







## **COMPANY OVERVIEW**



**FOUNDED 2001 IN ONTARIO** 



**OVER 13,000 EMPLOYEES** 



43 GW OF SOLAR MODULES SHIPPED, **WITH 15 GW PROJECTS IN PIPELINE** 



**MORE THAN 1,000 GLOBAL PATENT LICENSES** 



**2019 REVENUE \$3.20 BILLION** 



**MOST RECOMMENDED SOLAR COMPANY IN 2016\*** 

#### A WORLD-CLASS POWER **SOLUTIONS COMPANY**

Chairman and President Dr. Shawn Qu founded Canadian Solar in 2001 with a bold vision: to foster sustainable development and to make lives better by bringing electricity powered by the sun to millions of people worldwide. Over 13,000 dedicated employees of Canadian Solar (NASDAQ: CSIQ) strive each day to make this vision a reality.

The company's two main lines of business are: (i) the manufacturing and sale of solar products and services, and (ii) the development, construction and sale of solar PV projects, working with both build-to-sell and build-tohold business models. Over 43 GW of our solar modules have been installed so far, enough to provide clean, green power to an average of 3.73 million households.

Our products are in operation in more than 100 countries, giving us a truly global reach. These achievements put us at the forefront of making solar power competitive and mainstream.

Customers choose Canadian Solar because we deliver the best-possible value. Our wafers, cells, and modules combine superior quality with market-leading cost structures. And our solar projects consistently achieve the highest production values and returns on investment. We currently have more than 15 GW of such projects in our pipeline worldwide and are uniquely positioned to provide complete turnkey solar solutions. By bundling services for the entire project life cycle—feasibility study, permitting, engineering, procurement, construction, and maintenance—we can significantly reduce complexity and cost for industrial and commercial customers.



Chairman, CEO and CTO (Director)

Yan Zhuana Chief Operating Officer



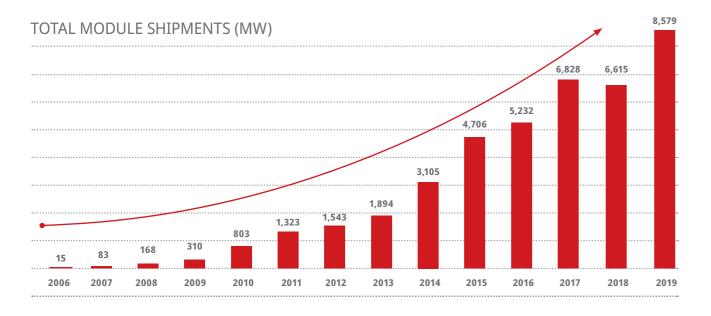
Thomas Körner Corporate Vice President, Module and System Solutions





## **COMPANY FACTS**

**CANADIAN SOLAR HAS BEEN MAKING THE DIFFERENCE FOR 19 YEARS** BY BRINGING A TOTAL OF MORE THAN 43 GW OF SOLAR CAPACITY TO **OUR CUSTOMERS WORLDWIDE.** 



#### **BUSINESS MODEL OVERVIEW**

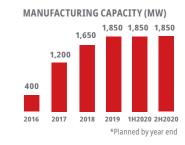


#### Silicon Production

Mono- & Polycrystalline



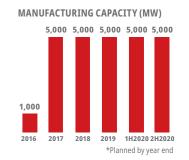
Ingot casting centralised in Batou, China by year end 2018.





#### Mono- & Polycrystalline

Wafer manufacturing capability quadrupled from year end 2016 to year end 2017. Diamond wire saw and Onyx black silicon technology reduce manufacturing costs.

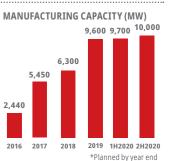




#### PV Cells

#### Mono- & Polycrystalline

9.6 GW of total annual solar cell manufacturing capacity, with plans to expand the cell manufacturing capacities to 10 GW by the end of 2020.

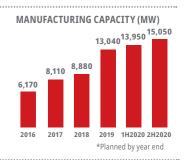




#### PV Modules

#### Mono- & Polycrystalline

Module manufacturing capacity is planned to reach 15.05 GWp at the end of 2020 across our global manufacturing facilities.





#### Systems and Solutions

String Inverters, MV Stations, Connectors and PV System Components, Energy Storage Systems, Off-grid Products, Micro-grids, Distributed Generation Solutions.



#### Global Energy Group

With a strong global team, the total projects backlog & pipeline reached 15.6 GWp in Q1 2020, with 5.6 GWp of projects currently in commercial operation.

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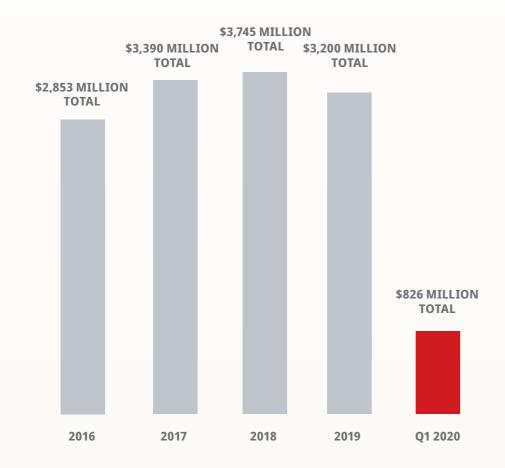
**CANADIAN SOLAR'S CORE BUSINESS** 



### FINANCIAL STRENGTH

Steady growth has enabled Canadian Solar to become one of the world's biggest supplier of solar modules. And we've done it profitably.

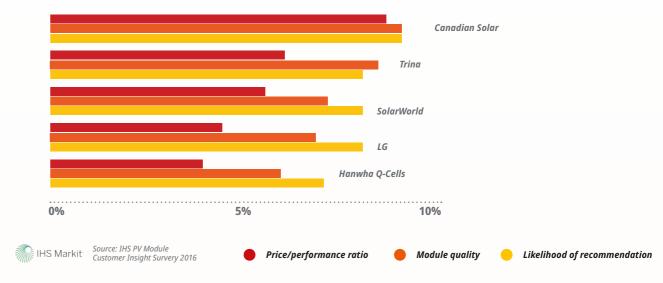
Our net income of \$171.6 million on revenue of \$3.20 billion in 2019 was among the best in the industry. These figures underscore Canadian Solar's ability to combine growth, profitability, and prudent financial management.



# TOP BRAND FOR PRICE/PERFORMANCE RATIO & HIGHEST MODULE QUALITY

#### **VERIFIED BY IHS**

Brand for price/performance ratio, Highest module quality verified by IHS. Canadian Solar was confirmed as the module brand with the best price/performance ratio, the highest module quality and the highest likelihood of being recommended.



**Americas** 

**EMEA** 

Asia-Pacific

## TOP-3 RATED BANKABLE SOLAR COMPANY

· 100% of respondents surveyed by BloombergNEF considered Canadian Solar's modules bankable.\*

- · Leading BNEF's Tier 1 ranking
- · Bankable at 100+ financial institutions globally
- World Bank's International Finance Corporation has become shareholder in 2016
- · Ranked No.1 for Corporate Social Responsibility
- · Top AA-Rated bankable PV module supplier

INDEPENDENT BANKABILITY REPORTS OF SGURR & DELOITTE AVAILABLE UPON REQUEST



\*The survey based on the respondents' perception, not BNEF.

6 | Financial Strength



# STRONG LOCAL SALES **AND PROJECT TEAM**

MULTI-FACETED, MULTI-CULTURAL, MULTI-TALENTED

The headquarter of Canadian Solar's energy and sales business in Australia is in Melbourne. Those highly skilled and motivated employees within our Australian team encompass all relevant functions: project development, sales including key accounts and regional sales, business development, finance, technical, marketing, operations and legal affairs. With all this talent in-house, we can offer our customers the full range of services, from presale consultation and system design to after-sale service and training.

Moreover, our team brings together people of more than 10 different nationalities, ensuring that we have the cultural competence to understand and serve customers across Australia. This rich diversity also makes our Melbourne office a great place to work.

#### **MISSION**



Lead solar into every household; create a better and cleaner earth for future generations!

#### **VISION**



Become a global solar solutons expert; create a bright future with our partners.

#### **CORE VALUES**











## **AUSTRALIA OVERVIEW**



**BEGAN BUSINESS IN AUSTRALIA IN 2011** 



**AUSTRALIA HO IN MELBOURNE** 



**4 OFFICES, 5 WAREHOUSES IN AUSTRALIA** 



**NO.1 PV MODULE BRAND IN 2016\* NO.2 MODULE SUPPLIER IN ASIA-PACIFIC** (EXCEPT CHINA, INDIA, OR JAPAN)





**EXTENSIVE EXPERIENCE AND EXPERTISE ACROSS ALL FUNCTIONS** 



**60+ LOCAL EXPERTS SERVING ALL** 

8 | Australia

## **QUALITY AND SERVICE**

ROBUST CONSTRUCTION IN ACCORDANCE WITH THE HIGHEST QUALITY STANDARDS GIVES OUR SOLAR PANELS OUTSTANDING LONGEVITY



Solar projects typically have a designed operating lifetime of 25 years. Our products have the longevity to meet these demands. We conduct rigorous in-house testing in our own laboratories to ensure durability and regularly submit our products to the world's leading independent testing institutes, including the Fraunhofer Society and TÜV Labs. We've adapted the stringent quality-management systems of the automotive industry to PV manufacturing and check every one of our products at 411 different points along the manufacturing process to ensure their quality. And we comply with a wide range of internationally recognised standards for quality and environmental management.

## QUALITY CONTROL MEETS HIGHEST INTERNATIONAL STANDARDS

- > Compliance with ISO IEC 17024 procedures to approve all materials and components entering our facilities
- > Confirmation through IEC 61215 and IEC 61730 tests to ensure product safety and reliability
- > Adaption of the stringent quality-management system of the automotive industry to PV manufacturing
- Compliance with international quality and environmental-management standards
   ISO 9001, QC080000, ISO 14001 and OHSAS 18001



Canadian Solar is committed to continually developing high quality products that you can trust. On top of our industry leading R&D team, designing innovative solar PV modules, we have stringent quality control criteria to ensure that Canadian Solar products consistently exhibit the exceptional quality we are renowned for.

With 411 quality control points across all areas of the product realisation process, from the incoming material inspection

to delivery, Canadian Solar stands out in the solar industry; continually developing new and more efficient technology without compromising on the panel quality.

These quality control points are consistently applied in all of our factories globally, so that our customers can be sure that no matter where they are, their Canadian Solar panels uphold our commitment to reliability and excellence.

10 | Quality and Service | 11

# SYSTEM SOLUTIONS PROVIDER

CANADIAN SOLAR MOVES TOWARDS OFFERING A FULL SUITE OF SYSTEM SOLUTIONS, ENABLING US TO SERVE YOU AS A ONE-STOP SHOP.

As a single source for modules, inverters, and more, Canadian Solar simplifies your procurement process with a unified contract, credit process, and invoice, as well as coordinated logistics and warranty, all from a supplier that understands solar.



#### **O&M SERVICES**

Canadian Solar's Operations and Maintenance services are designed to maximise the lifetime value of your solar power plant assets. Leveraging 19 years of solar industry experience, and over 1.8 GW under O&M operation worldwide, Canadian Solar proactively monitors and manages your plants minimising downtime and increasing site availability, resulting in maximum energy production, revenues and profitability. This global expertise has been brought to Australia, where 531 MW of O&M projects are under operation, and a further 657 MW have been contracted.

#### **EPC SERVICES**

Canadian Solar's Engineering, Procurement and Construction services deliver high quality projects with the best LCOE. Our commitment to excellence will help to ensure your project is delivered on time, on budget and with exceptional performance. Our EPC services offer advanced, innovative and cost-effective solutions for solar farms, backed by an expert team with extensive experience on projects in Australia and around the world, having built and connected over 4.7 GW of solar plants.

#### **INVERTERS**

Canadian Solar's grid-tied, transformerless string inverters are an optimal solution for commercial rooftop and small ground-mount applications. Furthermore, they are a cost-effective alternative to central inverters. Thanks to their modularity, string inverters allow designing power blocks and enable significant BoS cost savings.

- > Power classes available from 5 kWp to 125 kWp
- > Single Phase and 3 Phases
- > Peak efficiency of 99.1 %
- > Enable significant BoS cost savings

#### THREE-PHASE STRING INVERTER

CSI-125KTL-GI-E

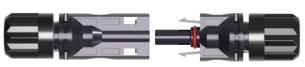
- > Maximum efficiency of 99.1%, EU efficiency up to 98.5%
- > Single MPPT for higher conversion efficiency
- > Transformerless design
- > PID mitigation capability
- > 5 years standard warranty, extension up to 20 years



#### **T4 PV CONNECTORS**

The Canadian Solar T4 PV connector is a high-quality field-installable PV connector-type. These connectors are made of high quality materials that guarantee long-term reliability. Lower contact resistance and higher current transfer capability ensure high product efficiency. T4 PV connectors have IP68 water- and dust-proof rating and can be used in a wide operating temperature range from -40 °C to 90 °C.

- > Suitable for 4 mm<sup>2</sup>/12 AWG and 10 AWG cables
- > Field toolkit, disconnect tool and jumper cables are available
- > T4 is the standard connector on Canadian Solar modules
- > 1000 V and 1500 V IEC / UL versions are available





12 | System Solutions Provider System Solutions Provider

## **NEWEST TECHNOLOGY**

#### **DUAL-CELL, BIFACIAL, SHINGLED & ENHANCED WAFER MODULES**

#### **BiHiKu**

CS3W-PB-AG / CS3W-MB-AG





High Efficiency Poly PERC Module: 435 W,

Efficiency: 19.5%

High Efficiency Mono PERC module: 445W,

Efficiency: 19.9%



First bifacial poly module exceeding 400 W



24% higher front side power than conventional modules, up to 30% more power from back side.



Wind load up to 3600 Pa, heavy snow load up to



LID +LeTID <2.0%









**30** 

High Efficiency Poly PERC Module: 440 W,

Efficiency: 19.9%

High Efficiency Mono PERC module: 375 W,

Efficiency: 20.3%



First poly module exceeding 400 W



Up to 4.5% lower LCOE, up to 2.7% lower system cost



Better shading tolerance, lower hot spot temperature



LID +LeTID <2.0%

#### BiKu

CS3K-MB-AG / CS3K-PB-AG CS3U-MB-AG / CS3U-PB-AG







High Efficiency Bifacial Poly PERC Module: 385 W, Efficiency: 19.2%

High Efficiency Bifacial Mono PERC Module: 400 W, Efficiency: 19.9%



Lower working temperature: 41±3°C, low temperature coefficient (Pmax): -0.36 % / °C



Up to 30% more power from the back side, Bifaciality up to 75%



Better shading tolerance, lower hot spot temperature



LID +LeTID <2.0%

#### **KuDYMOND**











CS3U-MS-AG / CS3U-P-AG

High Efficiency Poly Module: 395 W,

Efficiency: 19.91%

High Efficiency Mono PERC Module: 400 W, Efficiency: 20.16%



Lower working temperature: 42±3°C, low temperature coefficient (Pmax): -0.37 % / °C



Better shading tolerance, lower hot spot temperature



Wind load up to 4000 Pa, heavy snow load up to 8100 Pa



LID +LeTID <2.0%



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#### WE MANUFACTURE AND MARKET SOLAR PANELS FOR ALL APPLICATIONS: RESIDENTIAL, SMALL AND LARGE COMMERCIAL, UTILITY-SCALE, AND OFF-GRID.

KuMAX CS3U-MS / CS3U-P









**High Efficiency Poly PERC Module:** 395W,

Efficiency: 19.91 %

High Efficiency Mono PERC Module: 400 W,

Efficiency: 20.2 %



High PTC rating up to 93.27%



Low power loss in cell connection



Lower working temperature: 42±3°C, Low temperature coefficient (Pmax): -0.37 % / °C



LID +LeTID <2.0%

**KuPOWER** CS3K-MS / CS3K-P

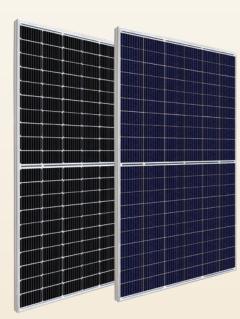








25 years



High Efficiency Poly Module: 330 W,

**Efficiency:** 19.86%

Hight Efficiency Mono PERC Module: 335 W,

Efficiency: 20.2%



High PTC rating up to 93.28%



Lower working temperature: 42±3°C, low temperature coefficient (Pmax): -0.37 % / °C



Better shading tolerance, lower hot spot temperature



LID +LeTID <2.0%

HiDM CS1H-MS / CS1U-MS



High Efficiency Module: 345 W,

Efficiency: 20.46 %

High Efficiency Module: 420 W,

Efficiency: 20.37 %



Aesthetic appearance



Module efficiency up to 20.46%



Shingled cell design maximises the light absorption area



LID +LeTID <2.0%

#### **WE ARE BANKABLE**

**PRODUCT WARRANTY** 

**ON MATERIALS AND** 

**WORKMANSHIP** 

As a top 3 world rated solar company with a minimum 25 year performance warranty on our solar panels we'll be around for the lifetime of your home solar system.



years

years

**LINEAR POWER OUTPUT WARRANTY** 

30 years

**LINEAR PERFORMANCE WARRANTY ON** PHOTOVOLTAIC DOUBLE GLASS **MODULE PRODUCTS** 

Canadian Solar has been given AA-Rated, the highest bankability status in Q3'19 release of the PV-Tech Module Bankability Ratings.

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## **ENERGY GROUP**

## **GLOBALLY DIVERSIFIED PROJECTS**

CANADIAN SOLAR HAS DEVELOPED AND BUILT LARGE-SCALE SOLAR PROJECTS FOR CUSTOMERS ACROSS THE GLOBE. OUR PROJECTS HAVE EARNED A REPUTATION FOR DELIVERING THE HIGHEST ENERGY YIELD AND RETURN ON INVESTMENT.

#### 1. NORTH AMERICA

570 MW O&M **216 MW IN OPERATION** 4,847 MW IN PIPELINE



THUNDERBAY AIRPORT, CANADA

### Power generation: 8.5 MW

#### 2. LATAM

467 MW O&M 3,891 MW IN PIPELINE 100 MW IN OPERATION 732 MW UNDER CONSTRUCTION



HOPLASS, UK Power generation: 10.3 MW

3. EMEA

145 MW O&M 2,159 MW IN PIPELINE

**KEETMANSHOOP, NAMIBIA** Power generation: 6 MW

#### 4. CHINA

674.91 MW O&M **459 MW IN OPERATION 430 MW IN PIPELINE** 

#### 5. JAPAN

232.51 MW O&M **85 MW IN OPERATION 70 MW UNDER CONSTRUCTION** 



E32, JAPAN Power generation: 1.2 MW



#### LONGREACH, AUSTRALIA Power generation: 17.4 MW

6. AUSTRALIA

1,189 MW O&M 1,200 MW PIPELINE

# PROJECT REFERENCES AUSTRALIA



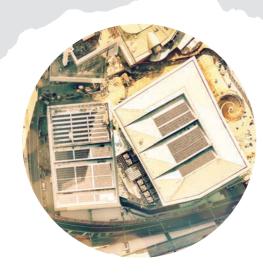
1. NORMANTON SOLAR FARM, QLD Module: CS6X-P Power generation: 5 MW



2.IKEA NATIONAL PROJECT, VIC, NSW & QLD Module: CS6X-P and CS6P-P Power generation: 3.6 MW



3. SHELLHARBOUR **SHOPPING CENTRE, NSW** Module: CS6P-P Power generation: 1.2 MW



4. SYDNEY CONVENTION CENTRE, NSW Module: CS6P-P-SD Power generation: 521 kW



Module: CS3W-P, CS3W-PB-AG Power generation: 333.48 MW







5. LONGREACH SOLAR FARM, QLD Module: CS6U-M Power generation: 17.4 MW



7. DARLINGTON POINT SOLAR FARM, NSW







8. FINLEY SOLAR FARM, NSW Module: CS3U-P Power generation: 175 MW



6. OAKEY SOLAR FARM, QLD Module: CS6U-M, CS3U-P Power generation: 100 MW

"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

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#### CONTACT

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