滿：

	30 June 2018 二零一八年 六月三十日 HK\$'000 千港元 (Unaudited) (未經審核)	31 December 2017 二零一七年 十二月三十一日 HK\$'000 千港元 (Audited) (經審核)
Within one year	392,084	223,100
In the second to fifth years, inclusive	1,797,334	1,243,292
Over five years	1,448,549	736,804
	3,637,967	2,203,196

(b) 其他承擔

於二零一八年六月三十日，本集團有根據向第三方供應商就整套生產線建設合同購買設備、就建造光伏發電站項目購買原料及向漢能聯屬公司購買光伏組件之不可撤銷合同之其他承擔總額為7,205,701,000港元。

於二零一七年十二月三十一日，本集團有根據建造光伏發電站項目及向漢能聯屬公司購買光伏組件之不可撤銷合同之其他承擔總額為524,891,000港元。

22. CAPITAL COMMITMENTS

Acquisition of items of property,
plant and equipment
— Contracted, but not provided for

收購物業、廠房及設
備項目
— 已訂約但未撥備

	30 June 2018 二零一八年 六月三十日 HK\$'000 千港元 (Unaudited) (未經審核)	31 December 2017 二零一七年 十二月三十一日 HK\$'000 千港元 (Audited) (經審核)
	86,759	79,727

22. 資本承擔

	30 June 2018 二零一八年 六月三十日 HK\$'000 千港元 (Unaudited) (未經審核)	31 December 2017 二零一七年 十二月三十一日 HK\$'000 千港元 (Audited) (經審核)
	86,759	79,727

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23. RELATED PARTY TRANSACTIONS

- (a) In addition to the transactions and balances detailed elsewhere in these condensed consolidated financial statements, the Group had the following material transactions with related parties during the period.

23. 關連人士交易

- (a) 除於此等簡明綜合財務報表其他部份詳述之交易及結餘外，本集團於本期間與關連人士進行以下重大交易。

		Six months ended 30 June 截至六月三十日止六個月	
		2018 二零一八年	2017 二零一七年
Notes 附註		HK\$'000 千港元	HK\$'000 千港元
		(Unaudited) (未經審核)	(Unaudited) (未經審核)
Manufacturing of turnkey production lines	製造整套生產線	(i) —	1,062,467
Rental expense	租金開支	(ii) 2,042	805
Equipment lease expense	設備租賃開支	(iii) 2,069	3,050
Technology usage fee expense	技術使用費開支	(iv) —	284
Purchase/prepayments for purchase of photovoltaic modules	採購光伏組件之採購／預付款項	(v) 33,572	44,869
Operational support income	營運支持收入	(vi) 3,174	—
Sales of flexible photovoltaic modules and cells	銷售柔性光伏組件及電池	(vii) —	38
Import commission fee	進口代理費	(viii) —	1,534
Office service income	辦公室服務收入	(ix) —	3,149
Interest expenses	利息支出	(x) 6,321	7,687

The above related party transactions were conducted in accordance with the terms mutually agreed between the parties.

上述關連人士交易乃按雙方協定之條款進行。

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23. RELATED PARTY TRANSACTIONS

(continued)

(a) (continued)

Notes:

- (i) The revenue from the sales of equipment and turnkey production lines was receivable from Hanergy Affiliates. The sales were made in accordance with the terms as stipulated in the relevant sales contracts.
- (ii) The continuing connected transaction between Sichuan Hanergy and Fujian Apollo was transferred to Sichuan Hanergy and Juntai Innovation (Beijing) Technology Limited (“Juntai Beijing”), a subsidiary of the Group. Therefore, the rental expense represents the rental of a production line by Juntai Beijing from Sichuan Hanergy in 2018.
- (iii) The continuing connected transaction between Sichuan Hanergy and Fujian Apollo was transferred to Sichuan Hanergy and Juntai Beijing, and therefore, the equipment lease expense represents the rental of a production line by Juntai Beijing from Sichuan Hanergy in 2018.
- (iv) The usage of relevant equipment, material and facilities by Fujian Apollo from Sichuan Hanergy to carry out research on thin-film solar energy technology development.
- (v) The photovoltaic modules were purchased from Hanergy Holding and Hanergy Global Investment and Sales Pte. Ltd (a Hanergy Holding’s affiliate) for the Group’s Downstream business.
- (vi) Certain operational support provided to MiaSolé, Hanergy Holding’s affiliate, for general administrative support and office services by MiaSolé Hi-Tech (“MHT”), a subsidiary of the Company.
- (vii) Sales of flexible photovoltaic modules and cells by the Company’s indirect wholly-owned subsidiary, MHT to certain subsidiaries of Hanergy Holding.

23. 關連人士交易(續)

(a) (續)

附註：

- (i) 銷售設備及整套生產線之收入乃應收自漢能聯屬公司。銷售乃根據相關銷售合同訂明之條款進行。
- (ii) 四川漢能與福建鉑陽之持續關連交易已轉讓予四川漢能與本集團之附屬公司君泰創新(北京)科技有限公司。因此，租金開支指北京君泰於二零一八年向四川漢能租用一條生產線之租金。
- (iii) 四川漢能與福建鉑陽之持續關連交易已轉讓予四川漢能與北京君泰，因此，設備租賃開支指北京君泰於二零一八年向四川漢能租用一條生產線之租金。
- (iv) 福建鉑陽使用四川漢能之相關設備、材料及設施，以進行薄膜太陽能之技術開發及研究。
- (v) 就本集團之下游業務來自漢能控股及Hanergy Global Investment and Sales Pte. Ltd (漢能控股之聯屬公司)購入光伏組件。
- (vi) 本公司之附屬公司MiaSolé Hi-Tech (「MHT」)就一般行政支持及辦公室服務向漢能控股之聯屬公司MiaSolé提供若干營運支持。
- (vii) 本公司之間接全資附屬公司MHT向漢能控股之若干附屬公司銷售柔性光伏組件及電池。

NOTES TO THE INTERIM CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

中期簡明綜合財務報表附註

FOR THE SIX MONTHS ENDED 30 JUNE 2018

截至二零一八年六月三十日止六個月

23. RELATED PARTY TRANSACTIONS

(continued)

(a) (continued)

Notes: (continued)

- (viii) Service for import provided to Beijing Hanergy New Energy Investment Co., Ltd (a subsidiary of the Company), by Beijing Rongtai Energy Investment Co., Ltd, a Hanergy Holding's affiliate in 2017.
- (ix) General administration and office service provided by MHT to MiaSolé, Hanergy Holding's affiliate.
- (x) Other interest bearing borrowings provided by Hanergy Global Investment and Sales Pte. Ltd, Hanergy Holding America Inc., Hanergy Investment and Hanergy Holding (HK) Ltd, Hanergy Holding's affiliates.

(b) Compensation of key management personnel of the Group

23. 關連人士交易(續)

(a) (續)

附註：(續)

- (viii) 於二零一七年，漢能控股之聯屬公司北京榮泰能源投資有限公司向北京漢能新能源投資有限公司(本公司之附屬公司)提供進口服務。
- (ix) MHT向MiaSolé(漢能控股之聯屬公司)提供一般行政及辦公室服務。
- (x) Hanergy Global Investment and Sales Pte. Ltd、Hanergy Holding America Inc.、Hanergy Investment及Hanergy Holding (HK) Ltd(漢能控股之聯屬公司)提供之其他計息借款。

(b) 本集團主要管理層薪酬

Six months ended 30 June
截至六月三十日止六個月

		2018 二零一八年 HK\$'000 千港元	2017 二零一七年 HK\$'000 千港元
Fees	袍金	1,533	1,044
Other emoluments:	其他酬金：		
Salaries, allowances and benefits in kind	薪金、津貼及實物利益	6,859	5,588
Equity-settled share-based payments	以權益結算的股份支付	—	948
Contributions to retirement benefit schemes	退休福利計劃供款	21	18
		6,880	6,554
Total	總額	8,413	7,598

NOTES TO THE INTERIM CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

中期簡明綜合財務報表附註

FOR THE SIX MONTHS ENDED 30 JUNE 2018

截至二零一八年六月三十日止六個月

24. FAIR VALUE AND FAIR VALUE HIERARCHY OF FINANCIAL INSTRUMENTS

The fair values of cash and cash equivalents, restricted cash, trade and bills receivables, contract assets, financial assets included in other receivables, deposits and prepayments, trade and bills payables, financial liabilities included in other payables and accruals, and the current-portion of interest-bearing bank and other borrowings approximate to their carrying amounts largely due to the short term maturities of these instruments.

The fair values of the non-current portion of interest-bearing bank and other borrowings have been calculated by discounting the expected future cash flows using rates currently available for instruments with similar terms, credit risk and remaining maturities. They are approximate to their carrying amount.

25. APPROVAL OF THE INTERIM FINANCIAL STATEMENTS

These condensed consolidated interim financial statements were approved by the Board on 30 August 2018.

24. 金融工具之公平值及公平值架構

現金及現金等價物、受限制現金、貿易及票據應收款項、合同資產、包括於其他應收款項、按金及預付款項中的金融資產、貿易及票據應付款項、包括於其他應付款項及應計費用中的金融負債以及銀行及其他附息借款的即期部份之公平值與其賬面值相近，主要由於此等工具的到期時間較短。

銀行及其他附息借款非即期部份之公平值，乃按預計未來現金流量，以年期、信貸風險及剩餘到期期限相近的工具的現行可用利率貼現計算。彼等之賬面值相若。

25. 批准中期財務報表

此等簡明綜合中期財務報表已於二零一八年八月三十日經董事會批准。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

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.

業務模式

漢能薄膜發電集團有限公司(本集團)是一家在香港交易所上市的高科技新能源企業，自二零零九年以來從事薄膜太陽能行業，主要業務包括(i)薄膜太陽能電池／組件生產裝備及整綫生產綫的研發、設計、組裝、銷售及交付，並提供相應技術服務；(ii)薄膜太陽能發電系統及移動能源應用產品的研發、設計、銷售及交付；及(iii)向上游生產綫及下游應用及產品提供技術服務和支援、建設及維護服務。

本集團持續專注薄膜太陽能路綫，一直積極開展全球先進薄膜太陽能技術的投資及研發，目前已掌握全球領先的銅銦鎵硒(CIGS)、砷化鎵(GaAs)和高效矽異質結(SHJ)技術。我們相信，此等技術構成我們其中一項主要的競爭優勢。集團在美國、德國、瑞典、中國等全球多個地方部署科學家研發團隊，持續致力於提升薄膜電池轉換率及技術研發能力，為客戶提供先進的薄膜太陽能整綫生產綫「交鑰匙」解決方案。

本集團更成功拓展創新業務，開拓多元化的收入來源及業務構成，不再單純依賴與漢能控股及其聯屬公司(「漢能聯屬公司」)的關聯交易。漢能聯屬公司對本集團的所有受擔保債務，已於二零一八年三月底全部還清，較原定時間提早了一年半。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS MODEL *(continued)*

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.

業務模式(續)

近年，集團上游及下游業務均取得理想進展。在上游領域，為配合國家能源結構調整及地方經濟轉型，本集團從二零一七年起，與多個「移動能源產業園」訂立設備及服務銷售合同，地方政府通過經濟轉型升級的過程，打造集薄膜太陽能電池技術研發、高端裝備製造、組件生產、應用產品研發於一體的「高科技+能源」現代產業鏈，顯示了對戰略性新興產業的積極佈局，以及對薄膜太陽能高新科技的信心及支持。

在下游太陽能應用領域，本集團的經銷商業務模式已經取得了理想成果，成為下游重要的銷售渠道。近年本集團亦開始發展海外經銷商，為集團的未來發展打下堅實基礎。本集團亦專注研發下游應用，設立一間佔地10,000平方米的下流研發中心及實驗室，集中開發下游太陽能應用方案及產品。伴隨科技發展，綠色理念已經融入生活的各個方面。本集團憑藉自身創新技術優勢，投入大量資源將薄膜太陽能技術應用到日常生活中，推出各類型顛覆性分佈式薄膜應用產品，包括今年四月推出的「漢傘」(Humbrella)，是全球首款基於柔性薄膜太陽能技術的多功能傘，集離網供電、儲電、夜間照明、終端充電四大功能於一體；而同月推出市場的單玻「漢瓦」(HanTile)，則較去年推出的雙玻漢瓦更輕、更薄、造型更美觀、性能更優異，為建材應用帶來重大的商業和環保價值。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS MODEL *(continued)*

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.

業務模式(續)

跨國媒體及諮詢公司湯森路透公司於二零一七年十一月發佈《全球能源領導者前100強報告》(Top 100 Global Energy Leaders Report)，本集團獲評選為能源分領域可再生能源的前25強(Top 25 Energy Subsector Honorees – Renewable Energy)，是該榜單上唯一的中國薄膜太陽能公司。

本集團將繼續保持全球最領先薄膜發電高科技能源公司的位置，以「一基兩翼」為長遠佈局：即以薄膜太陽能技術的持續創新為基礎，以高端裝備及產綫的「交鑰匙」解決方案為左翼，以分佈式能源及移動能源的解決方案為右翼，以上游裝備產綫業務為核心，下游分佈式能源業務為戰略方向，積極培育移動能源作為集團的大方向。

財務回顧

在截至二零一八年六月三十日的六個月內，本集團收入達20,414,526,000港元，較二零一七年同期增長約615%，實現了業務大幅增長，其中上游及下游收入佔期內集團收入佔比分別為93%及7%。本期間毛利由去年同期之1,092,507,000港元強勁增長至12,211,312,000港元。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

FINANCIAL REVIEW *(continued)*

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.

財務回顧(續)

本集團於期內錄得7,329,029,000港元盈利，相較去年同期錄得244,797,000港元盈利，同比增長30倍，主要因本集團在技術上取得重大突破、國家政策對薄膜發電、移動能源、高端裝備製造、新能源新材料等產業的大力支持以及開拓了新市場、新增多個客戶及新項目等，使公司上游業務在期內取得重大進展。

業務回顧

二零一八年上半年，全球宏觀經濟持續改善，中國經濟保持穩定增長。當前，太陽能發電已經成為中國清潔能源產業發展的戰略方向，而太陽能技術所帶來的發電能力，亦是全世界上及中國國內增長速度最快的可再生能源市場之一，年均新增裝機量持續上揚。根據中國光伏行業協會統計，今年一月至六月，中國新增太陽能裝機量約24GW；分佈式裝機約12GW，同比增長近72%，戶用太陽能發展速度亦快於預期。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

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.

業務回顧(續)

與此同時，隨著產業取得跨越式的發展，部分地區棄光、消納存在瓶頸，與電網無法協調等特徵日益明顯。為使行業更健康有序發展，中國國家能源局於五月三十一日發佈了《關於2018年光伏發電有關事項的通知》，對依賴國家補貼、局限單一發展模式的傳統太陽能企業帶來挑戰，加速了太陽能行業洗牌的速度。

漢能薄膜發電堅持以薄膜太陽能為核心技術，戰略性地專注於上游核心技術研發、生產裝備交付，及下游薄膜太陽能多樣化應用，打造移動能源的生態圈和提供「生態城市」解決方案，並對於國家補貼政策一直沒有過多依賴，因此在此次新規中受影響較小。本集團相信此輪調整將為先進太陽能技術、高質量太陽能發電項目留下發展空間，為集團進一步提升市場地位帶來契機。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

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.

業務回顧(續)

A. 組織架構：

本集團於期內進行架構重組，繼續優化公司內部治理結構，促進上下游的業務發展。上游事業部重組並整合為「漢能裝備科技集團」，以產綫技術作出區分，從而創造更有效率之架構，包括MiaSolé、Solibro、Global Solar Energy (GSE)、Alta Devices、HIT及漢能精工設備。下游業務方面，為配合本集團於香港的發展，期內新設「香港銷售公司」，並與「大客戶事業總部」及「渠道銷售事業部」共同組成「國內銷售集團」。此外，本集團亦新增「全球大數據總部」、「投資管理中心」及「監察部」等，以滿足業務運營需要及進一步優化公司架構。

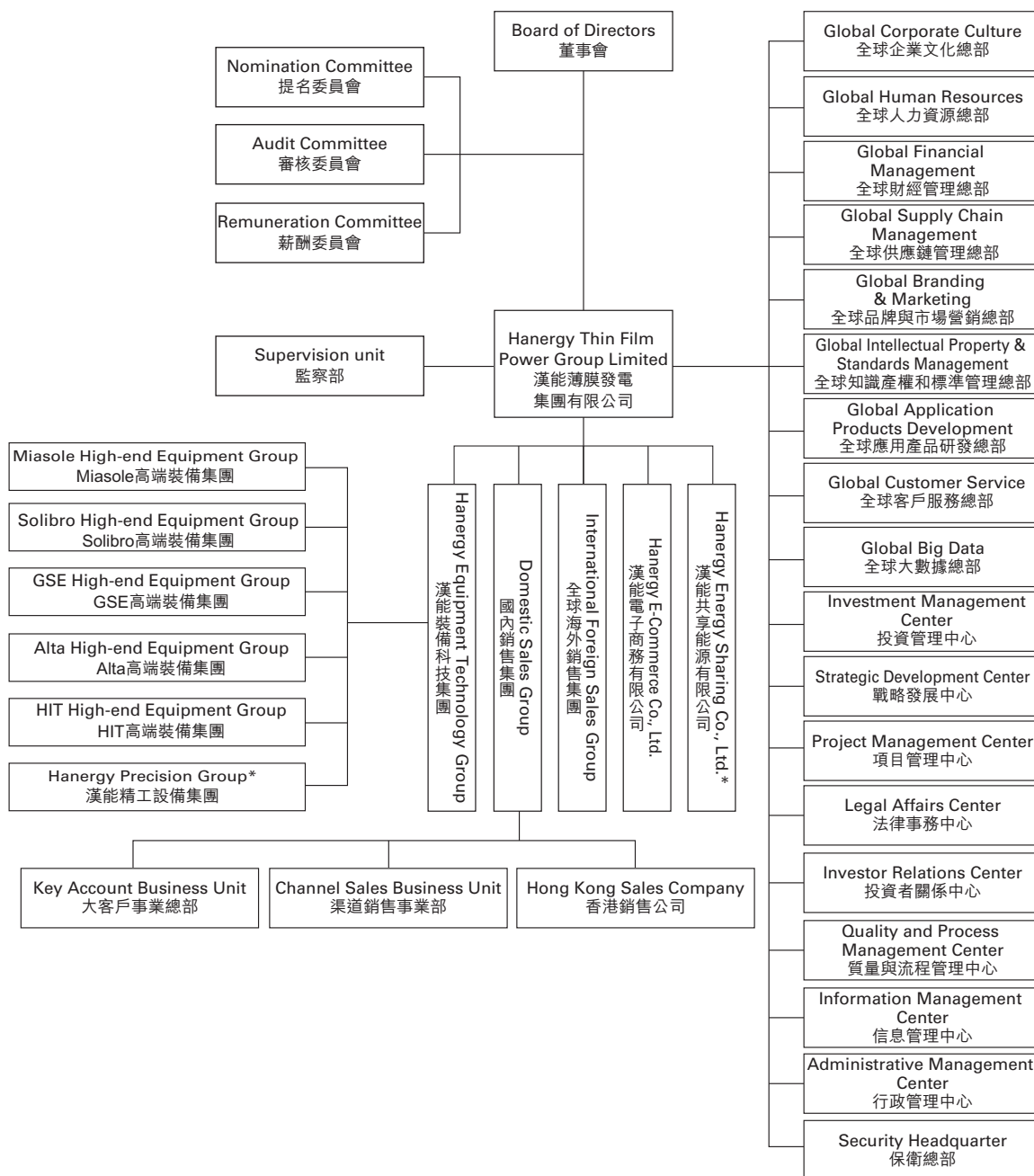
MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW (continued)

A. ORGANIZATION STRUCTURE: (continued)

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



* For identification purpose only

業務回顧(續)

A. 組織架構：(續)

以下為本集團於二零一八年六月三十日之組織架構圖：

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

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.

業務回顧(續)

B. 上游業務：

本集團之上游業務主要包括薄膜太陽能電池／組件生產裝備及整綫生產綫的研發、設計、銷售及交付，並提供相應技術服務。配合中國各地大力推動能源結構轉型和發展新能源產業園的趨勢，集團亦與多個移動能源產業園合作，積極推動開展薄膜太陽能組件生產裝備產綫的交鑰匙工程及大規模國產化。

期內，本集團與客戶緊密合作，以根據客戶要求的規格設計及組裝薄膜太陽能電池和組件的交鑰匙解決方案生產綫。截至二零一八年六月三十日，本集團通過研發、設計、銷售 MiaSolé、Solibro、Global Solar Energy (GSE)、Alta Devices、SHJ 等之薄膜太陽能高端裝備產綫，上游業務錄得約 190.84 億港元收入。

薄膜太陽能技術創新領先

作為全球薄膜太陽能行業的領導者之一，本集團持續技術突破及創新研發，在美國、德國、瑞典、中國等全球多個地點皆設有專業研發團隊，以提升各項技術。二零一八年上半年，本集團的薄膜太陽能組件轉換效率再創新高。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

B. UPSTREAM BUSINESS: *(continued)*

Innovative and Leading Thin-film Solar Technology (continued)

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.

業務回顧(續)

B. 上游業務：(續)

薄膜太陽能技術創新領先(續)

其中，本集團 Solibro 量產冠軍的玻璃基 CIGS 組件轉換效率達到 18.72%，為全球目前採用共蒸法工藝的 CIGS 組件之冠；MiaSolé 柔電池件的轉換效率達到 19.4%；GSE 電池的研發轉換效率達到 18.7%，量產冠軍組件的轉換效率則達到 16.3%；Alta Devices 的砷化鎵單結組件量產效率達到 25.1%，於二零一七年十一月十四日通過 Fraunhofer ISE CalLab 太陽能組件認證，Alta Devices 曾保持 GaAs 單結電池(截至二零一八年四月)及組件(截至二零一七年十二月)轉換效率的世界紀錄；本集團的高效矽異質結 (SHJ) 電池研發效率也高達 23.1%，並已獲得 SGS-TUV 認證。

2018年中國可再生能源大會在8月23日發佈了年度中國太陽能電池認證紀錄。在8項發佈紀錄中，漢能獲取了砷化鎵單結、砷化鎵雙結、銅銦鎵銻、異質結太陽能電池四項年度認證紀錄冠軍。其中異質結太陽能電池創出了23.7%的轉換效率，此乃經日本電氣安全環境研究所(JET)認證的紀錄，彰顯了漢能在過去一年取得持續的技術進步，確立了行業技術領先優勢。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

B. UPSTREAM BUSINESS: *(continued)*

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.

業務回顧(續)

B. 上游業務：(續)

積極推進產業園項目戰略開發

移動能源產業園是地方政府發展地方經濟轉型升級的過程中，對薄膜太陽能等高新技術和戰略性新興產業的積極佈局。政府近年來大力推進能源轉型和低碳發展，推廣政府與社會資本合作模式(PPP)。一般來說，漢能聯屬公司連同地方政府的國企平台公司(「地方政府公司」)及一名獨立第三方(通常為該省內的一間企業)(「獨立第三方」)成為了產業園項目公司(「項目公司」)的初步發起人及股東，各方須對項目公司作出初步注資。漢能聯屬公司作為初步發起人及項目公司的少數股東，實際上將不會委任項目公司的董事，亦將不會控制項目公司的營運。

項目公司在地方政府的支持下從事大規模薄膜組件生產。除以先進的薄膜太陽能技術開發可再生能源所帶來的裨益外，政府及政府投資平台公司相信，從商業角度觀之，產業園項目亦將取得成功。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

B. UPSTREAM BUSINESS: *(continued)*

Active Promotion of Strategic Development of Industrial Parks Projects (continued)

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.

業務回顧(續)

B. 上游業務：(續)

積極推進產業園項目戰略開發(續)

根據市場研究，薄膜太陽能電池及組件的銷售量乃受薄膜應用產品的需求增長所帶動，而該等產品已獲得終端用戶普遍使用。例如，在綿陽產業園項目及大同產業園項目中，地方政府鼓勵其管轄省市內的新建築項目使用產業園項目供應的薄膜太陽能產品，例如分佈式太陽能發電系統及農業太陽能應用系統、BIPV樓宇應用、城市照明系統、公共交通、電動車、公路、扶貧太陽能項目及其他與當地公益有關的項目。因此，產業園項目的大部分產品乃規劃售予該省內的本地客戶。我們相信薄膜太陽能產品的下游應用將會產生可觀的銷售收入，以確保產業園項目的營運及可持續發展。

本集團先進的薄膜太陽能技術在上游及下游太陽能市場廣為人知，因此吸引多個地方政府的注意和興趣。二零一八年上半年，漢能薄膜發電繼續為產業園提供CIGS、GaAs和高效矽異質結(SHJ)等一系列交鑰匙生產綫，以利地方政府使用太陽能技術，並吸引其他高科技公司進入新產業園，助力區域經濟發展。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

B. UPSTREAM BUSINESS: *(continued)*

Active Promotion of Strategic Development of Industrial Parks Projects (continued)

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.

業務回顧(續)

B. 上游業務：(續)

積極推進產業園項目戰略開發(續)

在二零一八年一月至六月期間，本集團的產業園項目客戶主要為綿陽產業園、大同產業園及淄博產業園。期內簽約之項目，正加緊進行交付並已收到部分回款。本集團正在與更多產業園進行合作洽談，預計未來將會簽約更多類似的產業園項目，為二零一八年及未來幾年的業績作出貢獻。

產業園項目公司作為設備與技術認購方，與本集團簽署薄膜太陽能電池生產線之採購協議，向本集團購買薄膜太陽能電池生產線。

四川綿陽產業園項目

於二零一七年五月十八日，綿陽市涪城區政府與漢能聯屬公司訂立一項有關移動能源產業園項目的合作協議(「綿陽產業園項目」)，根據該合作協議，綿陽產業園項目計劃於四川省綿陽市涪城區投資進行CIGS及GaAs薄膜太陽能組件生產線建設及安裝。綿陽產業園項目分為四期，其中第I期為600MW CIGS薄膜太陽能組件及20MW柔性GaAs薄膜太陽能組件生產線，總投資額為人民幣66億元。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

B. UPSTREAM BUSINESS: *(continued)*

Sichuan Mianyang Industrial Park Project (continued)

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.



業務回顧(續)

B. 上游業務：(續)

四川綿陽產業園項目(續)

於二零一七年六月，本集團與綿陽產業園項目公司訂立一份銷售合同。根據該等協議的條款及條件，我們向綿陽產業園提供600MW GSE CIGS薄膜生產綫，總價為約人民幣27.3億元，當中包括前端合同約人民幣24.665億元及後端合同約人民幣2.635億元。

截至二零一八年六月三十日的六個月，本合同產生的收入約為9.17億港元。

BUSINESS REVIEW *(continued)*

B. UPSTREAM BUSINESS: *(continued)*

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.

業務回顧(續)

B. 上游業務：(續)

山西大同產業園項目

於二零一七年七月，山西省大同市政府、大同煤礦集團有限公司及漢能移動能源控股有限公司(一間漢能聯屬公司)訂立一份有關移動能源產業園項目(「大同產業園項目」)的戰略性合作協議。根據該戰略性合作協議，大同產業園項目計劃在山西省大同市投資進行CIGS薄膜太陽能組件生產線建設及安裝。整體項目分為三個部分，包括第I期為250MW玻璃基CIGS薄膜組件生產線及50MW柔性CIGS薄膜組件生產線；第II期為300MW柔性CIGS薄膜組件生產線；及第III期為20MW高性能GaAs薄膜組件生產線。大同市政府將透過提供相關規劃信息及制訂水、電及供暖等公用事業的優惠政策來給予大同產業園項目支持。截至二零一八年六月三十日，項目第I期正在施工中，總投資額為人民幣22.72億元。

於二零一七年十月十九日，本集團與山西省大同產業園項目公司訂立一份銷售及服務合同。根據該合同的條款及條件，我們以人民幣18.2億元的價格向大同產業園項目提供300MW MiaSolé CIGS薄膜生產線。首批50MW薄膜組件生產線目標於二零一八年六月投入大規模生產視乎於設備的可用量、供應商交付設備的時間表、工廠的條件等，而餘下的250MW生產線將於二零一九年三月開始量產。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

B. UPSTREAM BUSINESS: *(continued)*

Shanxi Datong Industrial Park Project (continued)

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”).

業務回顧(續)

B. 上游業務：(續)

山西大同產業園項目(續)

截至二零一八年六月三十日的六個月，本合同產生的收入約為1.46億港元。

山東淄博產業園項目

於二零一四年十二月，山東省淄博市市政府與漢能控股訂立一份有關太陽能產業園項目(「淄博產業園項目」)的合作框架協議。根據該框架協議，淄博產業園項目計劃在山東省淄博市投資進行3GW CIGS薄膜太陽能組件生產線建設及安裝。於二零一七年十月，漢能控股將淄博產業園項目公司的57%股本權益轉讓予華豐源投資(北京)有限公司(「華豐源」)。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

B. UPSTREAM BUSINESS: *(continued)*

Shandong Zibo Industrial Park Project (continued)

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.



業務回顧(續)

B. 上游業務：(續)

山東淄博產業園項目(續)

於二零一六年一月，本集團與淄博產業園項目公司訂立一份銷售合同，以3.9億美元的價格向淄博產業園項目公司銷售300MW MiaSolé CIGS薄膜太陽能生產綫。於二零一七年四月二十七日，本集團與淄博產業園項目公司再訂立一份銷售合同。根據該協議的條款及條件，我們以3.9億美元的價格向淄博產業園項目公司銷售300MW Solibro CIGS薄膜太陽能生產綫。

截至二零一八年六月三十日，300MW MiaSolé及300MW Solibro CIGS生產綫設備已經交付並正在安裝，上述兩條不同技術之合同於期內產生的總收入約為16.77億港元。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

B. UPSTREAM BUSINESS: *(continued)*

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.

業務回顧(續)

B. 上游業務：(續)

積極開發其他新大客戶

除產業園外，本集團亦積極開發多個第三方新大客戶，多樣化上游業務。

荊州順佰

於二零一七年五月，本集團與荊州順佰太陽能電力有限公司(「荊州順佰」)訂立一份300MW非晶矽BIPV薄膜組件生產線銷售合同及相關的技術支持及服務協議，以5.7千萬美元的價格提供300MW非晶矽BIPV薄膜生產線，並以1.56億美元的價格提供相關技術支持及服務。設備已交付並正在安裝，同時按照交付進展情況支付階段性款項。

截至二零一八年六月三十日止六個月，本合同產生的收入約為1.85億港元。

於二零一七年九月，我們與荊州順佰產業園項目公司訂立一份150MW Solibro CIGS薄膜組件生產線銷售合同及相關的技術服務協議，以人民幣6.192億元的價格提供Solibro 150MW CIGS薄膜生產線，並以人民幣3.334億元的價格提供相關的技術服務。部分設備已交付並正在安裝，同時按照交付進展情況支付階段性款項。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

B. UPSTREAM BUSINESS: *(continued)*

Jingzhou Shunbai (continued)

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.

業務回顧(續)

B. 上游業務：(續)

荊州順佰(續)

截至二零一八年六月三十日止六個月，本合同產生的收入約為6.88億港元。

於二零一八年一月，本集團與荊州順佰產業園項目公司訂立一份150MW MiaSolé CIGS薄膜組件生產綫銷售合同以及服務及技術支持協議，總價格為人民幣7.469億元。部分設備已於二零一八年六月開始交付並正在安裝，同時按照交付進展情況支付階段性款項。

截至二零一八年六月三十日的六個月，本合同產生的收入約為2.615億港元。

成都華豐源

於二零一七年十月二十六日，本集團與華豐源(成都)新能源科技有限公司(「成都華豐源」)訂立600MW SHJ薄膜組件生產綫銷售合同，在中國成都安裝開發其農業應用太陽能項目的SHJ薄膜組件生產綫。根據此協議的條款及條件，本集團須以約人民幣14億元的價格向成都華豐源提供600MW SHJ薄膜太陽能組件生產綫。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

B. UPSTREAM BUSINESS: *(continued)*

Chengdu Huafengyuan (continued)

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.

業務回顧(續)

B. 上游業務：(續)

成都華豐源(續)

本集團之後分別於二零一七年十月二十七日及二零一八年三月二十三日簽訂相關的技術支持及服務協議，分別為120MW及480MW SHJ生產線提供技術服務，價格分別為人民幣1.76億元及7.038億元。截至二零一八年六月三十日的六個月，以上產綫及技術合同產生的收入約為17.25億港元。

於二零一八年五月二日，本集團與成都華豐源訂立一份銷售合同及一份技術支持及服務協議，提供150MW MiaSolé CIGS薄膜組件生產綫及相應的技術支持及服務，總價格為人民幣8.9251億元。截至二零一八年六月三十日的六個月，本合同產生的收入約為1.25億港元。

南京易能

至二零一八年六月十二日，本集團與華夏易能(南京)新能源有限公司(「南京易能」)訂立一份300MW Solibro CIGS薄膜組件生產綫銷售合同及一份技術支持及服務協議，分別以約人民幣12.4億元的價格向南京易能提供300MW Solibro CIGS薄膜組件生產綫，並以人民幣6.67億元的價格提供相關技術支持和服務。截至二零一八年六月三十日，部分設備已經交付並正在安裝，同時按照交付進展情況支付階段性款項。截至二零一八年六月三十日的六個月，本合同產生的收入約為17.68億港元。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

B. UPSTREAM BUSINESS: *(continued)*

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.

業務回顧(續)

B. 上游業務：(續)

黑龍江易能

於二零一七年九月二十九日，我們與黑龍江華夏易能新能源科技有限公司(「黑龍江易能」)訂立一份銷售合同及一份技術支持及服務協議，分別以人民幣9.38億元的價格向黑龍江易能提供300MW Solibro CIGS薄膜太陽能組件生產線，並以人民幣7.68億元提供相關技術支持及服務。

截至二零一八年六月三十日，部分設備已經交付並正在安裝，同時將按照交付進展情況支付階段性款項。截至二零一八年六月三十日的六個月，本合同產生的收入約12.85億港元。

德州易能

於二零一七年十一月十三日，我們與德州易能新能源科技有限公司(「德州易能」)訂立一份銷售合同及一份技術支持及服務協議，分別以人民幣9.38億元的價格向德州易能提供300MW Solibro CIGS薄膜太陽能組件生產線，並以人民幣7.68億元提供相關技術支持和服務。

截至二零一八年六月三十日，部分設備已經交付並正在安裝，同時將按照交付進展情況支付階段性款項。截至二零一八年六月三十日的六個月，本合同產生的收入約12.61億港元。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

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.

業務回顧(續)

C. 下游業務

本集團之下游業務主要為研發、設計、集成及銷售薄膜太陽能發電系統、移動能源應用產品並提供相關服務，包括：(i) 銷售分佈式發電系統，包括戶用屋頂發電系統、工商業屋頂發電系統、太陽能建築一體化系統及太陽能農業應用系統等；(ii) 銷售移動能源應用產品；(iii) 提供太陽能發電站建設及維修服務；(iv) EPC工程。

截至二零一八年六月三十日，下游業務錄得約13.3億港元收入。下游分部持續增長符合我們擴展下游業務的戰略。憑藉我們於產品中應用的技術，本集團的薄膜太陽能產品在市場上佔盡柔性、輕巧及弱光性能優異的競爭優勢。

截至二零一八年六月三十日，本集團銷售四類戶用分佈式薄膜發電系統，包括：(1) 為一般家庭用戶而設之標準產品系列；(2) 利用工商業建築閒置的屋頂成為小型發電站的小型工商業產品系列；(3) 適用於遮陽棚及涼亭的陽光棚系列；及(4) 以中國傳統建築所用的拱形瓦片之造型於普通屋面為發電組件的漢瓦系列。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

C. DOWNSTREAM BUSINESS *(continued)*

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.

業務回顧(續)

C. 下游業務(續)

生態城市綜合解決方案

漢能生態城市綜合解決方案是在國家新能源發展戰略下，以降低城市能源消耗為目標，通過對城市能源全面佈局，從宏觀規劃、業務諮詢、方案設計、建設實施、運維服務等方面入手，提供一攬子綜合能源解決方案。本集團銳意透過打造移動能源的生態圈和提供「生態城市」解決方案，用智慧能源賦能城市生態的多脈絡，以能源變革打造全新的生活方式，創建自然、城市與人和諧共生的城市有機體。

搶先佈局香港市場

今年四月，香港政府公佈上網電價計劃，提出兩間電力公司將以每度電港幣3元至5元的價格向安裝太陽能發電系統的業主購電，價格維持15年，幾乎為全球最高的金額。本集團的柔性薄膜太陽能產品具有輕、薄、柔的特性，在安裝和運輸環節大大減少了人工費用，非常適合香港市場。期內，本集團已在香港落地數個屋頂電站項目，分別位於新界各地。我們也將通過與經銷商及合作夥伴的合作，繼續積極拓展香港地區的太陽能應用業務。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

C. DOWNSTREAM BUSINESS *(continued)*

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.



業務回顧(續)

C. 下游業務(續)

案例：香港沙頭角4.14KW屋頂項目

香港沙頭角農莊屋頂項目於二零一八年五月正式落地，這是漢能能在香港建成的首個太陽能示範項目。組件採用漢能 MiaSolé 柔性薄膜發電科技，裝機容量 4.14KW。本項目屬裝機容量少於 10 千瓦或以下系統，根據香港政府與兩間電力公司於二零一七年訂立的《管制計劃協議》，項目方可以每度電電價港幣 5 元售予電力公司，預計每年平均發電量達 5000 度，每年賣電收入約港幣 2.5 萬元，賬面回本期只需 5 至 6 年。未來，漢能將繼續以先進的科技和優質的產品為香港的綠色發展助力。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

C. DOWNSTREAM BUSINESS *(continued)*

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.

業務回顧 *(續)*

C. 下游業務 *(續)*

工商業屋頂發電系統

集團繼續致力於開發及銷售工商業屋頂之分佈式發電系統，利用屋頂面積建設採用薄膜發電組件的發電站。我們的目標是通過提供項目設計、開發、銷售、建設及維修服務，向工商業主提供綠色能源解決方案。期內銷售屋頂電站為本集團貢獻518,516,000港元之收入。

案例：北京CBD核心區「中國尊」項目

中國尊，位於北京商務中心區核心區，建成後將是北京市最高的地標建築，共108層，高528米。該項目用地面積11,478平方米，總建築面積43.7萬平方米，由北京中信和業有限公司投資，預計總投資達240億元。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

C. DOWNSTREAM BUSINESS *(continued)*

Case: "China Zun Building" Project in the Core Area of Beijing CBD (continued)

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 system is 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.

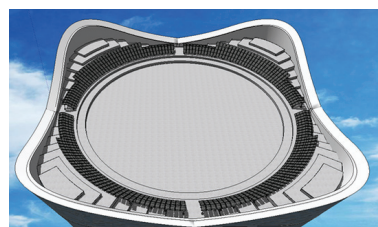


業務回顧 *(續)*

C. 下游業務 *(續)*

*案例：北京CBD核心區「中國尊」項目 *(續)**

項目運用本集團Solibro組件共640塊，佔用屋頂投影面積約為900平方米，總裝機容量為92.8KW。項目原定組件安裝方式為壓塊式，但考慮到大廈高達528米，屋頂風荷載及其它不可預見風險較高，為了使組件排佈觀感性更強，增加風荷載，防範非常規極端天氣對薄膜太陽能發電系統的影響，將安裝方式由原來的壓塊式變更為滑軌式，從而確保了系統更加安全可靠。目前，中國尊薄膜太陽能屋頂項目已在緊鑼密鼓籌備中，薄膜組件已交付，等待業主施工。



BUSINESS REVIEW *(continued)*

C. DOWNSTREAM BUSINESS *(continued)*

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 (滄州市市政工程公司) 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.



業務回顧(續)

C. 下游業務(續)

案例：河北省第三屆園林博覽會園林景觀建設項目

二零一八年四月，本集團與滄州市市政工程公司簽署河北省第三屆園林博覽會園林景觀建設項目——太陽能電池板工程項目銷售合同。該項目為國際和國內具有重要影響的園博盛會，本著「生態優先、節約環保、中外融合、持續發展」的規劃理念，將園博園打造成「永不落幕」的主題公園，成為中國園林的一張新名片。作為省重點項目，園博會綠色館為推動漢能產品在綠色建築項目中的應用，具有重要的示範意義。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

C. DOWNSTREAM BUSINESS *(continued)*

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.

業務回顧(續)

C. 下游業務(續)

太陽能建築一體化：美觀＋節能

BIPV項目採用BIPV技術，通過安裝太陽能瓦屋面、太陽能採光頂、太陽能幕牆、太陽能欄杆、太陽能遮陽、太陽能車棚等薄膜太陽能系統，利用太陽能資源為建築提供免費的清潔電力，集實用性發電系統和優美的建築形態於一身，構建薄膜太陽能發電建築。

案例：山西國電生產調度綜合樓中庭太陽能採光頂系統

期內，山西國電生產調度綜合樓中庭太陽能採光頂系統安裝完畢並等待併網。該項目安裝面積達800平米，具超大尺寸中空BIPV採光頂，既保持了建築的美觀外形，又實現了節能環保，單塊組件尺寸近8平米，為國家電網示範型項目，預計交付時間為今年十月。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

C. DOWNSTREAM BUSINESS *(continued)*

Case: Solar Energy Sunroof System in the Atrium of Shanxi National Power Generation Dispatching Complex Building (continued)

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%.



業務回顧(續)

C. 下游業務(續)

案例：山西國電生產調度綜合樓中庭太陽能採光頂系統(續)

該項目使用高光電轉換效率的組件，將照射在建築表面的太陽能加以有效利用，並且憑藉雙銀玻璃的材質特性，保證高透光率的同時將傳熱系數降低21%，充分降低室內溫度，縮小了南北側溫差，預計可降低空調耗電量15%。



MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

C. DOWNSTREAM BUSINESS *(continued)*

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.



業務回顧(續)

C. 下游業務(續)

案例：北京世園會國際館太陽能花傘項目

二零一九年中國北京世界園藝博覽會(簡稱「北京世園會」)，屬世博會範疇，由中國政府主辦、北京市舉辦。作為園區的三大核心建築之一、也是面積最大的場館建築，國際館總建築面積約22,000平方米，它以「花傘」為基本元素，94把由鋼柱和懸挑鋼梁構成的「花傘」在頂部花瓣處相互連接，構成了如同「花海」般的屋頂。「花傘」由6片葉狀的鋁單板組成，本集團的MiaSolé柔性太陽能組件鋪設在鋁單板上，與鋁單板結合成一片片總裝機量為10KW的太陽能花瓣。據測算，鋪上漢能柔性組件後，一棵花傘一年約可發電1.01萬度，節省標準煤3.23噸，減少碳排放9.41噸，相當於種了514棵樹，這與北京世園會「綠色生活•美麗家園」的主題完美契合。



MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

C. DOWNSTREAM BUSINESS *(continued)*

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.

業務回顧(續)

C. 下游業務(續)

生態漢瓦 承古耀今

目前全球半數的原材料和能源使用來自建築類消耗，節能建築是未來發展的必然趨勢。本集團關注在建築方面的太陽能應用，創造性地推出漢瓦和BIPV項目，充分發揮薄膜太陽能的優勢，在產品開發、產品提供、系統設計、安裝施工和運行維護上提供一站式解決方案，在保證有效能源供應的前提下降低傳統能源消耗，減少污染物排放。

公司於二零一七年推出創新性綠色建築材料——「漢瓦(HanTile)」，今年四月又推出新一代的單玻「漢瓦」，較去年推出的雙玻漢瓦更輕、更薄、造型更美觀、性能更優異，為建材應用帶來重大的商業和環保價值。漢瓦是將高效薄膜太陽能組件和疊層玻璃進行完美結合，將銅銦鎵硒(CIGS)薄膜太陽能芯片通過內外雙層的夾膠封裝工藝，封裝在高透光度玻璃內層中，兼具高效發電性能和高等級建築安全性能，實現屋頂太陽能發電，並結合了中國傳統拱形瓦片的造型而設計製造。漢瓦的節能減排效果顯著，有數據表示，一片漢瓦目前的功率是35瓦，一年產生大約40度電。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

C. DOWNSTREAM BUSINESS *(continued)*

Ecological Hantile, the Ancient Heritage to Light up the Future (continued)

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.

業務回顧(續)

C. 下游業務(續)

生態漢瓦 承古耀今(續)

漢瓦定位為中高端產品，可應用於新建商品別墅、城鄉公共建築、農村自建住宅、美麗鄉村或特色小鎮等，服務於房地產開發商、地方政府、高淨值人群等多領域客戶。目前，漢瓦已被應用於多項建築設計，包括瑞典別墅項目、吉林養老院項目、北京順義項目、安徽泗縣項目以及雲南項目等。

漢瓦亦已順利通過了SGS-TÜV (SGS and TÜV Saarland)認證，符合國際太陽能產品認證的要求，具備了應用於歐洲太陽能市場的資格。漢瓦已於期內正式登陸歐洲市場。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

C. DOWNSTREAM BUSINESS *(continued)*

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 glasses 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.



業務回顧(續)

C. 下游業務(續)

案例：瑞典斯德哥爾摩別墅項目

漢瓦在歐洲市場推廣以來，便獲得了各國客戶的廣泛關注和接洽。二零一八年六月，歐洲首批雙玻漢瓦36KW試點項目圓滿竣工。該項目是位於瑞典斯德哥爾摩的5棟高端新建別墅工程。

工程團隊按照雙玻漢瓦系統安裝指導手冊嚴格把控，高效率高質量地完成了對5棟高端別墅的整體工程。漢瓦高端、流暢的外形和優秀的發電效率，獲得了合作方及當地建築開發商的一致認可，合作方已決定將漢瓦納入其未來中高端別墅項目的標配。



MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

C. DOWNSTREAM BUSINESS *(continued)*

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.



業務回顧 *(續)*

C. 下游業務 *(續)*

案例：無錫單玻漢瓦木屋項目

二零一八年四月，本集團與上海奧寧電子科技有限公司簽署漢瓦系統項目銷售合同。該無錫度假村木屋項目，於五月十五日正式開始施工，並於五月十九日初步成功併網發電。因其不污染環境且為第一個漢瓦別墅項目，具有重要的示範作用。漢瓦木屋建築美觀實用，弱光發電性能佳。除了這三座漢瓦別墅木屋外，在今後的項目建設過程中，本集團還將為度假村提供漢傘、柔性薄膜組件等更多技術及產品支持。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

C. DOWNSTREAM BUSINESS *(continued)*

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.

業務回顧(續)

C. 下游業務(續)

綠色交通 共創低碳城市

綠色交通解決方案主要為了緩解交通所需的能源供應，整體佈局交通系統能源供應，將太陽能薄膜技術應用於新能源汽車、智能公交站台、停車棚信號能源、照明、高速公路能源、郵輪港口等領域，通過白天發電、夜間供電，為城市交通減少市政供電，降低能耗和污染。

案例：大理智慧公交站台項目

二零一八年三月，本集團與大理市海東區政府簽署大理智慧公交站台銷售合同，裝機容量2.5KW。

大理智慧公交太陽能站台可通過太陽能發電，為顯示屏、視頻監控、語音報站、交互查詢及燈箱廣告等提供能源支持，只要有陽光照射，智慧車站就可自己發電，不會排放任何污染物，真正實現低碳節能、綠色環保。為了適應全球各地不同氣候特點，大理智慧公交太陽能站台還內置了蓄電池解決方案，可存儲長達三天的使用電量，即便在多陰雨天氣下，也可以完美保證智慧公交太陽能站台的正常運行。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW (continued)

C. DOWNSTREAM BUSINESS (continued)

Case: Dali Smart Bus Station Platforms Project (continued)

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.

業務回顧(續)

C. 下游業務(續)

案例：大理智慧公交站台項目(續)

現兩座薄膜公交站台已通過大理市海東區政府驗收交付及回款。

移動能源變革 開創綠色生活新時代

伴隨科技發展，綠色理念已經融入生活的各個方面。漢能薄膜發電通過持續技術突破及創新研發，將太陽能發電應用到日常生活中，推出新一代薄膜太陽能發電紙、發電包、發電背包、小型離網發電系統等多款便攜式移動能源產品，覆蓋城鄉居民的智慧穿戴、家居生活、電子設備以及戶外運動裝備等方面，為使用者提供更方便、快捷的移動用電體驗，滿足移動通訊、戶外運動、野外作業、應急救援等市場對移動能源解決方案的需求。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

C. DOWNSTREAM BUSINESS *(continued)*

Reformation of Mobile Energy to Create New Era of Green Life (continued)

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.

業務回顧(續)

C. 下游業務(續)

移動能源變革 開創綠色生活新時代(續)

今年四月，本集團推出薄膜太陽能新品—漢傘，在研發漢傘產品過程中，產出了159件專利及專利申請。作為全球首款基於柔性薄膜太陽能技術的多功能傘，漢傘結合全球銅銦鎵硒柔性共蒸法最高轉換效率的薄膜芯片，集離網供電、儲電、夜間照明、終端充電四大功能於一體，可以滿足電力供應困難地區的基本用電需求。本集團還啟動了「點亮非洲」漢傘公益項目，通過免費捐贈漢傘向非洲地區提供移動能源解決方案。

在銷售渠道方面，除了線下網絡，本集團亦透過專有的網絡渠道在綫銷售薄膜發電產品，包括自營的官方網上商城網站「漢能商城」、天貓網旗艦店、京東網旗艦店以及其他大型電商平台專營店、網絡經銷商渠道、在綫代銷渠道及垂直行業及網站渠道，形成了綫上綫下、覆蓋全國的立體銷售渠道平台。於二零一八年上半年，銷售光伏應用產品為本集團貢獻2,172萬港元之收入。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

C. DOWNSTREAM BUSINESS *(continued)*

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.



業務回顧(續)

C. 下游業務(續)

用於消費品的移動太陽能應用產品

漢傘：薄膜太陽能發電雨傘

全球首款基於柔性薄膜太陽能技術的多功能傘，集離網供電、儲電、夜間照明、終端充電四大功能於一體。

漢包：可攜式薄膜太陽能發電背包

背包外層由尼龍配以牛皮製成，正面是一張使用MiaSolé芯片的太陽能發電紙。部分漢包在其下方還有一張發電紙，可抽拉進行使用，以增大受光面積，提升發電效能。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

C. DOWNSTREAM BUSINESS *(continued)*

Application of Mobile Solar Energy Products for Consumer Goods (continued)

HanPaper: Thin-film Solar Energy Power Generation Paper

HanPaper adopts MiaSolé CIGS chips and is equipped with magnetic power storage components 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.



業務回顧(續)

C. 下游業務(續)

用於消費品的移動太陽能應用產品(續)

漢紙：薄膜太陽能發電紙

採用 MiaSolé 的銅銦鎳硒 (CIGS) 芯片製成，利用柔性共蒸法薄膜太陽能技術，配有磁吸式 5000mAh 儲電模塊，支持 Qi 標準無線充電模式，可以進行無線充電。其中，M12 薄膜太陽能發電紙採取了三摺式設計，輕薄、柔軟、防水、抗污，摺疊收起時面積小於一張 A4 紙，厚度只有 1 毫米。同時額外配備了 4 枚掛扣，可將發電紙懸掛於帳篷、背包上，邊走邊發電。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

C. DOWNSTREAM BUSINESS *(continued)*

Application of Mobile Solar Energy Products for Consumer Goods (continued)

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.



業務回顧(續)

C. 下游業務(續)

用於消費品的移動太陽能應用產品(續)

便攜式薄膜太陽能應急電源箱

發電、照明、充電三合一，立體解決方案助您遠足探險，郊外休閒。黑色磚牆紋面盡顯酷炫氣質，內含50W-100W薄膜太陽能摺疊充電紙、30000mAh移動電源及8800mAh野營燈。

BUSINESS REVIEW (continued)

C. DOWNSTREAM BUSINESS (continued)

Application of Mobile Solar Energy Products for Consumer Goods (continued)

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 functions include 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.

業務回顧(續)

C. 下游業務(續)

用於消費品的移動太陽能應用產品(續)

薄膜太陽能服裝

戶外及極限運動專用，通過太陽能充電供電裝置連接發光體，並由光電轉換柔性板、光電池及網狀發熱纖維等構成新型太陽能服裝，使其具備照明、警示、取暖等功效。

無人駕駛飛機

太陽能驅動飛行器主要包括無人機、太空飛船及熱氣球和飛艇等，其中無人機是最典型的應用。漢能4.4米固定翼無人機鋪設薄膜太陽能電池後，將續航時間延長到6至10小時，工作範圍可以達到400至700公里，是工業級太陽能無人機，可廣泛應用於軍用、民用和商用市場，如石油天然氣管道巡邏、農業監控、軍用警用巡邏、災害和應急救援、航拍和土地測繪、自然資源檢測、邊境和海岸線巡邏、礦業監測等。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

C. DOWNSTREAM BUSINESS *(continued)*

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, the Group, transfers 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.

The Group attaches 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.

業務回顧(續)

C. 下游業務(續)

太陽能扶貧 推動經濟發展

本集團繼續響應國家能源局和國務院扶貧辦兩部委牽頭實施的「光伏扶貧」政策方案，認真貫徹落實國家扶貧開發方針，研究光伏政策，制定區域扶貧策略，不斷探索光伏扶貧之路，充分利用農村貧困戶的土地資源，讓平日裏最尋常的太陽光成了貧困戶脫貧路上的「財富」，從而實現扶貧開發由「輸血式」向「造血式」扶貧的轉變，幫助貧困群眾實現精準脫貧。

本集團高度重視光伏扶貧與當地特殊情況的結合，切實做到「精準扶貧」。參與光伏扶貧的貧困戶不僅可以得到太陽能發電設備的擁有權，還可以獲得除自用電力之外部份電力上網產生的經濟收益。此外，在不影響農業生產的前提下，本集團將薄膜太陽能發電技術與魚塘、畜禽棚結合，建設成集「光伏發電、漁光互補、畜光互補」為一體的大型現代化智慧農業項目；將薄膜太陽能發電技術和果樹種植融為一體，在紅棗太陽能大棚上建設太陽能電站，在實現清潔發電的基礎上解決了當地紅棗的裂果問題；將輕質透光的薄膜發電系統與育苗溫室相結合，在不影響棚下育苗的基礎上帶來額外的發電收益。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW *(continued)*

C. DOWNSTREAM BUSINESS *(continued)*

Solar Energy Poverty Alleviation and Promotion of Economic Development (continued)

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.



業務回顧(續)

C. 下游業務(續)

太陽能扶貧 推動經濟發展(續)

漢能薄膜發電繼續努力發展太陽能扶貧項目，截至二零一八年六月三十日止六個月，集團已簽訂並完成四個扶貧項目。

案例：七台河勃利縣光伏扶貧項目

漢能薄膜發電為黑龍江省七台河市勃利縣615KW光伏扶貧項目的EPC總承辦商，當地政府負責該項目20%自有資金，另外80%的資金為農業發展銀行貸款，在各村集體廢置土地投資建設村級光伏扶貧電站。預計電站併網後，為每戶貧困戶帶來每年約人民幣3,000元的收益，真正地實現整村脫貧。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW (continued)

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.

業務回顧(續)

D. 向漢能控股集團交付生產綫

福建鉑陽精工設備有限公司(「福建鉑陽」，為我們的附屬公司之一)與漢能控股分別於二零一零年及二零一一年訂立兩份主銷售合同(各為「主銷售合同」)，以向漢能控股、其附屬公司及其聯屬公司(「漢能控股集團」)銷售供製造薄膜太陽能組件使用的設備及整套生產綫。該等合同的詳情分別載於我們日期為二零一零年七月八日及二零一一年十一月十四日的通函內。

於二零一三年十月三十一日，福建鉑陽與漢能控股訂立兩份主銷售合同的補充銷售合同。該等補充銷售合同的詳情載於我們日期為二零一三年十二月十二日的通函內。

		Master Sales Contract entered into in 2010 (as supplemented in 2013) 於二零一零年訂立並於二零一三年補充的主銷售合同	Master Sales Contract entered into in 2011 (as supplemented in 2013) 於二零一一年訂立並於二零一三年補充的主銷售合同
Total purchase capacity as stipulated in the sales contracts	有關主銷售合同所訂明的總銷售產能	3,000MW	7,000MW
Purchase capacity of module equipment and production lines committed by Hanergy Holding Group as at 30 June 2018	於二零一八年六月三十日漢能控股集團已承諾採購的組件設備及生產綫產能	1,300MW	7,000MW

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

BUSINESS REVIEW (continued)

D. DELIVERY OF PRODUCTION LINES TO HANERGY HOLDINGS GROUP (continued)

業務回顧(續)

D. 向漢能控股集團交付生產綫(續)

		Master Sales Contract entered into in 2010 (as supplemented in 2013) 於二零一零年 訂立並 於二零一三年 補充的 主銷售合同	Master Sales Contract entered into in 2011 (as supplemented in 2013) 於二零一一年 訂立並 於二零一三年 補充的 主銷售合同
		HK\$'mil 百萬港元	HK\$'mil 百萬港元
Total contract sum	合同總金額	25,800	61,270
Total cumulative advance payment made by Hanergy Holding Group as at 30 June 2018	截至二零一八年六月三十日，漢能控股集團已付出的總累計預付訂金	1,998	1,560
Contract revenue recognized in:	已確認合同收入：		
For the year ended 31 December 2010	截至二零一零年十二月三十一日止年度	2,310	0
For the year ended 31 December 2011	截至二零一一年十二月三十一日止年度	1,446	1,009
For the year ended 31 December 2012	截至二零一二年十二月三十一日止年度	0	2,756
For the year ended 31 December 2013	截至二零一三年十二月三十一日止年度	0	3,243
For the year ended 31 December 2014	截至二零一四年十二月三十一日止年度	3,102	2,853
For the year ended 31 December 2015	截至二零一五年十二月三十一日止年度	134	(88)
For the year ended 31 December 2016	截至二零一六年十二月三十一日止年度	39	865
For the year ended 31 December 2017	截至二零一七年十二月三十一日止年度	628	434
For the period ended 30 June 2018	截至二零一八年六月三十日止期間	0	0

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

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. For example, Energy Trend, a market research company based in Taiwan analyzed the new policy was expected to cause a significant decrease

未來展望

A. 全球太陽能市場

太陽能發電是世界上增長速度最快的可再生能源市場之一。延續二零一七年全球太陽能市場首次突破100GW太陽能裝機量的發展勢頭，二零一八年上半年，全球太陽能市場在各方市場環境變動下仍有所增長。根據IHS的數據顯示，二零一八年上半年全球新增裝機容量約54GW。其中，據中國光伏行業協會(CPIA)統計，今年上半年中國新增裝機量24GW，同比基本持平，發展勢頭較為穩定。與此同時，對於太陽能行業的全球企業融資總額增長強勁。根據Mercom資本集團的資料，二零一八年上半年太陽能行業的全球企業融資總額同比增長15%至53億美元。

二零一八年一月，美國政府宣佈對進口太陽能面板徵收高達30%的關稅，引起太陽能產業動蕩。而後在二零一八年五月三十一日，國家發展改革委、財政部、國家能源局聯合下發《關於二零一八年光伏發電有關事項的通知》(531通知)，嚴控太陽能發展的基調，引發了全球聚焦關注。展望二零一八年全年，在531通知的影響下，多家行業機構下調先前預測幅度。如台灣市場研究公司Energy Trend分析，預計531通知將使二零一八年中國內需大幅下滑到29-35GW，並使全球太陽能需求出現首度負增長，預計將低於100GW水平。但仍有多家機構對全球太陽能市場保持信心。光伏市場聯盟(PVMA)在最新發

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

FUTURE OUTLOOK *(continued)*

A. GLOBAL SOLAR ENERGY MARKET *(continued)*

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 Energy 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 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.

未來展望(續)

A. 全球太陽能市場(續)

佈的「全球光伏市場報告」中表示，儘管中國政府近期出現突然的政策變化導致今年中國的裝機量下滑，但預計全球太陽能市場將不會受到重大影響，其中中國以外的市場裝機量將從二零一七年的45GW增長到今年的60GW以上，印度、歐洲和各大洲的許多新興市場將在二零一八年出現強勁增長。到二零一九年，除中國外的世界太陽能市場將創下100GW的新裝機容量，並預計這一數字將繼續增長。

中國太陽能市場

太陽能作為重要的清潔能源之一，在中國的能源結構轉型中扮演著重要角色，而中國太陽能產業作為全球中的佼佼者，未來發展前景十分廣闊。近年來，中國太陽能產業鏈成本持續下降，經濟性逐漸顯現。我國太陽能發電新增裝機規模連續5年全球第一，累計裝機規模連續3年位居全球第一。太陽能技術不斷創新突破、全球領先，並已形成具有國際競爭力的完整的太陽能產業鏈。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

FUTURE OUTLOOK *(continued)*

A. GLOBAL SOLAR ENERGY MARKET *(continued)*

The Solar Energy Market in China (continued)

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.

未來展望(續)

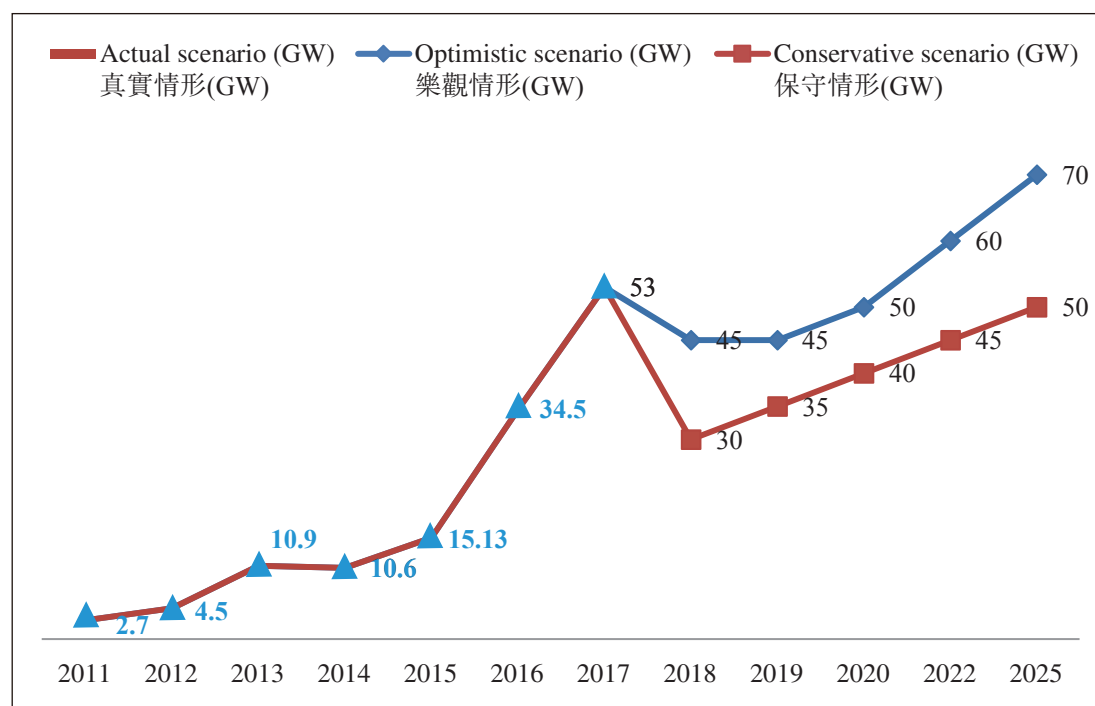
A. 全球太陽能市場(續)

中國太陽能市場(續)

根據國家能源局統計，截至2018年上半年，全國太陽能發電裝機容量達到154.51GW，其中，太陽能電站112.6GW，分佈式太陽能41.9GW。

Chart 1: Historical newly installed capacity in China and forecasts

圖表 1：中國歷史新增裝機量資料及預測



Source of data: CPIA

數據來源：CPIA

FUTURE OUTLOOK *(continued)*

A. GLOBAL SOLAR ENERGY MARKET *(continued)*

The Solar Energy Market in China (continued)

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.

未來展望(續)

A. 全球太陽能市場(續)

中國太陽能市場(續)

根據CPIA統計，今年上半年，中國新增太陽能裝機量約24.3GW，同比基本持平。其中分佈式裝機量約12.2GW，同比增長72%。中國太陽能組件產量達到42GW，增長約24%，組件環節產量大多來自海外訂單拉動，出口量約為19GW，同比增幅25%以上。結合太陽能發電發展的強勁勢頭，薄膜太陽能發電裝機容量也在持續增加。2017年底至今，《關於開展分佈式發電市場化交易試點》、《分佈式發電項目管理辦法(徵求意見稿)》等多項政策出台，旨在加速太陽能發電市場化進程，引導和鼓勵太陽能產業長期穩健發展。展望2018年全年，放眼全球，太陽能發電成本不斷下降，並已在多個國家低於常規能源，太陽能市場的潛力仍在被激發，預計全球市場仍將保持穩定甚至是增長勢頭。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

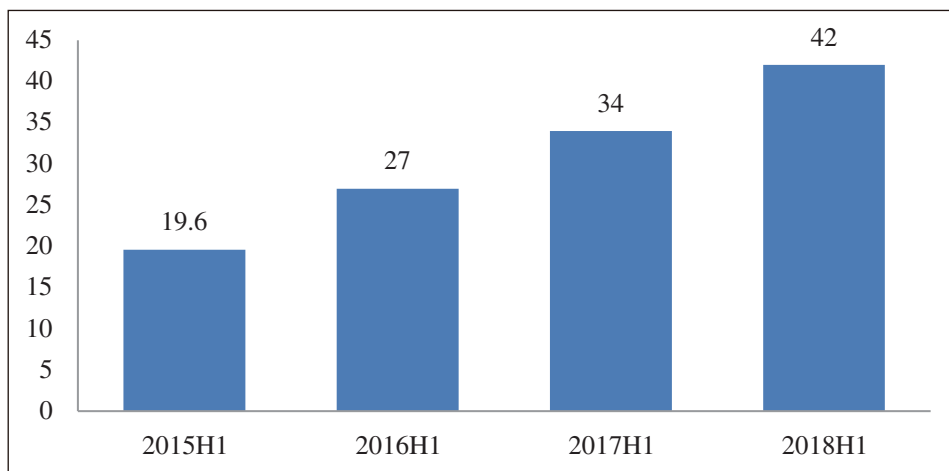
FUTURE OUTLOOK *(continued)*

A. GLOBAL SOLAR ENERGY MARKET *(continued)*

The Solar Energy Market in China (continued)

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

圖表 2：半年度我國生產組件情況 (GW)



Source of data: CPIA

數據來源：CPIA

未來展望 *(續)*

A. 全球太陽能市場 *(續)*

中國太陽能市場 *(續)*

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

FUTURE OUTLOOK (continued)

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.

未來展望(續)

B. 國家相關政策

《智慧光伏產業發展行動計劃(2018-2020年)》

二零一八年四月十九日，工業和信息化部、國家能源局等六部委印發了《智慧光伏產業發展行動計劃(2018-2020年)》，明確：加快發展先進製造業，加快提升太陽能產業智能製造水平，推動互聯網、大數據、人工智能等與太陽能產業深度融合，鼓勵特色行業智能太陽能應用，促進我國太陽能產業邁向全球價值鏈中高端。

《關於減輕可再生能源領域企業負擔有關事項的通知》

二零一八年四月，國家能源局發佈《關於減輕可再生能源領域企業負擔有關事項的通知》，《通知》要求嚴格落實《可再生能源法》要求，切實保障可再生能源產業健康發展；優化投資環境，降低可再生能源開發成本；完善政府放管服等公共服務，激發市場活力。該《通知》為可再生能源行業在市場消納及併網要求、用地措施、金融支持及提高政府服務職能方面，帶來新的利好消息，將減輕可再生能源相關企業投資經營負擔，進一步促進可再生能源度電成本下降。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

FUTURE OUTLOOK *(continued)*

B. RELATED POLICIES IN CHINA *(continued)*

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.

未來展望 *(續)*

B. 國家相關政策 *(續)*

《關於二零一八年光伏發電有關事項的通知》

二零一八年五月三十一日，國家發改委、財政部、中國國家能源局聯合發佈《二零一八年光伏發電有關事項的通知》。《通知》提出，暫不安排二零一八年普通太陽能電站建設規模；今年安排10GW左右規模用於支持分佈式太陽能項目建設；調低上網電價——新投運的太陽能電站標杆上網電價每千瓦時統一降低0.05元。

本集團相信，即使531通知調整了二零一八年分佈式太陽能發電系統的增長模式，但政府對太陽能行業的長遠規劃及對分佈式太陽能發電的支持，仍將繼續促進中國太陽能行業的發展。該通知的發佈加速了太陽能產業洗牌的速度，長遠來看有助於企業致力改革創新，優化太陽能產業的資源分配，利於行業的長遠持續發展。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

FUTURE OUTLOOK *(continued)*

B. RELATED POLICIES IN CHINA *(continued)*

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》(continued)

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.

未來展望(續)

B. 國家相關政策(續)

《關於二零一八年光伏發電有關事項的通知》(續)

薄膜太陽能技術是國家的支持重點。本集團致力於發展薄膜太陽能技術，並努力開發移動能源應用及產品創新，對於國家補貼政策無過多依賴，在此次新規中受影響較小。集團還相信，這種對分佈式太陽能發電系統的調整將為我們進一步推廣和開發我們的移動能源應用產品提供機會，這些產品不受531通知限制分佈式太陽能項目規模的約束。因此，集團將能夠提升目前的市場地位，擴大移動能源應用產品在下游市場的現有銷量規模。本集團一直明白，太陽能行業不可完全依靠補貼進行發展，因此在技術佈局及市場佈局上早已做了準備。對於受影響的傳統業務部分，集團有最好的品牌和完善的渠道，因此亦有較好的抗衝擊能力。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

FUTURE OUTLOOK *(continued)*

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

未來展望(續)

C. 公司未來發展願景

繼續「一基兩翼」戰略、開拓多元客戶

本集團期內繼續開展公司結構調整及公司治理優化，建立了更加清晰高效的治理結構、更科學規範的業務流程及以客戶為導向的銷售文化，採取「一基兩翼」的戰略佈局，即以薄膜太陽能技術的持續創新為基礎，以薄膜太陽能電池製造裝備及產線的「交鑰匙」解決方案為左翼，以分佈式能源及移動能源的解決方案為右翼，聚焦於上游裝備及產線業務、下游分佈式發電及移動能源業務。

上游業務積極開發產業園項目和獨立第三方客戶，提供薄膜太陽能裝備及產線的一體化「交鑰匙」解決方案。集團相信產業園項目日後將會是上游業務中最重要的大型客戶。期內集團在爭取擴大新產業園項目客戶基礎的同時，亦與我們的三大產業園項目客戶（綿陽產業園、大同產業園及淄博產業園）維繫良好的關係，並於期內陸續完成階段性交付及收到回款。下游業務仍以經銷商合作夥伴模式和大客戶直銷模式齊頭並進，為客戶提供「一站式」服務與解決方案；移動能源應用業務實現新的創新合作；工商業發電、光伏扶貧、BIPV、農業應用等業務亦取得進一步發展。同時我們於海外市場推廣下游產品，並利用與海外

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

FUTURE OUTLOOK *(continued)*

C. THE COMPANY'S VISION ON FUTURE DEVELOPMENT *(continued)*

Continue to implement the "One Base and Two Fronts" strategy and expand diversified customer base (continued)

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 Umbrella 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.

未來展望(續)

C. 公司未來發展願景(續)

繼續「一基兩翼」戰略、開拓多元客戶(續)

業務夥伴之間緊密的合作關係促進各類下游產品的銷售，拓寬市場，為集團的未來發展打下堅實基礎。

不斷研發新產品

集團順應清潔環保的全球趨勢，保持全球移動能源創新者的優勢，在薄膜太陽能應用產品研發方面取得了重大進展。例如，繼去年推出新型建材雙玻漢瓦，集團今年又推出新一代的單玻漢瓦，另外曲面雙玻漢瓦已順利通過TUV、CE、CQC、CCC、UL的認證測試且取得了相應的證書，並完成兩項企業標準發佈、一項團體標準立項及147件專利申請工作。二零一八上半年度完成了歐洲首批漢瓦示範項目，以助力漢瓦產品在國外市場順利推廣。

二零一八年四月底，集團推出漢傘，這是全球首款基於柔性薄膜太陽能技術的多功能傘，並在「點亮非洲」公益項目中將首批產品捐贈予坦桑尼亞。除此之外，集團亦於今年六月推出新款漢包、漢紙。這些新一代的產品，覆蓋居民的智慧穿戴、家居生活電子設備及戶外運動裝備等方面，為使用者提供更方便、快捷的移動用電體驗，滿足移動通訊、戶外運動、野外作業、應急救援等市場對移動能源解決方案的需求。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

FUTURE OUTLOOK *(continued)*

C. THE COMPANY'S VISION ON FUTURE DEVELOPMENT *(continued)*

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 foldable 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.

未來展望(續)

C. 公司未來發展願景(續)

移動太陽能能源發展態勢優異

本集團已開發出多樣化的移動能源應用產品，至今發展態勢優異。除了如薄膜太陽能摺疊式發電紙、發電包、發電背包等便攜式的移動能源產品，集團的薄膜太陽能電池也相繼應用於如共享單車、物流運輸車、無人飛機、太陽能無人汽車等多個移動交通領域。

二零一八年三月，漢能與中國第一汽車集團有限公司達成合作，籌劃將其旗下的紅旗系列搭載漢能薄膜太陽能車頂技術。集團的MiaSolé技術亦被應用於多個知名品牌。今年五月，韓國現代汽車發佈新型號商用旅行車，其車頂採用了集團MiaSolé技術的柔性太陽能組件。另外英國DHL送貨車及快遞車、順豐快遞車及不久前京東發佈的太陽能智能配送車，均依托於集團的柔性CIGS薄膜組件技術，並已先後投入市場使用。移動太陽能的大力發展有助於實現節能減排與綠色環保，本集團日後亦擬繼續拓展在此方面的業務及企業合作。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

FUTURE OUTLOOK *(continued)*

C. THE COMPANY'S VISION ON FUTURE DEVELOPMENT *(continued)*

Strong development momentum of mobile solar energy (continued)

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.

未來展望(續)

C. 公司未來發展願景(續)

移動太陽能能源發展態勢優異(續)

二零一八年上半年，本集團配合行業新規，緊跟市場步伐，不遺餘力地開拓發展核心業務，不斷堅持自主創新，取得了令人矚目的市場成績。展望下半年，本集團將持續緊跟太陽能市場的發展趨勢，著眼國內及國際環境變化，繼續保持集團作為最先進及高技術薄膜太陽能解決方案提供者的地位，憑藉現有的規模優勢，提高運營效率，並積極開拓海內外新市場，從而保持平穩的業績增長。上游持續推動移動能源產業園及其他新客戶的薄膜太陽能產綫交鑰匙工程；下游繼續發展移動能源和分佈式發電等重點太陽能應用業務；堅持技術研發，開發新產品，努力推動薄膜太陽能發電技術和產品的升級，走在行業前端和市場前沿。

MANAGEMENT DISCUSSION AND ANALYSIS

管理層討論及分析

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.

流動資金及財務資源

於二零一八年六月三十日，本集團之銀行及其他付息借款為627,577,000港元(二零一七年十二月三十一日：1,126,008,000港元)，而現金及現金等價物則約為1,183,267,000港元(二零一七年十二月三十一日：約2,496,760,000港元)。

於二零一八年六月三十日，資本負債比率(債務總額減現金及現金等價物、應付稅項、遞延收入、其他非流動負債及遞延稅項負債(「債務淨額」)除以母公司擁有人應佔權益及債務淨額)為39.20%(二零一七年十二月三十一日：47.86%)。

庫務政策及匯兌及其他風險

本集團之貨幣交易及存款繼續以美元、人民幣及港元結算。本集團預期匯率波動風險並不重大，故並無進行任何對沖活動。

或然負債

於二零一八年六月三十日，本集團並無任何重大或然負債(二零一七年十二月三十一日：無)。

員工

於二零一八年六月三十日，本集團之僱員人數為6,541人(二零一七年十二月三十一日：4,250人)，其中1,645人(二零一七年十二月三十一日：695人)為辦公室行政人員。

員工及董事薪酬乃按照個人表現及不同地區之現行薪金趨勢而釐定，並每年進行檢討。本集團亦向員工作出強積金及退休金供款，並提供醫療保險。

本集團根據個別人員表現及集團整體表現而向若干本集團僱員發放花紅。

DIRECTORS' INTEREST IN SHARES

As at 30 June 2018 the directors or the chief executive of the Company had interest or short position in the shares underlying shares or debentures of the Company or its associated corporations (within the meaning of Part XV of the Securities and Futures Ordinance (the "SFO")) as recorded in the register required to be kept by the Company pursuant to section 352 of the SFO or as otherwise notified to the Company and The Stock Exchange of Hong Kong Limited (the "Stock Exchange") pursuant to the Model Code for Securities Transactions by Directors of Listed Issuers (the "Model Code") as set out in Appendix 10 of the Rules Governing the Listing of Securities on the Stock Exchange (the "Listing Rules") as follows:

董事之股份權益

於二零一八年六月三十日，本公司各董事或主要行政人員在本公司或其任何相聯法團(定義見證券及期貨條例(「證券及期貨條例」)第XV部)之股份、相關股份或債券中擁有任何記錄於本公司根據證券及期貨條例第352條須存置之登記冊之權益或淡倉，或根據香港聯合交易所有限公司(「聯交所」)證券上市規則(「上市規則」)附錄十所載之上市發行人董事進行證券交易的標準守則(「標準守則」)須知會本公司及聯交所之權益或淡倉載列如下：

Name of Director	Capacity held	Number of shares	Number of underlying shares under derivatives equity/share options 衍生工具權益 項下之相關股份/ 購股權數目	Total interests	Percentage of issued share capital (%) 佔已發行股本百分比 (%)
董事姓名	持有身份	股份數目		合共權益	
Mr. YUAN Yabin 袁亞彬先生	Beneficial owner 實益擁有人	20,220,000(L)	—	20,220,000(L)	0.048
Dr. LAM Yat Ming Eddie 林一鳴博士	Beneficial owner 實益擁有人	—	1,400,000(L)	1,400,000(L)	0.003
Mr. HUANG Songchun 黃松春先生	Beneficial owner 實益擁有人	1,248,500(L)			
	Interest of spouse 配偶權益	1,657,500(L)	—	2,906,000(L)	0.007
Mr. XU Xiaohua 徐曉華先生	Beneficial owner 實益擁有人	6,000,000(L)	—	6,000,000(L)	0.014

L — Long positions 好倉

OTHER INFORMATION 其他資料

DIRECTORS' INTEREST IN SHARES *(continued)*

Save as disclosed above as at 30 June 2018 none of the Directors and the chief executive of the Company had registered an interest or short position in the shares underlying shares or debentures of the Company or its associated corporations that was required to be recorded pursuant to section 352 of the SFO or as otherwise notified to the Company and the Stock Exchange pursuant to the Model Code.

SUBSTANTIAL SHAREHOLDERS

As at 30 June 2018 the register of substantial shareholders maintained by the Company pursuant to Section 336 of the SFO shows that other than the interests disclosed above in respect of certain directors and chief executives of the Company the following shareholders had notified the Company of relevant interests in the issued share capital of the Company.

董事之股份權益(續)

除上文所披露者外，於二零一八年六月三十日，本公司之董事及主要行政人員概無在本公司或其相聯法團之股份、相關股份或債券中登記擁有任何須記錄於本公司根據證券及期貨條例第352條須存置之登記冊之權益或淡倉，或根據標準守則須知會本公司及聯交所之權益或淡倉。

主要股東

於二零一八年六月三十日，本公司根據證券及期貨條例第336條存置之主要股東名冊顯示，除上文所披露有關若干董事及本公司主要行政人員的權益外，下列股東已通知本公司所持本公司已發行股本之相關權益。

Name of shareholder	Capacity	Interests in Shares	Percentage of issued share capital (%) 佔已發行股本百分比 (%)
股東名稱	權益性質	股份權益	(%)
Mr. Li He Jun 李河君先生	Interest of controlled corporation 所控制法團之權益	31,171,300,297(L) (Note 1) (附註1)	73.96
		3,122,000,000(S)	7.41
北京華勤高科貿易有限公司	Interest of controlled corporation 所控制法團之權益	10,341,329,376(L) (Note 1) (附註1)	24.53
北京建煌電力投資有限公司	Interest of controlled corporation 所控制法團之權益	10,341,329,376(L) (Note 1) (附註1)	24.53
Hanergy Holding 漢能控股	Beneficial owner & Interest of controlled corporation 實益擁有人及所控制法團之權益	10,341,329,376(L) (Note 1) (附註1)	24.53

OTHER INFORMATION 其他資料

SUBSTANTIAL SHAREHOLDERS (continued)

主要股東(續)

Name of shareholder	Capacity	Interests in Shares	Percentage of issued share capital (%) 佔已發行股本百分比 (%)
股東名稱	權益性質	股份權益	
廣東東江電力開發有限公司	Interest of controlled corporation 所控制法團之權益	10,341,329,376(L) (Note 1) (附註 1)	24.53
漢能移動能源控股有限公司	Interest of controlled corporation 所控制法團之權益	20,129,970,921(L) 2,822,000,000(S)	47.76 6.70
Hanergy Investment Limited	Beneficial owner & Interest of controlled corporation 實益擁有人及所控制法團之權益	19,805,088,921(L) 2,822,000,000(S)	47.76 6.70
Hanergy Option Limited	Beneficial owner 實益擁有人	2,966,785,603(L)	7.04
GL Wind Farm Investment Limited	Beneficial owner 實益擁有人	1,973,684,104(L) 400,000,000(S)	4.68 0.95

L — Long positions 好倉

S — Short positions 淡倉

Note:

附註：

1. These shares comprise the Second Tranche of 1,473,458,688 Subscription Shares at the Subscription Price of HK\$0.12 per Subscription Share and the Third Tranche of 1,473,458,688 Subscription Shares at the Subscription Price of HK\$0.10 per Subscription Share will be issued and allotted pursuant to Subscription Agreement dated 20 May 2010 and the subsequent Supplementary Agreement.

1. 該等相關股份包括根據二零一零年五月二十日訂立之認購協議及其後之補充協議予以配發及發行之第二批合共1,473,458,688股認購股份，每股認購股份0.12港元及第三批合共1,473,458,688股認購股份，每股認購股份0.10港元。

OTHER INFORMATION 其他資料

SUBSTANTIAL SHAREHOLDERS *(continued)*

Save as disclosed above the Company had not been notified any interests or short positions in the shares or underlying shares of the Company as recorded in the register required to be kept under section 336 of the SFO as at 30 June 2018.

SHARE OPTION SCHEME

PRINCIPAL TERMS OF SHARE OPTION SCHEME

Pursuant to the terms of the share option scheme adopted by the Company on 28 August 2007 (the “**Share Option Scheme**”) the Company may grant option to (i) any director employee or consultant of the Group or a company in which the Group holds an equity interest or a subsidiary of such company (“**Affiliate**”) or (ii) any discretionary trust whose discretionary objects include any director employee or consultant of the Group or an Affiliate; or (iii) a company beneficially owned by any director employee or consultant of the Group or an Affiliate; or (iv) any customer supplier or adviser whose service to the Group or business with the Group contributes or is expected to contribute to the business or operation of the Group as may be determined by the Directors from time to time to subscribe for the shares of the Company.

The Share Option Scheme is set up for the purpose of attracting and retaining quality personnel and other persons and providing incentive to them to contribute to the business and operation of the Group. To this end the Directors may specify the minimum period if any for which an option must be held or the performance targets if any that must be achieved before the option can be exercised.

主要股東(續)

除上文所披露者外，於二零一八年六月三十日，本公司並無接獲通知任何本公司股份或相關股份之權益或淡倉須列入根據證券及期貨條例第336章須存置之登記冊。

購股權計劃

購股權之主要條款

根據本公司於二零零七年八月二十八日採納之購股權計劃(「**購股權計劃**」)之條款，本公司可授出購股權予(i)本集團或本集團持有股本權益之公司或其附屬公司(「**聯屬公司**」)之任何董事、僱員或諮詢人；或(ii)本集團或聯屬公司之任何董事、僱員或諮詢人為全權託管對象之任何全權信託；或(iii)本集團或聯屬公司之任何董事、僱員或諮詢人實益擁有之公司；或(iv)董事不時釐定向本集團提供之服務或與本集團之業務目前或預期將會對本集團之業務或營運有貢獻之任何客戶、供應商或顧問，以認購本公司股份。

購股權計劃之設立目的為吸引及挽留高質素之員工及其他人士，以及提供獎勵讓彼等為本集團業務及營運作出貢獻。為達此目的，董事或會指定購股權可獲行使前必須持有之最低限期(如有)或必須達致之表現目標(如有)。

SHARE OPTION SCHEME *(continued)*

PRINCIPAL TERMS OF SHARE OPTION SCHEME *(continued)*

Share options may be granted without any initial payment for the share options at an exercise price (subject to adjustments as provided therein) equal to the highest of (i) the nominal value of the shares; (ii) the closing price per share as stated in the Stock Exchange's daily quotations sheet on the date of the grant of the share option; and (iii) the average closing price per share as stated in the Stock Exchange's daily quotations sheets for the five business days immediately preceding the date of the grant of the share option.

The maximum number of shares which may be issued upon the exercise of all options to be granted under the Share Option Scheme and any other share option scheme(s) of the company shall not exceed 10% of the share capital of the Company in issue on 28 August 2007 the date of adoption of the Share Option Scheme unless a refresh approval of the shareholders is obtained. At a special general meeting of the Company held on 11 June 2010 the shareholders of the Company have approved to refresh the 10% limit. As at the date of this report the total number of shares available for issue upon the exercise of all options granted or to be granted under the Share Option Scheme is 461,224,947 (representing 10% of the issued share capital of the Company as at the date of passing the resolution to refresh the 10% limit).

The maximum number of the shares (issued and to be issued) in respect of which share options may be granted under the Share Option Scheme to any one grantee in any 12-month period shall not exceed 1% of the share capital of the Company in issue on the last date of such 12-month period unless approval of the shareholders of the Company has been obtained in accordance with the Listing Rules.

購股權計劃(續)

購股權之主要條款(續)

購股權可毋須按行使價就該等購股權(可按本文規定而予以調整)作出初步付款而授出，行使價相等於下列三者中之最高者：(i) 股份之面值；(ii) 每股股份於授出購股權當日在聯交所每日報價表所報之收市價；及(iii) 每股股份於緊接授出購股權當日之前五個營業日在聯交所每日報價表所報之平均收市價。

因行使根據購股權計劃及本公司任何其他購股權計劃將予授出之全部購股權而可能須予發行之股份最高數目不得超過於二零零七年八月二十八日(採納購股權計劃日期)本公司已發行股本之10%，惟取得股東之更新批准除外。於二零一零年六月十一日舉行之本公司股東特別大會上，本公司股東已批准更新10%限額。於本報告日期，因行使根據購股權計劃已授出或將予授出之全部購股權而可予發行之股份總數為461,224,947股(佔通過更新10%限額之決議案當日之本公司已發行股本之10%)。

根據購股權計劃可於任何12個月期間向任何一名承授人授出購股權之有關股份(已發行及將予發行)最高數目不得超過於有關12個月期間最後一日本公司已發行股本之1%，惟根據上市規則已取得本公司股東批准除外。

OTHER INFORMATION 其他資料

SHARE OPTION SCHEME (continued)

PRINCIPAL TERMS OF SHARE OPTION SCHEME (continued)

The Share Option Scheme was approved by the shareholders of the Company on 28 August 2007 and has expired on 27 August 2017. The exercise period of an option granted under the Share Option Scheme shall not be more than ten years from its date of grant and may include the minimum period if any for which such option must be held before it can be exercised.

The exercisable period of the share options granted was determined by the directors of the Company each time when the options were granted. Holders of share options granted under the Share Option Scheme may only exercise their options during the exercisable periods as follows:

購股權計劃(續)

購股權之主要條款(續)

購股權計劃已於二零零七年八月二十八日獲本公司股東批准，於二零一七年八月二十七日屆滿。根據購股權計劃授出之購股權之行使期自授出日期起計不超過十年及可能包括有關購股權獲行使之前必須持有之最短期限(如有)。

所授出購股權的行使期由本公司董事在每次授出購股權時決定。根據購股權計劃獲授出購股權的持有人只可在下列行使期內行使其購股權：

Date of grant 授出日期	Exercisable period 行使期	Maximum percentage of exercisable share options 可行使購股權的上限百分比
27/10/2014 二零一四年十月二十七日	27/10/2014 — 31/10/2015 二零一四年十月二十七日 至 二零一五年十月三十一日	10%
	1/11/2015 — 31/10/2016 二零一五年十一月一日 至 二零一六年十月三十一日	10%
	1/11/2016 — 31/10/2017 二零一六年十一月一日 至 二零一七年十月三十一日	10%
	1/11/2017 — 31/10/2018 二零一七年十一月一日 至 二零一八年十月三十一日	10%
	1/11/2018 — 31/10/2019 二零一八年十一月一日 至 二零一九年十月三十一日	60%
	30/1/2015 二零一五年一月三十日	30/1/2015 — 29/1/2016 二零一五年一月三十日 至 二零一六年一月二十九日
30/1/2015 二零一五年一月三十日	30/1/2016 — 29/1/2017 二零一六年一月三十日 至 二零一七年一月二十九日	10%
	30/1/2017 — 29/1/2018 二零一七年一月三十日 至 二零一八年一月二十九日	10%
	30/1/2018 — 29/1/2019 二零一八年一月三十日 至 二零一九年一月二十九日	10%
	30/1/2019 — 29/1/2020 二零一九年一月三十日 至 二零二零年一月二十九日	60%
	30/1/2019 — 29/1/2020 二零一九年一月三十日 至 二零二零年一月二十九日	60%
	30/1/2019 — 29/1/2020 二零一九年一月三十日 至 二零二零年一月二十九日	60%

SHARE OPTION SCHEME (continued)

購股權計劃(續)

PRINCIPAL TERMS OF SHARE OPTION SCHEME (continued)

購股權之主要條款(續)

Date of grant 授出日期	Exercisable period 行使期	Maximum percentage of exercisable share options 可行使購股權的上限百分比
16/4/2015 二零一五年四月十六日	16/4/2015 — 15/4/2016 二零一五年四月十六日至二零一六年四月十五日	10%
	16/4/2016 — 15/4/2017 二零一六年四月十六日至二零一七年四月十五日	10%
	16/4/2017 — 15/4/2018 二零一七年四月十六日至二零一八年四月十五日	10%
	16/4/2018 — 15/4/2019 二零一八年四月十六日至二零一九年四月十五日	10%
	16/4/2019 — 15/4/2020 二零一九年四月十六日至二零二零年四月十五日	60%

MOVEMENTS OF SHARE OPTIONS

購股權的變動

Details of the movements in the share options granted under the Share Option Scheme during the period are as follows:

期內根據購股權計劃授出購股權的變動詳情如下：

Eligible persons 合資格人士	Date of grant 授出日期	Exercise price 行使價 (HK\$) (港元)	Exercise period 行使期	Outstanding as at 1/1/2018 於二零一八年 一月一日 尚未行使	Movement of share options during the year 年內購股權的變動			Outstanding as at 30/6/2018 於二零一八年 六月三十日 尚未行使
					Granted 已授出	Exercised 已行使	Lapsed 已失效	
Director 董事								
Dr. Lam Yat Ming Eddie 林一鳴博士	27/10/2014 二零一四年 十月二十七日	1.716	27/10/2014-31/10/2019 二零一四年十月二十七日至 二零一九年十月三十一日	1,400,000	—	—	—	1,400,000
Other employees 其他僱員	27/10/2014 二零一四年 十月二十七日	1.716	27/10/2014-31/10/2019 二零一四年十月二十七日至 二零一九年十月三十一日	21,560,000	—	—	—	21,560,000
	30/1/2015 二零一五年 一月三十日	3.61	30/1/2015-29/1/2020 二零一五年一月三十日至 二零二零年一月二十九日	11,360,000	—	—	(3,170,000)	8,190,000
	16/4/2015 二零一五年 四月十六日	6.91	16/4/2015-15/4/2020 二零一五年四月十六日至 二零二零年四月十五日	12,240,000	—	—	(4,960,000)	7,280,000
				46,560,000	—	—	(8,130,000)	38,430,000

OTHER INFORMATION 其他資料

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.

DISCLOSURE OF CHANGE OF INFORMATION OF DIRECTORS UNDER RULES 13.51B(1) AND 13.51(2) OF THE LISTING RULES

Pursuant to Rules 13.51B(1) and 13.51(2) of the Listing Rules the change in information of Directors during the six months ended 30 June 2018 and up to the date of this report are as follows:

Name of Directors 董事姓名	Particulars 詳情	Effective Date 生效日期
Mr. Wang Xiong 王雄先生	Resignation as Vice Chairman and Executive Director 辭任副主席兼執行董事	15 March 2018 二零一八年三月十五日

With reference to the respective duties and responsibilities of Directors in the Group as well as the prevailing market condition the monthly remuneration (including salary and director's fee) of the following Directors were adjusted as follows:

Name of Directors 董事姓名	Monthly remuneration (Including salary and director's fee) 每月酬金(包括薪金及董事袍金) (HK\$) (港元)	Effective Date 生效日期
Mr. Lo Man Tuen 盧文端先生	50,000	1 April 2018 二零一八年四月一日
Professor He Xiaofeng 何小鋒教授	50,000	1 April 2018 二零一八年四月一日
Professor Zhang Qiusheng 張秋生教授	50,000	1 April 2018 二零一八年四月一日
Mr. Wang Dan 王丹先生	50,000	1 April 2018 二零一八年四月一日
Mr. Yuen Yabin 袁亞彬先生	374,518	1 May 2018 二零一八年五月一日

遵守企業管治守則

於截至二零一八年六月三十日止六個月，本公司一直遵守上市規則附錄十四所載之企業管治守則的守則條文。

購買、出售或贖回本公司之上市證券

於截至二零一八年六月三十日止六個月，本公司或其任何附屬公司概無購買、贖回或出售任何本公司之上市證券。

根據上市規則第 13.51B(1) 條及第 13.51(2) 條披露董事資料之變動

根據上市規則第 13.51B(1) 條及第 13.51(2) 條，截至二零一八年六月三十日止六個月及直至本報告日期，董事資料之變動如下：

經參考董事各自於本集團之職務及職責以及當前市況後，以下董事之每月酬金(包括薪金及董事袍金)乃調整如下：

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.

INTERIM DIVIDEND

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

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.

董事進行證券交易的標準守則

本公司已就董事進行證券交易採納一套不比上市規則附錄十所載之上市發行人董事進行證券交易的標準守則(「**標準守則**」)所訂標準寬鬆之行為守則。經向全體董事作出特定查詢後，全體董事確認於報告期內彼等已遵守標準守則之所訂標準及本公司就董事進行證券交易而採納之行為守則。

中期股息

董事會不建議宣派任何截至二零一八年六月三十日止六個月之中期股息(二零一七年：無)。

審閱中期財務報表

本公司之審核委員會(「**審核委員會**」)已審閱本集團截至二零一八年六月三十日止六個月之未經審核綜合財務報表(「**中期財務報表**」)，並就中期財務報表之編製與高級管理層討論內部監控及財務報告事宜。

於本公佈日期，審核委員會由本公司全部獨立非執行董事組成，包括張秋生教授(主席)、盧文端先生、何小鋒教授及王丹先生。

OTHER INFORMATION 其他資料

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.

暫停股票買賣

本公司股票於二零一五年五月二十日上午十時四十分起暫停買賣。根據本公司收到證券及期貨事務監察委員會(「證監會」)所發出日期為二零一五年七月十五日有關證券市場規則第8(1)條指令之函件，指令香港交易所暫停本公司股票買賣。

根據證監會與本公司之討論，證監會對本公司提出兩個復牌的必要條件：第一個復牌之必要條件，是完成證券及期貨條例(第571章)第214條之民事程序(「第214條程序」)及證監會尋求法院命令；第二個復牌之必要條件，是本公司需要發報一份披露文件(「披露文件」)，對本公司之活動、業務、資產、負債、財務績效和前景等資料作出詳細披露，並委聘財務顧問進行盡職調查的工作，讓證監會可根據證券及期貨(在證券市場上市)規則(香港法例第571V章)(「證券市場上市規則」)第9條，作為考慮對本公司之復牌申請。證監會在證券市場上市規則第9條下的權力，只可通過一個證監會的會議行使，而該權力不能委派他人行使。證監會提出的第一個復牌必要條件，已經在二零一七年九月四日完成。至於第二個復牌必要條件，如本公司於二零一八年四月四日之公佈所披露，本公司已經將披露文件提交至證監會，目前本公司正在就證監會對披露文件提出的一些問題及關注事項回應解答；然後將會提交到證監會董事會審批，讓證監會根據證券市場上市規則第9條，作為考慮對本公司之復牌申請。

SUSPENSION OF TRADING IN SHARES

(continued)

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.

暫停股票買賣(續)

香港聯合交易所有限公司(「聯交所」)證券上市規則(「上市規則」)修訂除牌架構，已於二零一八年八月一日(「生效日期」)生效，該修訂除牌架構的過渡安排將適用於本公司。由於本公司股份停牌已經超過十二個月，倘若股份自生效日期起再連續十二個月繼續停牌，則聯交所可根據上市規則第6.01A(2)(b)(ii)條，取消本公司的上市地位。十二個月期限將於二零一九年七月三十一日屆滿。倘若本公司於二零一九年七月三十一日期限屆滿之前，未能恢復本公司股份之買賣，聯交所上市部將向聯交所上市委員會建議取消本公司之上市地位。在適當情況下，聯交所有權根據上市規則第6.10條實施較短的特定補救期限。

證監會過去最關心本集團的兩個核心問題及停牌原因，包括(1)漢能控股及其聯屬公司對本集團的債務，以及(2)關連交易收入過高的問題，目前這兩個問題已經完全解決。

本公司將繼續竭盡所能，努力達成證監會對本公司提出之要求，令本公司股份可儘快於聯交所恢復交易。本公司將根據第二個復牌必要條件之進展，於適當時候另行刊發公佈，以知會本公司股東及潛在投資者。

OTHER INFORMATION 其他資料

APPRECIATION

On behalf of the Board I would like to thank every staff for their diligence and dedication. I would also take this opportunity to express my sincere appreciation to our shareholders, customers and suppliers for their continuous and valuable support.

By order of the Board
Yuan Yabin
Chairman

Hong Kong, 30 August 2018

致謝

本人謹此代表董事會感謝各位員工之辛勤工作及專注投入。本人亦謹藉此機會對各位股東、客戶及供應商一直以來之寶貴支持表示衷心感激。

承董事會命
主席
袁亞彬

香港，二零一八年八月三十日

