

TOWNSHIP OF WOOLWICH
ENGINEERING & PLANNING SERVICES

REPORT: E 27-2010 As Amended

MEETING DATE: March 23, 2010

MEETING TIME: 6:00 p.m.

MEETING LOCATION: Council Chambers
24 Church Street West, Elmira

TITLE: Proposed Biogas Power Generation Facility
Woolwich Bio-en Inc.
Part of Part 9, Plan 58R-14363

FILE ID: D11 Marbro Capital 6/2008 E

PREPARED BY: Jeremy Vink

REVIEWED BY: Dan Kennaley *dk*

DATE REVIEWED BY MANAGEMENT TEAM: March 15, 2010

C.A.O.: _____ (signature not required if reviewed by SMT)

RECOMMENDATION

THAT Council of the Township of Woolwich submits the following comments to the Ministry of the Environment in respect to the Woolwich Bio-En Inc. biogas power generation facility proposed for Elmira. That the Ministry:

1. require the applicant to address the site servicing comments raised by the Township as attached in Appendix "B" to Report E 27-2010;
2. noting that the proposed facility does not conform with the Township of Woolwich Official Plan or the Township of Woolwich Zoning By-law, review the suitability of the location for such a facility which should include reference to MOE industrial separation distance guidelines.
3. post on the internet:
 - a. comments raised and how the comments have been addressed; and
 - b. the proposed decision and operational standards for the public.
4. set maximum noise, air and odour standards for the operation;
5. ensures that none of the fertilizer by-product is stored outdoors, does not remain on site, and that the material is utilized appropriately;

6. set detailed regulations for enforcement of noise, odour, and air standards, and implications for non-compliance with the above noted standards including implications for repetitive and prolonged non-compliance;
7. ensure transportation impacts are assessed and considered; and
8. provide for a peer review of reports associated with the proposal.

BACKGROUND

In August of 2008 Marbro Capital made application under Section 41 (site plan control) of the Planning Act for a bio-gas facility. The facility is proposed at the north end of Elmira in the industrial area, on lands zoned M-1 (General Dry Industrial). The biogas facility is proposed to be located on lands north of the former Canadian Pacific Railway lands and west of the current terminus of Martin's Lane, as shown on the attached location sketch.

Prior to the Green Energy Act the use was also required to have a Certificate of Approval under the Environmental Protection Act from the Ministry of the Environment (MOE) and the applicant started to work through that process. As part of the MOE process the applicant held an open house in 2009 where the community was invited to comment on the proposal.

The bio-gas facility is defined as a form of waste disposal site and described as a renewable energy anaerobic digestion facility that will process 70,000 tonnes per year of organics into biogas. The operation requires an additional 12,600 tonnes (12,600 cubic metres) per year of water as part of the process, operating 24 hours a day, 7 days per week. The 12,600 cubic metres of water will come from storm water runoff (+/-3000 cubic metres), and municipal water or offsite suppliers (+/- 9600 cubic metres). The organics will include kitchen and food processing wastes, livestock manure, energy crops, fats, oils and greases. The proposed facility will produce renewable electricity and heat energy to be sold to the power grid and a byproduct of fertilizer type material for application to agricultural land. The site will generate 2,850 Kilowatts of electricity and 3,360 kilowatts of heat. The electricity will be sold to Ontario Power Authority and the heat will be sold to adjacent industrial uses. The facility is proposed on 1.55 hectares of land with an Operations Building, Process Building, and Digester Tanks (see Appendix A). The facility is designed to meet the MOE's guideline of less than 1 odour unit (OU) at a sensitive receptor.

When the applicant proceeded through the public consultation process as required by the MOE; a number of compatibility issues were raised by neighbouring residences and expressed to the Township. In addition, Planning Staff raised concerns with respect to compatibility and whether the facility conformed to the M-1 zoning as it relates to:

- the use requiring water as part of the process, whereas the M-1 zoning permits only dry industrial uses; and
- whether the use constituted the recycling waste, whereas the M-1 zone prohibits recycling operations.

Also, the property is designated as Industrial within the Official Plan and is within the Northeast Policy Area. The nature of the policy area is to require that uses proposed or expansion to existing uses are compatible with surrounding land uses (for example - the residential area

located along High Street), to ensure that there is servicing capacity available, and that the use shall not impact future transportation corridors.

In March of 2009 Council received report E25-2009 noting that the Planning Division had reviewed the application and noted to Council that *"in order for the proposed bio-gas power generation facility to be permitted at the subject location, a rezoning is required not only to address the dry industry aspect of the Zoning By-law, but also to address the prohibition of uses that are, or may become, obnoxious, offensive or dangerous by reason of odour (etc.) and the prohibition of uses that involve the recycling of waste products. Despite the Zoning By-law treating such uses as prohibited uses, the applicant should be provided with the opportunity, in the context of a rezoning application, to satisfy concerns with respect to the two aspects relating to prohibitions. But, at the same time, the applicant must appreciate that the prohibition wording of the Zoning By-law, and the Official Plan's concern for ensuring compatibility with existing residential development in the High Street Policy Area, creates a high threshold which must be reached by the applicant before the rezoning may be able to proceed"*.

At that time the applicant placed the applications on hold pending new Provincial legislation proposed for Alternative Energy Systems (i.e., Green Energy). These renewable alternative systems include solar, wind and bio-fuel operations.

In May of 2009 the Province of Ontario passed the Green Energy Act and followed with necessary regulations. The Act and Regulations create a framework where the Province is the approval authority, local planning instruments are no longer applicable, and where the municipality is to comment on issues such as servicing. Local planning instruments that are no longer applicable include: Official Plans; Demolition Control By-laws; By-laws or Orders passed under Part V of the Planning Act, including zoning, site plan, holding by-laws, interim control by-laws; and Development Permit System By-Laws. The Building Code continues to apply. So for instance, a project could be built in a residential area, because zoning by-laws no longer apply, so long as the servicing is adequate, building is designed appropriately, and ultimately the Ministry is satisfied with the application.

Renewable Energy Approval (REA) processes are dependent on project size and technology type. Some renewable energy technologies require proponents to complete municipal consultation, community consultation and Aboriginal consultation. The Municipal consultation under the regulations (O. Reg. 359/09) consists of notice being sent 90 days prior to the final public meeting to the municipalities (Regional and Local), which shall include the consultation form. The form is for the purpose of consulting on matters relating to municipal or local infrastructure and servicing and shall be in a form and format approved by the Ministry. As such the form is provided for the Township to comment on municipal or local infrastructure and servicing.

In February of 2010 the Township received revised site plan drawings for the proposed facility for review and consideration. On February 3, the Township also received the documentation and notice of public meeting for the proposed bio-gas facility, which under the Green Energy Act regulations is classified as a Class 3 Anaerobic Digestion Facility.

The Green Energy Act regulations require that two public meetings be held. The Ministry has agreed that the open house held by the applicant in early 2009 would be counted as one of the required meetings, and a second meeting is proposed on April 6, 2010. A copy of the proposal is available at the Township Office for public viewing.

COMMENTS

The Green Energy Act does allow and support the development of Green Energy. Township staff understands the need for such uses and generally supports these facilities, provided they are appropriately located, designed, and operated so as to mitigate impacts or potential impacts. As the type of Green Energy projects are very different, so too are the impacts of these operations. With respect to location, design, and operation for this application the following is noted.

To fulfill the requirements of the Act, the municipality has the opportunity to comment to the infrastructure and servicing. The applicant's willingness to submit a site plan for review allows staff, to address some of the technical site servicing and operational issues with the applicant directly. Township staff note the following key points in respect to these submitted plans:

- The proposed storm water facility is designed to be a fire reservoir for fire fighting purposes; however storm water is also proposed to be collected and used as part of the operation. Having two sources rely on the pond for water is a concern. Utilizing a storm water management facility as a fire reservoir is problematic at the best of times and with the storage pond volumes competing with additional water uses, staff does not support the storm water management facility being used as a fire reservoir. Also identified as a concern with the design is the location of the draft pipe connection with respect to an 8.9 metre vertical draft elevation. Therefore a water tight fire reservoir storage tank is required on the property with a draft pipe connection, all to the full satisfaction of the Township Fire Chief.
- The plans do not show the proposed lines for running to the heating to any other surrounding industrial use. Explain where and how this will be addressed. Additional approvals may be required for such connections.
- The plan does not show any above or below ground hydro line connections.
- The proposed site servicing connections to the existing services identified on the plan are not owned or maintained by the Township. The developer is to provide proof of easement, in their favour, over the existing sanitary and water services prior to the site being permitted to connect to the existing private services.
- The owner is responsible for constructing the driveway, and extension of the services onto the site.
- The proposed access road / driveway, sanitary sewer and watermain which traverse a small portion of the Township's land, which abuts the westerly lot line with the subject lands, will be the responsibility of the owner of the subject lands to maintain.
- The existing municipal services would be sufficient for the purpose of the proposed site but would not be for further development. Please note that further development of the remaining lands including adjacent lands to the south will require upsizing of the existing sanitary, water and storm systems.
- If outdoor lighting is to be provided around the site, it must be shown on the plan. If external lighting is proposed a lighting plan (shown in foot candles) is required to ensure that the outdoor lighting does not project onto abutting lands.
- The flare setback should be located within the fenced area of the site.
- The access to the molock will conflict with the parking space.
- The swale along the north side of the access road must be defined and ensure that drainage from the site and future road allowance does not negatively impact the existing 300 mm dia. entrance culverts to the west of the site.

- That there is to be only one water meter for the property, with a backflow device. The water service can be extended from the main building to the second building after the meter and backflow.

A letter outlining these concerns and other minor comments has been sent to the applicant (See Appendix B). Staff feel these concerns can be addressed.

As was expressed in Report E25-2009, staff has concerns as to the suitability of the proposed site for a biogas power generation facility given the proximity of the residential uses on both Arthur and High Streets. Given these concerns, the Township requests that the Ministry of the Environment review the suitability of the location for such a facility. Such a review should include reference to MOE industrial separation distance guidelines. If mitigation is then necessary, the first form of mitigation that should be considered is avoidance, being that the facility is located to avoid the impacts.

Notably, the information submitted to the Township and for public review states that there will be no adverse impacts (outside of acceptable levels) associated with the use on surrounding properties in terms of odour, noise, air quality etc., these assertions are only as effective as implementation and enforcement. Therefore, it is recommended that any approvals have standards for such items that must be met or exceeded, and that these approvals come with enforcement procedures for non-compliance, especially if it is a repetitive issue or for a prolonged period of time.

The reports and drawings note that the fertilizer material will be disposed of properly and no outdoor storage is proposed. It is important that the Ministry ensure that the fertilizer material is not stored on site, (beyond what is proposed within the buildings), that there be no outdoor storage of the material, and that the fertilizer removed from the site is "disposed" of in an appropriate manner.

To ensure that the Township and the community understand the decision made by the Ministry, it is recommended that the Ministry post on the internet their proposed decision in regard to the facility, along with response to public comments and an explanation of how the comments were addressed.

The Green Energy Act and Regulations have significantly changed the role of the municipality insofar as green energy projects are involved. The public needs to be aware that approvals rest almost completely at the Provincial level and that the municipality has limited role as a commenting agency. As such the community must make their comments known to the Province.

CONCLUSION

Staff recommends that the following comments be sent to the Ministry in regard to the Bio-En application, specifically that the Ministry:

- require the applicant to address the servicing comments raised by the Township as attached in Appendix "B" to Report E 27-2010
- review the suitability of the location for such a facility which should include reference to MOE industrial separation distance guidelines;
- post on the internet:
 - comments raised and how the comments have been addressed, and
 - the proposed decision and operational standards for public comment;

- set maximum noise, air and odour standards for the operation;
- ensures that none of the fertilizer by-product is stored outdoors, does not remain on site, and that the material is disposed of appropriately; and
- set detailed regulations for enforcement of noise, odour, and air standards, and implications for non-compliance for the above noted standards both for repetitive and prolonged non-compliance.

FINANCIAL IMPLICATIONS

None.

OTHER DEPARTMENT IMPLICATIONS

None.

LIST OF ATTACHMENTS

Appendix "A" – Location Map
Appendix "B" – Site Plan Comments
Appendix "C" – Municipal Form

Appendix A





THE TOWNSHIP OF
WOOLWICH

BOX 158, 24 CHURCH ST. W.
ELMIRA, ONTARIO N3B 2Z6
TEL. 519-669-1647 / 648 Ex. 519-664-2613
COUNCIL/CAO/CLERKS FAX 519-669-1820
PLANNING/ENGINEERING/BUILDING FAX 519-669-4669
FINANCE/RECREATION/FACILITIES FAX 519-669-9348

Appendix B

ENGINEERING & PLANNING SERVICES
PHONE: 669-6038
FAX: 669-4669
jvink@woolwich.ca

March 9, 2010

Email: soliver@twfp.com

The Walter Fedy Partnership
Attn: Scott Oliver
487 Riverbend Drive
Kitchener, Ontario
N2K 3S3

Dear Mr. Oliver:

RE: Bio-en – Site Plan Comments

Township staff have reviewed the revised drawings submitted for site plan approval, and have the following comments.

- The flare setback should be located within the fenced area of the site.
- If access to the Molock is required for emptying/unloading purposes, access would conflict with the parking space. Molock should be re-located so as to eliminate this concern.
- The plans do not show the location of any proposed servicing to distribute the heat from the operation to other properties. Explain where and how this will be addressed.
- The plan also does not show any above or below ground hydro line connections.
- Note the following on the plan:
 - o "That if the garbage facility is located outdoors, it shall be installed in accordance with the site plan, and if not shown on the plan, it will require an addendum to plan prior to construction. Any garbage facility shall be in accordance with the following:
 - o placed on a concrete pad, enclosed on all sides, including a gate, with a solid wood maintenance free fence, at a height, which is greater than the garbage bin and in the location shown on the Site Plan, or
 - o decorative molok(s) constructed in the location shown on the Site Plan for the garbage bin,but in either case shall not occupy or interfere with a required parking or loading space, and to maintain the facility in an acceptable state for the life of the development"
- If outdoor lighting is to be provided around the site, it must be shown on the plan. If external lighting is proposed a lighting plan (shown in foot candles) is required to ensure that the outdoor lighting does not project onto abutting lands.
- Provide the following note on the plan:
 - o "All lighting is to be directed downward or shielded so as not to project beyond the Owner's land, nor to cause a glare that would impact adjacent properties or passing traffic."
- Any proposed signage should be shown on the site plan. Signage shall be in accordance with the sign by-law.
- The waste 'fertilizer' material must be removed from the site and disposed of appropriately. No on site storage outside of what is shown in the buildings as part of the proposed plan is permitted.

Engineering has reviewed the documents noted above and provide the following comments:

1. The storm water management report is satisfactory.
2. Provide a sign indicating private access road at the property line with Martins Lane (at sanitary MH2A).
3. The reports identify that the SWM facility water storage volume will be used as part of the process water for the property as well as being used as a fire reservoir. Utilizing a SWM facility as a fire reservoir is problematic at the best of times and with the SWM storage volumes competing with additional water uses, staff does not support the SWM facility being used as a fire reservoir. Also identified as a concern with the design is the location of the draft pipe connection with respect to an 8.9 metre vertical draft elevation. Therefore a water tight fire reservoir storage tank is required on the property with a draft pipe connection, all to the full satisfaction of the Township Fire Chief.
4. Drawing C3-1 requires a current revision date.
5. Slopes steeper than 3:1 are to be vegetated with low maintenance ground cover.
6. Define the swale along the north side of the access road and ensure that drainage from the site and future road allowance does not negatively impact the existing 300 mm dia. entrance culverts to the west of the site.
7. There is to be one water meter for the property with a backflow devise. The water service can be extended from the main building to the second building after the meter and backflow. The backflow devise is to be in accordance with CSA B64.10-07 / B64.10.1-07.
8. The proposed access road / driveway, sanitary sewer and watermain which traverse a small portion of the Township's land, which abuts the westerly lot line with the subject lands, will be the responsibility of the owner of the subject lands to maintain.
9. The proposed site servicing connections to existing services identified on the plan are not owned or maintained by the Township. The developer is to provide proof of easement, in their favour, over the existing sanitary and water services prior to the site being permitted to connect to the existing private services.
10. The existing services the site is proposed to connect to may be sufficient for the purpose of the proposed site but would not be for further development. Please note that further development of the remaining lands including adjacent lands to the south will require upsizing of the existing sanitary, water and storm systems.

Township Building Division and Fire Department have no additional comments.

Additional comments are anticipated from Waterloo North Hydro and the GRCA. Once all the comments are received please revise the drawings as required and resubmit plans for review. If you have any questions or comments, please contact me at 519-669-6038.

The above comments are technical in nature as they relate to site plan elements, however, the Township will be providing additional comments to the Ministry through a report to Council. This report will note other concerns raised in previous comments, in addition to the site plan comments. A copy of this report will be made available to you and your clients prior to presentation to Council.

ENGINEERING & PLANNING SERVICES

PHONE: 669-6038

FAX: 669-4669

jvink@woolwich.ca

Yours truly,

A handwritten signature in black ink, appearing to read 'Jeremy Vink', with a large loop at the end.

Jeremy Vink MCIP RPP
Senior Planner

c.c Earl Brubacher, BioEn, email: EarlB@marbro.com

**PART A: TO BE COMPLETED BY THE APPLICANT BEFORE SUBMITTING TO
 MUNICIPALITY OR LOCAL AUTHORITY**
Section 1 - Project Description

1.1 - Renewable Energy Project					
Project Name (Project identifier to be used as a reference in correspondence)					
Woolwich Bio-En Inc.					
Project Location					
Same as Applicant Physical Address? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If no, please provide site address information below)					
Civic Address- Street information (includes street number, name, type and direction)					Unit Identifier (i.e. apartment number)
40 Martin's Lane					
Survey Address (Not required if Street Information is provided)					
Lot and Conc.: used to indicate location within a subdivided township and consists of a lot number and a concession number.			Part and Reference: used to indicate location within unorganized territory, and consists of a part and a reference plan number indicating the location within that plan. Attach copy of the plan.		
Lot	Conc.	Part	Reference Plan		
18		9	58R-14363		
Location Information (includes any additional information to clarify physical location)(e.g. municipality, ward/ township)					
Elmira					
Geo Reference (e.g. southwest corner of property)					
Map Datum	Zone	Accuracy Estimate	Geo Referencing Method	UTM Easting	UTM Northing
NAD 83	17	10-20 m	Digital Map	536286.93	4827949.57
Project Phasing (outline construction, operation and decommissioning activities)					
See note 1 attached					
1.2 - Environmental Context					
Describe any negative environmental effects that may result from engaging in the project (consider construction, operation and decommissioning activities.)					
See note 2 attached					
Propose early avoidance/prevention/mitigation concepts and measures.					
See note 3 attached					

1.3 - Renewable Energy Generation Facility

Type of Facility / Operation (select all that apply & complete all appropriate sections)

<input type="checkbox"/>	Wind Facility (Land Based)	<input type="checkbox"/>	Biofuel Facility
<input type="checkbox"/>	Wind Facility (Off-Shore)	<input type="checkbox"/>	Solar Photo Voltaic Facility
<input checked="" type="checkbox"/>	Biogas Facility (Anaerobic Digesters)	<input type="checkbox"/>	Other Describe :
<input type="checkbox"/>	Biomass Facility (Thermal Treatment)	<input checked="" type="checkbox"/>	Class (if applicable) : 3

Name Plate Capacity	Expected Generation	Service Area	Total Area of Site (hectares)
2.85 MW	2.85 MW	Elmira	1.4

Provide a description of the facilities equipment or technology that will be used to convert the renewable energy source or any other energy source to electricity.

See note 4 attached

1.4 - Renewable Energy Generation Activities

Describe the activities that will be engaged in as part of the renewable energy project

See note 5 attached

Section 2 - Supporting Documents

2.1 - Requirement	Name of Draft documents distributed for consultation	Date available to Municipal or Local Authority Contact
DRAFT Project Description Report	Draft Project Description Report	November 30, 2009
DRAFT Design and Operations Report		will be submitted
DRAFT Construction Plan Report		60 days prior to
DRAFT Decommissioning Plan Report		second public meeting
List of other Documents		

Location where written draft reports can be obtained for public inspection (physical location for viewing and the applicants project website if one is available):

Section 3 – Applicant Address and Contact Information

3.1 - Applicant Information (Owner of project/facility)		Business Identification Number		
Applicant Name (legal name of individual or organization as evidenced by legal documents)		855008199		
Woolwich Bio-En Inc.				
Business Name (the name under which the entity is operating or trading - also referred to as trade name)		<input checked="" type="checkbox"/> same as Applicant Name		
Woolwich Bio-En Inc.				
Civic Address- Street information (includes street number, name, type and direction)		Unit Identifier (i.e. apartment number)		
4 Arthur Street North				
Survey Address (Not required if Street Information is provided)				
Lot and Conc.: used to indicate location within a subdivided township and consists of a lot number and a concession number.		Part and Reference: used to indicate location within an unsubdivided township or unsurveyed territory, and consists of a part and a reference plan number indicating the location within that plan. Attach copy of the plan.		
Lot	Conc.	Part	Reference Plan	
Municipality	County/District	Province/State	Country	Postal Code
Elmira		ON	Canada	N3B 3A2

PART B: TO BE COMPLETED BY THE MUNICIPALITY OR LOCAL AUTHORITY

Section 4 - Municipal or Local Authority Contact Information (check the one that applies)

Local Municipality (include each local municipality in which project location is situated) <input type="checkbox"/> Yes <input type="checkbox"/> No					
Name of Municipality <i>Township of Cumbria</i>	Address <i>24 Clarkson St. W</i>	Phone <i>519-669-6038</i>	Clerk's Name <i>Christine Brughton</i>	Clerk's Phone/Fax	E-Mail Address
Upper Tier Municipality (include each upper tier municipality in which project location is situated) <input type="checkbox"/> Yes <input type="checkbox"/> No					
Name of Municipality	Address	Phone	Clerk's name	Clerk's Phone/Fax	E-Mail Address
Local roads area (include each local roads area in which project location is situated) <input type="checkbox"/> Yes <input type="checkbox"/> No					
Name of local roads board	Address	Phone	Secretary-treasurer's Name	Secretary-treasurer's Phone/Fax	E-Mail Address
Board Area (include each board area in which project location is situated) <input type="checkbox"/> Yes <input type="checkbox"/> No					
Name of Local Service Board	Address	Phone	Secretary's name	Secretary's Phone/Fax	E-Mail Address

Section 5: Consultation Requirement

5.1 - Project Location:
Provide comment on the project location with respect to infrastructure and servicing. <i>• Servicing subject to addressing issues noted in attached.</i>
5.2 - Project Roads:
Provide comment on the proposed project's plans respecting proposed road access. <i>• Access off of Martin's Lane.</i>
Identify any issues and provide recommendations with respect to road access <i>N/A</i>
Provide comment on any proposed Traffic Management Plans <i>N/A.</i>
Identify any issues and provide recommendations with respect to the proposed Traffic Management Plans <i>N/A</i>

5.3 – Municipal or Local authority Service Connections

Provide comment on the proposed project plans related to the location of and type of municipal service connections, other than roads.

• See attached (insufficient space)

Identify any issues and provide recommendations with respect to the type of municipal service connections, other than roads.

• water pressure not sufficient for fire fighting purposes
must provide water tank to satisfaction of fire chief. (see attached)

5.4 – Facility Other

Identify any issues and recommendations with respect to the proposed landscaping design for the facility

• satisfactory

Provide comment on the proposed project plans for emergency management procedures / safety protocols.

• satisfactory

Identify any issues and recommendations with respect to the proposed emergency management procedures / safety protocols.

• satisfactory

Identify any issues and recommendations with respect to any Easements or Restrictive Covenants associated with the Project Location

• N/A

5.5 Project Construction

Identify any issues and recommendations with respect to the proposed rehabilitation of any temporary disturbance areas and any municipal or local authority infrastructure that could be damaged during construction.

• N/A

Identify any issues and recommendations with respect to the proposed location of fire hydrants and connections to existing drainage, water works and sanitary sewers

• See comments attached.

Identify any issues and recommendations with respect to the proposed location of buried kiosks and above-grade utility vaults

• applicant must consult with Hydro and utility providers
(gas, phone)

Identify any issues and recommendations with respect to the proposed location of existing and proposed gas and electricity lines and connections

N/A

Provide comment on the proposed project plans with respect to Building Code permits and licenses.

• must note building permit application to verify compliance with Code.

Identify any issues and recommendations related to the identification of any significant natural features and water bodies within the municipality or territory.

• None in close proximity

Identify any issues and recommendations related to the identification any archaeological resource or heritage resource.

None

Note 1

Woolwich Bio-En anticipates that construction will commence in the fall of 2010, finishing in the spring of 2011. The Facility will be commissioned upon completion of construction, biogas production will be ramped up during this commissioning period, full operation is expected in early summer of 2011. The Facility will be operational for a period of at least 20 years, consistent with the OPA Feed-in Tariff program. The project will be evaluated after 20 years to determine if the Facility will continue to produce electricity. The Facility will be decommissioned at the end of the project life.

Note 2

During the construction phase of the project, there is a potential for siltation and erosion at the site. During operation of the Facility, there may be potential emissions of contaminants to the air, odour and noise to the environment, these potential effects will be mitigated and will comply with applicable MOE health and nuisance-based criteria. There is a potential for leaks or spills to the ground and soil. There is also the potential for litter to be generated at the site.

Further detail is provided in the project description report.

Note 3

This Facility has been designed to mitigate and minimize potential impacts to the environment. The following measures have been included in the design of the Facility:

- During the construction of this Facility, fencing will be placed around the construction site as there may be a potential for siltation or erosion of the site.
- In the event of engine malfunction or maintenance, or if excess biogas is produced, the Facility will be equipped with a back-up flare capable of combusting 100 percent of the biogas generated.
- There is the potential for emissions of combustion products to the environment from the cogeneration units and the back-up flare. These sources of air emissions have been designed to promote dispersion. The Facility will comply with applicable with MOE Point of Impingement criteria under O. Reg. 419.
- Potential emissions of odour generated from the incoming waste or from the operations of the digestion equipment will also be mitigated. The Facility will install a membrane over the digesters with a permeation of less than $200 \text{ cm}^3/\text{m}^2/\text{day}/\text{bar}$ which exceeds the permeation limit of $500 \text{ cm}^3/\text{m}^2/\text{day}/\text{bar}$ recommended in O. Reg. 359/09. In addition, all waste will be unloaded indoors and the air from the buildings will be treated with a

biofilter that will reduce potential odour impacts. The Facility is designed to meet the MOE's Guideline of less than 1 odour unit (OU) at a sensitive receptor.

- The Facility will have potential emissions of noise to the environment. The main sources of noise will be the cogeneration units and the truck traffic. The cogeneration units will be equipped with silencers to mitigate the emissions of noise. The Facility has been designed to mitigate potential impacts resulting from noise emissions and will comply applicable with MOE noise criteria in Section 9 of the Environmental Protection Act.
- The tanks at the Facility are being designed to 150 percent of the required design criteria in order minimize the risk of leaks, spills, and contamination to the ground water and soil.
- The Facility is located on a parcel of land that is currently zoned for industrial land use, therefore, it is not expected that there will be impacts to any environmentally or culturally sensitive areas.
- The Facility will be equipped with a control system including alarms and pressure relief valves to ensure the safe operation of the Facility and to minimize the risk of process disruption.
- The Facility will be fenced and locked to ensure that trespassers do not enter the site and tamper with equipment.
- The Facility will be unloading incoming organic material indoors to minimize the generation of litter at the Facility. In order to further reduce potential litter, all hauling trucks will remain tarped until the material is unloaded inside the building.

The Facility has been designed to mitigate potential environmental impacts and will comply applicable with MOE criteria.

Note 4

The proposed Facility will include two buildings, operations and processing. The operations building may receive organic materials, may provide storage for the organics and will house the reciprocating engines. The process building may receive organic materials and will contain equipment to prepare and blend the organic material prior to being fed into the anaerobic digestion equipment.

In addition, the Facility will utilize three pre-treatment tanks and two digester tanks to generate biogas. The biogas will be combusted in reciprocating engines to produce renewable heat and power. The Facility will be equipped with a back-up flare to process biogas when required (engine maintenance).

Note 5

The proposed Facility will receive various organic materials including:

- Organics from food processing facilities, grocery stores, food distribution companies, and milling facilities
- Livestock manure
- Glycerol
- Kitchen waste
- Fats, oil, and grease (FOG)
- Renewable energy crops (i.e., corn silage)
- Organic solids skimmed from dissolved air flotation (DAF) tanks

These materials will be pre-processed and mixed as required and will be fed to the pre-treatment tanks to under-go a pre-treatment phase, the materials are further processed in digester tanks to produce biogas. The biogas generated will be combusted in two reciprocating engines to produce renewable heat and power.