CanadianSolar

The Super Highway to Grid Parity

Solar Project Development Overview

November 17, 2016

Safe Harbor Statement

- This presentation has been prepared by the Company solely to facilitate the understanding of the Company's business model and growth strategy. The information contained in this presentation has not been independently verified. No representation, warranty or undertaking, express or implied, is made as to, and no reliance should be placed on, the fairness, accuracy, completeness or correctness of the information or the opinions contained herein. None of the Company or any of its affiliates, advisers or representatives will be liable (in negligence or otherwise) for any loss howsoever arising from any use of this presentation or its contents or otherwise arising in connection with the presentation.

- This presentation contains forward-looking statements and management may make additional forward-looking statements in response to your questions. Such written and oral disclosures are made pursuant to the Safe Harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. These forward looking statements include descriptions regarding the intent, belief or current expectations of the Company or its officers with respect to its future performance, consolidated results of operations and financial condition. These statements can be identified by the use of words such as "expects," "plans," "will," "estimates," "projects," or words of similar meaning. Such forward-looking statements are not guarantees of future performance and involve risks and uncertainties. Actual results may differ materially from expectations implied by these forward-looking statements as a result of various factors and assumptions. Although we believe our expectations expressed in such forward looking statements are reasonable, we cannot assure you that they will be realized, and therefore we refer you to a more detailed discussion of the risks and uncertainties contained in the Company's annual report on Form 20-F as well as other documents filed with the Securities & Exchange Commission. In addition, these forward looking statements are made as of the current date, and the Company does not undertake to update forward-looking statements to reflect future events or circumstances, unless otherwise required by law.

Agenda

- About Canadian Solar
- Project Development and Implementation
- Solar Job Creation

Company Overview

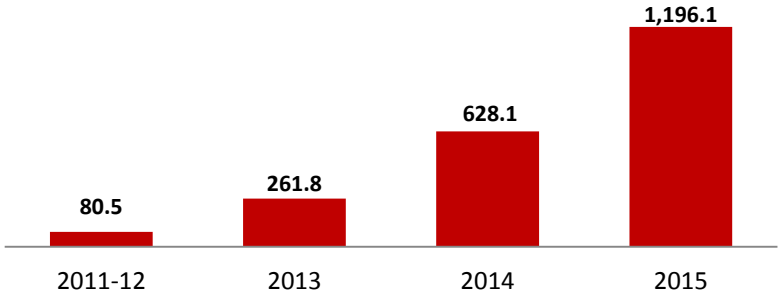
- Founded in Ontario, 2001
- Listed on NASDAQ (CSIQ) in 2006
- Over 8,000 employees globally
- Presence in 18 countries / territories
- > 14 GW of solar modules shipped cumulatively
- > 1.8 GWp solar power plants developed, built and connected (incl. Recurrent)
- Top 2 solar company by MW shipped, revenue and profits in 2015*

Global Footprint and Brand

Highlights

- 2015 Revenue: **$3.5 Billion**
- 2015 Shipments*: **4.7 GW**
- 2015 Net Income: **$172 Million**
- 2016 Shipment Guidance: **5.4 – 5.5 GW**

Solar Power Plants Built and Connected**



Bankable Brand with High Quality Products

Commercial & Utility-Scale

MaxPower CS6X-P | DIAMOND CS6K-P-PG | CS6P-M | CS6P-P

Residential

CS6V-M | CS6V-P | All-black CS6K | ONYX CS6K

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

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

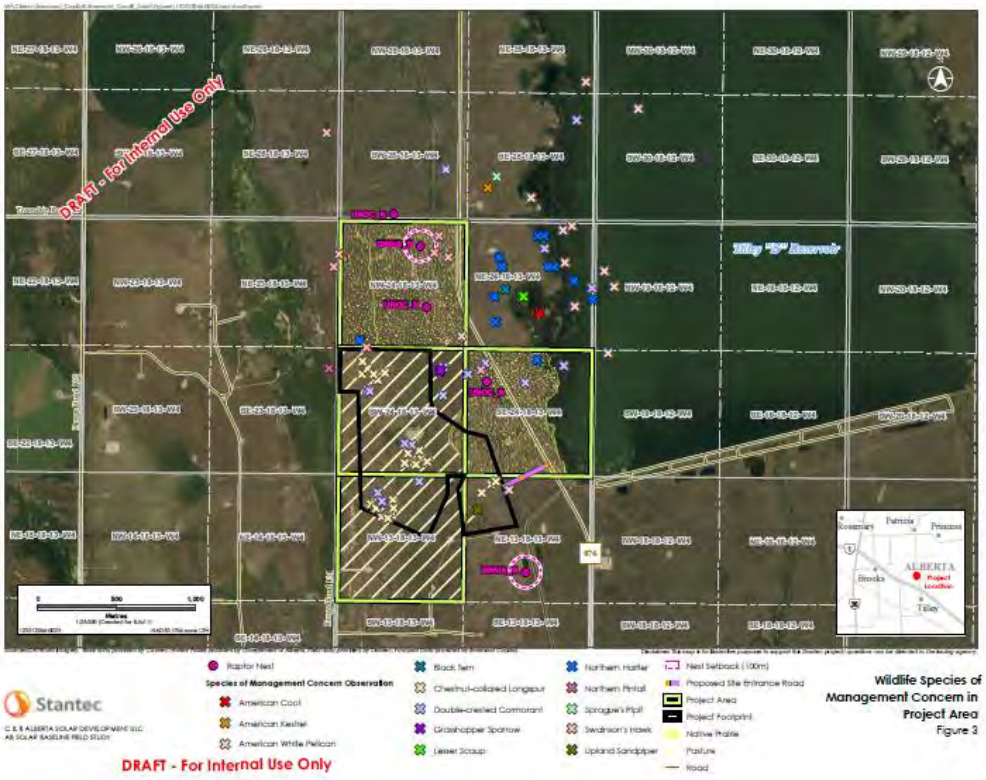
Source: Company information

Project Development

- **Project Initiation**
- **Project Development**
- **Regulatory/Commercial**

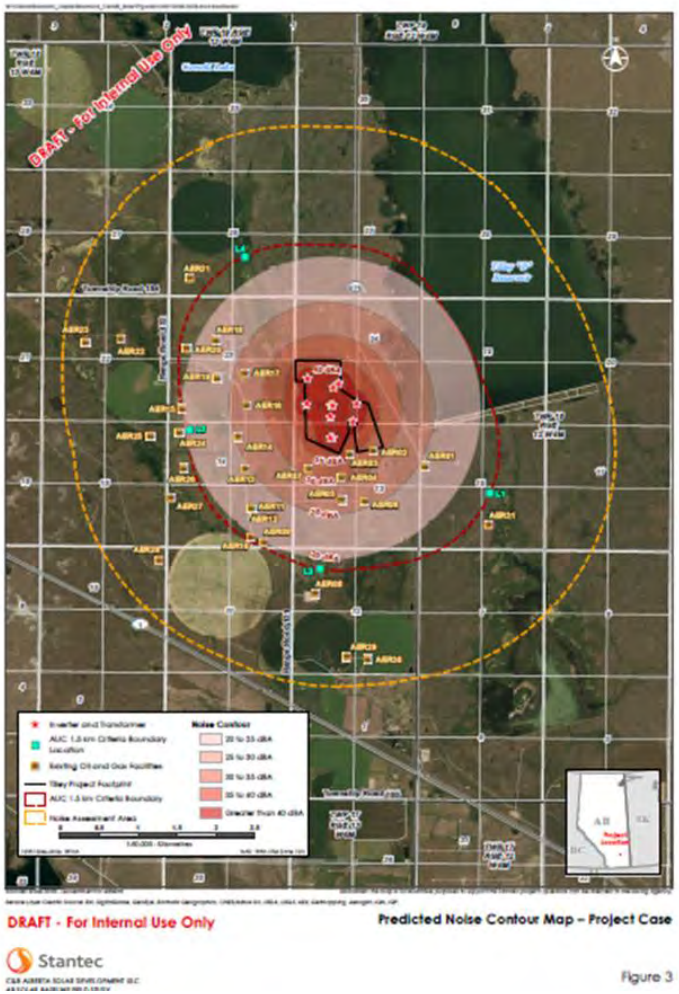
Project Development – Initiation

- **Project Initiation**
  - Project scope and assessment of concept
  - Identify site(s) and stakeholders, partners
  - Understand approval procedures, relevant regulators
  - **Assessment of power off-take concepts**



Project Development – Feasibility

- **Project Development**
  - Site and infrastructure assessment
  - Feasibility study and grid-impact study
  - Geo-tech and techno-economic assessment
  - Environmental site assessment(s)
  - Risk assessment, and management plan
  - Technology selection and initial design
  - Resources and energy yield assessments
  - Viability assessments, financial modelling



Project Process – Regulatory

- **Regulatory Approvals**
  - Planning permits, land re-designation (local)
  - Environmental approval(s) (provincial / federal)
  - Facility approval (provincial)
  - Grid impact studies, connection approval

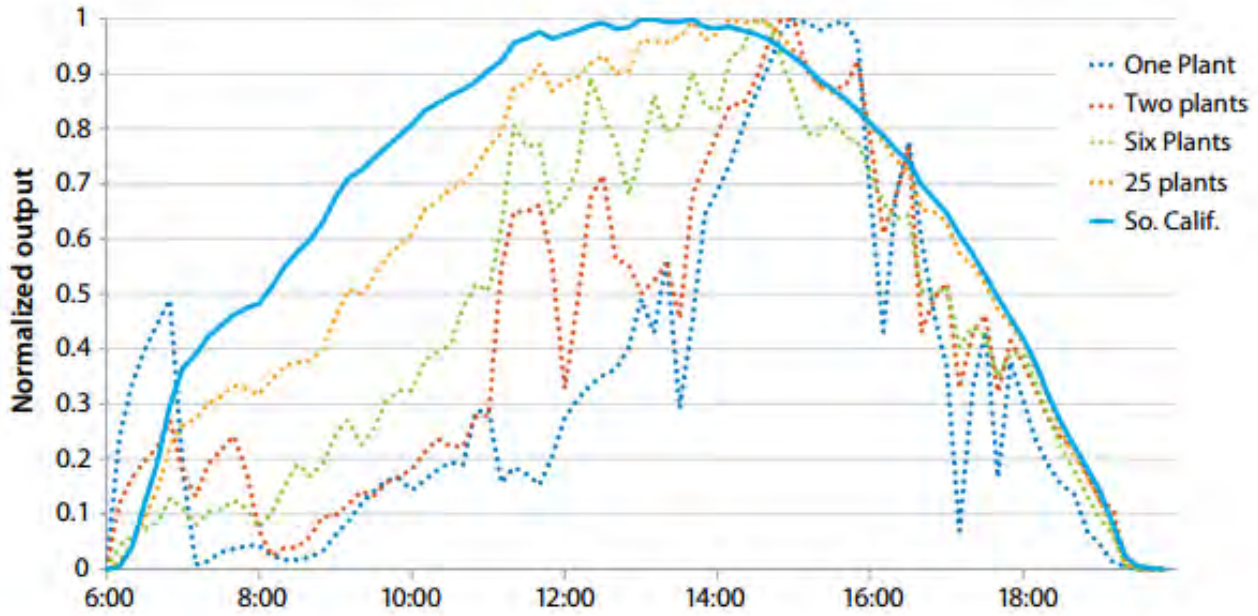


Figure ES-26. Normalized power output for increasing aggregation of PV in Southern California for a partly cloudy day

Project Process – Commercial

- **Commercial**
  - Land lease or purchase
  - Power purchase agreement (PPA)
  - Major supply agreements
  - Construction agreements
  - Financing agreements (balance sheet, construction, term)
  - Long-term operation, maintenance and administration agreement
  - Commercial closure
  - Handover to Operations, Maintenance & Administration (OMA) team

Project Process – Service Procurement

- **Locally-Sourced Development Services**
  - Surveying
  - Land acquisition support
  - Stakeholder consultation support
  - Environmental investigation and reporting
  - Engineering services
  - Regulatory consultation
  - Implementation support staff

- **Locally-Sourced Construction Services**
  - Civil construction
  - Fence installation
  - Foundation installation
  - DC & AC cabling
  - Racking assembly
  - Module mounting and fastening
  - Module connection and cabling
  - Concrete slab foundations
  - Inverter station installation
  - Substation construction
  - Protection and communication system installation
  - Commissioning & testing
  - Clean-up & close out

Project Process, Continued

Project Process – OM&A

- **Site Operations & Maintenance**
  - Grounds keeping, vegetation management
  - Snow removal and management
  - Routine and unplanned equipment maintenance
  - Technical inspections
  - Management of spare parts inventory
  - Training

- **Centralized Activities:**
  - Real-time condition monitoring
  - Dispatch of site operations staff
  - Data acquisition and reporting
  - Interfacing with local authorities
  - Supporting emergency response
  - Training

Site Grading and Road Construction

Perimeter Fence Installation

Racking Assembly and Installation

Completed Racking Installation

Inverter Station and Switchgear Installation

Inverter Station and Switchgear Rigging

Inverter Station and Switchgear Installation

Inverter Station and Switchgear Testing

Module Installation

Completed Racking and Modules

Completed Racking and Modules

Canadian Contractors and Suppliers

Contractors

ABB

PCL CONSTRUCTION

ED

res

WHITE an IEA company

Suppliers

SMA

ABB

SOLAR FLEXRACK A Division of Northern States Metals

GraybaR CANADA

MAGNA

EATON Powering Business Worldwide

Typical Completed Project (Brockville 2)

Typical Completed Project (Grand Renewable Solar)

Typical Completed Project (Val Caron)

Typical Completed Project (Alfred)

Job Creation Benefits of Solar

- Solar projects create an average of 5.4 FTEs per MW and employ between 9 and 28 workers per MW during peak construction periods1
- Substantial additional job creation comes from support services:
  - Consulting services for development, permitting and engineering design
  - Local manufacturing of equipment for solar projects
  - Delivery truck drivers
  - Accommodations, meals and entertainment for workers during construction
- For comparison, wind projects are expected to created roughly 0.8 FTEs per MW2
  - 100 MW of new solar is expected to create 540 construction jobs, whereas 100 MW of wind would only create 80 construction jobs

1. Ontario employment statistics and Canadian Solar employment averages
2. CanWEA: Alberta WindVision Technical Overview Report, WindVision 2025: A Strategy for Alberta

Solar Job Creation for Completed Canadian Projects

Direct construction job creation for completed Canadian Solar projects in Ontario:

Project	Project Size (MW)	Construction Duration (Months)	Total FTE Jobs	Peak Workforce
A	100	15	493	872
B	9	10	36	N/A
C	7	9	35	N/A
D	10	11	51	133
E	10	10	63	216
F	10	10	75	281
G	10	10	60	179
H	9	9	41	158

Full-time equivalent (FTE) jobs based on 2,080 hours per year

Solar Projects for Faster Implementation Timelines

- The following timelines are estimated for the implementation of new renewables projects:
  - Solar: 1.5 - 3 years
  - Biomass: 2 - 3 years
  - Wind: 4 - 6 years
  - Geothermal: 3 - 7 years
  - Large Hydro: 10 - 14 years
- **Solar projects are expected to be the fastest to implement of all renewable technologies**


CanadianSolar
THANK
YOU!