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# Corporate Overview



## Corporate Profile





Focus on vertical integration for monocrystalline products, providing one-stop solutions from ingots, wafers, cells, modules to the development, design, construction, operation and maintenance of PV System



Cross-listed in Hong Kong (00757.HK) and Taiwan (9157.TT)





## Shareholding Structure as at 31 December 2015







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

1多儿RE IS 1至 IX 为 PK 公 马

Number of issued shares 3,211,780,566





## Manufacturing Base - China & Taiwan

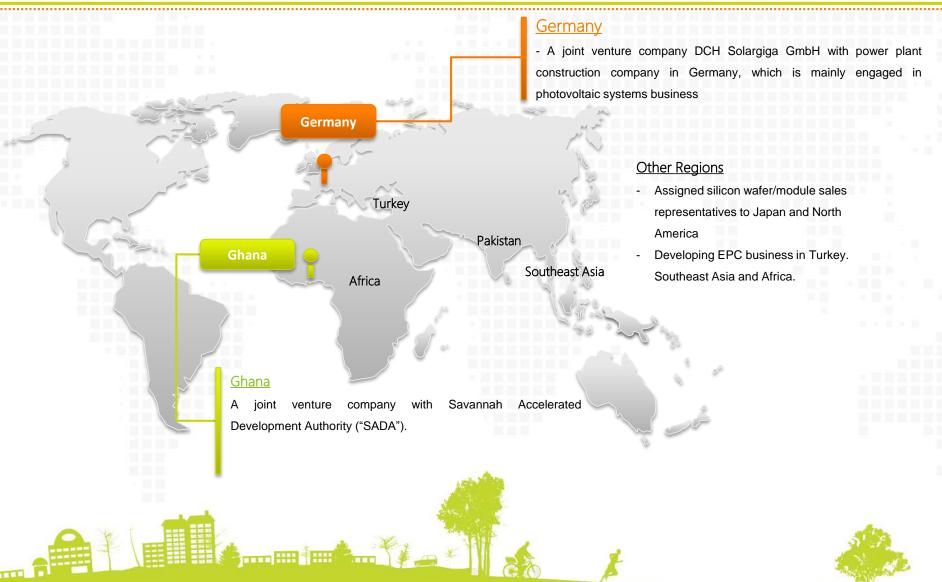






# Manufacturing Base – Overseas











#### Market Overview



#### **China**

- China maintains its leading position and dominated the demand in the photovoltaic industry. As of December 2015, the cumulative grid connection installation capacity of photovoltaic power generation in China was 43.18GW. It achieved its 2015 grid connection target by growing of 54% year-on-year.
- 2016 is the first year of the Thirteenth Five-Year Plan of China, the National Energy Bureau of China targeted its cumulative grid connection installation capacity of photovoltaic power generation to 150GW by 2020, with photovoltaic power plants accounting for 70GW and distributed power plants accounting for 80GW. With the national policy setting the pace in the Thirteenth Five-Year Plan of China and 領跑者計劃, complemented by more matured financing options and stable financial models, annual targets of 20GW are expected to be met with ease.

#### <u>Japan</u>

- Japan maintained the growth in its market demand in 2015, which PV installation in 2015 was 12.3GW.
- It is estimated that 2016 will set a new high, with the annual installation figures in 2016 reaching as high as 14.3 GW. The Japan Photovoltaic Energy Association ("JPEA") published a revised version of "PV Outlook 2030". The 2020 PV installation target of 49.4GW has been revised to 65.7GW and the capacity may reach 100GW in 2030.





#### Market Overview



#### **USA**

- The cumulative US solar PV installations have now topped 25 GW, up from just 2GW in 2010. Based on the GTM research, the PV installations reached 7.3GW in 2015.
- PV installations is expected to grow to 20 GW annually by 2020. Growth will occur in all segments, but residential market will remain the driving force behind the overall growth.

#### **Emerging markets**

- The photovoltaic projects in Africa have potential installation capacity of over 11GW, with Ghana alone has a pool of photovoltaic projects under application already exceeded 2GW in scale.
- India emerged as an established market with installation of 2GW in 2015.
- The Philippines, Pakistan, Bangladesh, Uruguay, Guatemala and Panama will be moving forward and attempting to hit 100MW each.





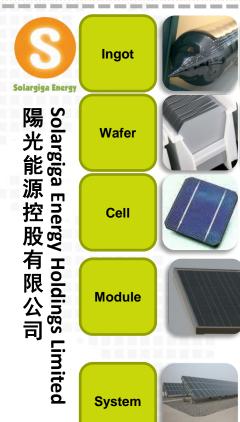


# Business Review



# **Product Range**





• 1.2GW

- 900MW
- 330MW
- 600MW + 400MW (in March 2016) + 200MW (in April 2016) = Total 1.2GW
- German and PRC subsidiaries as our overseas and local bases for developing EPC and O&M businesses in emerging markets and locally
- Actively searching for solar plant opportunities overseas and locally.



# Monocrystalline Solar Ingots and Wafers





#### Silicon Ingot Business

- Annual production capacity of silicon ingots is 1.2GW.
- The Group maintained stable capacity for silicon ingots production in 2015. Through technological enhancements, equipment modification, such as speedy ending, adjustments in the speed of the ingot pulling and spinning process, number of inputs into the furnace for each batch of ingot, the Group was able to increase capacity and reduce costs in its production processes, especially the consumption of electricity.
- The photovoltaic conversion efficiency of its monocrystalline silicon products is also higher than the industry average. In 2015, the external shipment volume of N-type silicon ingots was approximately 98% of the total external shipment volume of silicon ingots.

#### **Wafer Business**

- In 2015, the external shipment volume of self-manufacturing and processing of silicon solar wafers of the Group increased by 14%.
- The Group has been enhancing its slicing technique by replacing slurry with diamond saw. Diamond saw is able to improve the consistency and reduce the thickness of each slice of wafer, and also help reduce the consumption of water in the process of slicing. It is expected to realise an increase in slicing capacity.







#### Photovoltaic Cells, Modules and Power Plant Projects



#### **Cell Business**

- The manufacturing base of the Group in Jinzhou is equipped with production lines of solar cells having a production capacity of 300MW, which mainly provides cells for the production of the Group's downstream modules.
- In order to cope with the increase in module demands, higher portion of solar cells being reserved to the production of modules within the Group.

#### **Module Business**

- The Group recorded significant increases by 18.7% in external shipment volume due to the increase in demand by long-term key customers.
- The volume of external shipment exceeded our photovoltaic module production capacity during the year. The Group engaged various processing sub-contractors for the extra production needed. This is a significant indication of the sentiment of certain segment of the market, where demand was not catching up with the supply.

#### **Photovoltaic Power Plant Projects**

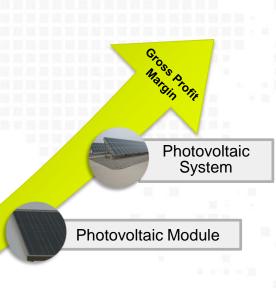
- The Group continued to operate a 20MW large-scale photovoltaic power plants project in Golmud, Qinghai Province. Combining designing techniques of a subsidiary in German, which engaged in PV system business, and strategic advantages of self-manufactured PV modules, the Group has successfully realised its potentials and synergies.
- Currently, our overseas pipeline includes projects in Ghana, Turkey, Pakistan, etc.



# Superiorities of Monocrystalline Vertical Integration Strategy



- Our products are not only sold to upstream and midstream customers in photovoltaic industry, but also directly to end-users. Through vertical integration strategy, the Group provides services for applications and development to our clients.
- Monocrystalline vertical integration strategy not only improves the sales of downstream products, it also enhances the utilisation of the Group's upstream production capacity.
- Leveraging on monocrystalline vertical integration strategy, to enhance the gross profit margins of monocrystalline cells and modules
- Compared to multicrystalline products, monocrystalline products has a higher conversion efficiency, it reduces the generating cost per watt. It also has a lower attenuation rate. Monocrystalline products are becoming the popular choice for solar plants, and is fast growing market share.









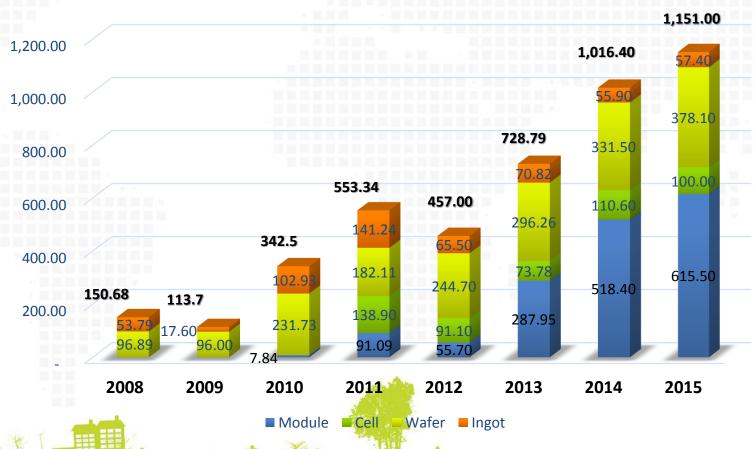
# Performance



# Yearly Shipment Volume



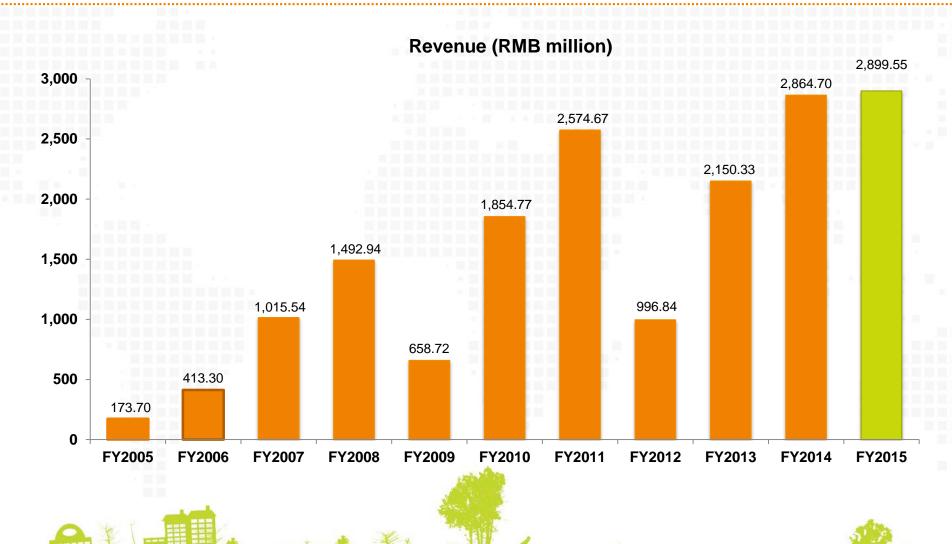






# Yearly Revenue







# Results Highlight



- 2015 marked another record-breaking year with external shipment of 1,151MW and revenue of RMB2,899.550 million, represented an increase of RMB34.851 million compared with the year ended 31 December 2014. The Group expected demand for its products to remain strong as the global and especially the Chinese solar energy market continue to flourish.
- The Group turned around to record a profit of RMB16.4 million in 2015 (loss of RMB60.4 million in 2014).
- EBITDA increased by 33.5%. The improvement in EBITDA to revenue ratio from 9.0% in 2014 to 11.9% in 2015 illustrates an improvement in production efficiency.

(RMB'000)	FY2015	FY2014	FY2013
Turnover	2,899,550	2,864,699	2,150,328
Reported Gross Profit	242,538	363,917	149,993
Gross Profit Margin (%)	8.4%	12.7%	7.0%
Profit/(Loss) from Operations	152,548	171,085	(39,704)
Profit/(loss) for the year	16,441	(60,371)	(116,567)
Basic earnings/(loss) per share (RMB cents)	0.49	(1.99)	(4.57)
EBITDA	344,806	258,244	152,574



#### **Financial Position**



As at 31 December (RMB '000)	FY2015	FY2014	Change
Current Assets	2,554,539	1,798,519	42.0%
Current Liabilities	2,949,853	2,477,881	19.0%
Total Assets	4,709,217	4,281,040	10.0%
Total Liabilities	3,549,904	3,105,022	14.3%
Net Assets	1,162,863	1,176,018	(1.1%)

- The increase in current assets by 42% was mainly due to the combined effect of the following:
  - increase in proportion of module sales towards the end of the year due to the significant improvement in market condition;
  - revitalize assets, sold one of the vacant lands, strengthened the operating cashflow position for expected further growth in modules sales;
  - to cope with expected increment of usage of polysilicon in the next 12 months, driven by the expected growth of module sales, reclassified prepayment of raw materials from non-current to current.
- On the other hand, the increase in current liabilities was mainly due to increase in funding needs. This was driven by
  the significant growth in market demand for the Group's photovoltaic products.



### **Financial Ration**



- The Group allows for a longer credit period for module sales. The general increase in module sales, and especially toward the end of the year, led to an increase in trade receivables turnover days.
- The increase in current ratio was due to the combined effect of improvement in market condition and the restructuring
  of the five manufacturing locations centralized into one, followed by the subsequent sale of one of the vacant lands.

As at 31 December	FY2015	FY2014	Change			
Turnover Day Analysis						
Trade Receivables Turnover (Days)	53	40	13			
Trade Payable Turnover (Days)	108	89	19			
Inventory Turnover (Days)	89	81	8			
Gearing Analysis						
Current Ratio (Times)	0.87	0.74	0.13			
Net Debt to Equity Ratio (%)	129.2%	124.6%	(4.6PP)			







#### Action Plans in 2016



Policy Guidance 2016 is the first year of the Thirteenth Five-Year Plan of China. After the successful implementation of the Twelfth Five-Year Plan of China and the "Notice relating to the Issuance of the Implementation Plan of Photovoltaic Power Generation Infrastructure in 2015" (《關於下達2015年光伏發電建設實施方案的通知》) published by the National Energy Administration in March 2015, market confidence was greatly boosted, which created favorable conditions for photovoltaic growth and development in China.



**Plans** 

- With the establishment of a joint venture company with Motech Solar Group, the Group's total annual production volume of photovoltaic modules will then reach 1.2GW to satisfy significant increase in demand for modules. Further, the Group will also focus on maintaining a more sustainable local to overseas sales ratio at 50:50.
- The Company has implemented an integration and centralisation strategy to consolidate various production bases across Jinzhou, Liaoning. Manufacturing plants on five different locations have been centralized and relocated to one main production location. The Group has subsequently sold one of the five vacant lands. The proceeds from the sale will be used for general working capital of the Group and to capture any business and investment opportunities should suitable opportunity arise in future.
- The Group will active expand its downstream business of constructing, operating and maintaining photovoltaic power plants, and foster market development in emerging markets including Africa, Southeast Asia, Turkey, Pakistan and other Balkan countries on the basis of its existing market share.



