CanadianSolar
MAKE THE DIFFERENCE

COMPANY PROFILE NORTH AMERICA

Dr. Shawn Qu
Chairman, CEO and CTO (Director)

Yan Zhuang
President, CSI Solar

Thomas Körner
Corporate Vice President, Module and System Solutions

Vincent Ambrose
Senior Director and General Manager Sales, North America

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 14,000 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-to-hold business models.
Over 46 GW of our solar modules have been installed so far, enough to provide clean, green power to an average of 3.99 million households.

Our products are in operation in more than 160 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.

COMPANY OVERVIEW

FOUNDED 2001 IN ONTARIO

OVER 13,000 EMPLOYEES

46 GW OF SOLAR MODULES SHIPPED, WITH 15 GW PROJECTS IN PIPELINE

MORE THAN 1,600 GLOBAL PATENT LICENSES

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2019 REVENUE $3.20 BILLION

#1

MOST RECOMMENDED SOLAR COMPANY IN 2016*

*ACCORDING TO IHS MARKIT

COMPANY FACTS

CANADIAN SOLAR HAS BEEN MAKING THE DIFFERENCE FOR 19 YEARS BY BRINGING A TOTAL OF MORE THAN 46 GW OF SOLAR CAPACITY TO OUR CUSTOMERS WORLDWIDE.

TOTAL MODULE SHIPMENTS (MW)

BUSINESS MODEL OVERVIEW

CANADIAN SOLAR'S CORE BUSINESS

Silicon Production

Ingots

Mono- & Polycrystalline

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

MANUFACTURING CAPACITY (MW)

*Planned by year end

Wafers

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.

MANUFACTURING CAPACITY (MW)

*Planned by year end

PV Cells

Mono- & Polycrystalline

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

MANUFACTURING CAPACITY (MW)

*Planned by year end

PV Modules

Mono- & Polycrystalline

Module manufacturing capacity is planned to reach 16.06 GWp at the end of 2020 across our global manufacturing facilities.

MANUFACTURING CAPACITY (MW)

*Planned by year end

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.

FINANCIAL STRENGTH

Steady growth has enabled Canadian Solar to become one of the world's biggest suppliers 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.

IHS Markit *Source: IHS PV Module Customer Insight Survey 2016*

Price/performance ratio ***Module quality*** ***Likelihood of recommendation***

TOP-3 RATED BANKABLE SOLAR COMPANY

BLOOMBERGNEF'S PV MODULE BANKABILITY SURVEY RESULTS, TOP 15, 2020

- 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

sgurr energy A Wood Group Business Deloitte. BloombergNEF PVTECH

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

NEWEST TECHNOLOGY

INTRODUCING OUR LATEST SERIES 5 MODULE PORTFOLIO

HiKu5

CS3Y-MS / CS3Y-P

Poly PERC Module: 460 W

Efficiency: 19.5%

Mono PERC Module: 500 W

Efficiency: 21.2%

- LCOE 4% lower than industry average
- Reduces balance of system cost by 4.2%
- High price/performance ratio with 500W solar module solutions
- Up to 50% lower degradation with LID/LeTID mitigation technology

BiHiKu5

CS3Y-PB-AG / CS3Y-MB-AG

Poly PERC Module: 455 W

Efficiency: 19.1%

Mono PERC Module: 490 W

Efficiency: 20.7%

- LCOE 11.5% lower than industry average
- Low annual degradation: 0.45%
- Up to 29.5% increase in lifetime power generation
- Widely suitable to different solar plants and systems

INDUSTRY LEADING DUAL-CELL, BIFACIAL & ENHANCED WAFER MODULES

HiKu

CS3W-P / CS3W-MS

High Efficiency Poly PERC Module: 420 W

Efficiency: 19.0%

- 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%

BiHiKu

CS3W-PB-AG / CS3W-MB-AG

High Efficiency Poly PERC Module: 415 W

Efficiency: 18.6%

High Efficiency Mono PERC module: 450 W,

Efficiency: 20.1%

- 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 5400 Pa
- LID +LeTID <2.0%

*According to the applicable Canadian Solar Limited Warranty Statement.

PREMIUM ROOFTOP MODULES

HiDM5

CS1Y

High Efficiency Module: 405W
Efficiency: 20.1 %

- Aesthetically pleasing design blends into your roof
- Module efficiency up to 20.1%
- Better shading tolerance, lower hot spot temperature
- Low temperature coefficient (Pmax): -0.37 % / °C

HiDM

CS1H-MS ALL BLACK/ CS1H-MS

High Efficiency Module: 340 W
Efficiency: 20.2 %
High Efficiency Module: 345 W
Efficiency: 20.5 %

- Aesthetic appearance
- Module efficiency up to 20.46%
- Shingled cell design maximises the light absorption area
- LID +LeTID <2.0%

T4 PV CONNECTOR

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^2 /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

Male connector (-)

Female connector (+)

*According to the applicable Canadian Solar Limited Warranty Statement.

INVERTERS

THREE-PHASE STRING INVERTERS FOR POWER CONVERSION

Canadian Solar's grid-tied, transformer-less string inverters help to accelerate the use of three-phase string architecture for commercial rooftop and ground-mount applications. An NRTL approved, cost-effective alternative to central inverters, these inverters are modular design building blocks that provide high yield and enable significant BoS cost savings. Fanless and fan-assisted models are available. Canadian Solar inverters come with a 10 year warranty, extensible up to 20 years.

1500 V

125 kW

CS-125-KTL-GS-E

For utility and commercial applications

- Advanced thermal design with variable speed fans
- Maximum efficiency of 99.1%, CEC efficiency of 98.6%
- Transformerless design
- PID mitigation capability
- Single MPPT for higher conversion efficiency

1000 V

50-66 kW

KTL-GS SERIES (UL) 50-66KW

For commercial applications

- Maximum efficiency of 98.8%, CEC efficiency of 98.4%
- Advance thermal design with fan-assisted cooling
- 4 MPPT Channels (Maximum Power Point Tracking) to achieve higher system efficiency
- Separable wiring box design

25-40 kW

KTL-GS SERIES (UL) 25-40KW

For commercial applications

- Maximum efficiency of 98.8%, CEC efficiency of 98.3%
- Advance thermal design
- 4 MPPT Channels (Maximum Power Point Tracking) to achieve higher system efficiency
- Separable wiring box design

DATA MONITORING

HARDWARE AND SOFTWARE TO MONITOR THE PERFORMANCE OF YOUR PV SYSTEM

WIFI/LAN STICK

CSI-GL-WIFI STICK / CSI-GL-LAN STICK

- Quick installation & easy commissioning
- Mobile application commissioning via Android and IOS. Laptop version also available
- Robust IP65 outdoor WIFI connection point, built to survive solar plant conditions

CSI CLOUD APPS

PORTAL APPS FOR END USERS, INSTALLERS, AND OPERATORS

CSI Cloud

- Portal for end-user
- Display & monitor system performance and key metrics

CSI Cloud Pro

- Portal for installers, operators, fleet management
- Includes administrative & access rights management

Mobile App

- iOS and Android platform
- CSI Cloud and CSI CloudPro
- All app features available on mobile

SERVICES

CANADIAN SOLAR DOESN'T JUST MAKE GREAT SOLAR PRODUCTS. AS A COMPLETE SYSTEM SOLUTIONS PROVIDER, WE OFFER A FULL RANGE OF SERVICES.

At Canadian Solar, we can design, engineer, procure, construct, manage, operate, and maintain utility-scale solar power plants. Our solutions are flexible and customized to each partner's needs.

TURNKEY EPC SOLUTIONS

Canadian Solar's Turnkey Solutions team helps customers deliver the best solar projects possible. Whether as a financial backstop, engineering assistance, or a full-scale engineering, procurement and construction (EPC) partner, Canadian Solar has the knowledge base and the institutional strength to deliver what you need. We bring our experience developing over 4.6 GW of solar systems to every project we undertake.

EPC WRAP

Canadian Solar provides single contract, which allows IPPs or sub-EPCs to qualify for project financing

ENGINEERED HARDWARE PACKAGE

Canadian Solar supplies modules, systems equipment and optimization services to the IPP or EPC

EPC MANAGEMENT

Canadian Solar acts as owner's representative during RFP, contract negotiation and construction phases of project

JOINT VENTURES

Canadian Solar partners with EPC companies to successfully deliver projects

TECHNICAL SERVICES

Canadian Solar designs the optimal solar system to maximize project production—and your profits

O&M SERVICES

Canadian Solar offers Operations and Maintenance Services for large commercial and utility-scale solar power plants. Customized packaged solutions can include monitoring, reporting, preventive maintenance, corrective maintenance, engineering services, warranty management, and spare parts management. With over 3.0 GW of solar projects contracted and under operations worldwide, Canadian Solar is expert in solar O&M.

- CSEye: 24/7/365 remote monitoring, diagnostics and troubleshooting
- Daily, monthly and annual reporting
- Availability and performance guarantees available
- NERC Registration

ASSET MANAGEMENT SERVICES

Our dedicated team has managed more than 2.2 GW of commercial and utility solar power plants in the Americas, representing hundreds of millions of dollars in annual power purchase agreement revenues, so we understand the owner's perspective and treat your assets as our own. Whether you're looking for a full-service solar asset management partner or need support in a few critical areas, we have the experience, expertise and capabilities to help navigate the complexities of a rapidly changing market.

- Representing 60 + projects since 2009
- Experienced with wide variety of offtake mechanisms, financing structures, jurisdictions, energy markets, and PV equipment sets
- Proven track record of asset optimization, issue resolution, compliance. and risk mitigation
- Extensive experience establishing and managing an active National Security Agreement (NSA) with the United States Department of Defense (DoD) and Committee on Foreign Investment in the United States (CFIUS) since 2018.

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

411 QUALITY POINTS PROVIDE YOUR SYSTEMS OUTSTANDING LONGEVITY

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.

CANADIAN SOLAR SALES AND SUPPORT FOOTPRINT

Our team of sales, sales support, technical, customer service, logistics, credit, finance, and other professionals in North America is dedicated to your success. Contact Canadian Solar today to see how we can "Make the Difference" for your solar business.

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