



GCL-Poly Energy Holdings Limited  
保利協鑫能源控股有限公司



# 3Q'2011 Business Performance

17 November, 2011



# Management Team

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*Chairman, Executive Director and CEO*

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*Executive Director and President of Solar Business*

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Mr. Tien Hsiang CHAU  
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# Content

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Solar Business Performance

Power Business Performance

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# Results of the Solar Business

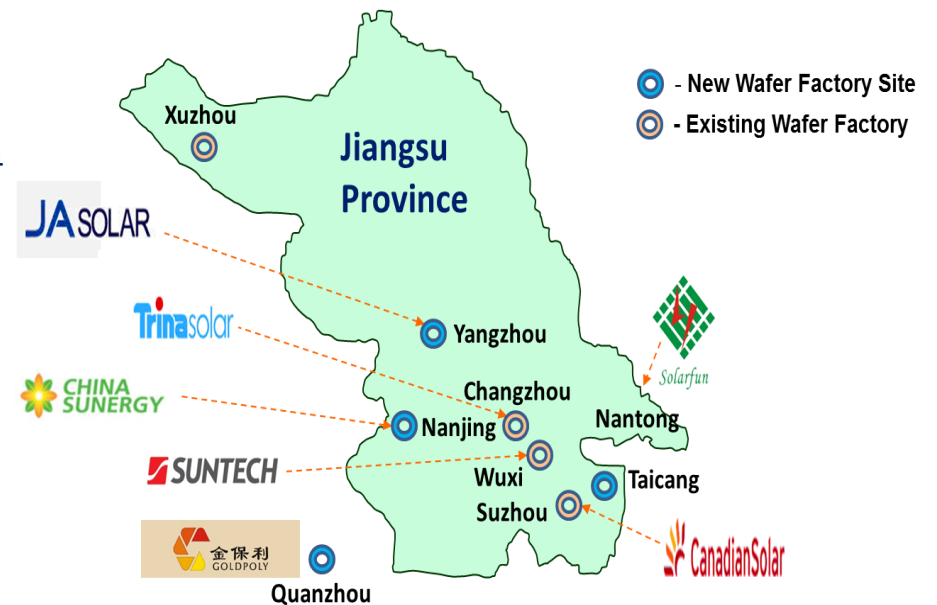


# Solar Business – Key Operating Data

	<i>Q3 2010</i>	<i>Q3 2011</i>	<i>First 3Q of 2010</i>	<i>First 3Q of 2011</i>
<b>Poly-Si Production (MT)</b>	<b>5,068</b>	<b>6,399</b>	<b>12,099</b>	<b>18,425</b>
<b>Poly-Si ASP (US\$/kg)</b>	<b>51.7</b>	<b>44.0</b>	<b>50.6</b>	<b>58.5</b>
<b>Poly-Si production cost (US\$/kg)</b>	<b>25.4</b>	<b>20.9</b>	<b>29.8</b>	<b>21.7</b>
<b>Wafer Production (MW)</b>	<b>432</b>	<b>1,201</b>	<b>624</b>	<b>3,277</b>
<b>Wafer ASP (US\$/W)</b>	<b>0.80</b>	<b>0.49</b>	<b>0.80</b>	<b>0.62</b>
<b>Wafer processing cost (US\$/W)</b>	<b>0.28</b>	<b>0.17</b>	<b>0.29</b>	<b>0.20</b>

# Co-location Strategy Securing a Large Number of Long Term Supply Contracts

<u>Customers</u>	<u>Contract Volume/Amount</u>	<u>Delivery Period</u>
Solarfun	2,500 MW	Jan 2011 – Dec 2015
JA Solar	10,031 MW	Jan 2011 – Dec 2015
Indosolar	815 MW (About US\$600M)	Nov 2010 – Dec 2014
Neosolar	350 MW	Oct 2010 – Dec 2013
Hareon	Totaling RMB20.8 billion	Jan 2011 – Dec 2013
Delsolar	At least 664 MW	Oct 2010 – Dec 2015
Goldpoly	5,500 MW	2011 – 2015
Trina	7,500 MW	Jan 2011 – Dec 2015
Canadian Solar	5,200 MW	Jan 2011 – Dec 2015
China Sunergy	4,400 MW	Feb 2011 – Dec 2016
Realforce Power	4,200 MW	Jul 2011 – Dec 2016
Tainergy Tech	1,000 MW	5-year period



**Note: The above information are extracted from the Company's press release**



# Research, Development and Innovation of Polysilicon and Wafer Production

## Polysilicon

- Producing 100% TCS in-house; Cost of in-house TCS production significantly lower than that of purchasing from other suppliers
- Energy consumption of CVD process is 40kWh/kg, and that of the whole manufacturing process is 65kWh/kg
- Beginning to produce electronic grade polysilicon in 2010 (average 11'Ns, some products can even achieve 13'Ns)
- High-quality N-type resistivity of 200~500  $\Omega \cdot \text{cm}$  and continuously improving
- Annual hydrochlorination capacity increased from 500,000 MT to 1,300,000 MT
- Technology improvement in chemical vapour deposition process
- Upgrading distillation technologies

## Wafer

- Promotion of self-developed GCL-ASCS-880 advanced ingot furnace system
- In-house crucible manufacturing
- Slurry recovery with annual production of 20,000 MT
- Beginning to use diamond wire and more efficient use of steel wire
- Wafer production yield rate over 94%
- Average conversion efficiency of over 17% using polysilicon produced in-house (17% for multicrystalline wafer, 18% for quasi-monocrystalline wafer, maximum 18.5% for "GCL Quasi-Mono Wafer")
- 2-way wafer slicing technique development and application
- Quasi-monocrystalline wafer technology development and application



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# Development of Solar Power Business during the First Three Quarters in 2011

In the first half of 2011, the Group started construction on approximately 11MW new solar farm projects in the United States. This includes a 5.2MW project in the San Diego Unified School District and a 5.8MW project in the Palmdale School District of the Greater Los Angeles Area. These projects are expected to be completed in the second half of 2011

In October 2011, the Group announced that it will invest in and build 2 solar farm projects developed by Solar Projects Solutions, LLC totaling approximately 84MW. The construction of the projects is expected to commence in 2011, and will begin commercial operation in 2012

As at the end of September 2011, the Group had 11MW completed solar farm projects and over 1GW solar farm development pipeline in the US



# Start of Solar System Integration Business

In addition to its leadership in the polysilicon and wafer businesses, the Group is also one of China's leading cogeneration power plant operators. The Group benefits from its competent and well-experienced team in power plant investment, construction, operations as well as its success in solar farm investment projects in the US and China

In Oct 2011, GCL-Poly announced entering into the solar system integration business. The Group will form alliance with major solar equipment suppliers as well as financial institutions to provide solar farm investors with an 1-stop solar system solution: from project development, engineering, procurement, construction, financing to operation and management

We will further improve solar farm system efficiency and lower investment costs for the solar farm investors. Through this, the solar industry will be less reliant on government subsidies and the proliferation of the clean solar energy can be accelerated



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# Business Outlook

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# Outlook for Solar Business

## Polysilicon

- Ramping up our production capacity to 65,000 MT by mid-2012 and will be the world's largest polysilicon manufacturer
- Construction of the new 15,000 MT polysilicon production line was completed in July 2011, and has been entering into the production stage
- Continuing to reduce production cost, which will be about **USD20/kg** before the end of 2011
- Benefiting from the stringent standards for polysilicon capacity expansion that have been set out by the PRC government
- Expected production in 2011 to be about **31,000 MT**

## Wafers

- Our wafer production capacity reached 6.5 GW as at 31 July 2011, which was 5 months earlier than our wafer capacity expansion target in 2011. We are already the world's largest wafer manufacturer
- Further increase of crucible capacity and slurry recovery
- Use of diamond wire and more efficient use of steel wire
- Processing cost has reached **USD0.164/W** at the end of September 2011

## Solar farm joint venture

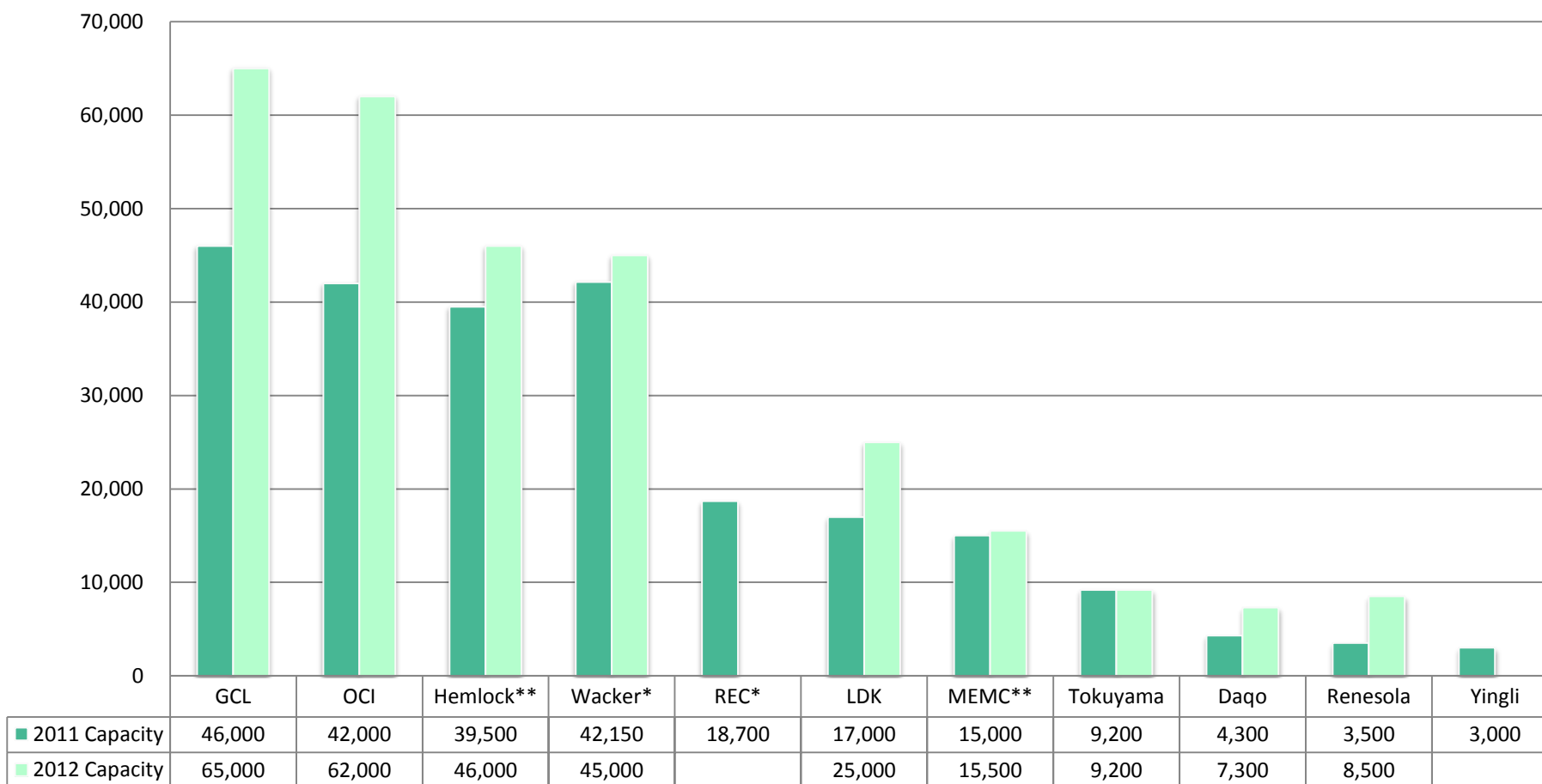
- Continuing to invest in solar farm opportunities in the US, Europe and China, India, South Africa & Australia
- Projects with target IRR of over 12-15%

## Solar system integration business

- Set up branches or representative offices in key solar markets to cooperate with solar equipment suppliers and financial institutions to provide comprehensive system solution to solar farm investors

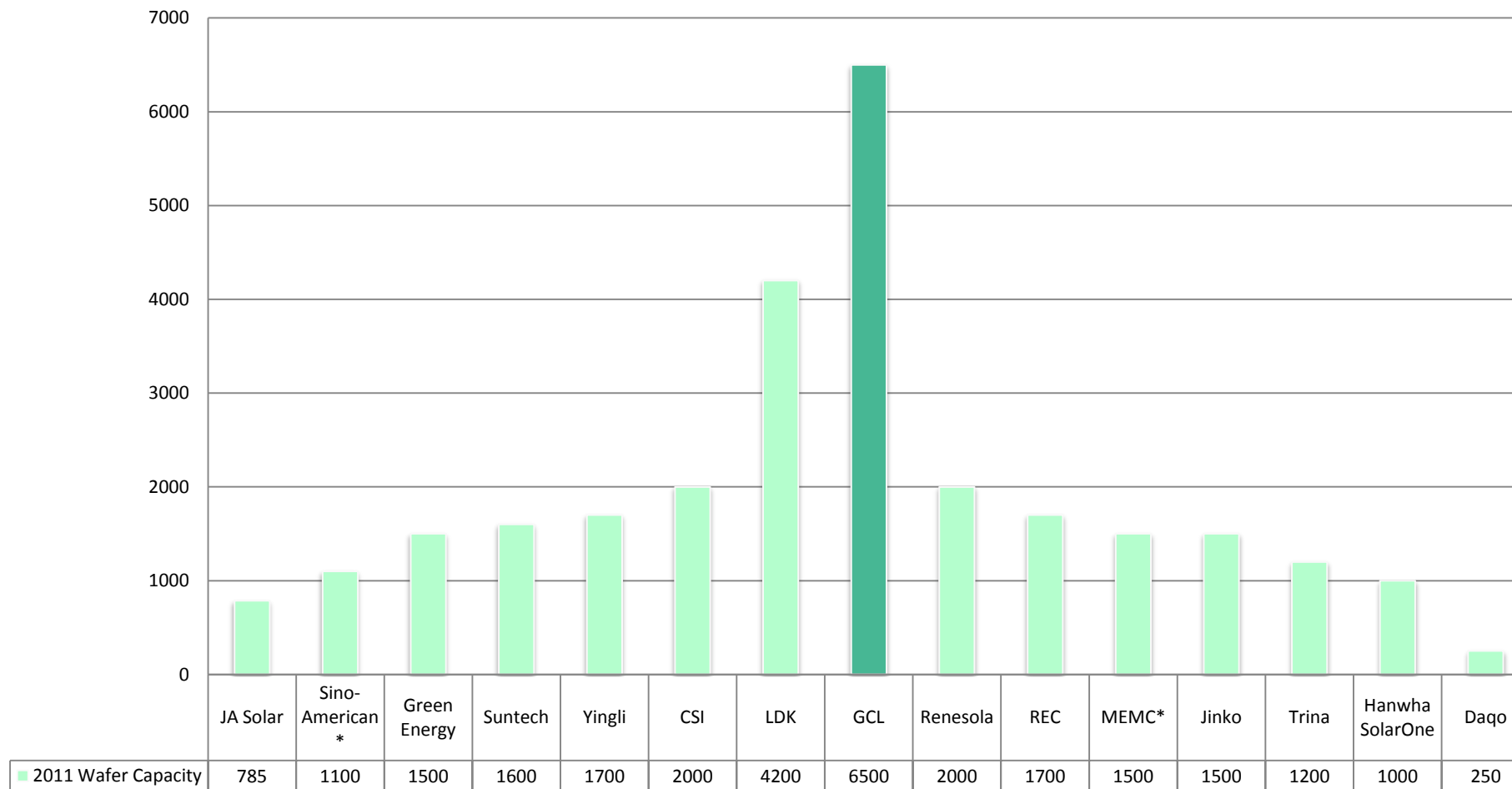


## 2011/2012 Polysilicon Capacity (MT)



Note(\*) - Expected Production for Wacker & REC; (\*\*) – The above information are obtained from the above companies' announced data except Hemlock & MEMC whose data come from analysts' estimates. Source: Company estimates

## 2011 Global Wafer Capacity (MW)



Notes(\*): The above information are obtained from the above companies' announced data except Sino-American & MEMC whose data come from analysts' estimates.

Source: Company estimates

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# Results of the Power Business



## Key Operating Metrics of the Power Business

	<i>The first 3 quarters ended 30 Sep 2011</i>	<i>The first 3 quarters ended 30 Sep 2010</i>	<i>Change</i>
<b>Total Installed Capacity (MW)</b>	<b>1,126</b>	<b>1,126</b>	<b>Nil</b>
<b>Power Sales (GWh)</b>	<b>3,638</b>	<b>3,580</b>	<b>1.6%</b>
<b>Steam Sales (000 tons)</b>	<b>5,525</b>	<b>5,090</b>	<b>8.5%</b>
<b>Average On-grid Tariff (HKD/MWh, VAT excluded)</b>	<b>612.9</b>	<b>561.1</b>	<b>9.2%</b>
<b>Average Steam Price (HKD/ton, VAT excluded)</b>	<b>221.1</b>	<b>195.3</b>	<b>13.2%</b>

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