



# Investor Presentation

Second Quarter 2017 Update

August 2017

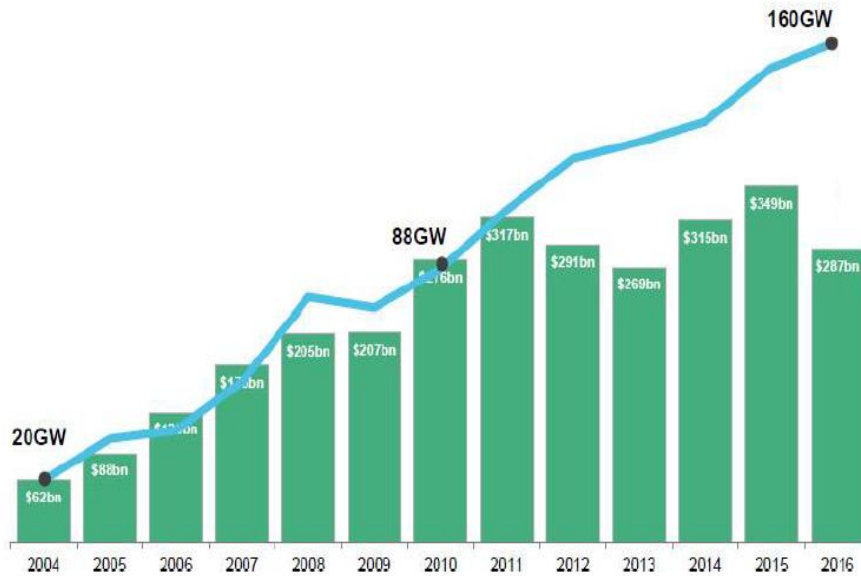
CSIQ NASDAQ Listed

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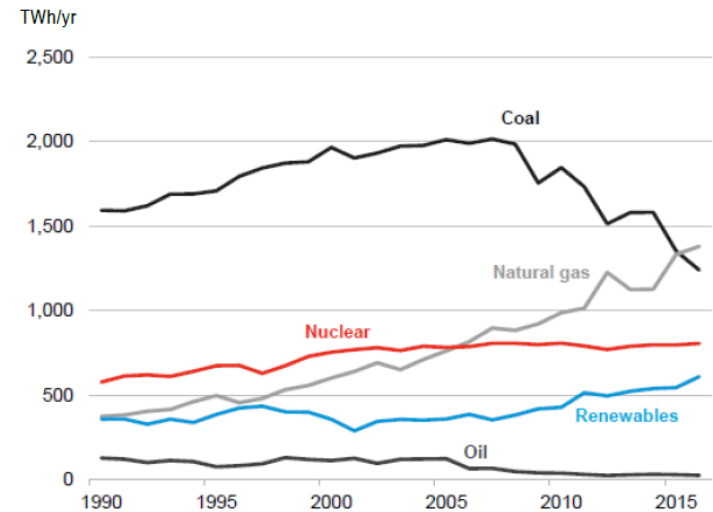
# Global Renewable Energy Installation Is Increasing

## More Wind and Solar Globally for Less Dollars in 2016



Source: BNEF

## US Power Generation by Source

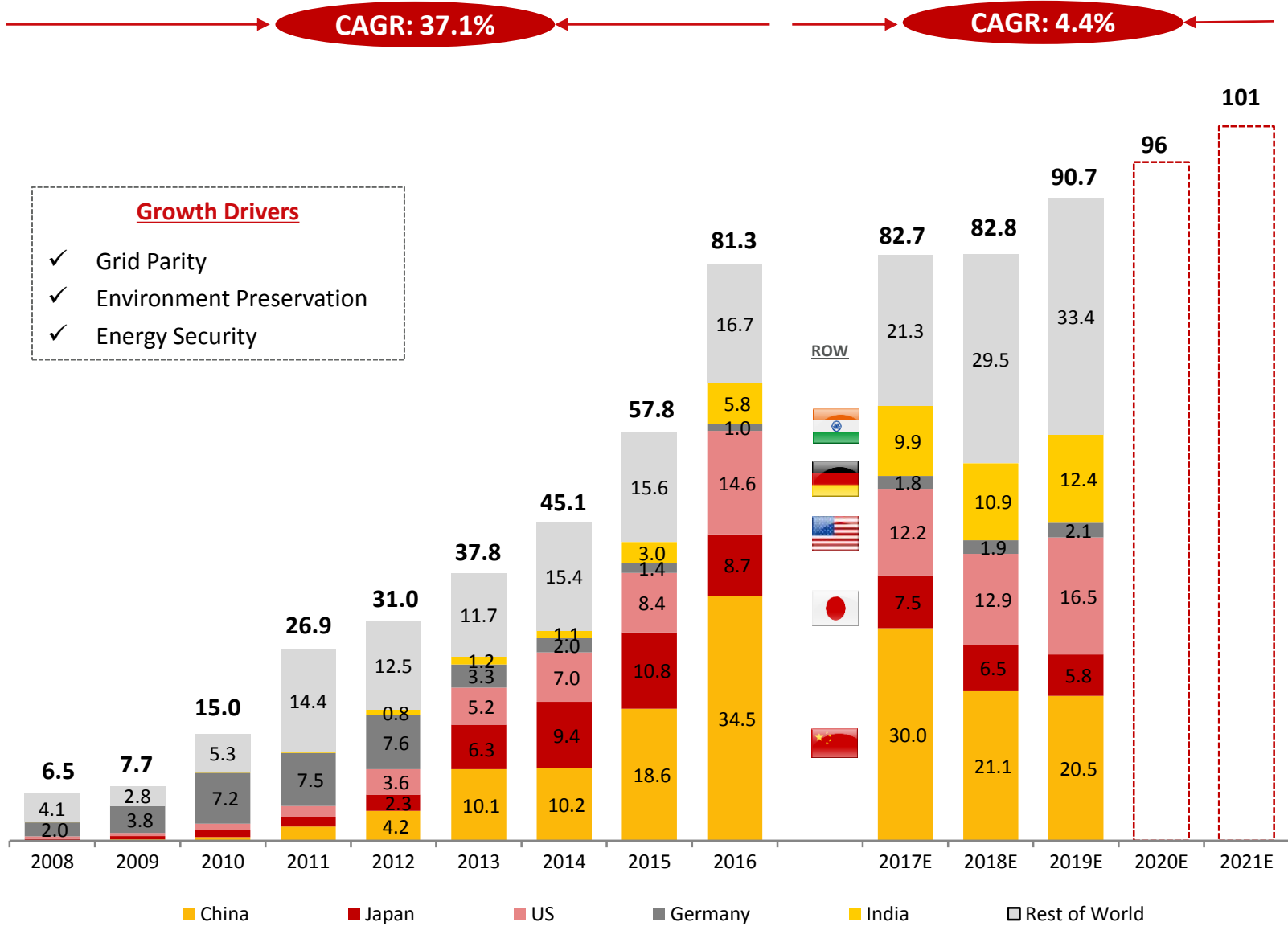


Source: BNEF

“Global investment in renewables (excluding large hydro) fell 17% to \$287 billion in 2016, though installations rose 9% to 160GW, underscoring the “more-for-less” benefit of falling cost/watt.”

-- J.P. Morgan Analyst Research Report

# 2016 Global Annual PV Installation Exceeded 81GW

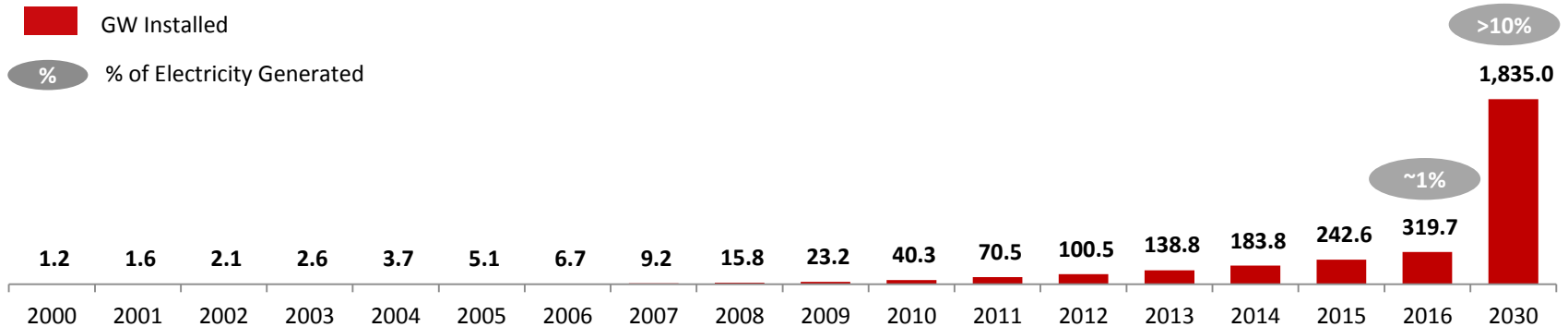


Source: Global PV module demand assumptions from IHS, analyst research reports

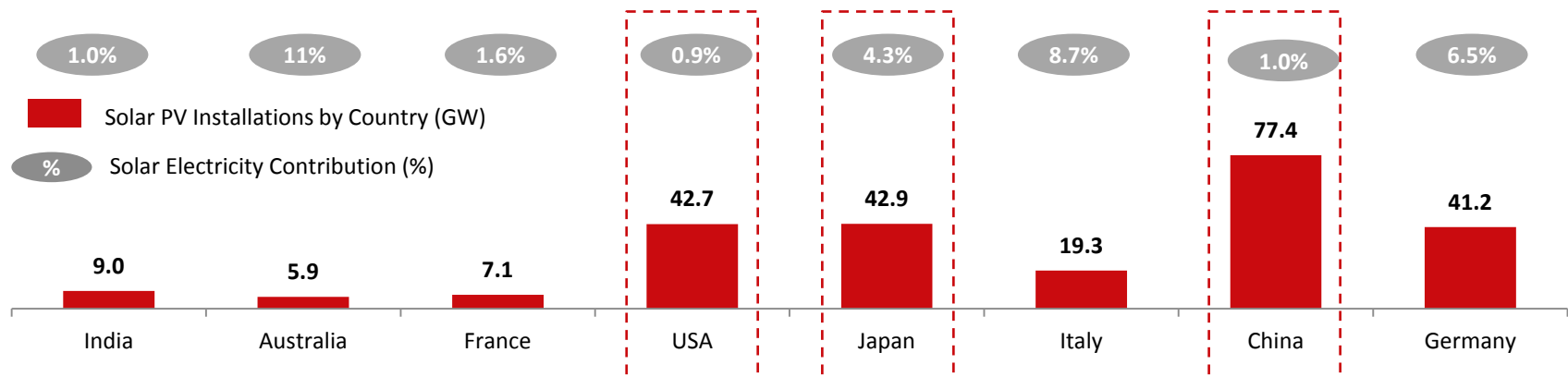
# We Are at the Very Early Stages of Solar Adoption

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

## Global Cumulative Solar PV Installations (GW)



Canadian Solar's key markets such as U.S., Japan and China are significantly under-penetrated



Source: EPIA, IHS, EIA, Canadian Solar Analysis; Cumulative Installations as of the year 2016.

Solar PV installed capacity is forecast to grow to over 1,835 GW in 2030.

# Company Overview

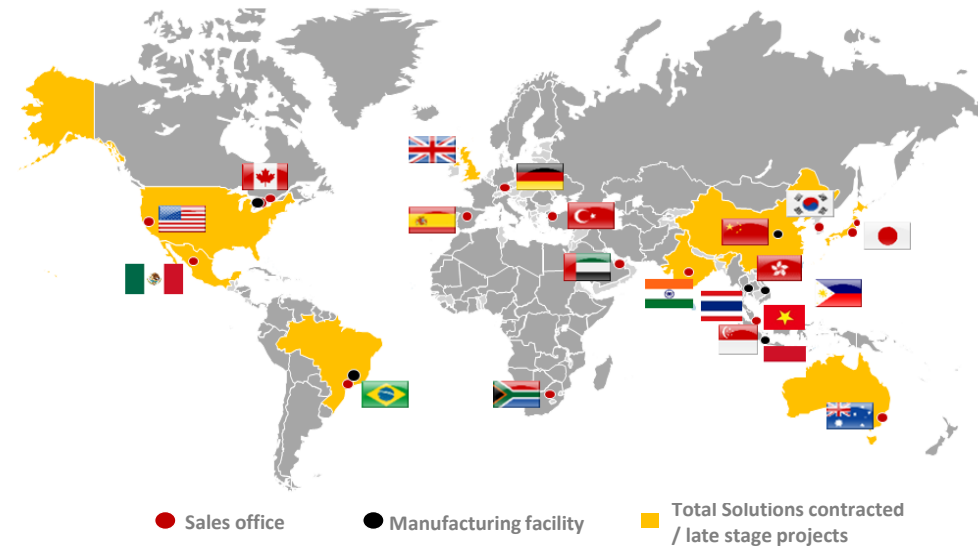
- 🌿 Founded in Ontario, 2001
- 🌿 Listed on NASDAQ (CSIQ) in 2006
- 🌿 Over 9,700 employees globally
- 🌿 Presence in 18 countries / territories
- 🌿 > 22 GW of solar modules shipped cumulatively
- 🌿 > 3.2 GWp solar power plants built and connected (incl. Recurrent)
- 🌿 No. 1 Solar Company 2016 according to IHS

## Highlights

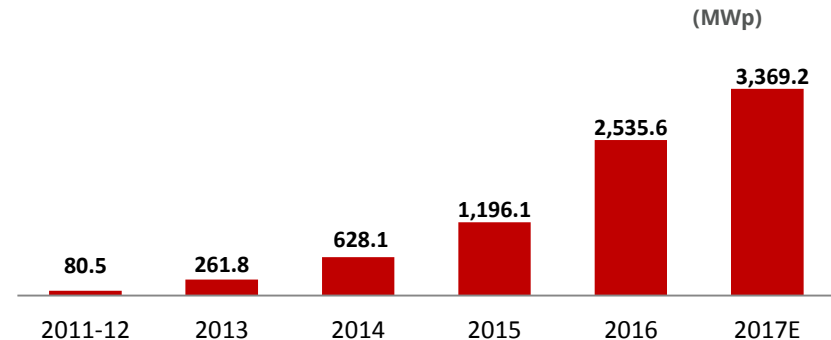
- 🌿 Q2 2017 Revenue: **\$692 million**
- 🌿 Q2 2017 Shipment: **1.75 GW**
- 🌿 Q3 2017 Shipment Guidance: **1.65 GW to 1.70 GW**
- 🌿 2017 Shipment Guidance: **6.0 GW – 6.5 GW**

Source: Company information as of August 14, 2017.

## Global Footprint and Brand



## Solar Power Plants Built and Connected



# Energy Business: Globally Diversified Project Pipeline

## Priority Markets for Utility-scale Project Development

**9.5 GWp**

Total project development pipeline

**8.1 GWp**

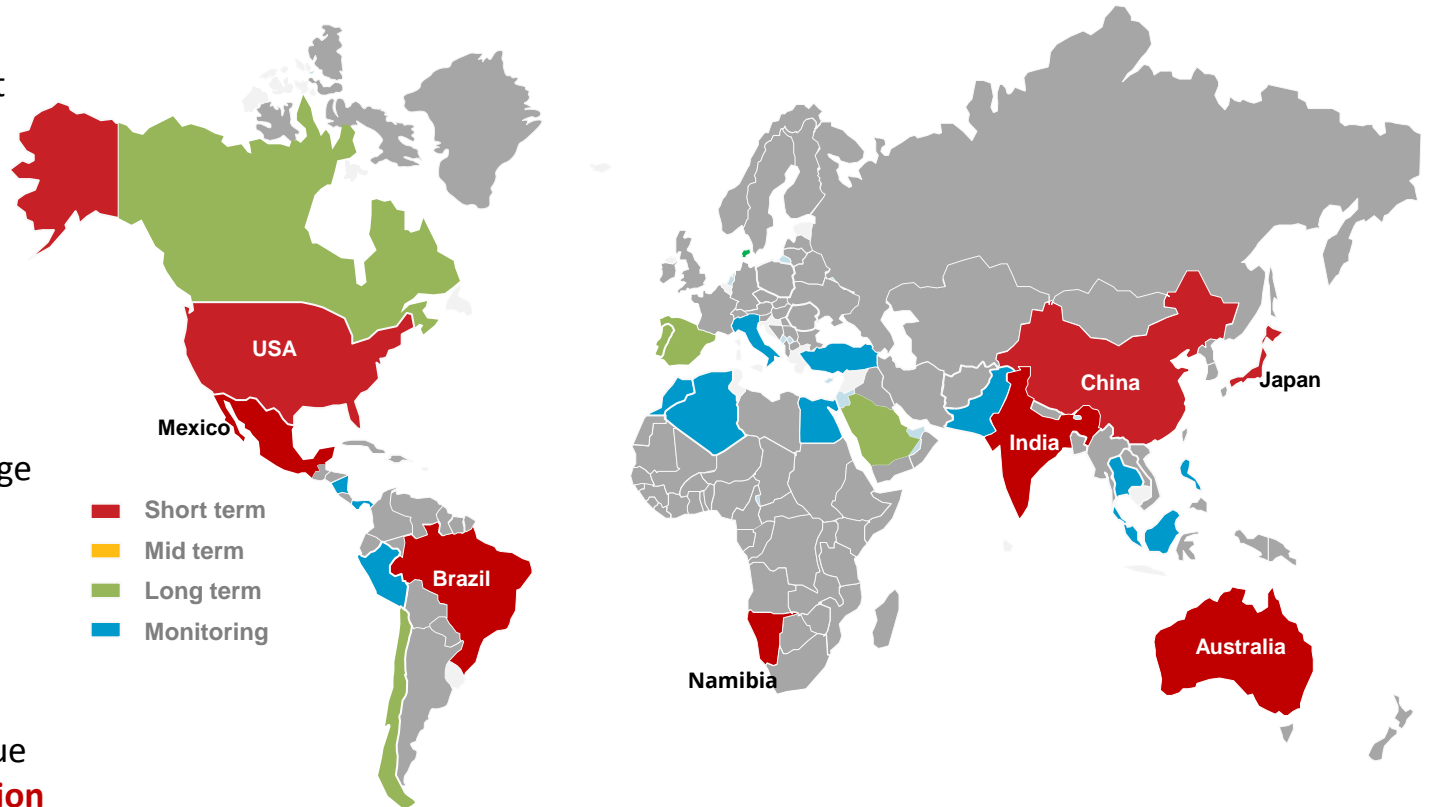
Early to mid-stage development pipeline <sup>(2)</sup>

**~1.4 GWp**

Total contracted / late-stage project pipeline <sup>(1)</sup>

**~1,260 MWp**

Solar power plants owned and operated, with an estimated total resale value of approximately **\$1.8 billion**



**362 MWp**

Japan <sup>(1)</sup>

**120 MWp**

U.S. <sup>(1)</sup>

**210 MWp**

China <sup>(1)</sup>

**399 MWp**

Brazil <sup>(1)</sup>

**108 MWp**

India <sup>(1)</sup>

**118 MWp**

Australia <sup>(1)</sup>

**68 MWp**

Mexico <sup>(1)</sup>

**6 MWp**

Africa <sup>(1)</sup>

Source: Company information as of August 14, 2017

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 2-4 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 only those projects that have been approved by our internal Investment Committee or projects that are expected to be brought to the Investment Committee in the near term.

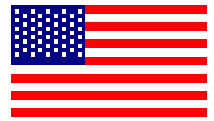
# Project Summary

Country/Region	Plants In Operation at 06/30/2017	Plants In Operation at 07/31/2017	Late-stage Projects Expected COD Schedule			
			Q3'17	Q4'17	2018 and After	Total Late-stage Projects
(Gross MWp)						
US	808	808	92	-	28	120
China	186.7	186.7	-	10	200	210
UK	150	150	-	-	-	-
Japan	110.5	110.5	30	21.4	311	362.4
Spain	5	5	-	-	-	-
Brazil	-	-	191.5	92.5	115	399
Mexico	-	-	-	-	68	68
India	-	36	-	108	-	108
Australia	-	-	5	-	113	118
Africa	-	-	6	-	-	6
<b>Total Gross MWp</b>	<b>1,260.2</b>	<b>1,296.2</b>	<b>324.5</b>	<b>231.9</b>	<b>835</b>	<b>1,391.4</b>

Source: Company information as of August 14, 2017



# Market Leader in the U.S.



## U.S. Project Development Business Footprint

Including Recurrent Energy across North America

**3.3 GWp**

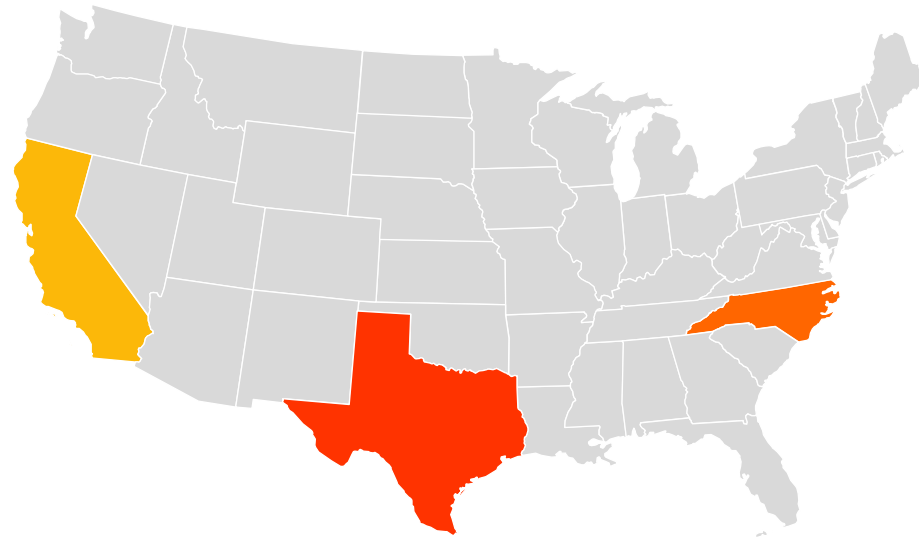
Early to mid-stage pipeline

**120 MWp**

Late-stage pipeline<sup>1</sup>

**808 MWp**

Owned and operated<sup>2</sup>



### Late-stage Pipeline<sup>1</sup>

RoseRock



*Commercial Operation since Q4 2016*

IS42



*In Construction,  
Commercial Operation by 2017*

Gaskell West 1

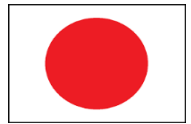


*Under Development,  
Commercial Operation by 2018*

1. Includes all of Canadian Solar and Recurrent Energy's (US only) projects developed and in construction

2. Gross MWp owned by Canadian Solar;

# Japan Utility-scale Solar Project Pipeline



## Total Solutions Business – Japan

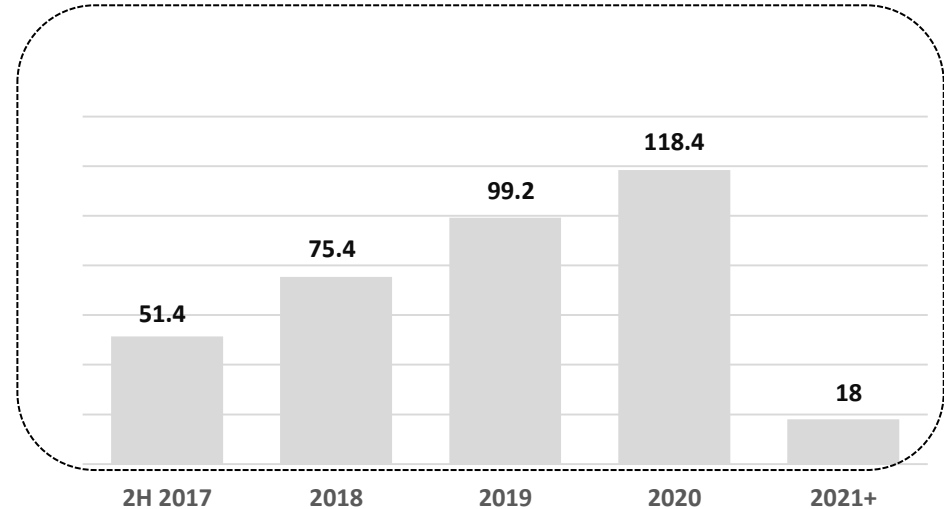
**362 MW<sub>p</sub>**  
Late-stage pipeline

**110.5 MW<sub>p</sub>**  
Owned and operated



Yamaguchi plant: 24 MWp

## Utility-scale COD Schedule<sup>1</sup> - MWp



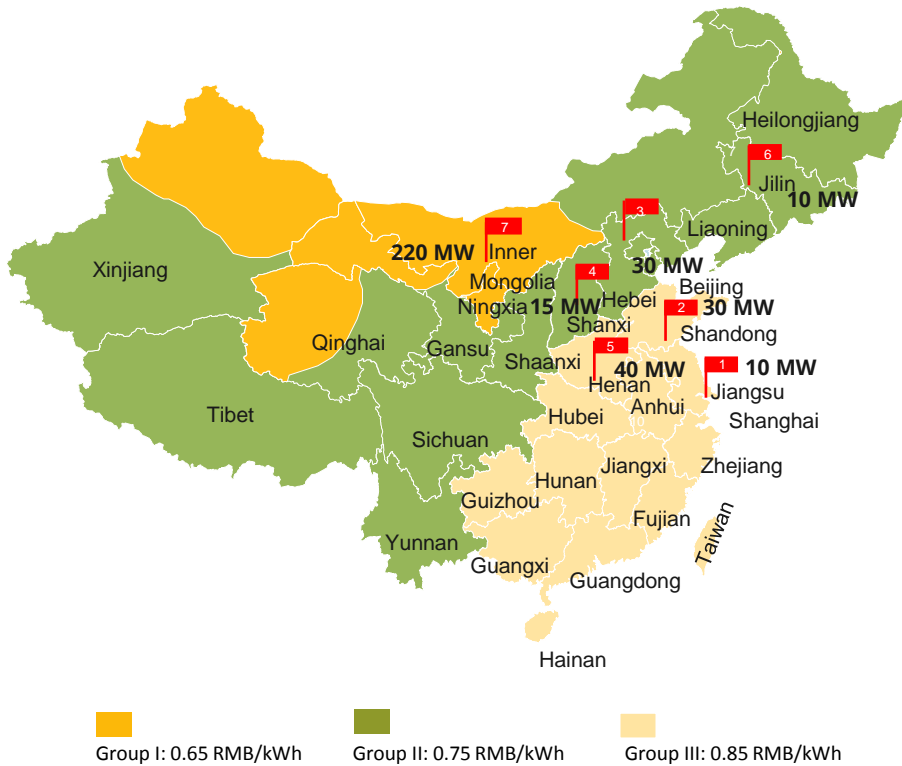
Note: (1) Expected COD are tentative estimates subject to change, due to delays in securing all the necessary permits among other risk factors.

- **362 MWp** of projects have secured the interconnection agreements, including **159 MWp** in construction and **203 MWp** under development
- Projects in the bidding process **210 MWp**

# China Utility-scale Solar Project Pipeline



## Energy Business – China



	Province	Late-stage Project Opportunity (MW <sub>p</sub> )	Early to mid-stage Project Opportunity (MW <sub>p</sub> )	Feed-in Tariff (RMB/kWh)
1	Jiangsu	-	10	0.85
2	Shandong	10	20	0.85
3	Hebei	-	30	0.75
4	Shanxi	-	15	0.75 to 0.85
5	Henan	-	40	0.85
6	Jilin	-	10	0.75
7	Inner Mongolia	200 <sup>(1)</sup>	20	0.50 to 0.59
	<b>Total</b>	<b>210</b>	<b>145</b>	

Note: (1) Two Top Runner Projects, 100 MWp each in size.

Source: Company information as of August 14, 2017

# Brazil Utility-scale Solar Project Pipeline



## Late-stage Pipeline

Project	Gross MWp	Status	Expected COD
Pirapora I <sup>(1)</sup>	191.5	Construction	2017
Pirapora II <sup>(1)</sup>	115	Development	2018
Pirapora III <sup>(2)</sup>	92.5	Construction	2017
Total	<u>399</u>		

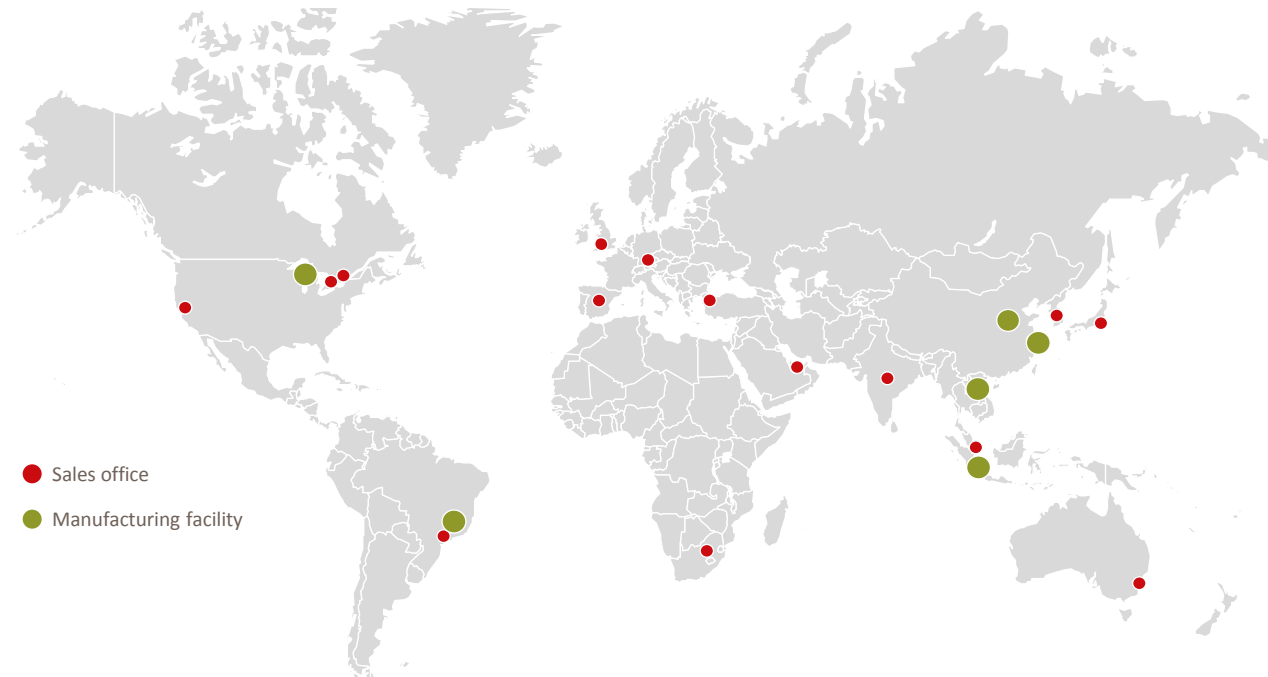


**Canadian Solar has completed the sale of an 80% interest in each of the Pirapora projects to EDF EN and supplies modules for all these projects.**

Source: Company information as of August 14, 2017

# Module Business: Global Footprint With Diversified Customer Base

## Operational Footprint



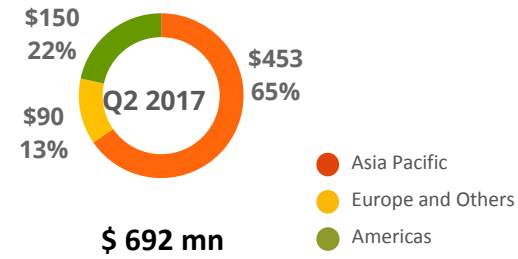
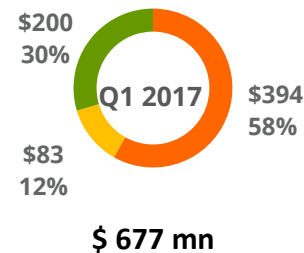
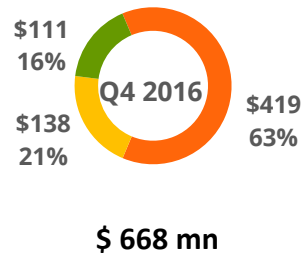
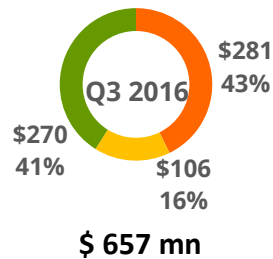
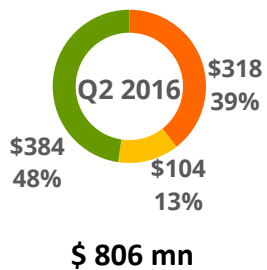
**> 22 GW**

cumulative modules sold to date

**Customers in over 100 countries**

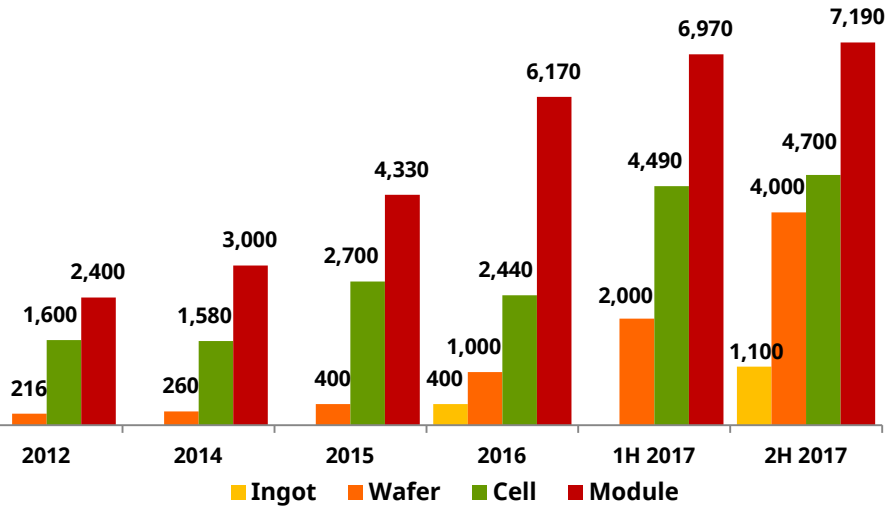
with offices in 18 countries

## Sales Breakdown by Region



# Capacity Expansion to Optimize Technology and Cost

## Manufacturing Capacity - MW



### Technology upgrade - New products, new process, new design

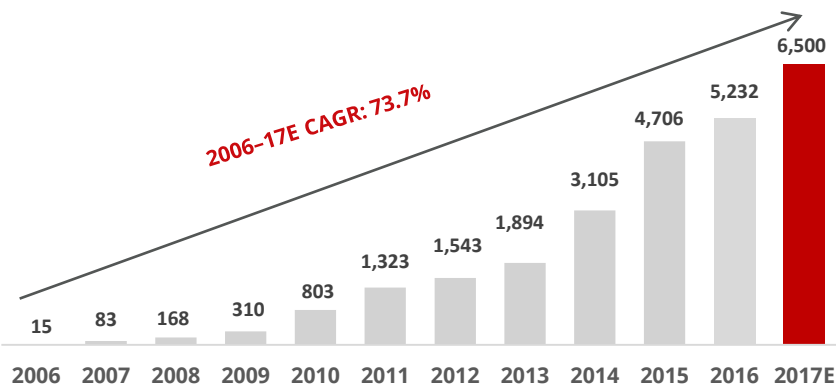
- ✓ Diamond wire-saw wafer
- ✓ Black silicon
- ✓ Mono PERC
- ✓ Black silicon + PERC

### Global Manufacturing Footprint

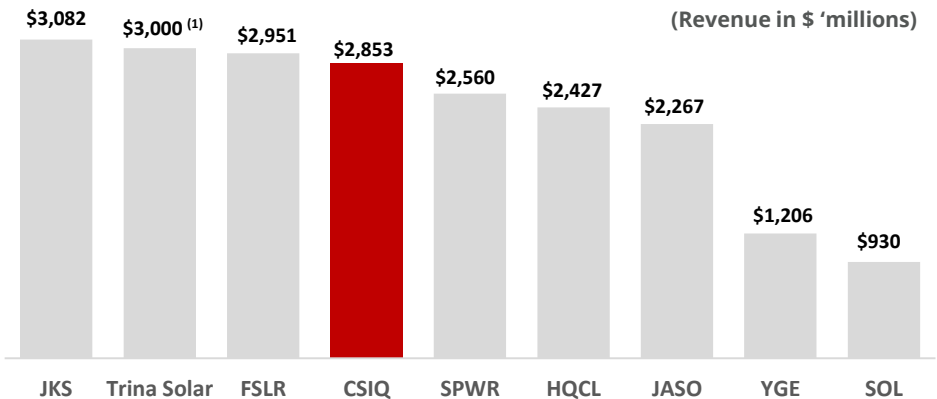
- ✓ Brazil
- ✓ Canada
- ✓ China
- ✓ Indonesia
- ✓ South East Asia
- ✓ Vietnam

### Operation efficiency improvements: Shorter cycle time and lower inventory

## Total Module Shipments - MW



## Top 4 Solar Energy Solutions Company by Revenue in 2016



Source: Company information  
Note: (1) based on IHS estimate

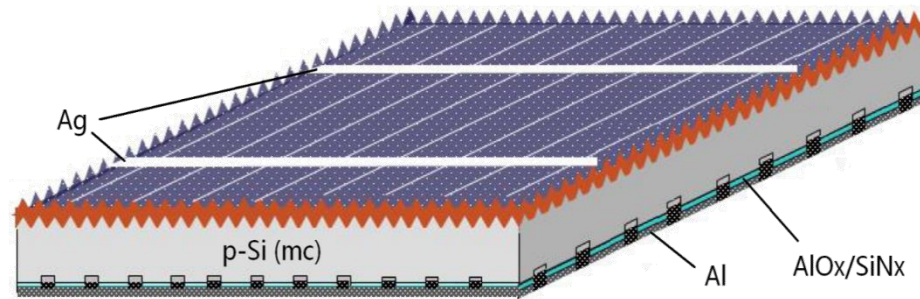
# Competitive Pipeline of Homegrown Technologies

## Poly Gen3



- ☀️ 0.4% cell efficiency and 4 watts module power gain over baseline; cell efficiency to reach over 19% in mass production
- ☀️ Over 4 years in-house R&D, **self-owned IPs**
- ☀️ 100% in-house multi cell production (~4GW) using this technology by the end of 2017
- ☀️ Pleasing aesthetics

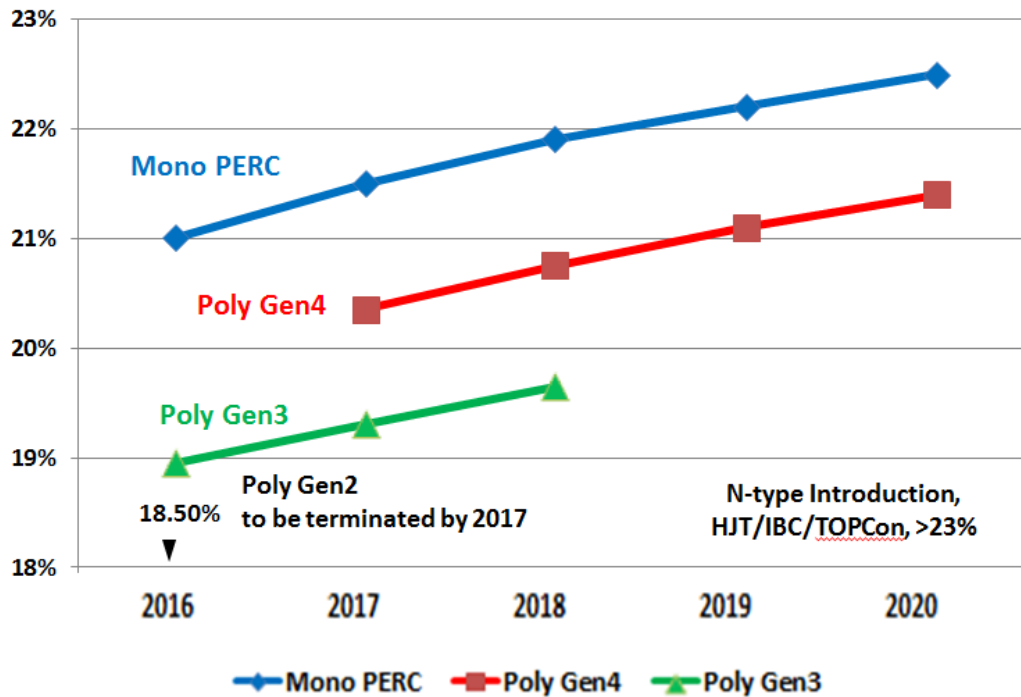
## Mono PERC



- ☀️ Mono PERC enhances back side passivation and increases cell efficiency to 21%
- ☀️ Low Light Induced Degradation (LID), and Potential Induced Degradation (PID) resistant
- ☀️ Premium product: 60-cell module power to reach over 300 Watt
- ☀️ 100% mono cell production to be upgraded to mono PERC by the end of 2017

# Cell Efficiency Roadmap

## Cell Efficiency



## Highlights

- ☀️ Gen3 nano-texturing technology paves the way for using diamond-wire saw wafer in multi-crystalline cell production
- ☀️ Gen4 will improve the multi-crystalline cell efficiency to above 21.4% by 2020
- ☀️ Mono PERC cell efficiency can reach above 22.5% in mass production by 2020
- ☀️ PERC technology is expected to fully replace Al BSF by the end of 2018

Source: Company information as of August 14, 2017



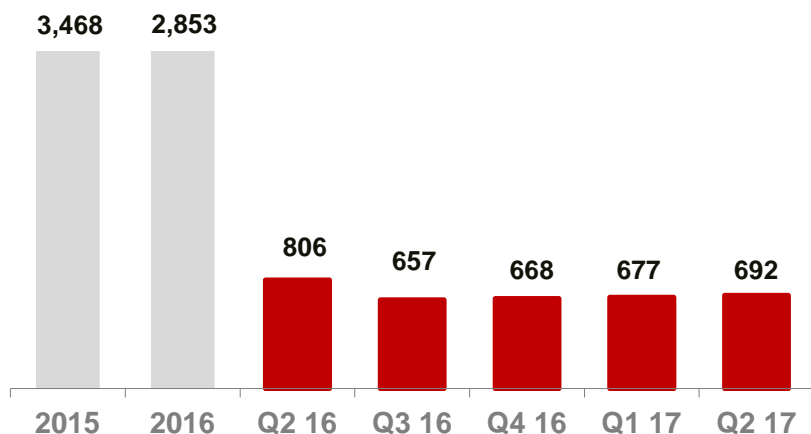
# Experienced Board & Senior Management

Name / Title	Work Experience	
 <p><b>Dr. Shawn Qu</b> <i>Chairman, President &amp; CEO (Director)</i></p>	<ul style="list-style-type: none"> <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 Hydro (Ontario Power Generation Corp.)</li> </ul>	
 <p><b>Dr. Huifeng Chang</b> <i>SVP, Chief Financial Officer</i></p>	<ul style="list-style-type: none"> <li>■ Co-Head of Sales &amp; Trading at CICC US in New York</li> <li>■ CEO of CSOP Asset Management in Hong Kong</li> <li>■ Vice President of Citigroup Equity Proprietary Investment in New York</li> </ul>	
 <p><b>Yan Zhuang</b> <i>SVP and Chief Commercial Officer</i></p>	<ul style="list-style-type: none"> <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>	
 <p><b>Guangchun Zhang</b> <i>SVP and Chief Operating Officer</i></p>	<ul style="list-style-type: none"> <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>	
 <p><b>Arthur Chien</b> <i>SVP and Chief Strategic Officer</i></p>	<ul style="list-style-type: none"> <li>■ CEO at Talesun Solar Co., CFO at Canadian Solar Inc.</li> <li>■ Managing director of Beijing Yinke Investment Consulting Co. Ltd.</li> <li>■ Chief financial officer of China Grand Enterprises Inc.</li> </ul>	
 <p><b>Jianyi Zhang</b> <i>SVP and Chief Compliance Officer</i></p>	<ul style="list-style-type: none"> <li>■ Senior advisor to several Chinese law firms</li> <li>■ Senior assistant general counsel at Walmart Stores, Inc.</li> <li>■ Managing Partner at Troutman Sanders LLP</li> </ul>	
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Experienced Independent Directors</p>	<p><b>Robert McDermott</b> <i>Chairperson of the Corporate Governance, Nominating and Compensation Committees</i></p>	<ul style="list-style-type: none"> <li>■ Partner with McMillan LLP, a business and commercial law firm</li> <li>■ Director and senior officer of Boliden Ltd.</li> </ul>
	<p><b>Lars-Eric Johansson</b> <i>Chair of the Audit and member of Governance, and Compensation Committees</i></p>	<ul style="list-style-type: none"> <li>■ CEO of Ivanhoe Nickel &amp; Platinum Ltd.</li> <li>■ Chairperson of the Audit Committee of Harry Winston Diamond</li> </ul>
	<p><b>Dr. Harry E. Ruda</b> <i>Chair of Technology and member of the Audit, Governance, Compensation Committees</i></p>	<ul style="list-style-type: none"> <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>
	<p><b>Andrew Wong</b> <i>Member of the Audit, Corporate Governance, Compensation Committees</i></p>	<ul style="list-style-type: none"> <li>■ Senior Advisor to Board of Directors of Henderson Land Development Co.</li> <li>■ Director of Ace Life Insurance Co. Ltd., China CITIC Bank Corp., Intime Retail (Group) Co. Ltd. And Shenzhen Yantian Port (Group) Co. Ltd.</li> </ul>

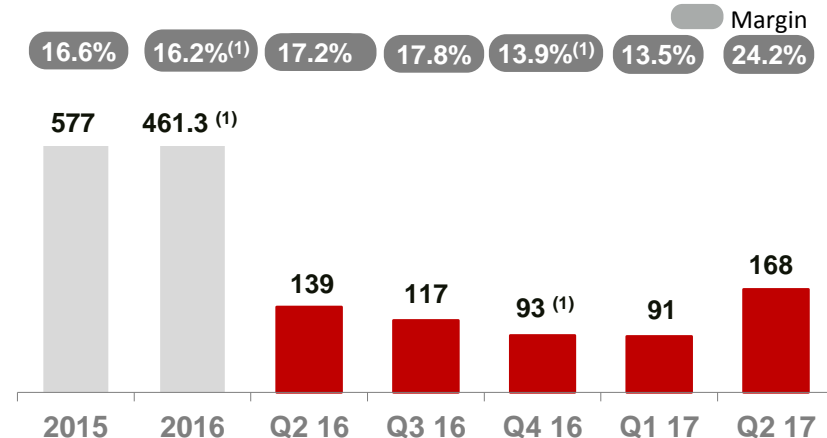
Source: Company information

# Income Statement Summary

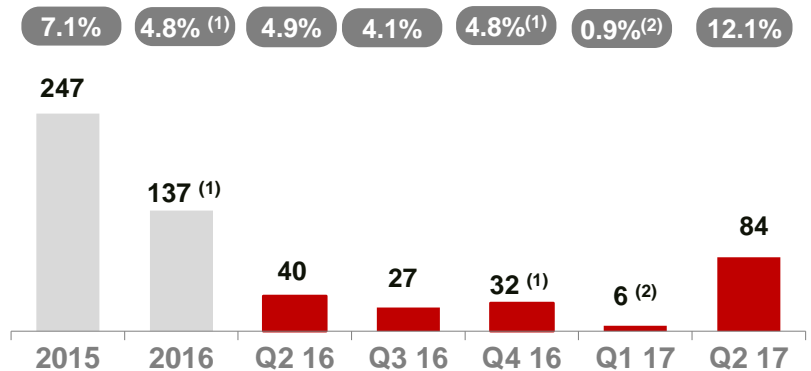
Revenue – US\$ million



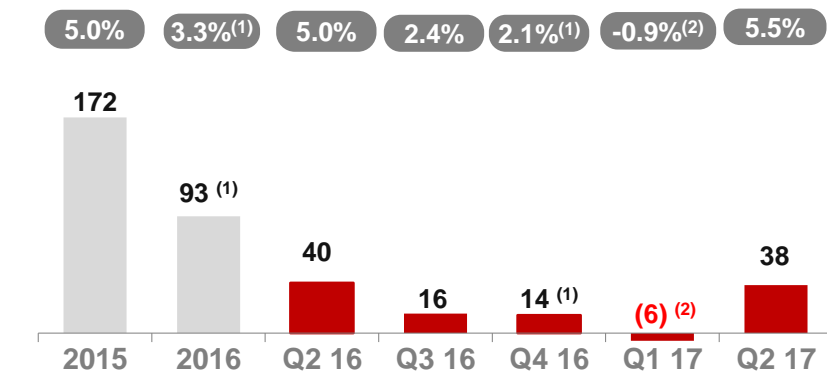
Gross Profit – US\$ million



Operating Income – US\$ million



Net Income – US\$ million



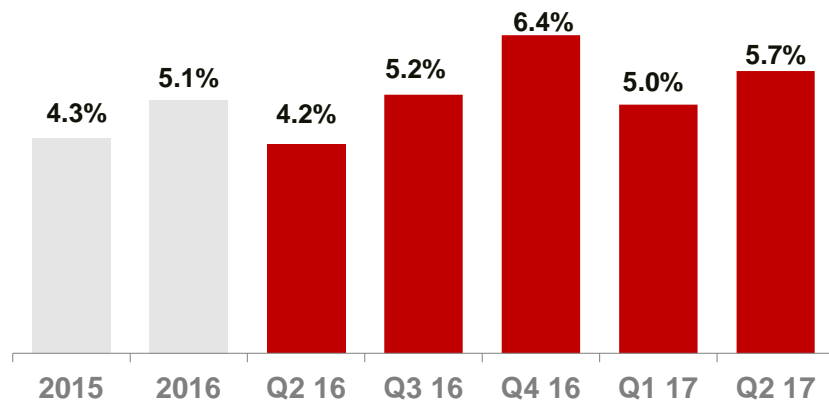
Source: Company filings

Note: (1) Non-GAAP adjusted numbers, excluding the AD/CVD true-up provision of \$44.1 million

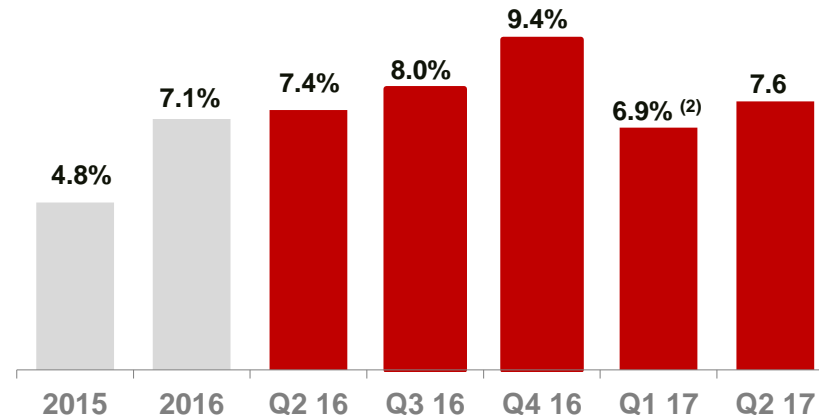
(2) Non-GAAP adjusted numbers, adjusted to exclude a one-time provision of \$8.6 million and net of income tax effect

# Operating Expenses as % of Net Revenue

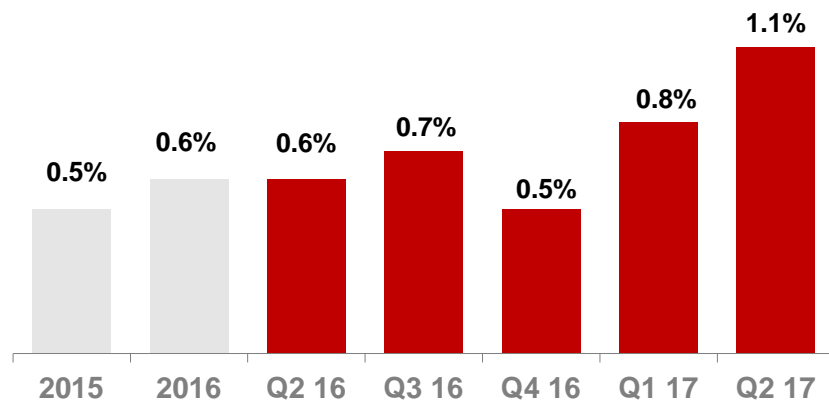
## Selling Expenses



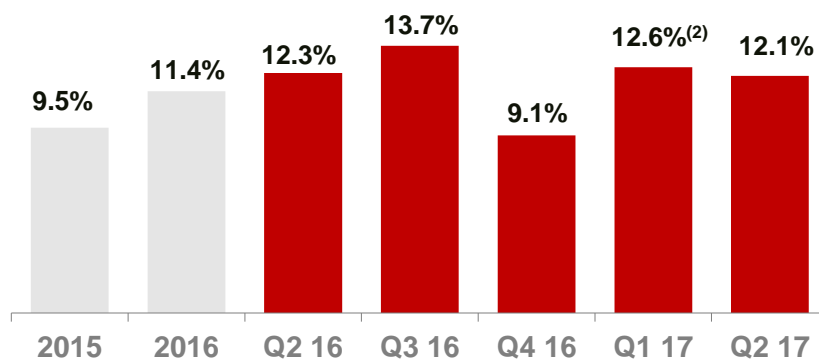
## General & Administrative Expenses



## Research & Development Expenses



## Total Operating Expenses



Source: Company filings

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

(2) Non-GAAP adjusted numbers, adjusted to exclude a one-time provision of \$8.6 million

## Guidance as of August 14, 2017

	Q2 2017	Q3 2017
<b>Module Shipments</b>	1,745 MW	1,650 MW to 1,700 MW
<b>Revenue</b>	\$692 mn	\$805 mn to \$825 mn
<b>Gross Margin</b>	24.2% <sup>(1)</sup>	15% to 17% <sup>(1)</sup>

	FY2016	FY2017	YoY Δ%
<b>Module Shipments</b>	5,232 MW	6.0 GW to 6.5 GW	+24.2%
<b>Revenue</b>	\$2.85 bn	NA	NA
<b>Gross Margin</b>	NA	NA	NA

1-Includes module business and project business

**THANK  
YOU!**

August 2017