Investor Day Presentation
JW Marriott, Essex House, New York City
May 18, 2015
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<table>
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<tr>
<th>Agenda Today</th>
<th>Time</th>
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<tbody>
<tr>
<td>Strategy Overview</td>
<td>10:00 a.m. – 10:30 a.m.</td>
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<tr>
<td>Module Business</td>
<td>10:30 a.m. – 12:00 p.m.</td>
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<tr>
<td>Technology and Cost Roadmaps</td>
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<td>Sales and Marketing</td>
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<tr>
<td>Q &amp; A</td>
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<tr>
<td>Lunch Break</td>
<td>12:00 p.m. – 1:00 p.m.</td>
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<tr>
<td>Energy Business</td>
<td>1:00 p.m. – 2:00 p.m.</td>
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<tr>
<td>Global Project Segment</td>
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<td>U.S. Project Segment (Recurrent)</td>
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<tr>
<td>YieldCo Opportunity and Guidance</td>
<td>2:00 p.m. – 2:30 p.m.</td>
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<tr>
<td>Q &amp; A</td>
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<tr>
<td>Closing Remarks</td>
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Agenda Today

Strategy Overview

Module Business

Lunch Break

Energy Business

YieldCo Opportunity and Guidance

Closing Remarks
**Company Overview**

- Founded in Ontario, 2001
- Listed on NASDAQ (CSIQ) in 2006
- Over 8,000 employees globally
- Presence in 18 countries / territories
- > 10 GW of solar modules shipped cumulatively
- > 1.4GW solar power plants developed, built and connected (incl. Recurrent)
- Yield Co expected to be launched in the quarters ahead
- **Top 3 solar company by revenue and profits in 2014***

**Highlights**

- 2014 Revenue: **$3.0 Billion**
- 2014 Shipments: **3.1 GW**
- 2014 Net Income: **$240 Million**
- 2015 Shipment Guidance: **4.0 – 4.3 GW**

*Source: Factset, company analysis*
# Presenters Today

<table>
<thead>
<tr>
<th>Name / Title</th>
<th>Work Experience</th>
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</table>
| **Dr. Shawn Qu**                      | - Director & VP at Photowatt International S.A.  
                                         - Research scientist at Ontario Power Generation Corp.                                                                                      |
| **Michael Potter**                    | - Corporate Vice President and CFO of Lattice Semiconductor Corp.  
                                         - Senior Vice President and CFO of STATS ChipPAC                                                                                         |
| **Yan Zhuang**                        | - Head of Asia of Hands-on Mobile, Inc.  
                                         - Asia Pacific regional director of marketing planning and consumer insight at Motorola Inc.                                                 |
| **Guoqiang Xing**                     | - Chief Technology Officer at Hareon Solar Technology Co. Ltd  
                                         - Research & Development Senior Director at JA Solar                                                                                     |
| **Colin Parkin**                      | - Automation Tooling Systems (ATS)  
                                         - Founder and President, Integrated Manufacturing Technologies                                                                               |
| **Josh Goldstein (Recurrent Energy)** | - Director and VP of Project Finance at Recurrent Energy  
                                         - Public power banker at Morgan Stanley  
                                         - Board Member, DeRose & Appelbaum, Bay Area provider of real estate services                                                              |
| **Ed Job**                            | - IR Consultant  
                                         - Principal in the Strategy Practice at DiamondCluster International, now PwC  
                                         - Senior Manager in the Strategy Consulting division at Arthur D. Little                                                                     |
A Look Back at Our Key Accomplishments

- We grew our PV module shipments at over 63% per year while broadly expanding our geographic footprint, and reducing dependence on European markets.
- We leveraged our global brand, quality and effective sales force to consistently expand our market share.
- We differentiated our business model by successfully growing our downstream, total solutions business.
- We ended 2014 among the top-3 solar U.S.-listed solar energy companies by revenue and profitability, with one of the strongest balance sheets.
- We built an industry leading project development platform that positions us to launch our own YieldCo.

Since our IPO we have emerged as a strong global leader of the solar revolution.
We Grew Shipments and Broadened Our Geographic Footprint...

**CAGR: 86.8%**

- **2006**: 15
- **2007**: 83
- **2008**: 168
- **2009**: 310
- **2010**: 803
- **2011**: 1,323
- **2012**: 1,543
- **2013**: 1,894
- **2014**: 3,105
- **2015E**: 4,150

Guidance Midpoint

**Europe**: 89.5%
- Americas: 4.6%
- Asia and Others: 5.9%

*Based on net revenue*

**2014***
- Europe: 8.2%
- Asia and Others: 31.2%
- Americas: 60.6%

**2008***
We Consistently Expanded Our PV Module Market Share

<table>
<thead>
<tr>
<th>Year</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
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<tbody>
<tr>
<td></td>
<td>First Solar</td>
<td>Suntech</td>
<td>Suntech</td>
<td>Yingli</td>
<td>Yingli</td>
<td>Trina Solar</td>
<td>Trina Solar</td>
<td>Canadian Solar</td>
<td>Canadian Solar</td>
<td>JA Solar</td>
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<td>2009</td>
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<td></td>
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<tr>
<td>2010</td>
<td>Suntech</td>
<td>First Solar</td>
<td>First Solar</td>
<td>Suntech</td>
<td>Trina Solar</td>
<td>Yingli</td>
<td>Sharp</td>
<td>Jinko Solar</td>
<td>Yingli</td>
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<tr>
<td>2011</td>
<td>Sharp</td>
<td>Sharp</td>
<td>Yingli</td>
<td>Trina Solar</td>
<td>Canadian Solar</td>
<td>Canadian Solar</td>
<td>Sharp</td>
<td>Jinko Solar</td>
<td>Yingli</td>
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<tr>
<td>2014</td>
<td>Trina Solar</td>
<td>Canadian Solar</td>
<td>Sharp</td>
<td>Sharp</td>
<td>Renesola</td>
<td>Sharp</td>
<td>First Solar</td>
<td>Renesola</td>
<td>Renesola</td>
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</tr>
</tbody>
</table>

Source: Company issued press releases, analyst reports, Canadian Solar analysis
Note: Based on Module MW shipment recognized under GAAP
We Differentiated our Business Model by Moving Downstream

We ended 2014 among the top-3 US-listed solar energy companies by revenue and profitability, with one of the strongest balance sheets.
We Built a World Leading Platform to Support Our YieldCo Launch

- Acquired Recurrent Energy for $265M, transaction closed March 30, 2015
- $2B to be invested to complete 1.0 GWDC prior to end of 2016
- Core asset base to support launch of CSIQ YieldCo.
- Approximately 2,000 American jobs to be created in the next two years

**Late-stage U.S. Projects Breakdown**

<table>
<thead>
<tr>
<th>Project</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Astoria</td>
<td>14%</td>
</tr>
<tr>
<td>Astoria 2</td>
<td>9%</td>
</tr>
<tr>
<td>Project A</td>
<td>8%</td>
</tr>
<tr>
<td>Mustang</td>
<td>13%</td>
</tr>
<tr>
<td>Tranquility</td>
<td>26%</td>
</tr>
<tr>
<td>Project B</td>
<td>19%</td>
</tr>
<tr>
<td>Project C</td>
<td>11%</td>
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</table>

1.0 GWp

**Total project pipeline**

<table>
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<tr>
<th>(GWp)</th>
<th>+91.5%</th>
<th>9.0</th>
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</thead>
<tbody>
<tr>
<td>Canadian Solar</td>
<td>4.7</td>
<td>4.7</td>
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<tr>
<td>Canadian Solar + Recurrent Energy</td>
<td>4.3</td>
<td>4.7</td>
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</table>

**Total late-stage pipeline**

<table>
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<tr>
<th>(GWp)</th>
<th>+71.4%</th>
<th>2.4</th>
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</thead>
<tbody>
<tr>
<td>Canadian Solar</td>
<td>1.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Canadian Solar + Recurrent Energy</td>
<td>1.0</td>
<td>1.4</td>
</tr>
</tbody>
</table>
Macro-environment Driving Solar Adoption is Favorable

- Demand for electricity is not going out of fashion, with global demand growth expected to track GDP
- Renewable energy additions already surpasses conventional energy, and solar is expected to be the fastest growing source of electricity
- Global annual PV installation to break through 50GW in 2015, and near term demand is forecast to be healthy
- We believe we are at the very early stages of solar adoption, and see significant upside in demand for solar PV over the next 15 years
Demand for Electricity is not going out of Fashion

- Electricity consumption is expected to grow in line with GDP
- Aging fleet of coal and nuclear assets are expected to be decommissioned
- Environmental compliance is expected to force cost of conventional sources of electricity higher
- Cost of solar energy is expected to continue to decline as technology improves and economies of scale from widespread adoption prevail

Source: BP 2014 Statistical Review of World Energy
In 2014, solar PV and other renewable energy capacity additions surpassed conventional energy for the first time, and solar PV is expected to dominate.

Over the next 20 years the solar industry is expected to generate over $5 trillion of cumulative revenue.

Source: Bloomberg New Energy Finance, Deutsche Bank
Global Annual PV Installation to Break through 50GW in 2015

CAGR: 35.7%
CAGR: 9.3%

Growth Drivers
✓ Grid Parity
✓ Environment Preservation
✓ Energy Security

Source: Global PV module demand assumptions from Solarbuzz, IHS, Bloomberg New Energy Finance.
Note: (1) China portion of 2014 and 2015 demand based on National Energy Administration guidelines
We Are at the Very Early Stages of Solar Adoption

Solar energy will grow from less than 1% of global electricity generation today to >10% by 2030.

In Italy today, solar generates 9% of total electricity, compared to just 0.1% in China.

**Strategic Imperatives**

| Differentiation | Leverage existing downstream expertise to expand utility scale project opportunity and capturing value through the launch of a YieldCo  
|                 | Expand residential and commercial system kits and turn key solutions |
| Cost            | Continuously reduce manufacturing cost to remain competitive |
| Scale           | Expand capacity selectively in a cost-efficient manner to remain among top 5 suppliers to leverage scale and target 10% market share  
|                 | Develop local manufacturing partnerships in key markets |
| Technology      | Focus research and development effort on achieving solar cell efficiency improvements and on the introduction of new technologies |

Canadian Solar aims to maintain profitability and to be the global leader in the manufacture and sale of solar module products and the development, ownership and operations of solar power plants.
Strategic Positioning

Canadian Solar

Business Model

Manufacturing Business
- Reliable Product
- Predictable Demand

Development and Total Solar Business
- Growing Pipeline
- Secured Funding

Operating Assets (Yield Co.)

Key to Success

Profitable Growth
- Price premium
- Competitive cost
- High ROA
- Branding
- Technology
- Scale
- Focus

Strong Underwriting
- Location
- Professionals
- Finance

CAFD Growth
- Predictable project pipeline
- Low cost of capital
Value Discovery in the Solar Sector

- Value disparity between North American and Asian stock markets out of normal range.

### P/E Ratio Comparison of Certain Solar Companies

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</thead>
<tbody>
<tr>
<td>8.6</td>
<td>24.0</td>
<td>12.1</td>
<td>41.5</td>
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</table>

Source: Deutsche Bank, March 23, 2015

Source: Factset April 17, 2015
Agenda Today

- Strategy Overview
- **Module Business**
- **Technology and Cost Roadmaps**
- Sales and Marketing
- Q & A
- Lunch Break
- Energy Business
- YieldCo Opportunity and Guidance
- Closing Remarks
The PV Learning Curve and Cost Reduction Backdrop

- Historically, module price decreases by 21.5% for every doubling in cumulative module shipment.
- Cell efficiency/module power improvement and manufacturing efficiency are critical to support future cost reduction.
- At Canadian Solar, we have been able to increase cell efficiency at 0.5% absolute per year over the past 5 years through internal efforts, in line with industry learning curve.
- Module power output for our mainstream product (CSP6), has increased by an average of 6.8W per year in the past 5 years.

Canadian Solar R&D has a track record of success scaling innovative technologies that deliver cost competitive solar energy solutions.
Module price has decreased by 21.5% for every doubling in cumulative module shipment.

Note: measurement starts circa 1960’s and goes until Q1 2015 when cumulative modules shipments are estimated by ITRPV to be 184GW.
Module Price and Cost Reduction is Slowing Down

Since 2012 module price and cost reduction is back to the learning curve norm.

Module power/cell efficiency improvement and manufacturing efficiency are critical to support future cost reduction.
Cell efficiency improved at a rate of 0.5% (absolute) each year.
**Canadian Solar Module Power Output and Cost Trend**

### CS6P-P (60 cells) Power and Cost Trend

**Mainstream CS6P-P module, each year’s Q4 data**

<table>
<thead>
<tr>
<th>Year</th>
<th>Power (W)</th>
<th>Cost ($/W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>232</td>
<td>1.49</td>
</tr>
<tr>
<td>2011</td>
<td>238</td>
<td>0.84</td>
</tr>
<tr>
<td>2012</td>
<td>246</td>
<td>0.56</td>
</tr>
<tr>
<td>2013</td>
<td>251</td>
<td>0.53</td>
</tr>
<tr>
<td>2014</td>
<td>259</td>
<td>0.47</td>
</tr>
</tbody>
</table>

- Annual power increase averaged 6.8W per year in the past 5 years
- In-house module cost decreased steadily
Strong R&D Capabilities and Portfolio of Technologies

R&D Mission:

- To make company’s solar products more powerful, reliable, affordable and easy-to-use.

R&D Objective:

- To develop and improve ready-for-production technologies in wafers, cells and modules to increase product efficiency while reducing cost; and continuously enhance technical strength in PV systems and energy solutions.

Dedicated research labs for cells and modules

PV Reliability Test and Analyses Lab is accredited as test witness lab for TUV Rheinland, CSA and VDE

Recently launched competitive high-efficiency cell technology: ONYX

Portfolio of high efficiency technologies such as n-type technology, being evaluated for potential future launch with efficiency targeted to exceed 22% by 2017
## Research & Development Capabilities

<table>
<thead>
<tr>
<th>Areas of Focus</th>
<th>Description</th>
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</table>
| Solar Cell Research and Development                 | ✓ Develop high efficiency and cost competitive new cell technologies  
|                                                      | ✓ Owns one dedicated research production line for cell R&D                                                                                   |
| Solar Module Research and Development               | ✓ Focused on the innovation of solar modules  
|                                                      | ✓ Owns one dedicated research production line for module R&D                                                                               |
| PV Product and System Technology Development         | ✓ Develop high quality and low cost off-grid products: hybrid system, energy storage, solar pump, and PV+ diesel  
|                                                      | ✓ System technology development                                                                                                             |
| Photovoltaic Reliability Testing and Analysis       | ✓ Fully compliant with ISO/IEC 17025, IEC 61215/61730 /61701/62804, UL1703/1741 standards  
|                                                      | ✓ Test witness lab: TUV Rheinland, CSA and VDE certification bodies                                                                             |

First PV manufacturer to obtain auto industry’s stringent ISO TS16949 accreditation for product quality control
Solar Cell: ONYX I (Black Silicon)

- 0.4% cell efficiency and 4 watts module power gain over baseline by 2015 Q4
- Production roll out begun in 2015 Q1
- Ramp up as future multi baseline
- Increase market competitiveness
- Pleasing aesthetics

<table>
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<tr>
<th></th>
<th>Voc(mV)</th>
<th>Isc(A)</th>
<th>FF(%)</th>
<th>Efficiency</th>
</tr>
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<tbody>
<tr>
<td>Baseline</td>
<td>632.2</td>
<td>8.707</td>
<td>79.46</td>
<td>18.00%</td>
</tr>
<tr>
<td>ONYX I</td>
<td>633.1</td>
<td>8.812</td>
<td>79.88</td>
<td>18.31%</td>
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</table>

Over 3 years in-house R&D, **self-owned IPs**

**World 1st and the only one in mass production** with similar technologies
**Solar Cell: ONYX II**

- ONYX II enhances back side passivation and increases cell efficiency to 19%
- Low Light Induced Degradation (LID), and Potential Induced Degradation (PID) resistant
- 0.5% cell efficiency and 5 watts module power gain over ONYX I by 2015 Q3
- Production roll out begin in 2015 Q3, will gradually ramp up to 400MW
Solar Cell: Next Generation (n-type bifacial)

- LID Free & PID Free
- Excellent Temperature Coefficient: (-0.22/°C vs. -0.47/°C conventional)
- Bifacial module: higher front side efficiency plus back side contribution, expected to lower LCOE by 16%
- Targeting production cell efficiency at 22.0% and module power output at 310W (CS6P type, single side)
- Trial production expected in 2016
Cell Efficiency Roadmap

2014Q4 2015Q4 2016Q4 2017Q4 2018Q4

Cell Efficiency(%)
World Class Solar Module Portfolio

- We have a broad portfolio of modules addressing all segments of the market, residential, commercial and utility-scale.
- Our modules have the highest PVUSA Testing Conditions (PTC) rating among our peers.
- We have developed innovative cell and module designs to meet the ever growing needs of our customers.
  - Double glass modules with up to 30 year warranty.
  - First to launch a mass produced module with 4-busbar cells.
- 100% of our in-house produced cells are PID resistant.
Module performance is rated at 25°C cell temperature – Name plate power

Required by the California Energy Commission, a more realistic measure of module performance around module’s nominal operating cell temperature (NOCT), which is about 45 °C

Higher PTC Rating means module with the same name plate power being able to generate more power at realistic operation conditions

Canadian Solar modules ranked highest PTC Rating among all the P-type modules independently tested to meet the California Energy Commission requirements
# California Solar Initiative Module PTC Rating (CS6P-P, 60 Cells)

## PTC Rating for Poly Modules

<table>
<thead>
<tr>
<th>Model</th>
<th>88%</th>
<th>89%</th>
<th>90%</th>
<th>91%</th>
<th>92%</th>
</tr>
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<tbody>
<tr>
<td>Canadian Solar CS6P-255P</td>
<td></td>
<td></td>
<td></td>
<td>91.88%</td>
<td></td>
</tr>
<tr>
<td>Canadian Solar CS6K-255P</td>
<td></td>
<td></td>
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<td>91.80%</td>
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<tr>
<td>Canadian Solar CS6K-255P-PG</td>
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<td>91.45%</td>
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<tr>
<td>ReneSola JC255M-24/8x</td>
<td></td>
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<td>91.06%</td>
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</tr>
<tr>
<td>Trina TSM-255PA05</td>
<td></td>
<td></td>
<td></td>
<td>91.57%</td>
<td></td>
</tr>
<tr>
<td>Yingli YL255P-29b</td>
<td></td>
<td>90.55%</td>
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<tr>
<td>Jinko JKM255P-60</td>
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<tr>
<td>Hanwha HSL60P6-PB-4-255TW</td>
<td>89.73%</td>
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<td>JA JAP-72-255</td>
<td>89.18%</td>
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<tr>
<td>Canadian Solar CS6P-260P</td>
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<td>91.96%</td>
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<td>Canadian Solar CS6P-260P</td>
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<td>91.85%</td>
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<td>91.62%</td>
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<tr>
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<td>91.12%</td>
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<tr>
<td>Trina TSM-260PA05</td>
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<td></td>
<td>91.62%</td>
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<tr>
<td>Jinko JKM260P-60</td>
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<td>90.69%</td>
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<tr>
<td>Yingli YL260P-29b</td>
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<td>90.38%</td>
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<td>Hanwha HSL60P6-PB-4-260TW</td>
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<td></td>
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<tr>
<td>JA JAP6-60-260/3BB</td>
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<td>89.27%</td>
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## PTC Watt

<table>
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<tr>
<th>Model</th>
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<th>STC Watt</th>
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<tbody>
<tr>
<td>Canadian Solar CS6P-255P</td>
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<td>255</td>
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<tr>
<td>Canadian Solar CS6K-255P</td>
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<td>JA JAP-72-255</td>
<td>227.4</td>
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<td>239.1</td>
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<td>Canadian Solar CS6P-260P</td>
<td>238.8</td>
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</tr>
<tr>
<td>Canadian Solar CS6K-260P</td>
<td>237.9</td>
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<td>Canadian Solar CS6K-260P-PG</td>
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<tr>
<td>ReneSola JC260M-24/8x</td>
<td>236.9</td>
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<td>Trina TSM-260PA05</td>
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<td>Jinko JKM260P-60</td>
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<td>Yingli YL260P-29b</td>
<td>233.1</td>
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<tr>
<td>Hanwha HSL60P6-PB-4-260TW</td>
<td>232.1</td>
<td>260</td>
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<tr>
<td>JA JAP6-60-260/3BB</td>
<td></td>
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</table>

Updated as of April 1, 2015
California Solar Initiative Module PTC Rating (CS6X-P, 72 Cells)

PTC Rating for Poly Modules

<table>
<thead>
<tr>
<th>Module</th>
<th>88%</th>
<th>89%</th>
<th>90%</th>
<th>91%</th>
<th>92%</th>
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<tbody>
<tr>
<td>Canadian Solar CS6X-305P</td>
<td></td>
<td></td>
<td></td>
<td>91.90%</td>
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<tr>
<td>ReneSola JC305M-24/Ax</td>
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<tr>
<td>Trina TSM-305PA14</td>
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<td>91.08%</td>
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<tr>
<td>Jinko JKM305P-72</td>
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<td>90.69%</td>
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<td>JA JAP6-72-305</td>
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<td>90.59%</td>
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<tr>
<td>Yingli YL305P-35b</td>
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<td>Hanwha Solarone HSL72P6-PA-4-305Q</td>
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<td>89.84%</td>
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<td>Canadian Solar CS6X-310P</td>
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<tr>
<td>ReneSola JC310M-24/Axh</td>
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<td>91.61%</td>
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<td>Trina TSM-310PA14</td>
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<td>91.13%</td>
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<tr>
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<td>90.71%</td>
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<tr>
<td>JA JAP6-72-310</td>
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<tr>
<td>Yingli YL310P-35b</td>
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<tr>
<td>Hanwha Solarone HSL72P6-PB-4-310T</td>
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<td>89.65%</td>
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<tr>
<td>Canadian Solar CS6X-315P</td>
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<td>91.97%</td>
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<td>Trina TSM-315PA14A</td>
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<tr>
<td>Jinko JKM315P-72</td>
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<td>JA JAP6-72-315</td>
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<td>Yingli YL315P-35b</td>
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<td>90.38%</td>
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<td>Hanwha Solarone HSL72P6-PB-4-315T</td>
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</table>

PTC Watt | STC Watt
---------|---------
280.3    | 305     
279.3    | 305     
277.8    | 305     
276.6    | 305     
276.3    | 305     
275.4    | 305     
274.0    | 305     
285.0    | 310     
284.0    | 310     
282.5    | 310     
281.2    | 310     
281.0    | 310     
280.0    | 310     
277.9    | 310     
289.7    | 315     
289.5    | 315     
288.7    | 315     
285.9    | 315     
285.6    | 315     
284.7    | 315     
282.6    | 315     


Updated as of April 1, 2015
Premium Solar Modules

Diamond Modules:
- Heat strengthened glass as backsheet, robust for sea/waterside/desert applications
- Ready for 1500V systems, saving BOS cost
- 30 year power performance warranty

Quartech Modules:
- Four-busbar cell technology improving module reliability and conversion efficiency
- 1st to launch volume production

PID Resistant Modules:
- Self-made cells are 100% PID resistant by the end of 2014
- Passed qualification test by 3rd parties (VDE, TUV SUD, Fraunhofer ISE, PI Berlin, PVEL)
## Module Power Output Forecast

<table>
<thead>
<tr>
<th>Research Cell &amp; Module</th>
<th>2014Q4</th>
<th>2015Q4</th>
<th>2016Q4</th>
<th>2017Q4</th>
<th>2018Q4</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Eff</td>
<td>Power</td>
<td>Eff</td>
<td>Power</td>
<td>Eff</td>
</tr>
<tr>
<td>Multi</td>
<td>18.5%</td>
<td>270</td>
<td>19.0%</td>
<td>280</td>
<td>19.5%</td>
</tr>
<tr>
<td>Mono</td>
<td>20.5%</td>
<td>280</td>
<td>21.0%</td>
<td>290</td>
<td>22.0%</td>
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<table>
<thead>
<tr>
<th>Volume Manufacturing</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Eff</td>
<td>Power</td>
<td>Eff</td>
<td>Power</td>
<td>Eff</td>
</tr>
<tr>
<td>Multi</td>
<td>17.9%</td>
<td>260</td>
<td>18.2%</td>
<td>266</td>
<td>18.6%</td>
</tr>
<tr>
<td>ONYX I</td>
<td>18.1%</td>
<td>263</td>
<td>18.5%</td>
<td>269</td>
<td>18.8%</td>
</tr>
<tr>
<td>ONYX II</td>
<td>19.0%</td>
<td>273</td>
<td>19.3%</td>
<td>277</td>
<td>19.6%</td>
</tr>
<tr>
<td>Mono</td>
<td>19.2%</td>
<td>270</td>
<td>19.5%</td>
<td>275</td>
<td>19.8%</td>
</tr>
<tr>
<td>Mono PERC</td>
<td>20.2%</td>
<td>283</td>
<td>20.5%</td>
<td>289</td>
<td>20.7%</td>
</tr>
<tr>
<td>N-type</td>
<td>21.5%</td>
<td>304</td>
<td>22.0%</td>
<td>312</td>
<td>22.5%</td>
</tr>
</tbody>
</table>
Centre for PV Product and System Technology Development

Objective: to continuously enhance technical strength in PV systems and energy solutions

PV Component

MLPE

Inverters

O&M components

Smart Energy

Off grid

On grid

Home Energy Management System

Micro grid

Energy Management System

System Engineering

Reliability design

Racking to Module Analysis

System Analysis/Optimizing

LCOE Evaluation
Manufacturing Capacity and Cost Roadmap

CSI is a global leader in the manufacturing of PV products, with 3.8GW of module capacity, with industry leading cost, technology and product quality.

Our new cell plant in Funing is equipped to produce Onyx I and II solar cells, with cell conversion efficiency expected to reach 19% by the end of 2015, and 20% by 2017.

We will continue to prudently expand our production capacity to increase our market share to maintain our position as a Tier 1 supplier of solar PV products.

We will also continue to implement cost reduction measures to maintain our competitive edge.

Canadian Solar has steadily improved to the top-3 position in market share with competitive cost and distinguished product quality.
## Canadian Solar Manufacturing Footprint

<table>
<thead>
<tr>
<th>Country</th>
<th>Location</th>
<th>Products</th>
<th>Capacities – MW*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>Guelph, ON</td>
<td>Module</td>
<td>500</td>
</tr>
<tr>
<td>China</td>
<td>Luoyang, Henan</td>
<td>Wafer</td>
<td>280</td>
</tr>
<tr>
<td></td>
<td>Changshu, Jiangsu</td>
<td>Module(^1)</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td>Suzhou, Jiangsu</td>
<td>Cells</td>
<td>1,500</td>
</tr>
<tr>
<td></td>
<td>Funing, Jiangsu</td>
<td></td>
<td>400(^1)</td>
</tr>
</tbody>
</table>

“Reverse Pyramid” capacity structure: Wafer: 280MW, Cell 1,900MW, Module 3,800MW

---

1- All capacities as of Q2 2015, except Funing which will reach 400MW in September 2015; module capacity does not include OEM relationships.
The brief of FN plant:

1. Product:
   ONYX I, ONYX II

2. Capacity:
   - Phase I: 400MW in Y2015
   - Phase II, III: up to 1600MW
Canadian Solar Cell Capacity Expansion Roadmap

Cell Capacity Expansion Roadmap

In: MW

- 2014 end: 1500 MW
- 2015 end: 1900 MW
- 2016 end: 2400 MW
- 2017 end: 2600 MW
Canadian Solar Module Capacity Expansion Roadmap

Module Capacity Expansion Roadmap

<table>
<thead>
<tr>
<th>Year</th>
<th>Capacity (MW)</th>
</tr>
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<tbody>
<tr>
<td>2014 end</td>
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</tr>
<tr>
<td>2015 end</td>
<td>3800</td>
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<tr>
<td>2016 end</td>
<td>4500</td>
</tr>
<tr>
<td>2017 end</td>
<td>5500</td>
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In: MW
Canadian Solar Cost Reduction Roadmap

Cost Reduction Roadmap for Module(6P-P) & Cell(P156) In CN

- Actual
- Target

<table>
<thead>
<tr>
<th>Year</th>
<th>In:$/W</th>
<th>Lower Materials Cost</th>
<th>Higher Power Output and Conversion Efficiency</th>
<th>Capacity Expansion</th>
<th>Automation</th>
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<tbody>
<tr>
<td>2014 end</td>
<td>0.47</td>
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<tr>
<td>2015 end</td>
<td>0.40</td>
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<td>2016 end</td>
<td>0.39</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>2017 end</td>
<td>0.36</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Agenda Today

- Strategy Overview
- Module Business
- Technology and Cost Roadmaps
- Sales and Marketing
- Q & A
- Lunch Break
- Energy Business
- YieldCo Opportunity and Guidance
- Closing Remarks
We are Gaining Market Share

- Strong brand
- Bankability
- Global footprint
- Quality and Energy yield
- Effective sales force

Canadian Solar Module Market Share

Source: IHS, Canadian Solar Analysis

Midpoint of Guidance
~4.2GW
Industry leading sales operations management:

- Fast payment cycle
- Low inventory
- Low selling expense

Close to zero bad-debt in 2014

Highest ASP among all China based manufacturers in 2014.
Industry Structure is Changing

1- Top-10 Market Share Consolidation

Top-10 module suppliers now account for 50% of the market.

Source: Global PV module demand assumptions from Solarbuzz, IHS, Canadian Solar analysis

2- Supply-Demand Balance is Tightening

Module demand is approaching estimated production capacity.

Cell and Module Effective Capacity: 50-60GW?
The 2015-19 Opportunity in Regional Markets is Large

- Mature markets: diminishing government incentives, grid-parity and evolving storage solutions will drive growth of distributed generation and self consumption.
- Emerging markets: utility-scale business, and hybrid micro-grid targeting on reducing diesel consumption will drive growth and create high margin opportunities for IPPs.
- U.S., Japan, Europe, China and India remain core markets for Canadian Solar in the foreseeable future.

**Total 2015-19: 317 GW**

Source: IHS, Canadian Solar Analysis
Solar PV Demand to Remain Robust in the US and Japan

**Market update**

- Second largest PV market in 2015-19 at 45 GW
- Utility-scale market driven by attractive FIT tariffs
- DG residential and commercial markets attractive over the long-term as utility-scale fades out

**Demand growth**

<table>
<thead>
<tr>
<th>Year</th>
<th>United States</th>
<th>(MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>6,273</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>6,992</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>8,404</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>10,397</td>
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<tr>
<td>2017</td>
<td>6,839</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>7,992</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>8,518</td>
<td></td>
</tr>
</tbody>
</table>

- Third largest market in 2015-19 at 42 GW
- Residential and commercial DG solar to grow fast driven by socket-parity, third-party owned business models and falling cost of capital

**CSIQ position**

- In 2014 Japan represented 25% of our shipments
- Established residential system kits and commercial turnkey solutions business
  - Estimated 8.4% market share
- Largest foreign PV module brand in Japan
- 605 MWp project pipeline

- Completed 162 MWp of projects in US in 2013-14
- Key module supplier to local utility companies and private solar developers
- 1.0GWp project pipeline
- Over 100MW signed DoD module supply deals

Source: IHS, company information.
Positive Developments Driving Growth in the China and India CSIQ position

**Market update**

- Plans to decentralize power industry in terms of financing, regulation and electricity distribution
- Emerging residential and small commercial solar DG will sustain future growth.
- Positive progress in India’s solar environment with target installations of 100GW by 2022.
- Confidence level is rising and the market is becoming much more dynamic.

**Customer / partners**

- We have been the market share leader in India (excluding First Solar) with completed sales of >0.5 GW to date in India
- Exploring a deeper presence in India including utility scale, large rooftop projects and local manufacturing.

**Canadian Solar**

- Canadian Solar has been aggressive in utility scale build to own project development; plan to connect 320MW by end of 2015.
- We shipped 200MW of modules in 2014 and plan to at least double this volume in 2015, but with tight control on payment risks.

Source: IHS, company information.
Direct Sales and Solutions Opportunity in Europe is Attractive

**CHANGING SEGMENTS in EUROPE:**

**Market Demand by Segments - Europe (GW)**

- 2014: 2GW, 1.3GW
- 2015: 2.4GW, 2.1GW
- 2016: 3.2GW, 2.5GW

Source: IHS, Canadian Solar research

**2016 Market Potential**
Diesel Displacement Off-Grid

- Turnkey EPC Solutions/ IPP for diesel displacement (off/weak grid) in emerging markets.
  - Market size: 600GW diesel facilities around the world and minimum 100GW can be replaced with solar.
  - Margin potential is high – EPC alone carries 30-40% gross margin so currency risk is not a big concern.
  - Demand is solid, less government involvement,
  - Large: Mining – 5-20MW,
  - Mid size 1: 0.5-5MW: Islands, Off/weak grid commercial/industry.
  - Mid Size 2: Public facilities such as school, hospital, jails and telecom (not desirable given payment risks, government).
  - Small size: villages, off grid agriculture
Key Markets Trends

Mature Markets

- Reduced government incentives, retail grid-parity, together with rising utility prices will drive most mature markets into self consumption mode
- Less room for intermediaries therefore direct channel is now dominating
- Digital B2C platforms become critical to lower the cost of end customer acquisition
- Strong demand for low cost, customized energy storage and management system
- Opportunity for IPP\(^1\) and/or turnkey solutions in Commercial/Industrial rooftop
- Utility-scale still present, albeit supported by grid-parity PPAs\(^2\)

Emerging Markets

- Demand for modules driven by utility-scale build-out
  - More and more new markets will launch grid-parity PPA bidding for solar PV
  - Volume driver with low- to mid-teen gross margin.
- Off/weak grid and diesel displacement presents an attractive opportunity
  - Demand is high
  - Plenty of margin
  - Bank financing may become available
  - Need bankable market makers

---

1. Independent Power Producers; 2. Power Purchase Agreement
“Capture the present from modules business while building the future with solutions business”

1. MODULES:
   - Direct channel and large projects
   - Digital Platform

2. SOLUTIONS: DG IPP/Turnkey EPC
   - Residential
   - C&I
   - Main Regions: Mature markets

3. SOLUTIONS: MICRO-GRID & HYBRIDS
   - Mining
   - Weak grids
   - Main regions: Emerging markets

Total Solutions Opportunity in Mature and Emerging Markets
We Plan to Grow Direct Sales and Solutions Business....

**Solutions Sales**

- Direct sales at premium pricing of modules and balance of systems (BOS)
- Digital channel sales of modules and BOS
- EPC Turnkey for commercial DG
- Micro-grid

**Direct Sales and Solutions Internal Targets - MW**

- 2014: $264m
- 2015E: $330m
- 2016E: $600
- 2017E: 1,000
The Direct Sales Channel Offers the Entire Bundle

**PV**

- Canadian Solar CS6P-P

**BOS**

- Racks
- Inverters
- Cables
B2C: Digital Channel for Mature Markets (Residential DG)
We have a Established Position in Japan Direct Sales and Solutions

System Kits

Market Entry: 2009
2014 Revenue: $97m
Turnkey Solution Case Study – IKEA Australia

»We have a long-term approach to sustainability, globally our ambition is to switch to renewable energy to become energy independent by 2020, and we’re well on the way. For an installation of this size, installing solar systems on to the roofs of our stores and warehouses here in Australia is a considerable undertaking and each of our sites’ has had its challenges. It’s important to us and our business to ensure we have efficient, reliable high quality product together with a competitive offer, expert knowledge and experience.«

Richard Wilson
Sustainability Manager
IKEA Australia

**PV Project:** 3.6 MW Roof-Top PV Projects for IKEA Australia

**City, State, Country:** Logan (QLD), Rhodes (NSW), Marsden Park (NSW), Springvale (VIC) and Richmond (VIC), Australia

**Application Type:** Solar Power Generation Systems, multi-states nation-wide deployment

**Installation Type:** Large Commercial Rooftop PV

**Total System Size:** 7 projects, total 3.6 MW

**Annual System Output:** 4,658 MWh/year

**CO2 Emission:** 4,742 metric Tons

**System Activated:** August 2014

**Module Type:** CS6X-P and CS6P-P

**Owned By:** IKEA Australia Pty Ltd

**Developed By:** Canadian Solar (Australia) Pty Ltd

**Constructed By:** Canadian Solar (Australia) in conjunction with Lamco Solutions, Smart Commercial Solar and CSA Services
Micro-grid One-Stop Shop Service
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