

## REPORT TO COUNTY COUNCIL

# Woodstock WWTP Biogas Utilization Project Funding Program Agreement

**To:** Warden and Members of County Council

**From:** Director of Public Works

## RECOMMENDATION

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1. That County Council authorize staff to enter into an agreement with the Independent Electricity System Operator, Industrial Energy Efficiency Program, to support the implementation of the Woodstock Wastewater Treatments Plant's Biogas Utilization Project and authorize the Chief Administrative Officer and Director of Public Works to sign all documents related thereto.

## REPORT HIGHLIGHTS

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- The Independent Electricity System Operator (IESO)'s, Industrial Energy Efficiency Program (IEEP), provides incentives of up to 75% of eligible costs for Facilities classified as an Industrial process in the province of Ontario and is expected to achieve a minimum electrical savings of 15% using commercially available technologies.
- The Woodstock Wastewater Treatment Plant (WWTP) Biogas Utilization Project meets the requirements of this funding program and has a budget of \$3.1 million planned for 2025/2026.
- The project is expected to offset 40% of grid electricity consumption and 39% of required heat energy at the Woodstock WWTP, resulting in an estimated annual energy cost savings of \$285,000. Additionally, the project will utilize 613,000 m<sup>3</sup> (91%) of the estimated biogas production on site of 672,000 m<sup>3</sup>, of which 544,000 m<sup>3</sup> (81%) is currently being flared and wasted.
- Entering into an agreement through the IESO's IEEP program will secure \$400,000 in incentives, as outlined in the County's proposal to the IESO. This incentive will be paid out upon project completion and verification that the proposed annual electrical saving of 1,370 MWh have been achieved.

## IMPLEMENTATION POINTS

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Following approval of this report and adoption of the recommendation, staff will proceed with executing the IEEP agreement, which is required prior to awarding contracts that include eligible expenses.

Upon completion of the construction phase of the project, staff will commence with the measurement and verification plan to validate system performance in order to collect the associated incentive value.

### Financial Impact

There are no financial impacts related to the approval of this report for the current year. The Woodstock WWTP Biogas Utilization Project is included in the approved 2025 Business Plan and Budget with \$600,000 allocated in 2025 to initiate early equipment procurement for components with long lead times and \$2.5 million allocated for bulk construction in 2026. Coupled with costs incurred to the end of 2024 of \$470,000, the project's total budget is \$3.57 million. The anticipated \$400,000 incentive, pre-approved as part of the proposal request to the IESO under this IEEP program, will improve the project's lifecycle cost, and reduce the simple payback period to within 17 years. If the IEEP funding agreement is approved, the resulting incentives would be received after construction has been completed and actual system performance has been verified.

The 2025 approved budget indicated the debenture requirement for this project would be nearly \$3.1 million. Receipt of the incentives would reduce the debenture requirement to just under \$2.7 million. Once approved, this would be reflected in future business plan and budget documents.

### Communications

As part of this funding agreement, staff will communicate with IESO at key milestones outlined in the agreement to ensure the County's obligations are being met. Information about the Woodstock WWTP Biogas Utilization Project is ongoing through general communications and at [www.speakup.oxfordcounty.ca/woodstock-wwtp-biogas](http://www.speakup.oxfordcounty.ca/woodstock-wwtp-biogas).




## 2023-2026 STRATEGIC PLAN

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Oxford County Council approved the [2023-2026 Strategic Plan](#) on September 13, 2023. The Plan outlines 39 goals across three strategic pillars that advance Council's vision of "Working together for a healthy, vibrant, and sustainable future." These pillars are: (1) *Promoting community vitality*, (2) *Enhancing environmental sustainability*, and (3) *Fostering progressive government*.

The recommendation in this report supports the following strategic goals.

## Strategic Plan Pillars and Goals

PILLAR 1	PILLAR 2	PILLAR 3
		
Promoting community vitality	Enhancing environmental sustainability	Fostering progressive government
	Goal 2.1 – Climate change mitigation and adaptation	Goal 3.4 – Financial sustainability

See: [Oxford County 2023-2026 Strategic Plan](#)

## DISCUSSION

### Background

Oxford County is planning to upgrade the Woodstock WWTP as part of its [Renewable Energy Action Plan 2022-2032 \(REAP-22\)](#) to support its [100% Renewable Energy Plan](#). The project involves implementing a Combined Heat and Power (CHP) system to convert biogas into heat and electricity, reducing reliance on non-renewable energy sources and reducing overall operational costs.

Currently, approximately 19% of the biogas produced is used for heating (792,000 ekWh per year), while the remaining 81% (representing a potential 3.4 million ekWh per year) is simply burned off through industrial flaring, providing no benefit. The upgrade will optimize utilization to 91% of the biogas produced, which translates into an increase in renewable energy use to 3.2 million ekWh per year.

This increased renewable energy utilization will reduce purchased electricity and natural gas resulting in an average annual reduction in energy costs by approximately \$285,000 per year for the initial 20-years. Additionally, GHG emissions will be reduced by 58%, equivalent to a reduction of 239 tCO<sub>2</sub>e per year.

The Woodstock WWTP Biogas Energy Project was initiated through a competitive procurement process, with J.L. Richards and Associates completing a Preliminary Engineering Study in 2022. The study identified a (CHP) system as the best method for utilizing excess biogas generated from wastewater sludge treatment, producing 100% renewable electricity in alignment with Hydro One's net metering program.

In 2023, the project entered the detailed design phase, which is now complete. The County applied to the Ministry of the Environment, Conservation and Parks (MECP) in April 2025 for a Renewable Energy Approval (REA), following consultations with the public, Indigenous communities, and agencies. The REA is expected by December 2025, based on an eight-month review timeframe estimated by MECP.

The project's design is now ready for tender, pending receipt of the REA and approval of this IEEP application. To expedite the schedule, staff are pre-selecting long-lead-time equipment (CHP Unit, High Voltage Grounding Transformer, and Switchgear) with anticipated award of this equipment in Q3 of 2025. Procurement of the pre-selected equipment will be carefully phased and aligned with the project's approval status and milestones, minimizing financial commitment risk. In addition to securing costs and delivery for this pre-selected equipment, this approach enables early procurement of shop drawings and materials prior to the construction contract being awarded in January 2026 and reducing overall implementation by 6 months with project completion anticipated by late 2026.

## **Comments**

The IEEP, offered by Save on Energy, provides financial incentives to industrial facilities in Ontario to improve energy efficiency and reduce electricity consumption in order to benefit Ontario's electrical system by reducing demand and optimizing required additional generation infrastructure as well as lowering energy bills for participants. The program supports projects that optimize industrial processes using commercially available technologies.

The Woodstock WWTP Biogas Utilization Project meets the requirements of the IEEP program, as the Facility is classified as an Industrial process in the province of Ontario and is expected to achieve a minimum electrical savings of 15% using commercially available technologies. Staff has received pre-approval of \$400,000 in potential incentives based on final system performance. If the full funding is approved, the project payback falls to within 17 years, compared with 20 years without the funding. The system is expected to operate for 20 years, resulting in a positive payback for the County within the initial system life. However, through planned component overhauls the lifecycle is expected to be extended to 40 years before full replacement would be required, resulting in additional ongoing financial benefits beyond the initial term.

The agreement will be effective upon signing after Council approval and will be in effect until five years after the in-service date of the CHP system. During the first year of operation, the County will submit measurement and verification reports to IESO to validate actual energy savings performance. Based on these reports and actual system performance, the County would receive 100% of the incentive funding if actual electricity savings are greater than 75% of the target savings (1,370 MWh as identified in pre-approval) in the first year. If actual savings are between 50% and 75%, 50% of the incentive will be received, and if actual electricity savings are less than 50%, then no incentive funds will be received. At this stage of the project, staff are confident that there is a high probability of achieving the required electricity savings to receive the maximum incentive. For the following four years, the County will continue to report annual performance to verify the system continues to function as designed.

## CONCLUSIONS

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Based on the funding opportunities available through the IEEP program, and the County's goal to maximize renewable energy resources and reduce operating costs in alignment with the 2023-2026 Strategic Plan, staff recommend entering into an agreement with this program to further improve the project's positive financial metrics and payback.

## SIGNATURES

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### Report author:

Original signed by

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Nathan E. Gerber, A.Sc.T., CEM, CMVP  
Coordinator of Energy Management

### Departmental approval:

Original signed by

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Melissa Abercrombie, P.Eng., PMP  
Director of Public Works

### Approved for submission:

Original signed by

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Benjamin R. Addley  
Chief Administrative Officer