

# **KINGSTON SOLAR LP**

Sol-Luce Project Overview

August 13, 2014

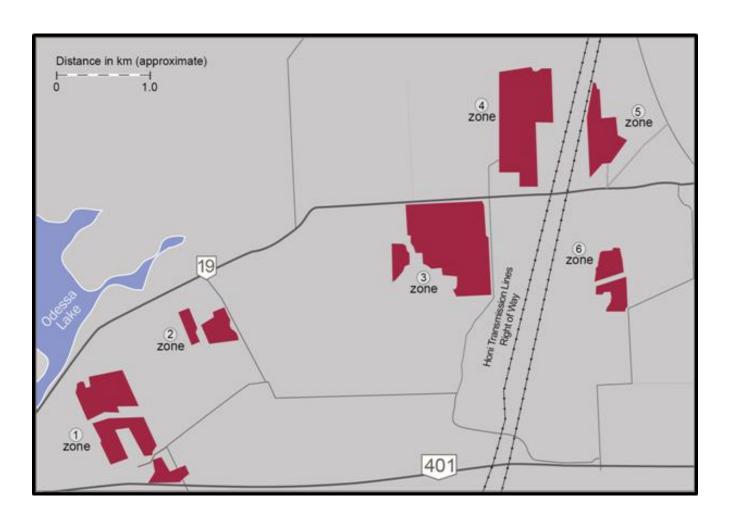


#### **PROJECT HIGHLIGHTS**

- Facility to be located on approximately 800 acres of land bridging the City of Kingston and Loyalist Township
- Comprised of approximately 464,500 ground-mounted photovoltaic ("PV") modules manufactured in Ontario by Canadian Solar Solutions Inc.
- Total nameplate capacity of 100MWAC / 140MWDC makes it the largest single solar project in Canada to date
- Project includes a 230kV substation connected via a short (200m) tie line to existing Hydro One transmission lines

Clean electricity generated will power 17,000 households

## **PROJECT LOCATION**



## **HISTORY OF THE PROJECT**

Year	Milestone
2011	July - Notice of Proposal to engage in a Renewable Energy Project Aug Public Meeting #1
2012	Feb Rural Affairs Committee Meeting Apr Interim Community Session Aug Public Meeting #2 Sept Application submitted to MOE
2013	Feb Application deemed complete by MOE Multiple meetings with City of Kingston to redesign the layout and implement the guidelines Dec REA amendment submitted
2014	Jan Public Meeting #3 Apr REA approved and Notice to Proceed Received June - EPC contractor selected July - Pre-construction activity (geotechnical work) begins
2015	Anticipated commercial operation

#### **KEY PARTIES**

Project Owner

Kingston Solar LP

Financial Sponsors

Samsung Renewable Energy Inc. ("Samsung").

Connor, Clark & Lunn Infrastructure ("CC&L")

Construction Managers

CC&L together with CarbonFree Technology ("CarbonFree")

Engineering, Procurement & Construction ("EPC") Contractors

Contractor: Canadian Solar Solutions Inc. ("CSSI")

Subcontractor: H.B. White Canada Corporation ("White")

Operations & Maintenance ("O&M") Provider

SMA Solar Technology Canada Inc. ("SMA")

#### SAMSUNG RENEWABLE ENERGY INC.

- Samsung Renewable Energy is creating clean, renewable energy for generations to come
- Together with our partners, Samsung is making a \$5-billion investment in Ontario to create the world's largest cluster of wind and solar power
- Our investments have created 900 direct renewable energy manufacturing jobs and 9,000 high-skilled indirect jobs in Ontario
- Built on Samsung C&T's commercial and technical expertise and the success of its renewable energy projects in several countries including the United States and Europe – Samsung is creating real jobs, through real investment, benefitting real people
- For more information, please visit www.samsungrenewableenergy.ca.

### **CONNOR, CLARK & LUNN INFRASTRUCTURE**

- CC&L Infrastructure invests in a broad range of North American infrastructure companies and projects
- The investment strategy targets high-quality assets at the construction and operating stages
- CC&L Infrastructure is a long-term asset owner that takes an active role in projects and provides hands-on management
- CC&L Infrastructure is part of Connor, Clark & Lunn Financial Group, a multi-boutique asset management firm responsible for more than \$55 billion in assets managed on behalf of advisors, individuals and institutional clients

### **CANADIAN SOLAR INC. (PARENT TO CSSI)**

#### A rapidly growing solar total solution provider with one of the largest global project development pipelines

- Founded in Ontario, 2001
- Listed on NASDAQ (CSIQ) in 2006
- Over 7,000 employees globally
- Presence in 20 countries / territories
- One of the world's largest solar module suppliers
- Proven project development track record

#### Module manufacturing business highlights

- 2013 shipments at 1.9 GW, #3 rank
- Industry leading cost structure
- Strong bankable brand with global reach



#### Total solar energy solutions business highlights

- Development and construction of utility-scale solar plants
- **EPC** services
- Rooftop solar system kits

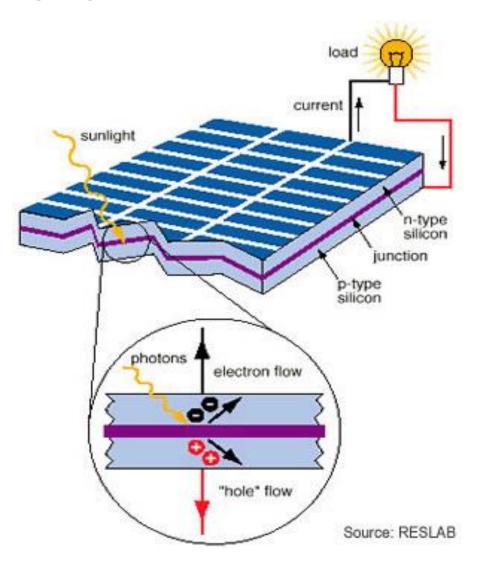
#### **SOLAR POWER TECHNOLOGY**

- Systems convert solar energy into electricity
- Solid-state process with no moving parts
- Well proven technology invented in the 1950s
- Requires little maintenance
- Safe for people and animals



#### HOW PHOTOVOLTAIC MODULES WORK

- Use materials that absorb photons and release electrons
- Semiconductor wafer is specially treated to form a positive electric field on one side and negative on the other
- Conductors are attached to both sides to form electrical circuit



#### **ECONOMIC IMPACT OF KINGSTON SOLAR PROJECT**

- The project will create jobs for manufacturing of the equipment, local installation jobs and long-term operations and maintenance jobs
- The project will comply with Ontario's "domestic content" rules, with all major components manufactured in the province
- The solar modules will be manufactured in Guelph and London by Canadian Solar, the inverters made in Toronto by SMA Canada Inc. and inverter houses made in London, ON by Canadian Solar Solutions Inc. The racking is supplied by Cosma from several Ontario plants.
- An average of 400 people will be employed onsite during the project's construction phase

#### ENVIRONMENTAL BENEFITS OF KINGSTON SOLAR PROJECT

- 100 MW AC / 140 MW DC project will generate an approximately 170,000 MWh of clean electricity annually
- Sufficient to power 17,000 Ontario homes
- 14,700 tonnes / year of CO2 avoided vs. Ontario grid electricity
- Equivalent carbon savings shown below:



17,000 Homes



2,700 Cars



3,340 Acres of Trees

#### LOCAL ENVIRONMENTAL CONSIDERATIONS

- Not developed on Prime Agricultural Land Kingston Solar has avoided lands which are designated as Prime Agriculture in the City of Kingston's Official Plan
- Setback Guidelines Project design meets setbacks designated in Landscaping and Site Design Guidelines released by the City of Kingston in May 2012
- Landscape Plan Kingston Solar has engaged a certified landscape architect to draft a comprehensive visual plan
- Community Input In response to community feedback the project revised its layout to exclude certain lands and substituted other preferred areas

#### LANDSCAPING PLANS

- Through consultation with the City of Kingston and Loyalist Township in 2013, Kingston Solar landscape plans were generated to model visual impacts
- Berms are to be contoured with a naturally undulating design
- As requested by the City of Kingston Forestry Department, a coniferous component will be used in the vegetative buffering
- The revised landscape plans were reviewed by the City of Kingston, Loyalist Township and the Cataraqui Region Conservation Authority and all confirmed that the requested changes have been applied to the project

#### **CONSTRUCTION PROCESS**

#### Civil Works

- Storm Water Management Plan
- Clearing & Grubbing, Landscaping
- Access Road Construction
- Final Grading & Drainage
- Seeding & Landscaping

#### Structural Works

- Inverter House **Foundations**
- Switchyard **Foundations**
- Solar Racking **Foundations**
- Pole Line **Foundations**

#### **Electrical Works**

- Panel Installation
- Inverter House Installation
- Switchyard Equipment Installation
- Pole Line Conductor and Telecom Installation

#### **EXPECTED CONSTRUCTION SCHEDULE**

- **Onsite Construction Activities:**
- 1. Preliminary Testing Activities: Mid July 2014 Mid Sep 2014
- 2. Mobilization: Mid Sep 2014
- 3 Site Construction Activities: Clearing & Grubbing: Sep 2014 – Nov 2014 Fencing & Site Grading: Sep 2014 – Dec 2014 Solar Zones Construction: Oct 2014 – Aug 2015 Switchyard Construction: Nov 2014 – July 2015
- 4. Final Completion: Aug 2015 Nov 2015

### **CONTACT INFORMATION**

Name	Title	Company	Phone	Email
Chris Moran	Project Manager	Kingston Solar	(613) 449- 6308	cmoran@cclinfrast ructure.com
Dan Barnard	Program Manager	Canadian Solar	(226) 339-5040	dan.barnard@can adiansolar.com
Al Jansen	Construction Manager	Canadian Solar	(226) 971- 3941	al.jansen@canadia nsolar.com
Shahid Pasha	Project Manager	HB White	(289) 233-6953	spasha@hbwhitec anada.com

Project phone number = (343) 333-5911

