



# Investor Presentation

Fourth Quarter 2016 Update

March 2017

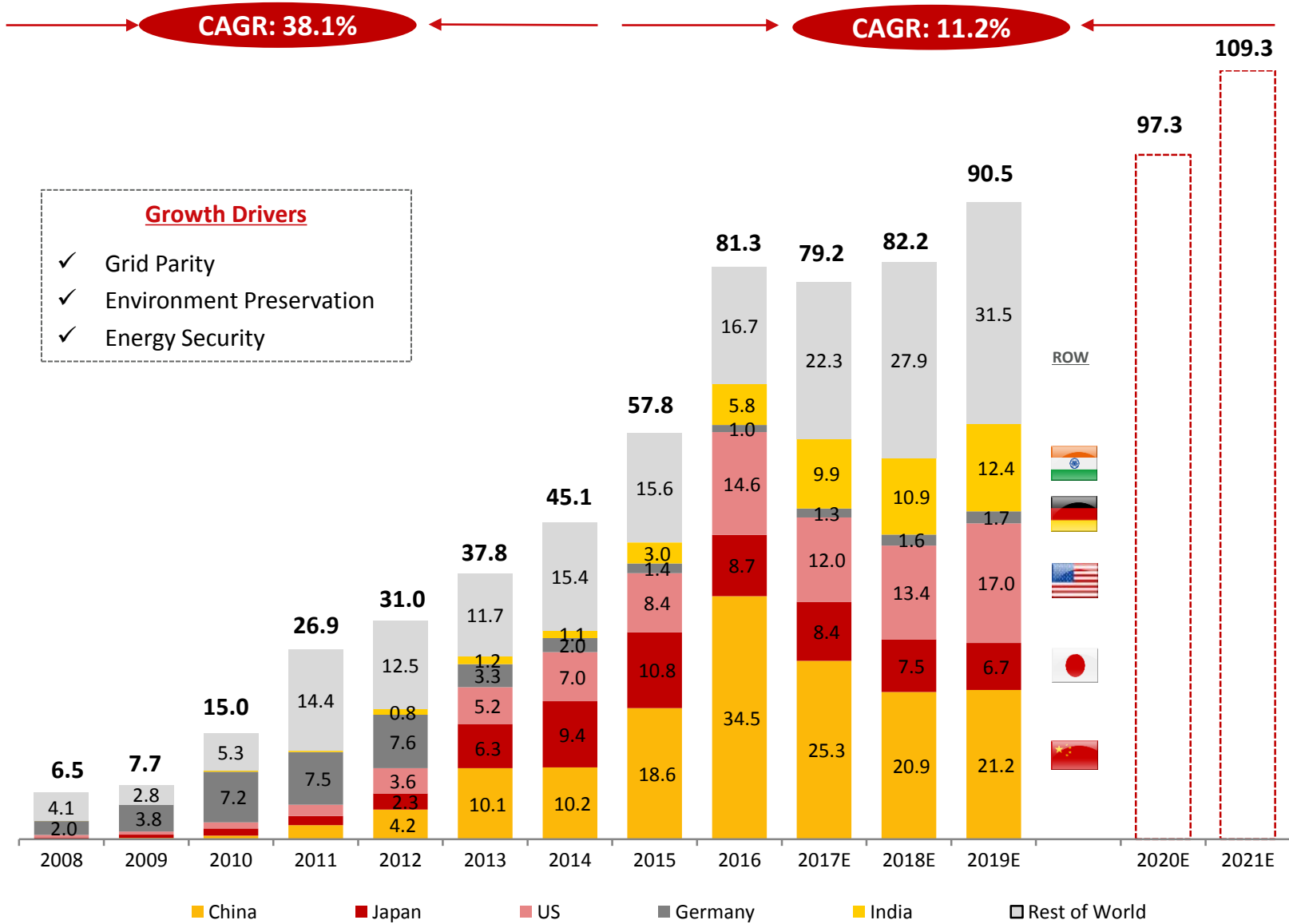
CSIQ NASDAQ Listed



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# 2016 Global Annual PV Installation Exceeding 81GW

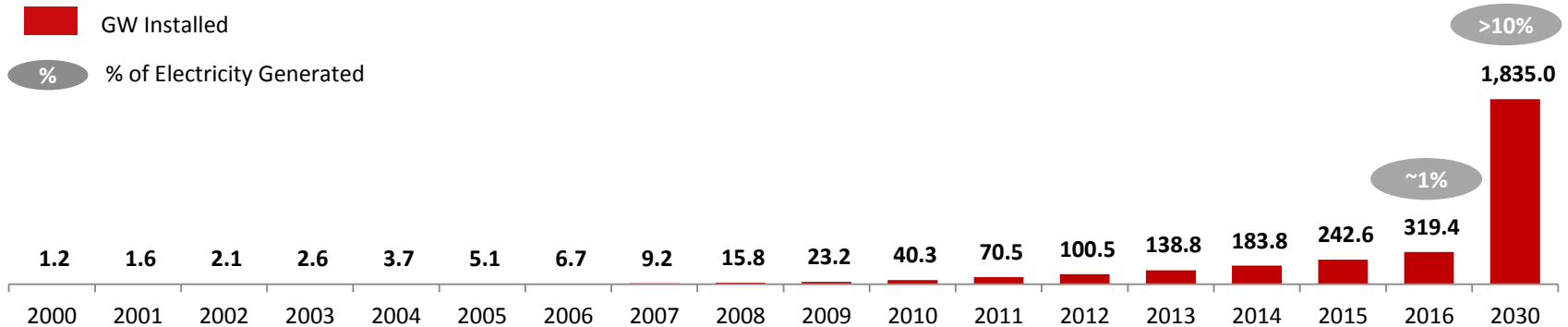


Source: Global PV module demand assumptions from IHS and GTM Research

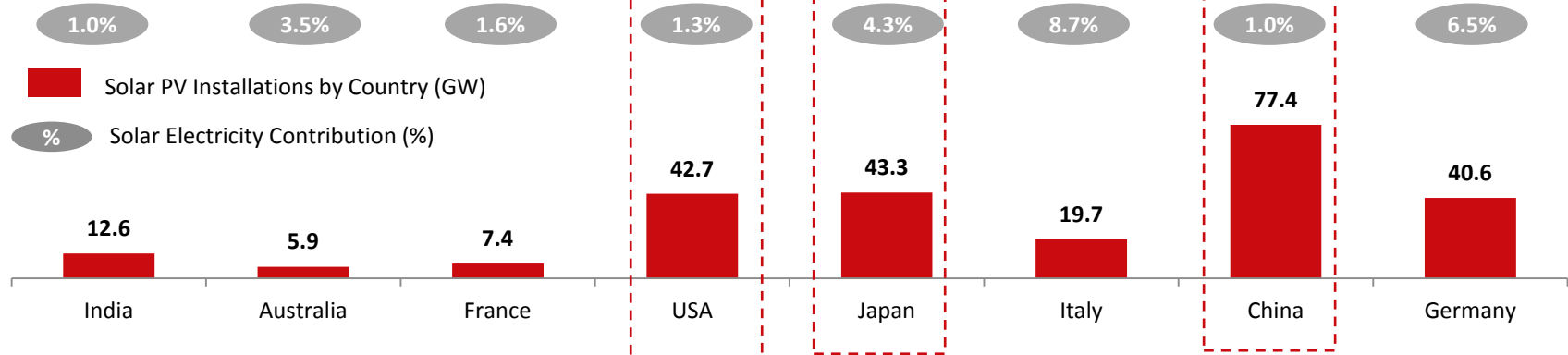
# We Are at the Very Early Stages of Solar Adoption

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; Information as of March 21, 2017

Solar PV Installed Capacity is Forecast to Grow to over 1,835 GW in 2030.

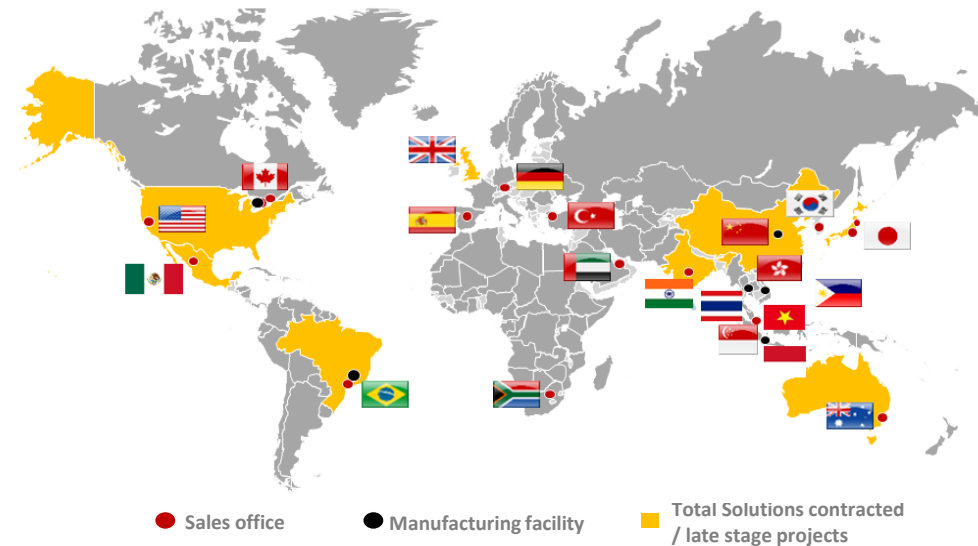
# Company Overview

- 🌿 Founded in Ontario, 2001
- 🌿 Listed on NASDAQ (CSIQ) in 2006
- 🌿 Over 9,700 employees globally
- 🌿 Presence in 18 countries / territories
- 🌿 > 19 GW of solar modules shipped cumulatively
- 🌿 > 2.5 GWp solar power plants built and connected (incl. Recurrent)
- 🌿 No. 1 Solar Company 2016 according to IHS

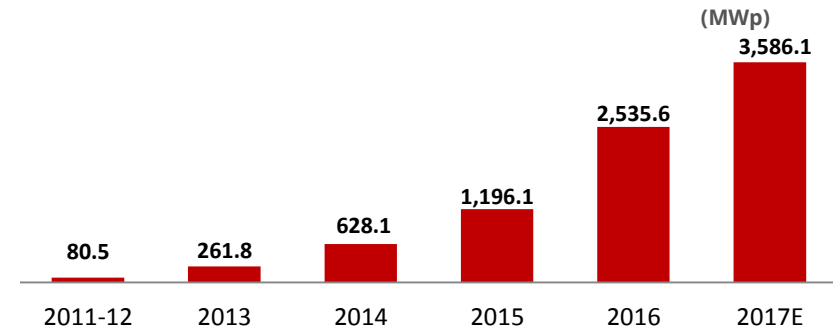
## Highlights

- 🌿 2016 Revenue: **\$2.85 Billion**
- 🌿 2016 Shipments: **5.2 GW**
- 🌿 2017 Shipment Guidance: **6.5 GW – 7.0 GW**
- 🌿 2017 Revenue Guidance: **\$4.0 Billion - \$4.2 Billion**
- 🌿 2017 New Solar Projects COD Guidance: **1.0 GW to 1.2 GW**

## Global Footprint and Brand



## Solar Power Plants Built and Connected



# Energy Business: Globally Diversified Project Pipeline

## Priority Markets for Utility-Scale Project Development

**9.8 GWp**

Total project development pipeline

**7.7 GWp**

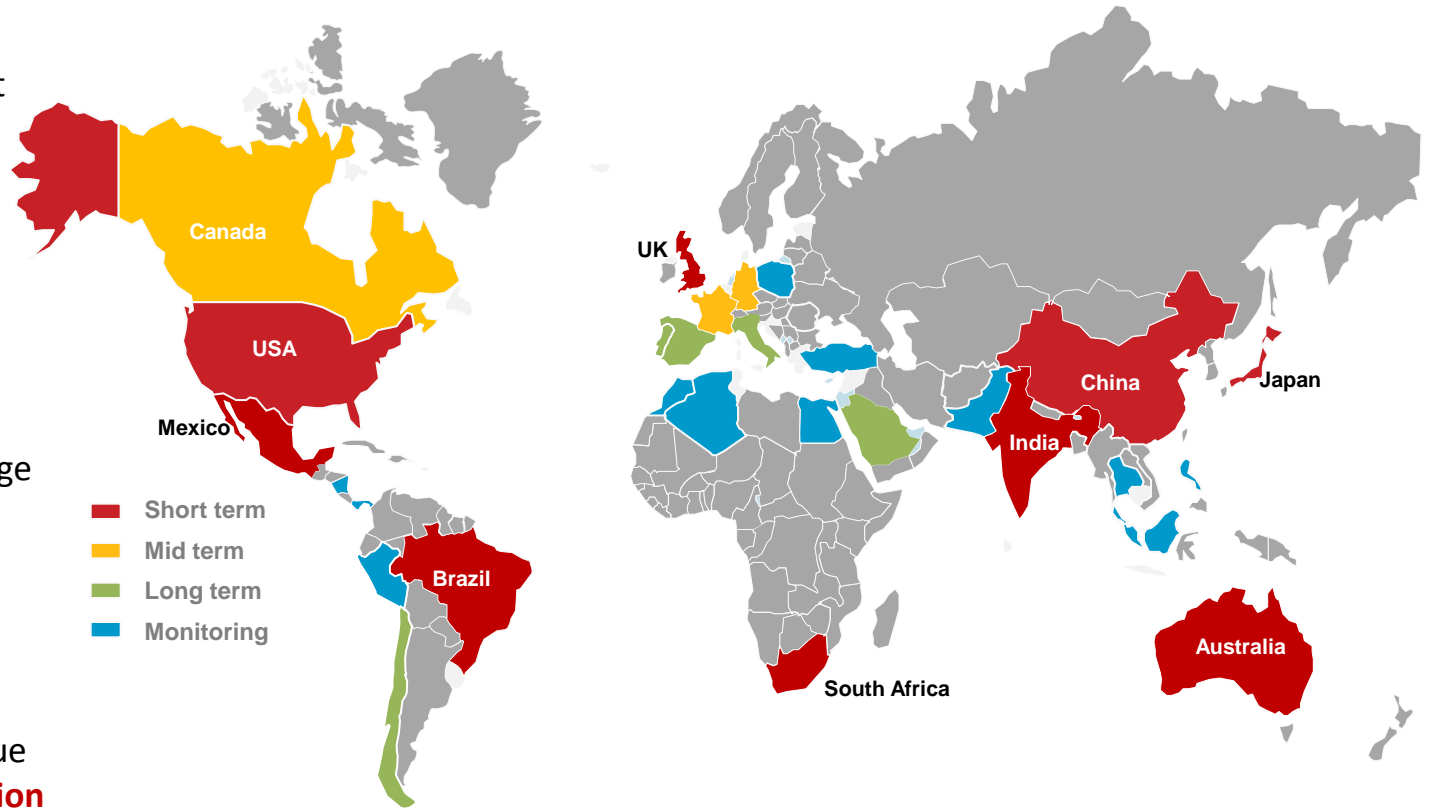
Early to mid-stage development pipeline <sup>(2)</sup>

**~2.1 GWp**

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

**~1,196 MWp**

Solar power plants owned and operated, with an estimated total resale value of approximately **\$1.6 billion**



**538.5 MWp**

Japan <sup>(1)</sup>

**401 MWp**

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

**400 MWp**

China <sup>(1)</sup>

**399 MWp**

Brazil <sup>(1)</sup>

**132 MWp**

India <sup>(1)</sup>

**118 MWp**

Australia <sup>(1)</sup>

**68 MWp**

Mexico <sup>(1)</sup>

**26 MWp**

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

**6 MWp**

Africa <sup>(1)</sup>

Source: Company information as of March 21, 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.

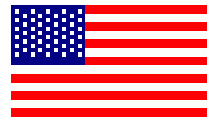
(2) Early to mid-stage of development: includes only those projects that have been approved by our internal Investment Committee or projects that are expected to be brought to the Investment Committee in the near term.

# Project Summary

## Late-stage Projects Expected COD Schedule

Country/Region	Plants In Operation at 02/28/2017	(Gross MWp)			
		Q1'17	2017	2018 and After	Total Late-stage Projects
US	808	-	92	309	401
China	198	16.5	400	-	400
UK	125	26	26	-	26
Canada	-	-	-	-	-
Japan	59.5	5	105.5	433	538.5
Spain	5	-	-	-	-
Brazil	-	-	284	115	399
Mexico	-	-	-	68	68
India	-	-	132	-	132
Australia	-	-	5	113	118
Africa	-	-	6	-	6
<b>Total Gross MWp</b>	<b>1,195.5</b>	<b>47.5</b>	<b>1,050.5</b>	<b>1,038</b>	<b>2,088.5</b>
<b>Gross Resale Value (\$ in M)</b>	<b>\$ 1,600</b>	<b>\$ 77.5</b>	<b>\$ 1,118</b>	<b>\$ 1,937.5</b>	<b>\$ 3,055.5</b>

# Market Leader in the U.S.



## U.S. Project Development Business Footprint

Includes Recurrent Energy Across North America

**3.2 GWp**

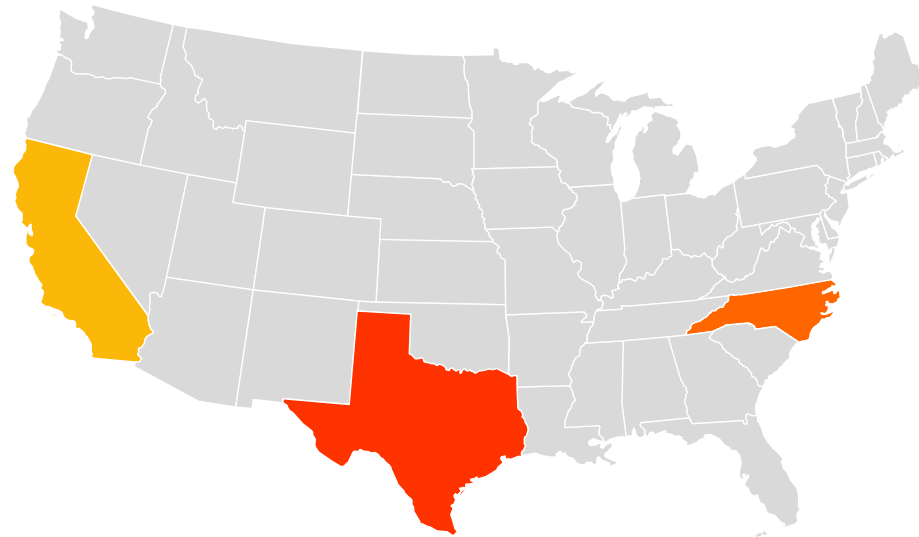
Early-stage pipeline

**401 MWp**

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

**808 MWp**

Owned and operated<sup>2</sup>



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

RoseRock



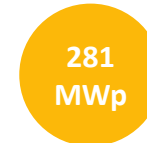
Commercial Operation since Q4 2016

IS42



Commercial Operation by 2017

Tranquility 8



Commercial Operation by 2018

Gaskell West 1

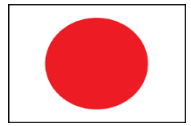


1. Includes all of Canadian Solar and Recurrent Energy's (US only) projects developed and delivered;

2. Gross MWp owned by Canadian Solar;



# Japan Utility-scale Solar Project Pipeline



## Total Solutions business – Japan

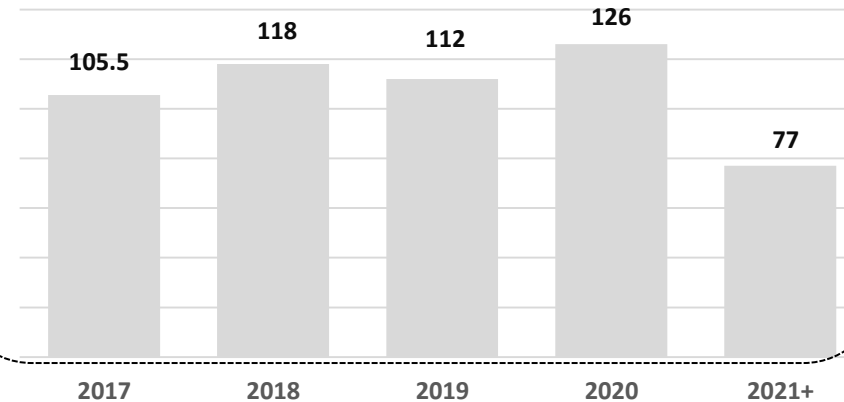
**538.5 MW<sub>p</sub>**  
Late-stage pipeline

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



Yamaguchi plant: 24 MWp

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



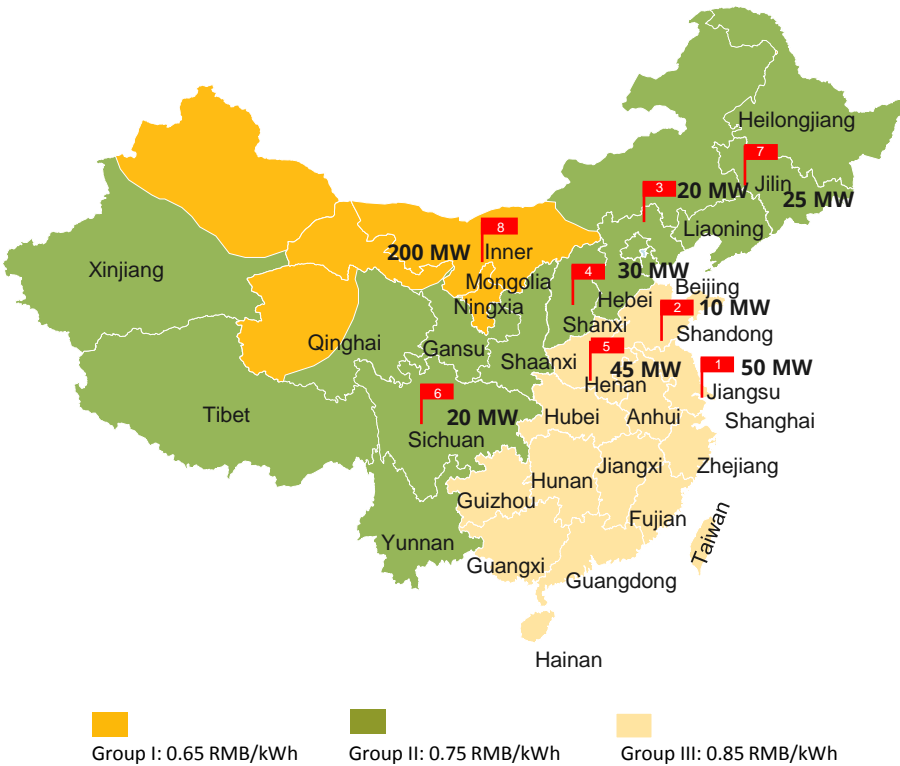
Note: (1) Expected COD are tentative estimates subject to change, due to delays in securing all the necessary permits among other risk factors.

- Projects in construction and under development that have executed interconnection agreement **375 MWp**
- Projects in construction **211.8 MWp**
- Projects ready-to-build **15 MWp**
- By April 1, 2017, additional projects with signed interconnection agreements **28 MWp**
- Projects with a total capacity of **71.4 MWp** will participate in a bid for a utility upgrades and will keep their current FIT while the bid process is underway

# China Utility-scale Solar Project Pipeline



## Energy Business – China



Province	2017 Late Stage Project Opportunity (MW <sub>p</sub> )	Feed In Tariff (RMB/kWh)
1 Jiangsu	50	0.75
2 Shandong	10	0.98
3 Hebei	20	0.75
4 Shanxi	30	0.75 to 0.85
5 Henan	45	0.75
6 Sichuan	20	0.75
7 Jilin	25	0.75
8 Inner Mongolia <sup>(1)</sup>	200	0.50 to 0.59
<b>Total</b>	<b>400</b>	

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

Source: Company information as of March 21, 2017

# Brazil Utility-scale Solar Project Pipeline



## Late-stage Pipeline

Project	Gross MWp	Status	Expected COD
Pirapora I <sup>(1)</sup>	192	Construction	2017
Pirapora II <sup>(1)</sup>	115	Development	2018
Pirapora III <sup>(2)</sup>	92	Development	2017
Total	<u>399</u>		



**The Company completed the sale of 80% interest in Pirapora I in the fourth quarter of 2016, and is supplying modules for this project.**

Source: Company information as of March 21, 2017

# Utility-scale Solar Power Plants Monetization Progress

## Monetization Schedule

<u>Country</u>	<u>MWp</u>	<u>Target Sale Date</u>
China	70	1H 2017
U.S.	703	2017
Japan	70	IPO of JREIT in Q3 2017

- ☀ In the U.S., we continue to make progress on the sales of our operating solar power plants asset, which we expect to complete in 2017.
- ☀ In China, we are targeting to complete the sale of approximately 70 megawatts in 1H 2017.
- ☀ In Japan, we continue to work to form a solar J-REIT to be listed in Tokyo exchange and are currently targeting the IPO of the J-REIT in Q3 of 2017.

**We are well on track to monetize our utility-scale solar power plants in various countries.**

Source: Company information as of March 21, 2017



# Module Business: Global Footprint With Diversified Customer Base

> 19.0 GW

cumulative modules  
sold to date

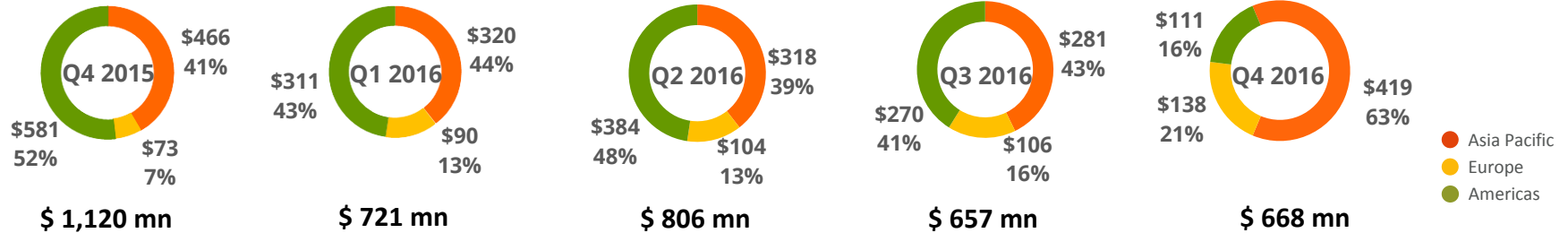
Customers in over 90  
countries

with offices in  
18 countries

## Operational footprint

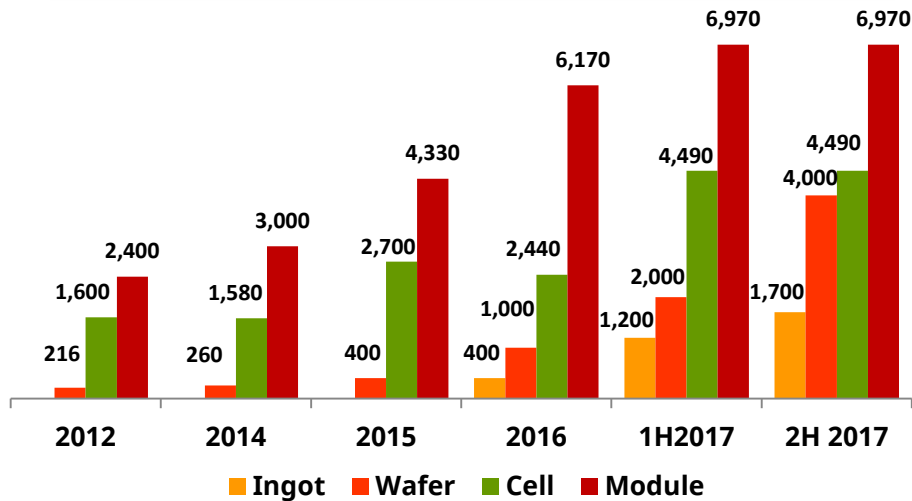


## Sales breakdown by region



# Capacity Expansion to Optimize Technology and Cost

## Manufacturing Capacity - MW



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

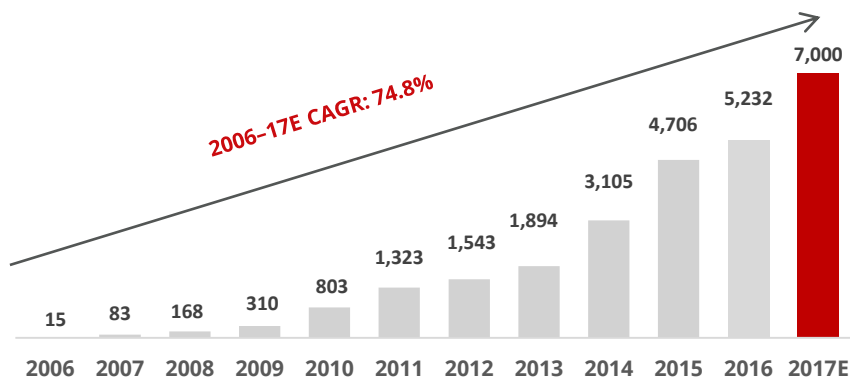
- ✓ Diamond wire saw wafer
- ✓ Black silicon
- ✓ Mono PERC
- ✓ Super 5

### Global Manufacturing Footprint

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

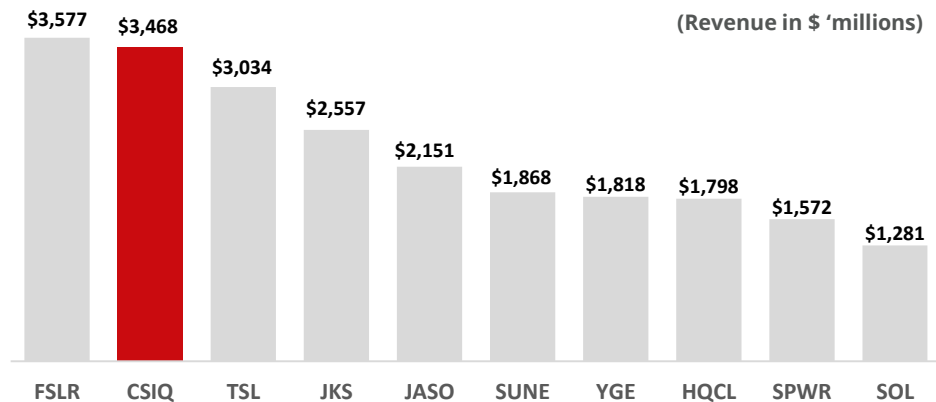
### Operation efficiency improvements: Shorter cycle time and lower inventory

## Total Module Shipments - MW

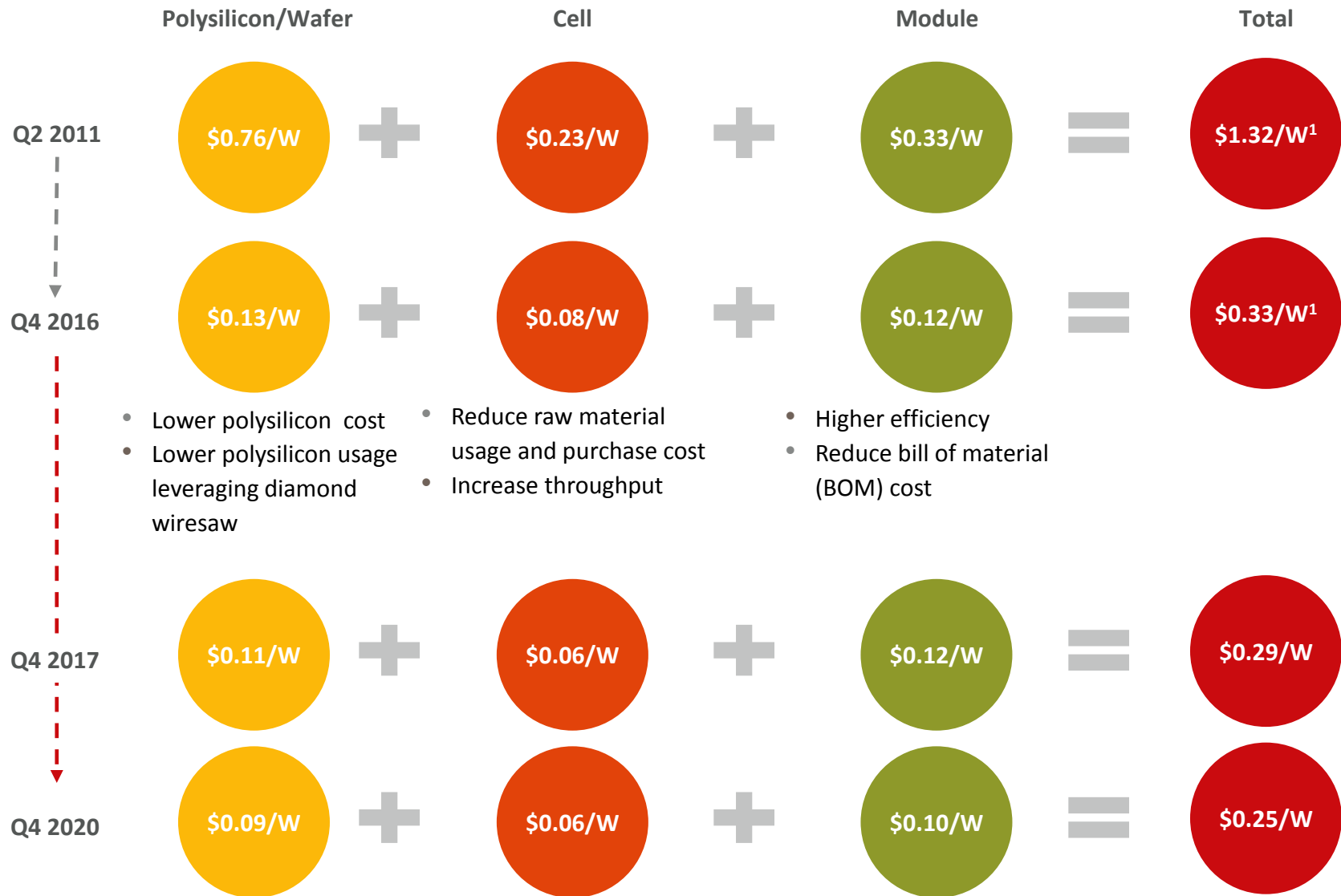


Source: Company information

## #2 Solar Energy Solutions Company by Revenue in 2015



# Industry Leading Manufacturing Cost Structure

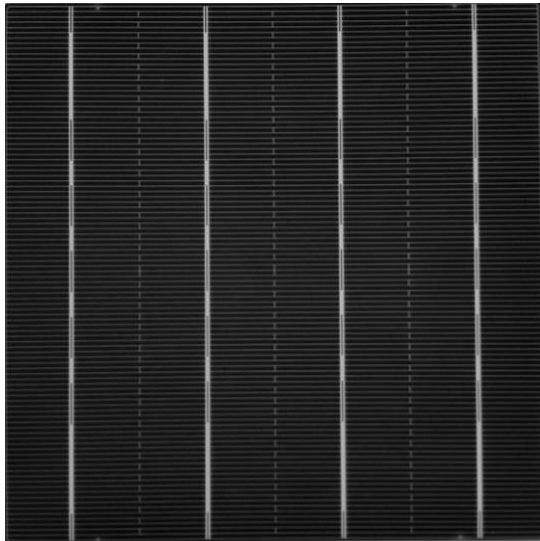


Source: Company information

1. Blended manufacturing cost in China, includes depreciation but excludes shipping, warranty and tariff costs

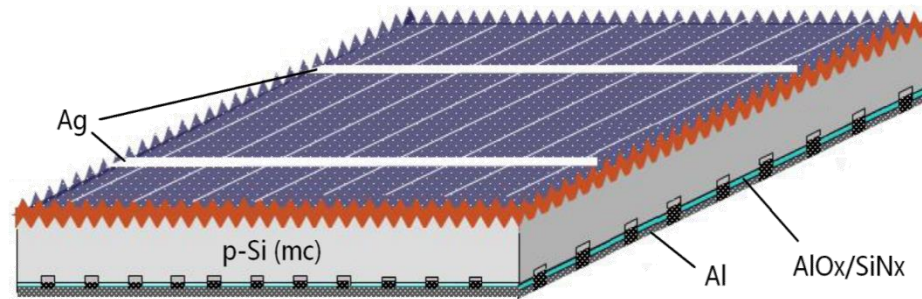
# Competitive Pipeline of Homegrown Technologies

## ONYX I – Black Silicon



- ☀️ 0.4% cell efficiency and 4 watts module power gain over baseline to over 19% by end of 2016
- ☀️ Over 3 years in-house R&D, **self-owned IPs**
- ☀️ Production roll out begun in 2015 Q1
- ☀️ Ramp up as future multi baseline
- ☀️ Pleasing aesthetics

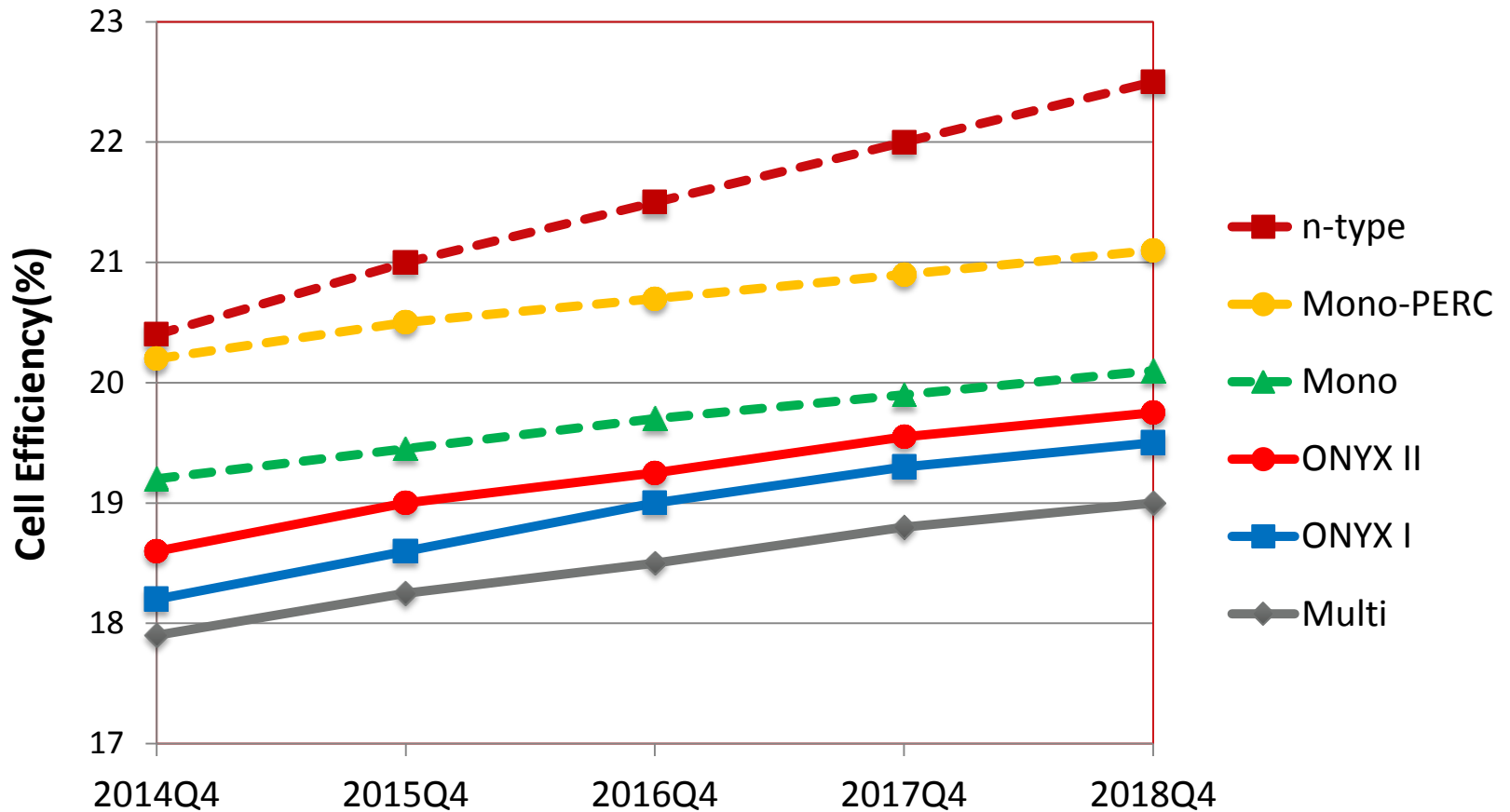
## Mono PERC



- ☀️ Mono PERC enhances back side passivation and increases cell efficiency to near 21%
- ☀️ Low Light Induced Degradation (LID), and Potential Induced Degradation (PID) resistant
- ☀️ Premium product: 60-cell module power to reach 290 Watt
- ☀️ Production roll out begun in 2016 Q1, will gradually ramp up within the year



# Cell Efficiency Roadmap



# Experienced Board & Senior Management

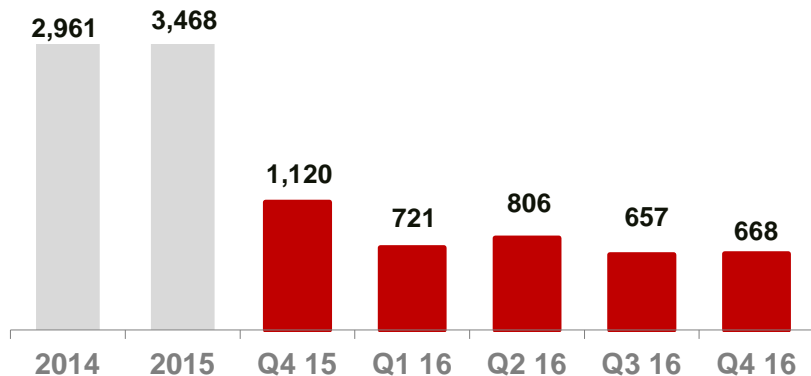
Name / Title	Work Experience
 <p><b>Dr. Shawn Qu</b> <i>Chairman, President &amp; CEO (Director)</i></p>	<ul style="list-style-type: none"> <li>■ Founded Canadian Solar in 2001, and has since then, firmly established the company as a global leader of the solar industry</li> <li>■ Director &amp; VP at 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><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>

Experienced Independent Directors

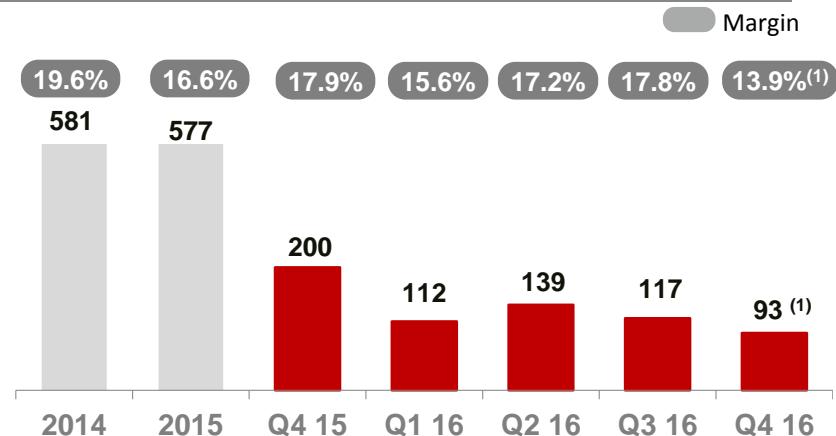
Source: Company information

# Income Statement Summary

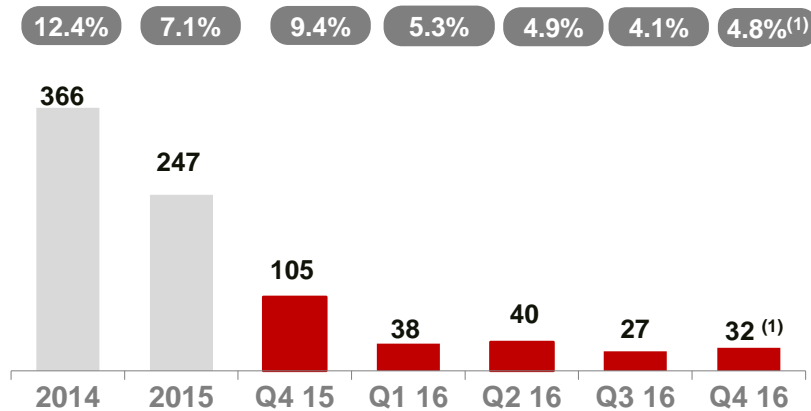
Revenue – US\$ million



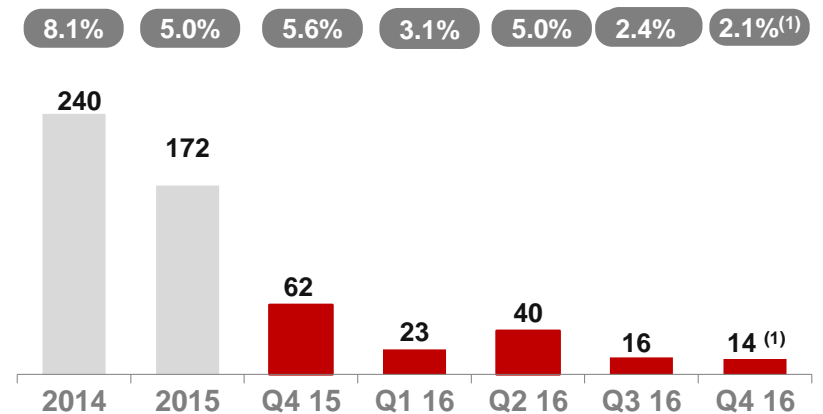
Gross Profit – US\$ million



Operating Income – US\$ million



Net Income – US\$ million

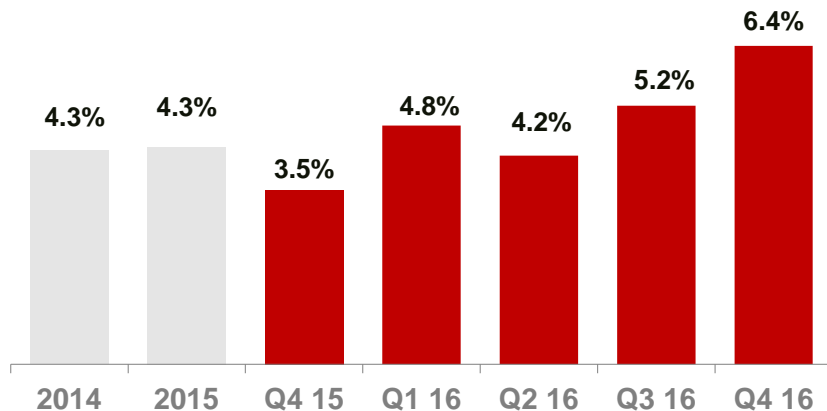


Source: Company filings

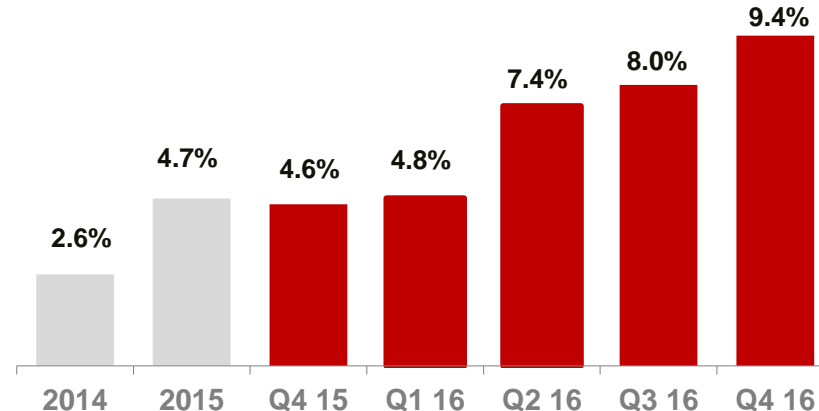
Note: (1) Non-GAAP adjusted numbers, excluding the AD/CVD true-up provision of \$44.1 million

# Operating Expenses as % of Net Revenue

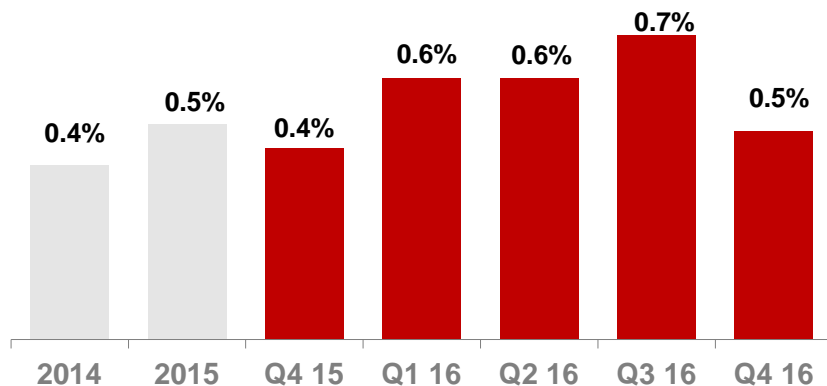
Selling expenses



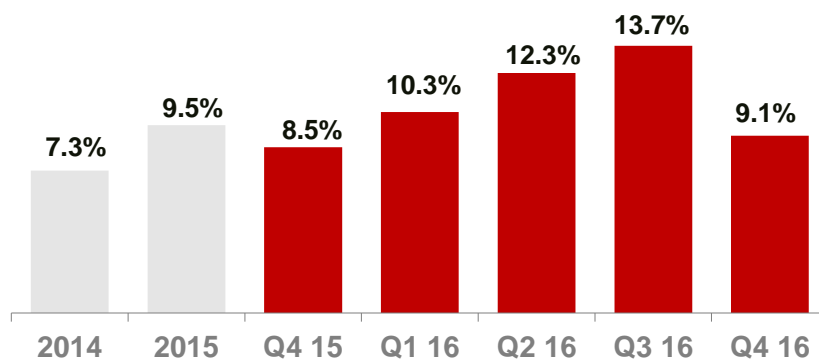
General & administrative expenses



Research & development expenses



Total operating expenses



Source: Company filings

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



## Guidance as of March 21, 2017

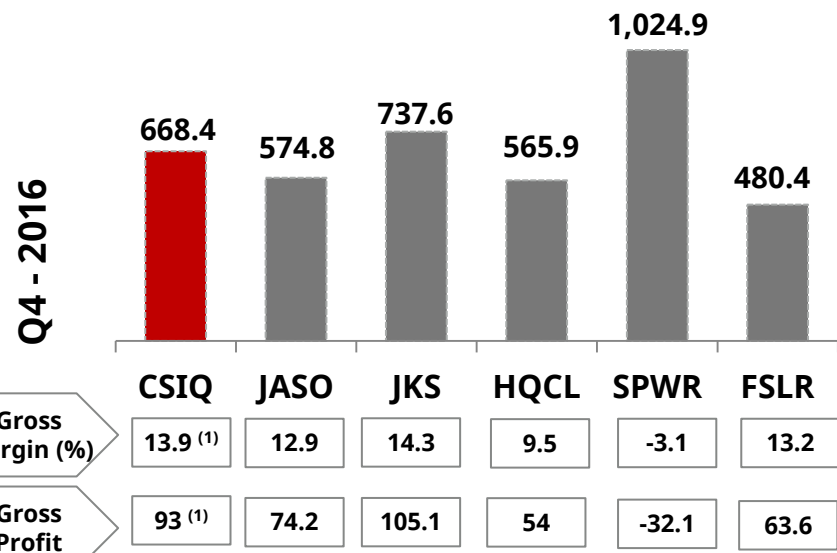
	Q4 2016	Q1 2017
<b>Module shipments</b>	1,612 MW	1,150 MW to 1,200 MW
<b>Revenue</b>	\$668.4 mn	\$570 mm to \$590 mm
<b>Gross margin</b>	7.3% <sup>(1)</sup>	13% to 15% <sup>(1)</sup>

	FY2016	FY2017	YoY Δ%
<b>Module shipments</b>	5,232 GW	6.5 GW to 7.0 GW	+24.2%
<b>Revenue</b>	\$2.85 bn	\$4.0 bn to \$4.2 bn	+40%
<b>Gross margin</b>	NA	NA	NA

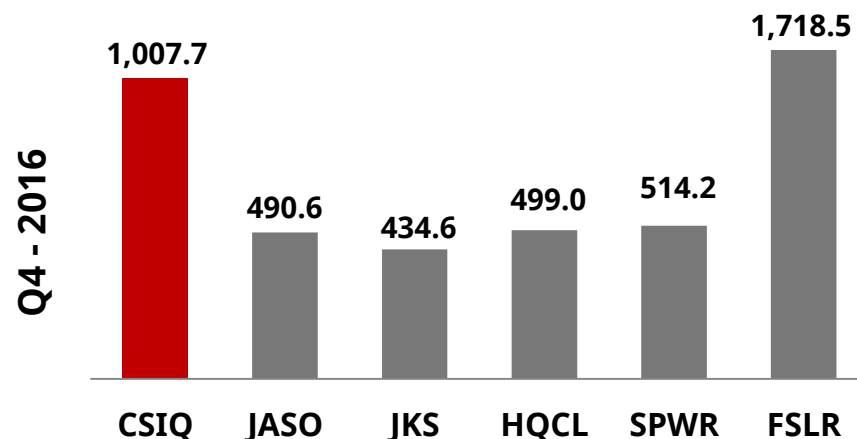
1-Includes module business and project business

# Competitive Analysis

Revenue (\$million) and Gross Margin (%)



Cash and Restricted Cash on Hand - \$ million



Q4 2016	CSIQ	JASO	JKS	HQCL	SPWR	FSLR
Receivable Days	65	77	124	69	18	98
Payable Days	114	70	176	85	45	38
Inventory Days	48	67	81	69	33	79
Cash Conversion Cycle	(1)	74	29	53	6	139

Guidance	CSIQ	JASO	JKS	HQCL	SPWR	FSLR
Q1 FY2017 Shipments (GW)	1.15 - 1.2	1.2 - 1.3	1.9 - 2.0	N/A	0.15 - 0.18	N/A
FY2017 Module Shipments (GW)	6.5 - 7.0	6.0 - 6.5	8.5 - 9.0	5.5 - 5.7	1.3 - 1.6	2.4 - 2.6
FY 2017 Revenue (in \$ billion)	4.0 - 4.2	N/A	N/A	N/A	N/A	2.8 - 2.9

Source: Canadian Solar analysis based on the press releases issued as of March 23, 2017.

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

**THANK  
YOU!**

March 2017