



CITY OF HAMILTON
PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT
Growth Management Division

TO:	Chair and Members Planning Committee
COMMITTEE DATE:	July 7, 2015
SUBJECT/REPORT NO:	Proposed Samsung Renewable Energy Inc. 15 Megawatt (MW) Solar Project located at 2037 Centre Road, Former Township of East Flamborough (PED15108) (Ward 15)
WARD(S) AFFECTED:	Ward 15
PREPARED BY:	Guy Paparella (905) 546-2424 Ext. 5807
SUBMITTED BY:	Jason Thorne General Manager Planning and Economic Development Department
SIGNATURE:	

RECOMMENDATIONS

- (a) That the Mayor and Council acknowledge the receipt of the correspondence entitled "PV Solar Project – Potential Mountsberg Solar Project" dated June 17, 2015 from Samsung Renewable Inc. (Appendix "A" to Report PED15108);
- (b) That the Mayor and Council provide support for the Province's Independent Electricity System Operator (IESO) "Prescribed Template – Municipal Council Support Resolution" Form IESORP/f-LRP1RFP-031r2 provided in Appendix "B" to Report PED15108, supporting the development, construction and operation of the proposed 15 Megawatt (MW) ground-mounted solar photovoltaic project and connection line located at 2037 Centre Road in Flamborough for the purpose of receiving Rated Criteria Points but not for the approval of the proposed project as outlined in Appendix "B";
- (c) That City Clerk or designate be authorized to sign the IESO's "Prescribed Template – Municipal Council Support Resolution" Form IESORP/f-LRP1RFP-031r2 provided in Appendix "B" to Report PED15108 on behalf of City Council and marked "Original Copy";
- (d) That the City Clerk or designate be authorized to execute the IESO's "Municipal Meeting Confirmation" Form IESORP/f-LRP1RFP-011r2 provided in Appendix "C" to Report PED15108 confirming a meeting has been held between the registered

proponent (Samsung Renewable Energy Inc.) and representatives of the City of Hamilton but does not constitute an agreement, approval or contract; and,

- (e) That the General Manager of Planning and Economic Development or designate be authorized to negotiate and execute any agreements necessary to the satisfaction of the City Solicitor including the IESO's "Prescribed Form – Municipal Agreement" Form ESORP/f-LRP1RFP-015r2 outlining Samsung Renewable Energy Inc.'s commitments to the City of Hamilton provided in Appendix "D" to Report PED15108.

EXECUTIVE SUMMARY

Samsung Renewable Energy Inc. is proposing to develop a 15 MW ground-mounted solar photovoltaic project at 2037 Centre Road in Flamborough, entitled the "Mountsberg Solar Project" (see Location Map in Appendix "E" to Report PED15108). In correspondence dated June 17, 2015 (see Appendix "A" to Report PED15108), Samsung Renewable Energy Inc. is respectfully requesting City engagement and support so as to satisfy the requirements of Ontario's Independent Electricity System Operator (IESO) for siting of proposed renewable energy projects. The proponent is requesting a timely response so as to meet the stringent timeline requirements set forth by the Province.

On December 16, 2013, the IESO (formerly the Ontario Power Authority or OPA) received a Ministerial Directive to develop a competitive province-wide procurement process for large renewable energy projects, including ground-mounted solar photovoltaic projects. This procurement, entitled by IESO as the "Large Renewable Procurement 1 ("LRP1") requires proponents to first qualify based on financial and technical experience, and then to submit project proposals into IESO's Request for Proposal (RFP) process. Samsung Renewable Energy Inc. was determined by IESO to have the required financial and technical experience and was awarded "Qualified Applicant" status. Samsung Renewable Energy Inc. hopes to submit the proposed Mountsberg Solar Project (see Location Map in Appendix "E" to Report PED15108) into IESO's LRP1 RFP process in September 2015.

The final LRP1 documents, posted by the IESO on March 10, 2015, set forth both mandatory and optional steps of engagement with municipalities. A municipal support resolution may be submitted as evidenced by the IESO's "Prescribed Template – Municipal Council Support Resolution" included as Appendix "B" to Report PED15108.

At least one meeting to discuss the particulars of the Project with officials from each of the communities is required as evidenced by the IESO's "Prescribed Form-Municipal Meeting Confirmation" included as Appendix "C" to Report PED15108. Additionally, a municipality may enter into a binding agreement with the proponent as evidenced by the IESO's "Prescribed Form – Municipal Agreement", included as Appendix "D" to Report

PED15108. This Municipal Agreement documents commitments made by Samsung Renewable Energy Inc. to the City of Hamilton (Appendix “A” to Report PED15108).

The proposed Mountsberg Solar Project would consist of a 15 MW ground mounted solar PV installation at 2037 Centre Road in Flamborough. Although the proponent is conducting the desktop study on 2,000 acres of the study area, the proponent will ultimately use and develop approximately up to 200 acres of the lands for 15 to 20 MW of ground mount solar PV energy project to be connected to the provincial distribution system. Approximately 58,000 to 60,000 solar panels between 290 to 305 watts direct current (DC) each, will be installed for the Project pending the result of the detailed engineering design. The panels will be aligned in rows approximately 10m apart and will be mounted on a 28 to 36 degree fixed tilt ground mounting system. Helical screw pier type foundations may be used to support the PV racking configurations pending geo-technical investigation. Approximately 1,000 to 2,000 racks will be required for the Project, which will be arranged in long rows, and spacing set to maximize the site area. Each of the racking structures will be assembled on site supported by piles. The exact type of method and number of piles will be determined at the time of final design. The exact type of inverter / transformer / substation and other type of ancillary equipment will also be determined at the time of detailed design stage.

In addition to the solar panels, several inverter / transformer units will be required to convert the DC from the solar panels to alternating current (AC) used in local distribution lines. A number of underground electrical collector lines will connect the inverters / transformers to the existing local distribution line system owned by Hydro One Networks Inc. Utilizing the existing right-of-way will be required to make a connection to the Hydro One controlled distribution system nearby. The power will then flow to the transformer station from where electricity is being fed into urban and rural areas of Hamilton. The proposed Mountsberg Solar Project would be the largest ground mount project of its kind in the Hamilton area.

The proposed project has been strategically sited to fall into the “Non-Prime Agriculture Area”, so as to avoid locating the project in prime Agricultural lands in the Official Plan. In this context, the proposed project represents development that is consistent with low impact commercial activity envisioned by the Official Plan.

Even with the proposed support resolution, the proposed Mountsberg Solar Project will be subject to rigorous environmental assessment under the Renewable Energy Approvals (REA) process. REA sets forth specific requirements for consultation with the public and the City, thereby ensuring that extensive further consultation will occur prior to finalizing the development plans. The REA process would be conducted in 2016 / 2017, provided that IESO selects the Mountsberg Solar Project as a winning project in the LRP1 RFP process later this year.

There is some urgency in procuring the City of Hamilton's signatures on the prescribed IESO forms in Appendices "B", "C" and "D" to Report PED15108 as a completed LRP1 bid must be submitted to the IESO by July 13 to 25, 2015.

Alternatives for Consideration – N/A

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: No financial support is being requested from the City. The form or support requested consists of non-financial steps, such as the resolution to support the application of the proposed project into the IESO LRP1 RFP process. The project, if built, is expected to result in a re-assessment of the property from rural to commercial uses. A significant increase in tax revenue would result from the re-assessment.

Staffing: No additional staffing is required. City staff will be involved in future review aspects as the project proceeds through Ontario's Renewable Energy Approval ("REA") process. Such review work will be dealt with in normal course using existing staff.

Legal: Legal assistance may be required in negotiating and executing any agreements with Samsung Renewable Energy Inc. regarding the commitments made by the Proponent to the City with respect to the proposed development.

HISTORICAL BACKGROUND

The Proponent is looking to develop a 15 MW ground mounted solar photovoltaic (PV) project at 2037 Centre Road in Flamborough entitled, the "Mountsberg Solar Project" (see Location Map in Appendix "E" to Report PED15108), and is looking for a municipal support resolution in the attached format (see correspondence in Appendix "A" to Report PED15108) by July 10, 2015.

2037 Centre Road is located within the rural area of the former Township of East Flamborough, as is described on the Location Map in Appendix "E" to Report PED15108. Under the Official Plan, the lands represent one of the few areas in rural Hamilton that is not designated as "Prime Agricultural". As such, the proposed site represents a plausible land use in the context of the Official Plan, and perhaps the most compatible location within rural Hamilton from a planning perspective.

On December 16, 2013, the Ontario Power Authority (now IESO) received a Ministerial Directive to shift large renewable projects away from the Feed-in Tariff (FIT) Program and begin development on a procurement process for these large projects; this has become the Large Renewable Energy Procurement 1 (LRP1) initiative, a Request for

Proposal (RFP) style procurement process requiring bidders to qualify based on a host of criteria, including among other items previous experience permitting, constructing, owning and operating facilities of the same technology and size. Samsung Renewable Energy Inc. qualified using the combined technical and financial capabilities related to previous successful renewable energy projects, including very similar ground mounted solar projects in Ontario. Qualified Applicants were publically announced on November 4, 2014. On January 1, 2015, the Ontario Power Authority merged with the Independent Electricity System (IESO) Operator and the LRP1 process was transferred to the IESO. At that time, the LRP1 process became known as the IESO LRP1.

Both the FIT and LRP1 program were enabled by the *Green Energy and Green Economy Act, 2009* which was passed into law on May 14, 2009. The Independent Electricity System Operator (IESO) (which has been combined Ontario Power Authority (OPA) which historically had jurisdiction over these projects) is responsible for implementing these programs.

The IESO's LRP1 requires qualified bidders to actively engage with local communities, municipalities and aboriginal communities directly affected by the projects being proposed. There are prescribed processes required for this consultation, including one public open house, the completion of a public consultation plan, the development of a Project website, and notification of abutting landowners, aboriginal communities and discussions with municipal communities. The final LRP1 bid submission will be scored based on the completion and submission of these items to the satisfaction of the IESO.

The final IESO LRP1 documents, posted by the IESO on March 10, 2015, set forth both mandatory and optional steps of engagement with municipalities. A municipal support resolution may be submitted as evidenced by the IESO's "Prescribed Template – Municipal Council Support Resolution" included as Appendix "B" to Report PED15102. At least one meeting to discuss the particulars of the Project with officials from each of the communities is required as evidenced by the IESO's "Prescribed Form-Municipal Meeting Confirmation" included as Appendix "C" to Report PED15108. Additionally, a municipality may enter into a binding agreement with the proponent as evidenced by the IESO's "Prescribed Form – Municipal Agreement", included as Appendix "D" to Report PED15108. This Municipal Agreement documents commitments made by the Samsung Renewable Energy Inc. to the City of Hamilton (Appendix "A" to Report PED15108).

Should this Project be awarded an LRP1 contract, it will be required to obtain a Renewable Energy Approval (REA) which are issued by the Ministry of the Environment and Climate Change (MOECC) under the *Environmental Protection Act* (EPA), as part of Ontario Regulation 359/09 which came into effect in September 2009. A REA exempts renewable energy projects from *Planning Act* approvals; however, a significant amount of municipal consultation continues to be important to the process. Additionally, renewable projects are still subject to approvals under the *Conservation Authorities Act*, *Heritage Act*, *Ontario Building Code Act*, and may still be subject to approvals for

Municipal Entry Permits for new access roads. An overview of the REA process detailing the opportunities for the City of Hamilton's input and participation is included as Appendix "F" to Report PED15108. It is important to note that at the conclusion of the REA process any party including the municipality has the opportunity to raise a Third Party appeal to the REA decision.

The proposed Mountsberg Solar Project would consist of a 15 MW ground mounted solar PV installation at 2037 Centre Road in Flamborough. Although the proponent is conducting the desktop study on 2,000 acres of the study area, the proponent will ultimately use and develop approximately up to 200 acres of the lands for 15 to 20 MW of ground mount solar PV energy project to be connected to the provincial distribution system. Approximately 58,000 to 60,000 solar panels between 290 to 305 watts (DC) each will be installed for the Project pending the result of the detailed engineering design. The panels will be aligned in rows approximately 10m apart and will be mounted on a 28 to 36 degree fixed tilt ground mounting system. Helical screw pier type foundations may be used to support the PV racking configurations pending geo-technical investigation. Approximately 1,000 to 2,000 racks will be required for the Project, which will be arranged in long rows and spacing set to maximize the site area. Each of the racking structures will be assembled on site supported by piles. The exact type of method and number of piles will be determined at the time of final design. The exact type of inverter / transformer / substation and other type of ancillary equipment will also be determined at the time of detailed design stage.

In addition to the solar panels, several inverter / transformer units will be required to convert the DC from the solar panels to AC used in local distribution lines. A number of underground electrical collector lines will connect the inverters / transformers to the existing local distribution line system owned by Hydro One Networks Inc. Utilizing the existing municipal right-of-way will be required to make a connection to the Hydro One controlled distribution system nearby. The power will then flow to the Nebo TS transformer station from where electricity is being fed into urban and rural areas of Hamilton.

There is some urgency in procuring the City's Letter of Agreement and subsequent forms as a completed LRP1 bid must be submitted in early September 2015.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

The subject lands are designated "Rural" on Schedule D to the Rural Hamilton Official Plan. The "Rural" Designation encompasses lands designated as Canada Land Inventory Classes 4 – 7.

With respect to renewable energy projects, the following policies apply:

“Increased Energy Supply

3.7.3 The City shall promote increasing the supply of energy and in particular, the supply of sustainable energy by:

1. permitting energy generation facilities to meet existing and planned needs, including *renewable energy systems* and *alternative energy systems*, both as principal and *accessory* uses. These facilities shall be permitted in all land use designations subject to the other relevant policies of this Plan, Policy B.3.7.2, *compatibility* with the surrounding land uses, and in accordance with the provisions of the Zoning By-law; and,
2. protecting existing and future utility corridors.

Renewable Energy and Alternative Energy System Locations

3.7.4 *Renewable energy systems* and *alternative energy systems* shall be permitted in accordance with all federal and provincial requirements and Policy B.3.7.3 a).

3.7.5 *Renewable energy systems* and *alternative energy systems* may be subject to studies to demonstrate how the potential adverse impacts, such as noise, dust, vibration, air quality, and water quality and quantity shall be mitigated.”

Subject to compliance with all applicable federal and provincial requirements and the proponent demonstrating compatibility with the surrounding land uses, the proposed use would be permitted.

Green Energy and Green Economy Act, 2009, Renewable Energy Approval - As this Project is a Renewable Energy Project it will not be subject to the *Planning Act* requirements, through an exemption made under the *Green Energy and Green Economy Act of 2009*. However, extensive consultation with the municipality will be required throughout the subsequent permitting steps should the Samsung Renewable Energy Inc. be awarded a contract under the LRP1 process. The REA process requires municipal consultation including municipal sign-off. Additionally, following the submission of the documents to the Ministry of the Environment and Climate Change (MOECC), any party including the municipality has the opportunity to appeal the approval to the Environmental Review Tribunal (ERT). Finally, most renewable power Projects are still subject to the *Heritage Act*, *Conservation Authorities Act* and *Ontario Building Code Act* dependent on their design and location.

Innovate Now - Supports the Public Works Business Plan in terms of being a leader in the greening and stewardship of the City.

Hamilton Economic Development Strategy 2010-2015 – Supports the Economic Development Strategy, specifically Clean Technology development related to the development of skills and experience in Power Generation.

RELEVANT CONSULTATION

Planning and Economic Development Department - A meeting to discuss this proposed 15 MW ground-mounted solar PV project at 2037 Centre Road in Flamborough as it relates to the submission to the IESO's LRP1 process, was held between Samsung Renewable Energy Inc. and the City of Hamilton's Mayor and staff.

ANALYSIS AND RATIONALE FOR RECOMMENDATION

General Terms of the Municipal Agreement

The municipal agreement to be negotiated will contain the following commitments, at minimum, by Samsung Renewable Energy Inc. upon a successful LRP1 bid outcome:

- The City of Hamilton will retain the rights to review and comment on the Renewable Energy Approval documents and process;
- The developer commits to working with the City to mitigate any potential visual impacts through berms or vegetation;
- The developer commits to working with the City to address any potential drainage or grading concerns;
- The developer commits to maintaining noise levels below the MOECC guidelines during the lifetime of the Project's operation;
- The developer commits to working with the City on all right-of-way concerns;
- The developer commits to collaborating on traffic flow concerns during construction; and,
- The developer commits to restricting physical construction of the Project to a 12 month time frame.

ALTERNATIVES FOR CONSIDERATION

N/A

ALIGNMENT TO THE 2012 – 2015 STRATEGIC PLAN

Strategic Priority #1

A Prosperous & Healthy Community

WE enhance our image, economy and well-being by demonstrating that Hamilton is a great place to live, work, play and learn.

Strategic Objective

- 1.1 Continue to grow the non-residential tax base. Should the proponent be awarded an LRP1 Contract, a successful Project will change the tax base from agriculture to industrial, and provide a significant increase in the tax assessment revenue.
- 1.6 Enhance Overall Sustainability (financial, economic, social and environmental).

APPENDICES AND SCHEDULES ATTACHED

Appendix “A”	Correspondence to Mayor and Council entitled “PV Solar Project Potential Mountsberg Solar Project” dated June 17, 2015 from Samsung Renewable Energy Inc.
Appendix “B”	Independent Electricity System Operator (IESO)’s “Prescribed Template – Municipal Council Support Resolution” Form IESORP/f-LRPIRFP-031r2
Appendix “C”	IESO’s “Municipal Meeting Confirmation” Form IESORP/f-LRPIRFP-011r2
Appendix “D”	IESO’s “Prescribed Form – Municipal Agreement” Form ESORP/f-LRPIRFP-015r2
Appendix “E”	Location Map
Appendix “F”	Overview of the REA process including areas for Municipal Input
GP/mah	