

# **Investor Presentation**

Second Quarter Update

September 1, 2015





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# **Company Overview**

- Founded in Ontario, 2001
- Listed on NASDAQ (CSIQ) in 2006
- Over 8,000 employees globally
- Presence in 18 countries / territories
- > 11 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\*

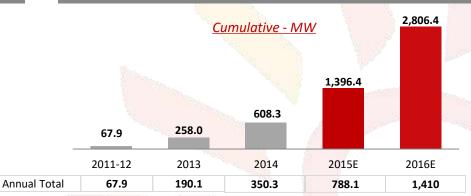
#### Highlights

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

#### **Global Footprint and Brand**



#### **Solar Power Plants Built and Connected**



<sup>\*</sup>Source: Factset, company analysis

# **Investment Highlights**

- 1 Leveraged to strong secular growth in demand for solar energy
- **2** Global leader in solar project development business
- **3** Globally diversified pipeline supports the launch of our own YieldCo
- 4 Leading vertically integrated PV module manufacturer
- 5 Management team with a proven track record



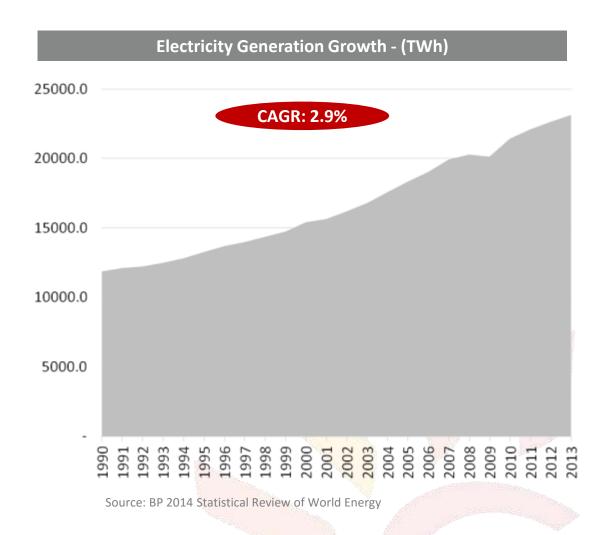
# **Levered to Strong Secular Growth in Demand for Solar Energy**

- → 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

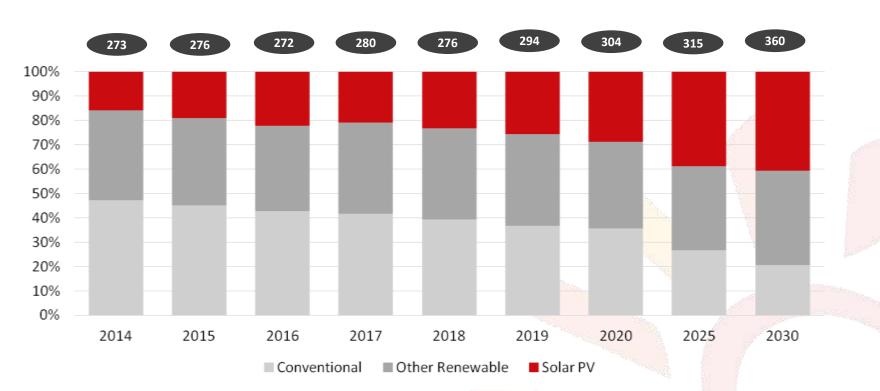




## Renewable Energy Additions Already Surpasses Conventional Energy

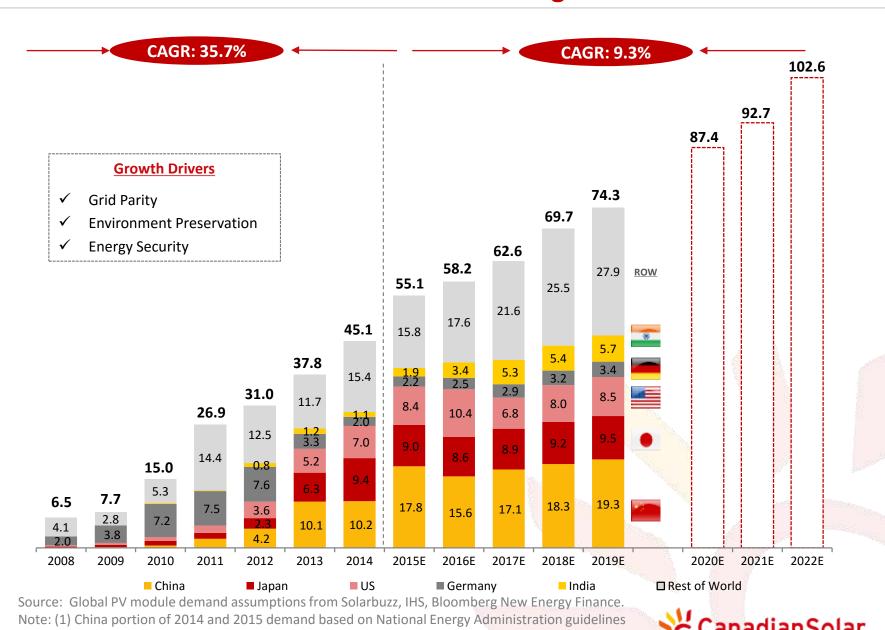
- In 2014, solar PV and other renewable energy capacity additions surpassed conventional energy for the first time, and solar PV is expected to dominate.
- Over the next 20 years the solar industry is expected to generate over \$5 trillion of cumulative revenue.

#### **Global Capacity Additions - GW**



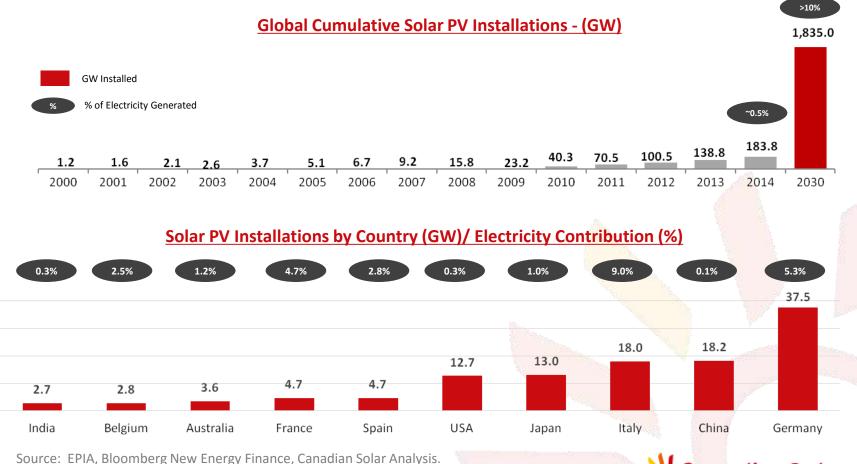
Source: Bloomberg New Energy Finance, Deutsche Bank

# Global Annual PV Installation to Break through 50GW in 2015



## 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



# **Global Leader in the Project Development Business**

- Industry leading globally diversified utility-scale project pipeline
- Proven track record monetizing utility-scale solar projects
- Leading solar energy developer in the U.S., Japan, and Canada, with a growing presence in the U.K. and China
- Well positioned to launch our own YieldCo to create lasting value for our shareholders



#### **Industry Leading Globally Diversified Project Pipeline**

#### 9.2 **GWp**

total project development pipeline

#### **2.6 GWp**

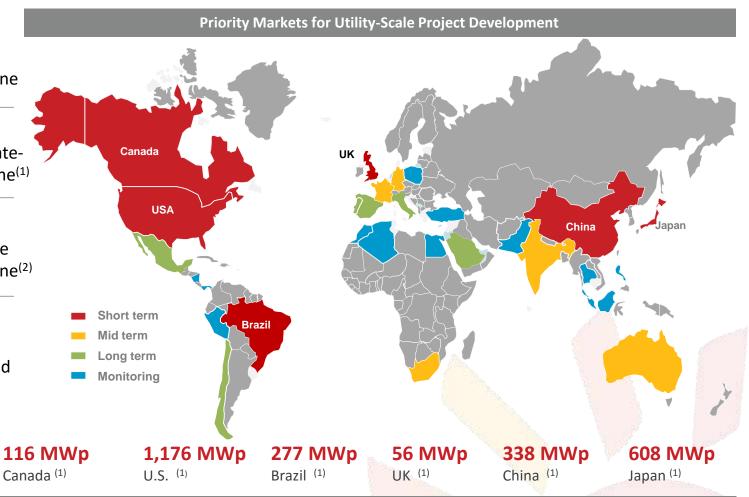
total contracted / latestage project pipeline<sup>(1)</sup>

#### > 6.6 GWp

total early-mid stage development pipeline<sup>(2)</sup>

#### ~163.9 MWp

Solar power plants owned and operated



Canadian Solar has a globally diversified pipeline of contracted / late stage projects in low risk geographies

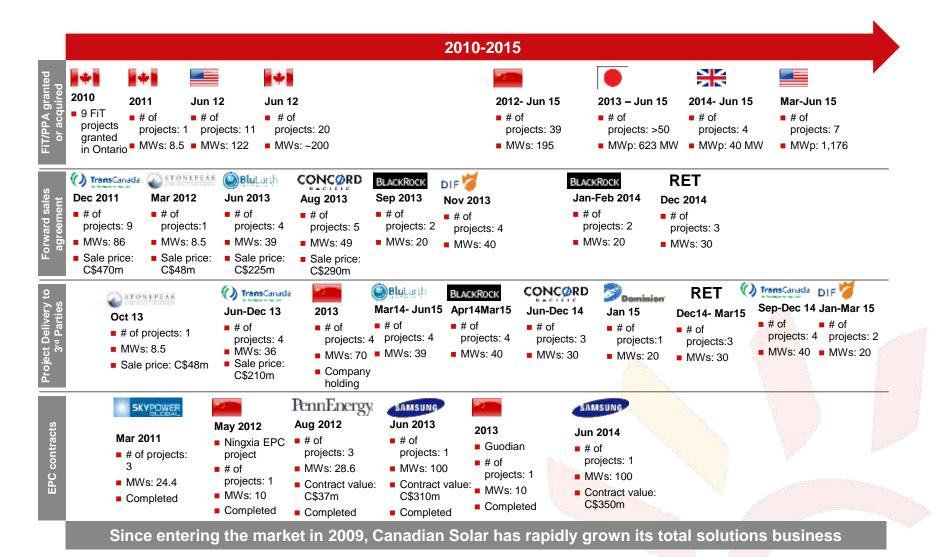
Source: Company information as of August 18, 2015

Note: (1) Late-stage project and EPC contract pipeline, nearly all projects have an energy off-take agreement and are expected to be built within the next 2-3 years. Some projects may not reach completion due to failure to secure permits or grid connection, among other risk factors.

(2) Early to mid-stage of development: includes projects under assessment for co-development and acquisition, as well as projects being self-developed where the land has been identified or secured, and an energy off-take agreement is in place or there is a reasonable probability that it can be secured.



#### **Proven Track Record Monetizing Utility-Scale Solar Projects**



Source: Company information

Note: All MW shown on this slide are in MW<sub>AC</sub> unless otherwise stated



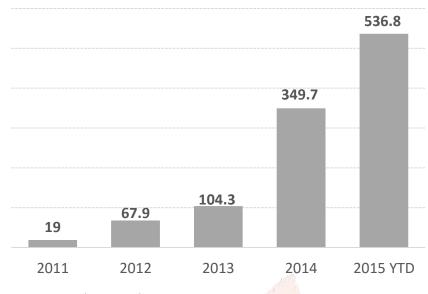
# **Leading Solar Energy Developer In Canada**



#### 184.2 MW to be Delivered in 2015

Canadian Solar Developed	MWp	Status	<b>Expected COD</b>
Liskeard 1	13.9	SALE CLOSED IN 4Q14	_
Liskeard 3 and 4	28.0	SALE CLOSED IN 3Q14	-
William Rutley (1)	13.9	SALE CLOSED IN 3Q14	-
Alfred	14.1	In Construction	2015 Q4
Mississippi Mills	14.1	SALE CLOSED in 4Q13	-
Burritts Rapids	9.8	SALE CLOSED in 3Q13	-
Brockville 1	13.2	SALE CLOSED in 2Q13	-
Brockville 2	12.5	SALE CLOSED in 3Q13	-
Foto Light LP	14.0	SALE CLOSED IN 4Q14	-
Illumination LP	14.0	In Construction	2015 Q4
Little Creek	11.9	SALE CLOSED in 1Q14	-
Gold Light LP	14.0	SALE CLOSED IN 1Q15	-
Beam Light LP	14.0	In Construction	2015 Q4
Earth Light LP	14.1	In Construction	2015 Q4
Lunar Light LP	14.0	SALE CLOSED IN 2Q15	-
Discovery Light LP	12.6	SALE CLOSED IN 4Q14	-
Sparkle Light LP	14.0	SALE CLOSED IN 4Q14	-
GlenArm LP	14.0	SALE CLOSED IN 1Q15	-
Good Light LP	14.0	SALE CLOSED IN 3Q14	-
Aria LP	14.8	In Construction	2015 Q4
Ray Light LP	14.0	SALE CLOSED IN 4Q14	-
Mighty Solar LP	14.0	SALE CLOSED IN 3Q14	-
City Lights LP	14.0	SALE CLOSED IN 1Q15	-
Highlight (Val Caron)	14.0	SALE CLOSED IN 2Q14	-
Taylor Kidd	14.0	SALE CLOSED IN 3Q14	-
Demorestville	14.0	SALE CLOSED IN 3Q14	-
Oro-Medonte 4	11.5	SALE CLOSED IN 4Q14	-
Westbrook	14.0	SALE CLOSED IN 3Q14	-
Total CSIQ Developed (Pending COD)	71.0		
3 <sup>rd</sup> Party Developed (EPC)	MWp	Status	Expected COD
Penn Energy	39.0	DELIVERED	-
Samsung Phase I	133.6	DELIVERED	-
Samsung Phase II	141.0	In Construction	2015 Q3
Total EPC Projects	313.6		
EPC MW Recognized into Revenue	268.3		
Total Project Backlog	116.3		

#### Projects Connected<sup>1</sup> to the Grid – Cumulative MWp



Note: Based on COD date

# Market Leader in the U.S. with 1.2 GW Project Backlog



Includes Recurrent Energy Across North America

# 4.1 **GWp**

Early-stage pipeline

# **1.2 GWp**

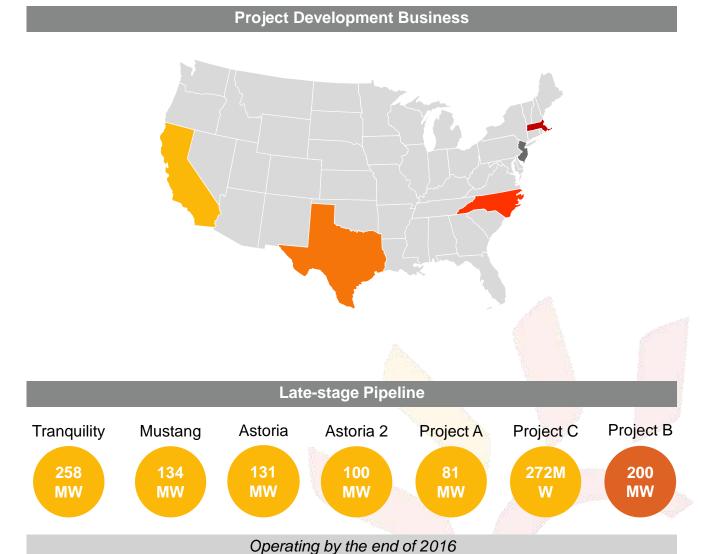
Late-stage pipeline

# >842 MWp<sup>1</sup>

Track record of projects developed and sold

# >1.2 GWp

breaking ground in 2015







# **Japan Utility-Scale Solar Project Pipeline**



#### **Total Solutions business – Japan**

# **608 MW<sub>p</sub>** (1) late-stage project pipeline

#### 120 MW<sub>p</sub> (1)

early stage assessment projects

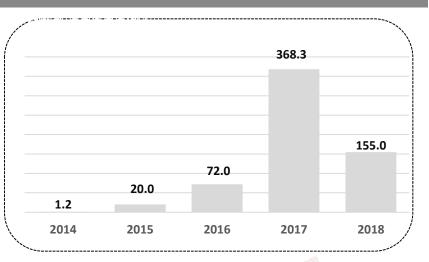
#### 6.4 MW<sub>p</sub>

Owned and operated

(1) Some of these projects may not progress to completion



#### Utility-Scale COD Schedule<sup>2</sup> - MWp



- (2) Expected COD are tentative estimates subject to change, due to delays in securing all the necessary permits among other risk factors.
- Projects in construction total 38.5MWp
- Projects that reached ready-to-build stage and are expected to start construction shortly total:
  57.3MWp

# **China Utility-scale Solar Project Pipeline**





	Province	2015–16 Late Stage Project Opportunity (MWp)	Feed In Tariff
1	Jiangsu	43 MW	RMB 1.00 to 1.15/kWh
2	Shanxi	50 MW	RMB 0.95/kWh
3	Yunnan	10 MW	RMB 0.95/kWh
4	Hebei	15 MW	RMB 0.95/kWh
5	Xinjiang	20 MW	RMB 0.90/kWh
6	Anhui	140MW	RMB 1.00/kWh
7	Shandong	50MW	RMB 1.00/kWh
8	Inner Mongolia	10MW	RMB 0.90/kWh
	Total	338 MWp	





## **Leading Vertically Integrated PV Module Business**

- Global footprint with diversified customer base
- Bankable brand with high quality products
- \* "Reverse Pyramid" asset light manufacturing capacity structure
- Industry leading manufacturing cost structure
- Competitive pipeline of homegrown technologies create opportunity for product differentiation

#### **Global Footprint With Diversified Customer Base**

#### > 11.0 GW

cumulative modules sold to date

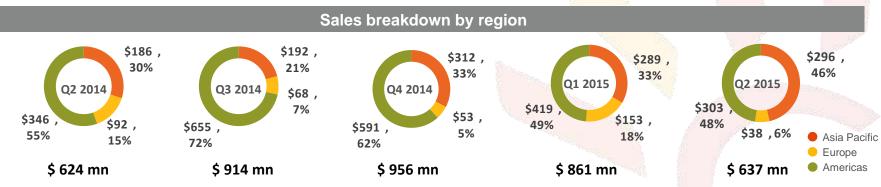
# Customers in over 90 countries

with offices in 18 countries

# Established projects business

currently delivering services in 6 countries





Source: Company information

#### **Bankable Brand with High Quality Products**

# **Commercial & Utility-Scale MaxPower** DIAMOND CS6P-M CS6P-P CS6X-P CS6K-P-PG

#### **International Environmental & Quality Management Standards**

- ISO 9001:2008 Quality Management System
- QC080000:2005 HSPM Hazardous Substance **Process Management**
- ISO 14001 Environment Management System
- ISO TS16949:2009 First PV manufacturer to adopt ISO TS16949 for PV quality control
- OHSAS 18001 Occupational Health and Safety

#### Residential



CS6V-P











ONYX

#### **International Testing Standards**

- IEC 61215 & IEC 61730, UL 1703 & UL 790 & CEC
- CE conformity, MCS (EN45011)
- REACH Compliance

- **IEC 61215**
- **IEC 61730**
- IEC 61701:

**Salt Mist Corrosion** 

- **Ammonia Resistance**
- PID free
- **REACH Compliant**



































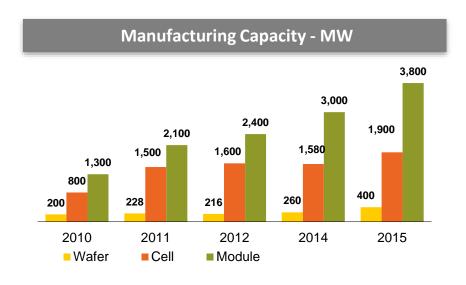




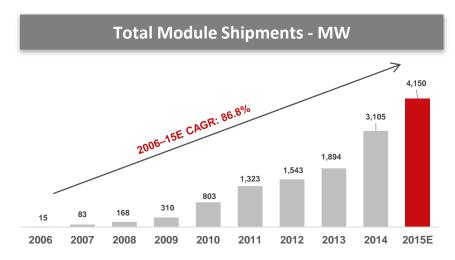




## **Reverse Pyramid Manufacturing Capacity Structure**

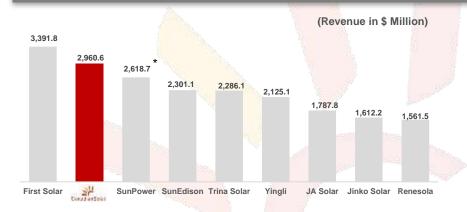


- Module capacity reached 3.8 GW in Q2 2015
- Cell capacity expansion in Funning, Jiangsu Province, in JV with GCL. Phase I targets net capacity to 400 MW by September 2015.
- In-house cell capacity targeted at 50% of module shipments
- Wafer capacity to reach 400 MW in 2015



Source: Company information

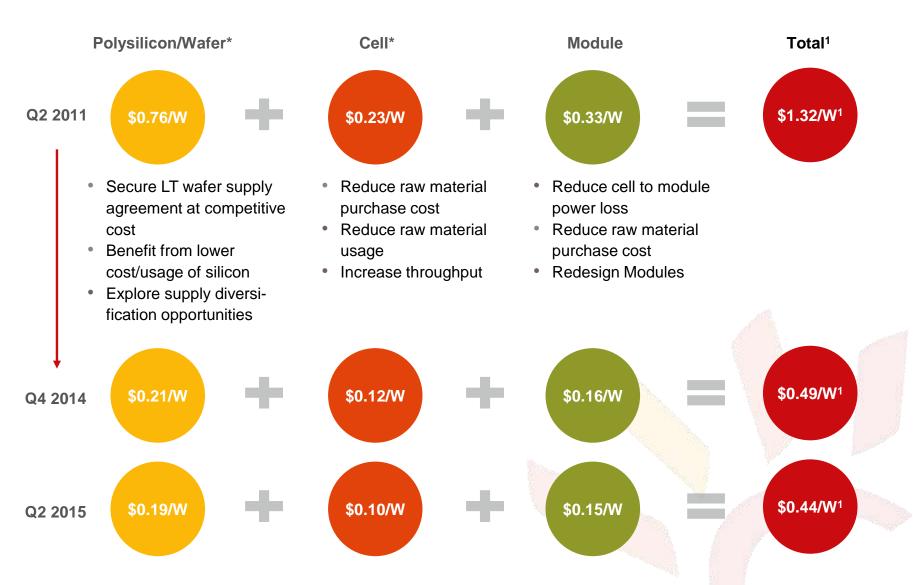
#### #2 Solar Energy Solutions Company by Revenue in 2014



Source: FactSet Data; \* Non-Gaap



### **Industry Leading Manufacturing Cost Structure**



Source: Company information, \* Includes purchased wafers and cells.

<sup>1.</sup> Blended manufacturing cost in China

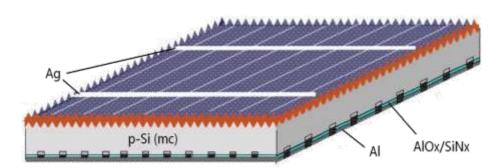
# **Competitive Pipeline of Homegrown Technologies**

#### ONYX I – Black Silicon



- 0.4% cell efficiency and 4 watts module power gain over baseline to 18.5% by 2015 Q4
- Over 3 years in-house R&D, self-owned IPs
- out begun in 2015 Q1 Production roll out begun in 2015 Q1
- 🤐 Ramp up as future multi baseline
- Pleasing aesthetics

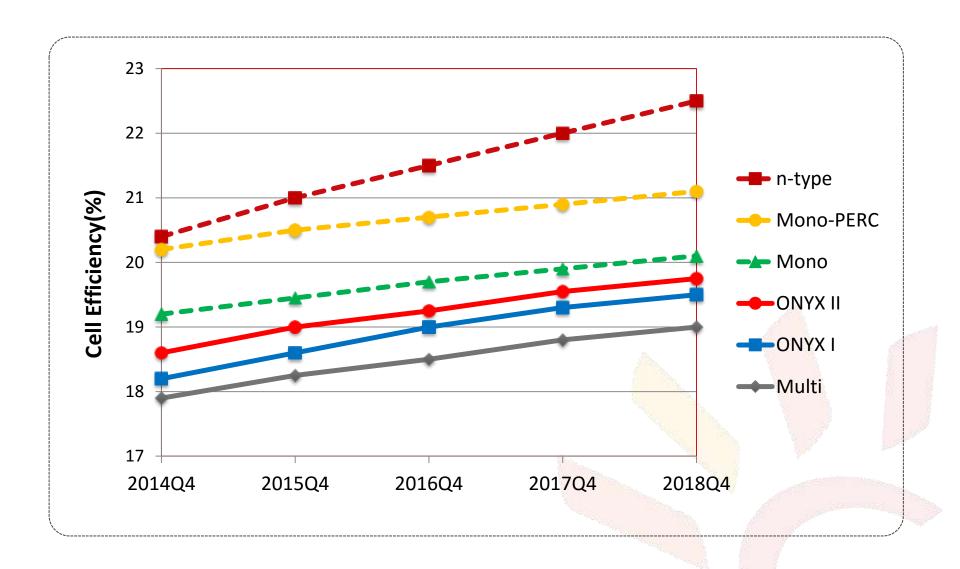
#### **ONYX II - PERC**



- 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



# **Cell Efficiency Roadmap**





# **Experienced Board & Senior Management**

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	Name / Title	Work Experience		
Grant Control	<b>Dr. Shawn Qu</b> Chairman, President & CEO (Director)	<ul> <li>Founded Canadian Solar in 2001, and has since then firmly established the company as a global leader of the solar industry</li> <li>Director &amp; VP at Photowatt International S.A.</li> <li>Research scientist at Ontario Power Generation Corp.</li> </ul>		
	Michael Potter SVP and Chief Financial Officer	<ul> <li>Corporate Vice President and CFO of Lattice Semiconductor Corp.</li> <li>Senior Vice President and CFO of NeoPhotonics Corp.</li> </ul>		
	Yan Zhuang SVP and Chief Commercial Officer	<ul> <li>Head of Asia of Hands-on Mobile, Inc.</li> <li>Asia Pacific regional director of marketing planning and consumer insight at Motorola Inc.</li> </ul>		
9	Guangchun Zhang SVP and Chief Operating Officer	<ul> <li>Vice President for R&amp;D and Industrialization of Manufacturing Technology at Suntech Power Holdings</li> <li>Centre for Photovoltaic Engineering at the University of New South Wales and Pacific Solar Pty. Limited.</li> </ul>		
Experienced Independent Directors	Robert McDermott Chairperson of the Corporate Governance, Nominating and Compensation Committees	<ul> <li>Partner with McMillan LLP, a business and commercial law firm</li> <li>Director and senior officer of Boliden Ltd.</li> </ul>		
	Lars-Eric Johansson  Chair of the Audit and member of Governance, and Compensation Committees	<ul> <li>CEO of Ivanhoe Nickel &amp; Platinum Ltd.</li> <li>Chairperson of the Audit Committee of Harry Winston Diamond</li> </ul>		
	Dr. Harry E. Ruda Chair of Technology and member of the Audit, Governance, Compensation Committees,	<ul> <li>Director of the Centre for Advanced Nanotechnology, Stanley Meek Chair in Nanotechnology and Prof. of Applied Science and Engineering at the University of Toronto, Canada</li> </ul>		
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Source: Company information

**Andrew Wong** 

Compensation Committees

Member of the Audit, Corporate Governance,

Senior Advisor to Board of Directors of Henderson Land Development Co.

(Group) Co. Ltd. And Shenzen Yantian Port (Group) Co. Ltd.

■ Director of Ace Life Insurance Co. Ltd., China CITIC Bank Corp., Intime Retail

#### **Strategic Imperatives**

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



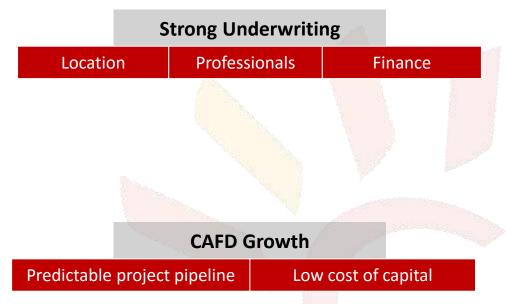
# **Strategic Positioning**

# Manufacturing **Business** Reliable Predictable Product Demand Canadian Development and Solar **Total Solar Business** Growing Secured **Pipeline Funding Operating Assets** (Yield Co.)

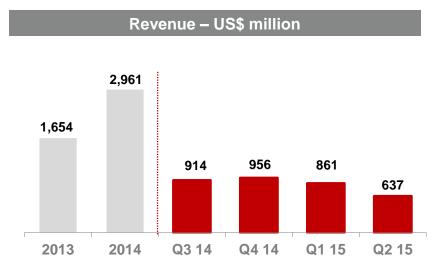
**Business Model** 

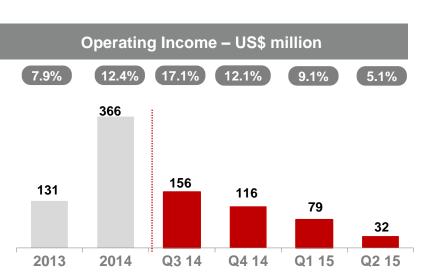
#### Key to Success

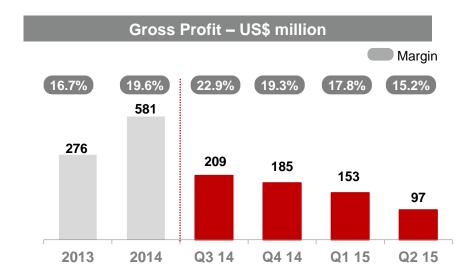
# Profitable Growth Price premium Competitive cost High ROA Branding Technology Scale Focus

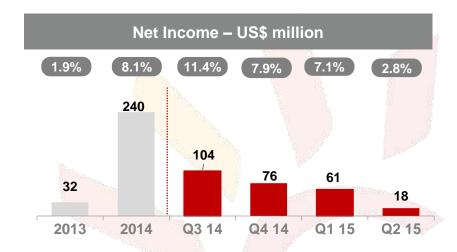


#### **Income Statement Summary**



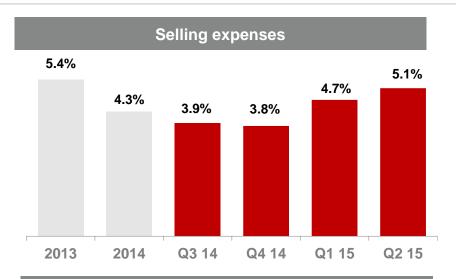




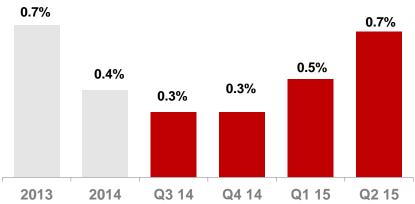




## **Operating Expenses as % of Net Revenue**

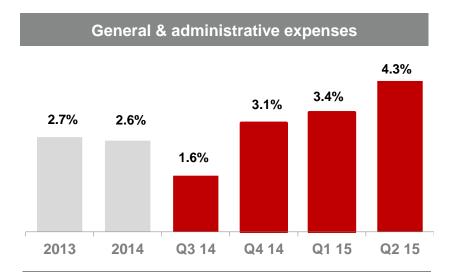




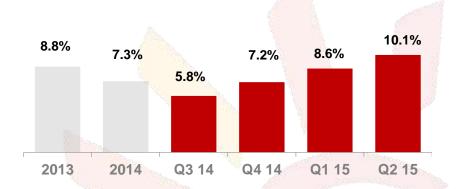


Source: Company filings

Note: Percentages are of the total net revenue in the corresponding period.

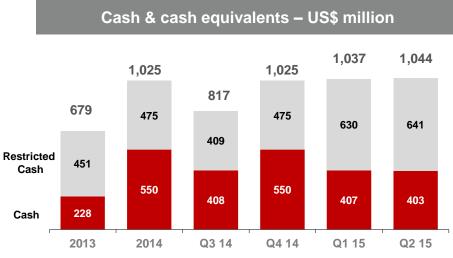


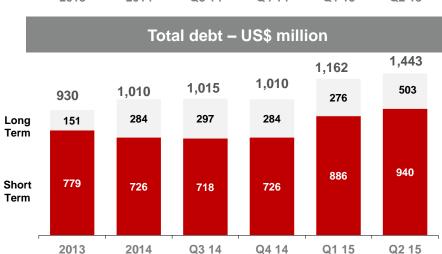
#### **Total operating expenses**





#### **Selected Balance Sheet & Cash Flow Items**





# 229.5 204 125 29 2013 2014 Q3 14 Q4 14 Q1 15 Q2 15

Cash flow from operations - US\$ million(1)



Source: Company filings

Note: (1) Working capital calculated as total current assets less total current liabilities

(2) Including US\$150 million in aggregate principal amount of 4.25% convertible senior notes due 2019



# **Guidance as of August 18, 2015**

	Q2 2015	Q3 2015	FY2014	FY2015	ΥοΥ Δ%
Module shipments	950 MW – 1,000 MW	970 MW – 1,020 MW	3.1 GW	4.0 GW – 4.3 GW	+33.1%
Revenue	\$ 570 m to \$ 620 m	\$ 570 m to \$ 620 m	\$2.96 bn	\$2.8 bn to \$3.0 bn	Flat (2)
Gross margin	13% – 15% <sup>(1)</sup>	12% – 14% <sup>(1)</sup>	19.6%	NA	NA



<sup>1-</sup>Includes module business and project business

<sup>2-</sup>Absent change in energy business model from build to sell, to build and operate, revenue for 2015 would be higher by over \$1.0 billion.

