



Date: Thursday, April 07, 2022

From: Cynthia Fletcher, CAO Township of Georgian Bluffs and
Patty Sinnamon, CAO/Clerk Township of Chatsworth

Subject: Biogas Feasibility Study – Special Joint Council Meeting

Report: CAO2022-002

Recommendation

That, Report OPS2022-09 Biogas Feasibility Study and the study report titled Source Separated Organics Availability, Digestion Technologies, and Beneficial Use of Biogas Study, attached to this report as Appendix “A”, be received for information.

Background

The BioGRID Joint Board of Management met on March 18, 2022 to consider Report OPS2022-09 Biogas Feasibility Study (Appendix A). At said meeting, the Board directed staff to negotiate a contract for the operation of the BioGRID assets for a period of up to 5 years, with an option to renew the contract at the discretion of the Board. The contract will be developed with the support of legal Counsel and include appropriate clauses to protect the Townships, should the direction for the BioGRID change in the future. The endorsement of the operational contract falls within the mandate of the Joint Board.

At the same meeting, the Board deferred the recommendations related to capital investment outlined below and directed staff to convene a Special Joint Council meeting to consider the matter.

That, the study report titled Source Separated Organics Availability, Digestion Technologies, and Beneficial Use of Biogas Study, attached to this report as Appendix “A”, be received; and

That the information contained within the appended study report be referenced for the review of requirements to support Option 1B of the report; and

That the information contained within the appended study form the basis of future planning purposes for the Biodigester

Considerations for the future of the BioGRID assets

- The 2 Townships have BioGRID assets that need to be better optimized. The status quo scenario does not take advantage of revenue potential or achieve the required daily biogas generation and associated revenues of Feed-in-Tariff (FIT) contract entered into in 2012.
- Legislation, anticipated in the next 2-3 years, will require municipalities to divert organic waste from landfill
- The assets will support local efforts in waste diversion and there is the opportunity to support waste diversion requirements of others: broader range of municipalities, private industry, other public sector organizations
- Potential feedstock providers have been identified. Most are waiting for the Township Councils to give direction regarding the future of the assets.
- The operation provides opportunity to support research/development and climate mitigation efforts
- The Townships have the assets and are much further ahead than other municipalities in meeting waste diversion requirements

The recommendation to proceed with Option 1 B of the feasibility study is intended to move from status quo to optimize the assets and demonstrate their value to the Townships. The required capital investment to reach maximum potential for the assets can occur incrementally. The intent is to make basic capital improvements to support the ability to increase the volume of feedstock and extend the operating hours.

There are three bottlenecks requiring capital investment:

- 1) Site access roads: The access roads limit the size of waste supply vehicles that can deliver to the facility, which excludes potential high volume waste suppliers or increases costs for multiple trips with smaller vehicles.

- 2) Storage Area and Loading/Unloading Equipment. With space re-configured on site and ease of loading/unloading, the BioGRID operation can provide more planning certainty for feedstock suppliers and more efficient processing on-site.
- 3) Biogas flare: The installation of this new equipment will allow for better management of feedstock and associated biogas production (i.e., excess biogas can be burned off safely). The lack of this equipment limits the volume of feedstock that can be accepted and processed on site.

To implement the changes to optimize the facility operations, the Environmental Compliance Approval (ECA) will also need to be updated.

Financial Impact

There are no financial implications, at this time.

Costs:

Results of negotiation with the potential service provider will be presented to the BioGRID Joint Board of Management and subsequently the Township Councils, at future meetings.

Costs to support Option 1 B of the report will be refined through detailed design and presented at future meeting(s). The infrastructure investments are intended to be incremental and will be approved at future BioGRID Joint Board and Council meetings. The order of magnitude projected costs (+/- 50%) to implement the changes outlined in Option 1B is \$700,000 (2021 dollars).

Costs to amend the Environmental Compliance Approval (ECA) will be refined and presented at a future meeting. Overall ECA costs will be determined by the requirements and based on the operational and infrastructure changes.

Potential offsetting revenues:

Revenue opportunities with feedstock stakeholders and potential partners will be pursued and details presented at future meetings

Funding opportunities for capital improvements will be pursued and details presented at future meetings.

Strategic Priorities

Demonstrate and Enhance Environmental Stewardship

The Township of Georgian Bluffs strives to become a leader in Environmental Stewardship by reducing energy consumption, reducing solid waste, increasing diversion rates of recyclable materials, and lessening the environmental impact of existing and future infrastructure through innovation and upgrading.

- 3.1 Continually strive to reduce environmental footprint by reducing energy consumption and greenhouse gas emissions to minimize climate change.
 - (a) Investigate and pursue opportunities to improve the Biodigester to ensure long term sustainability including the acceptance of source separated organics and a reduction in operating costs to attract septage waste.

Conclusion

The Province of Ontario is creating legislation which aims to divert 100% of organic material from landfills. This shift means municipalities need to look at infrastructure and operating programs that divert organic material from landfill.

The fact that the Townships of Georgian Bluffs and Chatsworth already own/operate BioGRID assets, positions us well to meet our regulatory requirements and realize benefits from other municipalities/businesses who will be seeking and paying for the services of an Organic Processing facility, rather than building their own.

The facility has potential to support the diversion of Food and Organic Waste (FOW) from landfill if the operating model was changed. The facility needs some upgrades/modifications and is currently operating below maximum potential.

The Joint Board has been exploring options for the assets. The Source Separated Organics (SSO), Digester Technology and Biogas utilization Feasibility Study shows the Townships can explore further steps to optimize its BioGRID facility and reduce revenue loss with the implementation of project Scenario 1B.

There is great potential for partnerships with organics suppliers, project developers, technology-providers, gas utility and local municipalities to further develop and assess other project scenarios and refine the business model.

Next Steps:

- Apply for funding from federal, provincial funding programs for next stages of project development including conceptual/ detailed design, engineering, and construction.
- Explore partnerships with potential organic feedstock suppliers and gas utilities.
- Engage and consult with regulatory agencies for necessary approvals.
- Explore partnerships with potential project financiers and developers for long term financing options and project development.

Staff will be reporting to the Joint BioGRID Board and respective Councils as required.

Respectfully Submitted:

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CAO/Clerk, Township of Chatsworth

Report Approval Details

Document Title:	Biogas Feasibility Study - Special Joint Council Meeting.docx
Attachments:	
Final Approval Date:	Mar 31, 2022

This report and all of its attachments were approved and signed as outlined below:

Cynthia Fletcher, Chief Administrative Officer

Patty Sinnamon, Chief Administrative Officer/Clerk – Township of Chatsworth