



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 Kalyn 250 Kilowatt (kW) Electricity Generator located at 97 5 th Concession Road East, Former Township of East Flamborough (PED15107) (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 letter entitled “Cecil Kalyn Municipal Council Support Resolution”, dated June 9, 2015, from Cecil Kalyn (Appendix “A” to Report PED15107);
- (b) That the Mayor and Council provide support for the Province’s Independent Electricity System Operator (IESO) “Prescribed Template – Municipal Council Support Resolution” Form IESOMRD/f-FIT-010r2 provided in Appendix “B” to Report PED15107, supporting the development, construction, and operation of the proposed 250 kilowatt (kW) electrical generator using biomass as fuel located at 97 5th Concession Road East, former Township of East Flamborough for the purpose of receiving Rated Criteria Points but not for the approval of the proposed project as outlined in Appendix “B” to Report PED15107;
- (c) That City Clerk or designate be authorized to sign the IESO’s “Prescribed Template – Municipal Council Support Resolution” Form IESOMRD/f-FIT-010r2 provided in Appendix “B” to Report PED15107 on behalf of City Council and marked “Original Copy”;
- (d) Should Mr. Kalyn’s bid be successful, the City of Hamilton request the Minister of the Environment that an environmental assessment of this project be conducted; 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 IESOMRD/f-FIT-010r2 outlining Cecil Kalyn's commitments to the City of Hamilton provided in Report PED15107.

EXECUTIVE SUMMARY

Cecil Kalyn is proposing to develop a 250 kW (kilowatt) electrical generator from biomass fuel at 97 5th Concession Road East, former Township of East Flamborough (see Location Map in Appendix "C" to Report PED15107). In a letter dated June 9, 2015 (see Appendix "A" to Report PED15107), Cecil Kalyn 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.

Through amendments to the *Electricity Act*, the operations of the Independent Electricity System Operator (predecessor IESO) and the Ontario Power Authority (OPA) were merged on January 1, 2015, bringing together real-time operations of the grid with long-term planning, procurement, and conservation efforts.

The IESO administers the Feed-in Tariff (FIT) Program, which is designed to encourage and promote greater use of renewable energy sources including on-shore wind, waterpower, renewable biomass, biogas, landfill gas and solar photovoltaic (PV) for electricity generating projects in Ontario. The fundamental objective of the FIT Program, in conjunction with the *Green Energy and Green Economy Act, 2009 (Ontario)* and *Ontario's Long Term Energy Plan, 2013*, is to facilitate the increased development of Renewable Generating Facilities of varying sizes, technologies and configurations via a standardized, open, and fair process.

This process entitled by the IESO as the Small FIT Program, requires projects meet certain eligibility requirements including an accumulation of Priority Points with a municipal support resolution counting as two Priority Points. Each Project will then be ranked on the merits of their application and accumulation of Priority Points.

Cecil Kalyn hopes to submit the proposed biomass fuel generator project (see Location Map in Appendix "C" to Report PED15107) into IESO's FIT Program process in July 2015.

The FIT Program documents posted by the IESO on May 22, 2015, sets 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 PED15107.

The proposed biomass fuel generator project would consist of a 250 kW (kilowatt) wholly enclosed installation at 97 5th Concession Road East, former Township of East Flamborough. The biomass will consist of waste saw dust from lumber mills in Northern Ontario which is pelletized and used as fuel to generate steam and then electricity. A number of underground electrical conductors will connect the generators / transformers to the existing local distribution line system owned by Horizon Utilities Inc. Utilizing the existing municipal right-of-way will be required to make a connection to the Horizon Utilities Inc. controlled distribution system nearby. The power will then flow to the local transformer station from where electricity is being fed into urban and rural areas of Hamilton.

According to the IESO *Guide for Environmental Assessment requirements for Electricity Projects* document, a project that is less than 5 Megawatts and a biomass fuel type, is classified as Category A, and there are no Environmental Assessment requirements. However, as quoted in the Act “Anyone can request that the Minister of the Environment make a Category A project subject to the *Environmental Assessment Act*.”

There is some urgency in procuring the City of Hamilton’s signatures on the prescribed IESO forms in Appendix “B” to Report PED15107, as a completed FIT bid must be submitted to the IESO by July 13, 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 FIT Program process. The project, if built, is expected to result in a re-assessment of the property from rural to commercial uses. An 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: None at this time however; legal assistance may be required in negotiating and executing any agreements with Cecil Kalyn regarding the commitments made by the proponent to the City with respect to the proposed development.

HISTORICAL BACKGROUND

The FIT and Small FIT programs were enabled by the *Green Energy and Green Economy Act, 2009* which was passed into law on May 14, 2009. On January 1, 2015, the Independent Electricity System Operator (IESO) (which has been combined with the Ontario Power Authority (OPA) which historically had jurisdiction over these projects) is now responsible for implementing these programs.

Pursuant to the June 12, 2013 direction issued by the Minister of Energy, as of that date and going forward, the FIT Program is open only to Small FIT Projects. A Small FIT Project is a “capacity allocation exempt small embedded generation facility” as defined in the Distribution System Code. Generally this means a Project that is connected to a Distribution System, and has a proposed Contract Capacity of 250 kW or less (if connected to a less than 15 kV line), or 500 kW or less (if connected to a 15 kV or greater line), and that is not a microFIT Project.

The IESO encourages Aboriginal, community, municipal, school, hospital, university, public transit services and Metrolinx Projects under the FIT Program. These FIT Rules provide incentives for Projects involving such groups. These FIT Rules also provide incentives for applicants to engage local municipalities and Aboriginal communities where Projects are proposed. The final FIT bid submission will be scored based on the completion and submission of these items to the satisfaction of the IESO.

The IESO FIT Program, Version 4 documents posted by the IESO April 28, 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 PED15107 to which is assigned a Priority Point Value of 2.

As a demonstration of his commitment and engagement with municipal representation, Mr. Kalyn has conducted at least one on-site meeting to discuss the particulars of the Project with City staff.

Should this Project be awarded a FIT Program 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 “D” to Report PED15107. 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 biomass fuel generator project would consist of a 250 kW (kilowatt) wholly enclosed installation at 97 5th Concession Road East, former Township of East Flamborough.

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

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

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 Cecil Kalyn Project be awarded a contract under the FIT Program 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.

The proposed Project has been strategically sited within the rural area designated as "Protected Countryside" in the Rural Official Plan and identified as "Non-Prime Agricultural Area". In this context, the proposal represents development that is consistent with low impact activity envisioned by the *Official Plan* and the Province's *Greenbelt Plan*.

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 and Public Works Department - A meeting to discuss this proposed 250 kW biomass fuel generator project as it relates to the submission to the IESO's FIT process was held between Cecil Kalyn and Guy

Paparella, Director of Growth Planning and Frank Gazzola Superintendent Energy Engineering, Public Works on June 19, 2015.

ANALYSIS AND RATIONALE FOR RECOMMENDATION

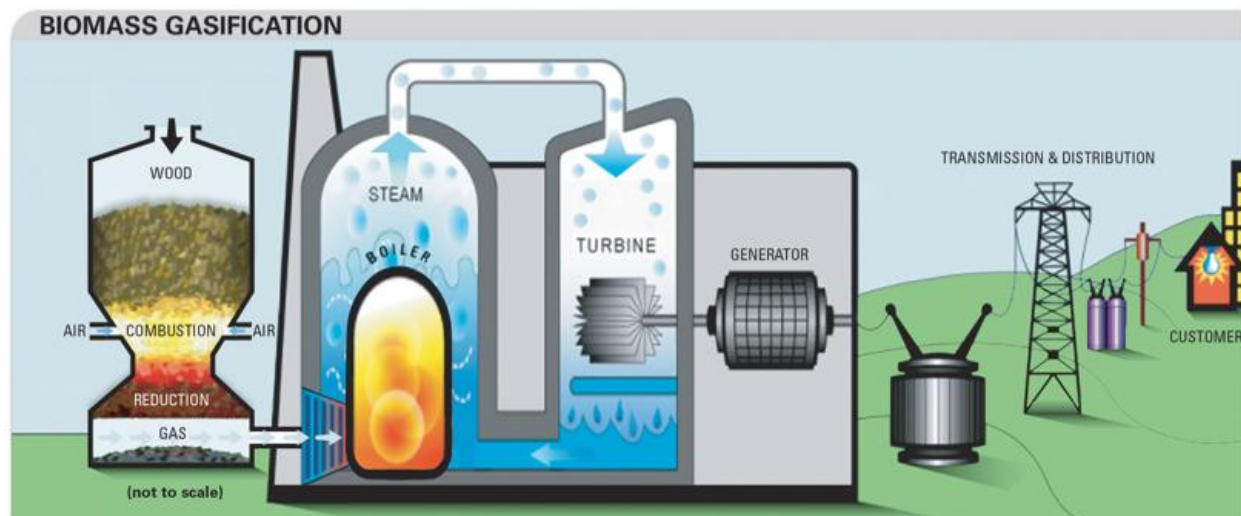
Although there is not a Municipal Agreement required, City staff recommend the proponent enter into an agreement to address the following under the FIT Program:

- 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;
- The developer commits to working with the City to address any potential drainage or grading concerns;
- The developer commits to maintaining noise and emission 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.

System Description

The proposed biomass energy system will consist of six steam driven generator units rated at 50 kW each capable of producing a total of 250 kW of electricity, allowing for conversion losses and inefficiencies.

The process of converting biomass, which in this case will be wood pellets, is called gasification which is different from the conventional combustion process. Gasification is achieved by mixing the fuel in a specifically designed chamber at high temperatures with oxygen, and sometimes steam. This process results in a product known as syngas. The syngas is, then in turn, combusted in a conventional manner to produce pressurized steam which is used to drive a turbine type generator which produces electrical power.



Using accurate metering equipment, this electrical power will be injected into the Horizon Utilities Inc. grid system following their requirements for safety and control.

Fuel

The fuel stream to be used for this Project is proposed to be commercially developed wood pellets that will be delivered to the site on a weekly basis. Typically, these pellets are produced from manufacturers located in the Northern Regions of the Province of Ontario, and are, therefore, classified as a renewable energy source. At this time, there are no details on the amounts of pellets that will be used; however, an estimate based on a generic conversion factor suggests a monthly quantity of 40 to 50 tonnes may be consumed.

Delivery of pellets will be via a silo truck that typically has a capacity of 20 tonnes. Therefore, truck traffic could be in the order of three to four per month. It is dependent upon the size of the delivery truck and the rate of consumption.

Ash

Estimation of the amount of ash produced by the process would be determined via a detailed engineering and design study; however, a typical biomass gasification process reduces the feedstock by 70% of the input. Therefore, the estimated amount of ash / char produced is roughly 14 tonnes per month. At this time, the City is not aware of the specific manner in which this will be dealt with.

Permitting and Environmental Assessment

According to the IESO *Guide for Environmental Assessment requirements for Electricity Projects* document, a project that is less than 5 MW, and a biomass fuel type, falls into a

Category A with no EAA requirements. However, as quoted in the Act “Anyone can request that the Minister of the Environment make a Category A project subject to the *Environmental Assessment Act*.”

This Project will be considered embedded generation meaning the exporting of power from the system will enter into the Horizon Utilities Inc. grid, and we have been advised from the proponent, the representatives from Horizon have been informed of the Project, and are in support of the initiative.

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 FIT Program Contract, a successful project will increase the tax assessment.
- 1.6 Enhance Overall Sustainability (financial, economic, social and environmental).

APPENDICES AND SCHEDULES ATTACHED

Appendix “A”	Letter to Mayor and Council “Cecil Kalyn Municipal Council Support Resolution” dated June 9, 2015 from Cecil Kalyn
Appendix “B”	Independent Electricity System Operator (IESO)’s “Prescribed Template – Municipal Council Support Resolution” Form IESORP/f-LRPIRFP-031r2
Appendix “C”	Location Map
Appendix “D”	Overview of the REA process including areas for Municipal Input
GP/mah	