



REPORT

Council

Meeting Date: January 30, 2023

FROM: Oakville Transit

DATE: January 17, 2023

SUBJECT: **Oakville Transit – The provision of Energy Infrastructure and Energy Services Agreements – RFP-48-2021**

LOCATION: Town-wide

WARD: Town-wide

Page 1

RECOMMENDATION:

1. That the Town enter into an Energy Infrastructure Contract (EIC) over a twenty (20) year period with the successful proponent of RFP-48-2021 for the provision of Energy Infrastructure to Oakville Transit for the electrification of the transit fleet.
2. That the Town enter into an Energy Services Agreement (ESA) for a term of twenty (20) years with the successful proponent of RFP-48-2021 for the Provision of Energy Services for Oakville Transit for the electrification of the transit fleet.
3. That the Town enter into a design-build agreement with the successful proponent of RFP-48-2021 to expand the existing transit facility and accommodate the energy infrastructure for electrifying the transit fleet.
4. That the EIC, ESA, and design-build agreements be executed in accordance with By-law 2013-057.
5. That staff be directed to continue exploring funding opportunities and evaluate the potential buy-out options outlined in the agreements.

KEY FACTS:

The following are key points for consideration with respect to this report:

- The town has been active in implementing climate change policies and programs since 2005 and has taken significant steps to reduce its impact on the environment.
- At the June 24, 2019 meeting, Council unanimously passed a motion declaring a climate emergency in Oakville. The declaration establishes the

importance of accelerating climate change action and signals to the community the need to take action now.

- Given Council's strong commitment to reducing its impact on the environment, staff recommended utilizing funding opportunities to begin greening its transit fleet at an accelerated rate.
- Oakville Transit confirmed funding, from the Investing in Canada Infrastructure Program (ICIP) – Public Transit Stream, to support transition to Battery Electric Buses (BEB).
- Prior to receiving delivery of BEBs, Oakville Transit requires supply and installation, as well as the on-going operation and maintenance, of energy infrastructure.
- Oakville Transit has been seeking highly skilled and qualified public agencies with expertise in energy delivery, storage, redundancy and charging to support Oakville Transit's transition to battery electric transit vehicles.
- The implementation and operation of the energy infrastructure to charge the BEB fleet will require the Town to enter into long-term capital leases and long-term service agreements.
- Town staff negotiated a capital lease and energy services agreement through RFP-48-2021 that satisfy all requirements put forward by the Town.
- In negotiating the capital lease and energy services agreements, staff are recommending the existing Oakville Transit facility be expanded to accommodate energy infrastructure and provide additional bus lanes for future transit fleet.
- The capital lease and energy services agreements achieve two of the three phases of energy infrastructure implementation and provides the ability to add charging infrastructure to the transit garage facility in the future.
- Funding for the capital lease, energy services agreement, and facility expansion may involve a combination of grant (ZETF), capital reserve, development charges (DCs), and debt financing.

BACKGROUND:

Oakville Transit buses travel more than six million kilometers annually. Diesel fuel is the single largest source of greenhouse gas (GHG) emissions from the town's operations.

Transitioning to a zero emission propulsion system would have a significant positive impact on the town's corporate goal to reduce GHG emissions 80% by 2050 from 2014 levels. This transition not only supports Oakville Town Council's unanimous Climate Change Emergency declaration, but also the town's Environmental Sustainability Strategy, Climate Change Strategy, Community Energy Strategy and Sustainable Green Fleet Procurement.

Battery electric buses are a green technology with the potential for zero emissions from energy generation through to bus operations.

Electric buses have no tailpipe emissions and, in Ontario, generation of electricity for overnight charging is virtually free of GHG emissions. The absence of tailpipe emissions also means that bus idling would no longer be an environmental concern. As well, the operation of a BEB virtually eliminates the noise associated with the operation of a bus.

In 2020, the Town of Oakville announced a seven-year plan to purchase 60 electric buses. The planned electrification of Oakville Transit's fleet is a long-term, multi-year strategy that will require both the energy and infrastructure to support the initial ICIP funded BEBs and the projected energy and capacity requirements for full fleet electrification.

An Electric Bus Needs Assessment was completed in 2020

Oakville Transit completed a plan to identify charging infrastructure required to support integration of fully electric buses into its fleet. The study included a review of existing facility resources, required changes, and an assessment of on street requirements (range and on street charging). It also provided a comparative analysis of battery purchase and lease options that might be available from bus manufacturers. Discussions with utility companies were also a critical component of the assessment to determine what would be required to build, operate, and maintain the energy infrastructure for the bus facility.

The Electric Bus Needs Assessment also identified phasing milestones to electrify the transit facility. Phase 1 of electrification identified using excess energy capacity at Oakville Transit's garage (plug in chargers). Phase 2 identifies utilizing ICIP funding and will end when the funds from the program are depleted (facility upgrade and pantograph chargers). Phase 3 identifies continued BEB procurement and final facility upgrade (full garage electrification) which will require further funding outside of the current ICIP funded programs.

Purchase of Battery Electric Buses (BEBs) and Charging Infrastructure began in 2022

Oakville Transit began purchasing BEB's for specialized service in 2022 along with the required charging infrastructure as a result of the Electric Bus Needs Assessment. Approved funding from the Investing in Canada Infrastructure Program (ICIP) – Public Transit Stream will provide 73.33% of the costs for planned BEB's through to 2026.

The first battery electric buses began arriving in the Town at the beginning of 2023. These buses will be used specifically for care-A-van specialized services. Battery electric buses for conventional services are planned to be delivered by early 2024 with nearly half the fleet converted to fully electric over the next 5 years. In order for the town to continue its transition to electric buses beyond 2026, continued grant funding will be required past the current available ICIP funding.

Town staff released RFP-48-2021 as a way to accelerate the process of electrifying the Oakville Transit bus garage.

The Town released an RFP to find a proponent responsible for the provision, construction, operation, and maintenance of the charging infrastructure required to support Oakville Transit's BEB fleet up to Phase 2 of electrification as identified in the Electric Needs Bus Assessment. The infrastructure costs will be assumed by the successful proponent, who will enter into an Energy Infrastructure Contract (EIC) with the Town of Oakville. The EIC clearly provides the roles and responsibilities of the parties with respect to the energy infrastructure required to support BEB charging for Oakville Transit's conventional and specialized bus fleets.

By identifying a proponent to provide and install the infrastructure elements required to electrify the bus facility, the Town would not be responsible for the purchase and operation of the equipment. This provides the Town an ability to select a proponent that can fulfill the requirements in the RFP at the best price and least risk to the Town.

In addition to the EIC component of the RFP, staff asked that an Energy Service Agreement (ESA) be drafted as part of the RFP to outline the pricing for the provision, installation, ownership, operation, maintenance, and repair of the Energy Infrastructure. This has been requested as Oakville Transit's priorities are to have predictable and reliable energy services that meet BEB operational needs. Town staff requested to have the ESA pricing based on a combination of fixed monthly operating and maintenance fees.

COMMENT/OPTIONS:

A long-term capital lease and energy services agreement has the most potential to benefit the Town and significantly reduce operating risks as part of the energy infrastructure project.

Planning, construction, operation, and oversight of the electrification of the transit facility can be completed with services the Town is not currently able to provide on its own. External resources managing and operating the electric infrastructure will be held to strict compliance agreements when providing services to the Town over

the long-term contract to ensure risks to the Town of operating and maintaining the infrastructure are kept at a minimum.

By 2025, the Transit facility is expected to be a “Class A” energy customer.

Class A customers pay for energy based on their top five peak hours of energy use in Ontario. The electrification of the fleet will impact costs to the facility as it will now be exposed to Global Adjustment costs. Global Adjustment fees cover the cost of building new electricity infrastructure in the province. Through contract negotiations, Oakville Transit will eliminate all risks associated of Global Adjustment costs once the facility is designated as a Class A customer. The Energy Services Agreement (ESA) will ensure the operating of the electric infrastructure minimizes peak energy loads that determines the Global Adjustment fees.

The successful proponent will be responsible for provision, construction, operation, and maintenance of the energy infrastructure required to support Oakville Transit’s BEB fleet

The proponent will be responsible for providing Energy Services including the design, provision, installation, ownership, operation, maintenance, and repair of the Energy Infrastructure. All structural upgrades to support the charging infrastructure, such as supports for pantograph chargers, and building modifications to house the electric power stations, will be completed by the proponent and their contractors. Staff also negotiated buyout terms with the proponent to transfer ownership of assets should external funding opportunities become available to the Town of Oakville.

Negotiated through the RFP process, the proponent will ensure software associated with all charging infrastructure is upgraded and maintained to ensure proper operation. On-going operations and maintenance services of the Energy Infrastructure to ensure reliable operations will be provided and has been identified in the ESA. The proponent will also develop an operating and maintenance plan for each year during the term of the Energy Services Agreement which will maximize reliability of the services provided. In the event of a utility power outage, back-up power generation will be available on-site to provide continuous power the charging infrastructure.

The ESA provides a predictable and reliable forecast of energy services that meet BEB operational needs. Staff negotiated the ESA pricing based on a combination of fixed monthly fees, over a period of twenty (20) years; and with an option in favour

of the Town to extend the agreement, subject to price negotiations, on the same terms and conditions for an additional term of up to ten (10) years.

Staff negotiated a 50:50 revenue sharing model with the proponent for the sale of excess energy produced for the energy infrastructure

Through the analyses completed in the Electric Bus Needs Assessment, there will be times throughout the year when there will be excess energy stored at the Oakville Transit garage as a result of charging cycles. This excess energy is planned to be sold to the energy market with a 50:50 revenue sharing agreement between the Town and the proponent. The revenue generated by the infrastructure is planned to help pay down ESA monthly costs. As the energy infrastructure market continues to grow, there will be a growing requirement for more energy to be available in the market. This places the Town and the proponent in a favourable position to increase revenues and aligns incentives related to the sale of excess energy during the term of the ESA contract.

Through the negotiation of RFP-48-2021, expanding the transit facility is recommended as part of Phase 2 electrification

Electrification infrastructure is required to be housed indoors to increase its useful life. Capital and operating savings over the term of the energy infrastructure contracts will be realized as capital replacement requirements of energy infrastructure will be extended when comparing to the useful life of equipment that is kept outdoors and must be weather proofed. The space equivalent of two bus lanes will be required to house the electrification infrastructure that would fulfill Phases 2 and 3 of Oakville Transit's electrification project. In reviewing future fleet space requirements, staff identified that an additional two bus lanes will be required to accommodate fleet growth and future proof the transit garage to the year 2050. Staff are recommending the electrification equipment enclosure is built along with the additional two bus lanes as part of Phase 2 of electrification, as cost efficiencies can be realized by constructing both items (energy infrastructure housing and two bus lanes) at the same time.

Estimated Costs and Funding Sources

The 2021 capital budget included \$2.6 million to begin implementing and purchasing charging equipment with 73.33% funded through ICIP. As indicated earlier, a long-term capital lease and energy services agreement for the charging infrastructure has the most potential to benefit the town and significantly reduce operating risks. Capital leases are deemed to be ineligible for ICIP funding; as such, any remaining ICIP funding allocated for the purchase of the charging equipment will be redirected to the purchase of BEBs to ensure that the town takes full advantage of the funding.

The estimated costs and funding sources are described below. Given the timing for the preparation of the 2023 proposed budget, placeholders were added in the proposed 2023 capital forecast as staff were still negotiating the contract with the proponent. As such, staff are also recommending adjustments to the proposed 2023 capital forecast and operating impacts as indicated below and this has also been referred to the 2023 Budget Committee.

Energy Infrastructure Contract (EIC)

The capital lease payments for the EIC are estimated to be between \$1.9 million and \$5.0 million annually over a 20-year period. The estimated cost for 2023 is \$4.2 million and the total cost for 2023-2032 is \$45.8 million. The proposed 2023 capital budget includes \$0.7 million and the proposed 2023-2032 capital forecast includes a total of \$5.3 million. Staff has recommended to the 2023 Budget Committee that the proposed 2023 capital budget and forecast be amended for project 54212301 Capital Lease for Charging Infrastructure to budget \$4.2 million in 2023 and \$45.8 million over 2023-2032, funded from the capital reserve.

Staff are also pursuing grant funding opportunities, notably Zero Emission Transit Fund (ZETF). While capital lease payments are not eligible for ZETF funding, purchase and ownership of the equipment is eligible. As such, staff have also negotiated equipment buyout terms with the proponent.

The decision to lease or buy the equipment will depend on grant funding for which staff are currently in the process of applying. Should the Town be successful in obtaining grant funding, the Town can initiate the capital buyout option and purchase the equipment to establish ownership of the energy infrastructure. Any outstanding capital costs of owning the infrastructure would be required to be funded by the Town through debt financing. Should the Town be unsuccessful in obtaining additional grant funding, the Town will continue to lease the equipment from the proponent.

Energy Services Agreement (ESA)

The operating cost for the ESA is estimated to be between \$2.6 million and \$3.8 million annually over the next 20-year period starting in 2024. Staff have recommended to the 2023 Budget Committee that the 2024-2032 operating impacts for capital project 54212301 Capital Lease for Charging Infrastructure be amended to add \$2.6 million in 2024 and adjust the remaining years from 2025 to 2032 to reflect the negotiated operating cost for the ESA. Future operating budgets will be updated accordingly to also reflect adjustments for diesel savings, hydro costs, and transfers to the Transit equipment reserve for the difference in cost between diesel and electric vehicles for future replacement.

Facility Expansion

Staff are working to establish a typical construction contract arrangement with payments based on milestones, for the facility expansion. This would allow the Town to treat this expansion in a similar manner as other construction projects. The construction of the facility expansion with LEED Silver certification is currently estimated to be \$18 million. Staff recommended to the 2023 Budget Committee the 2023 capital budget be amended to add a new capital project for \$18 million for the facility expansion, to be funded through debt.

Staff are also pursuing grant funding opportunities, notably Zero Emission Transit Fund (ZETF), to assist in funding the facility expansion. As well, the growth-related portion of the facility expansion cost will be eligible for development charges. Should the town qualify for grant funding and determine the amount eligible for DC funding, staff will update Council and indicate the amount required to be debt financed.

Consistent with the town's practice, the operating budget will need to be adjusted to add a contribution to the Building Maintenance reserve for future replacement and maintenance.

CONCLUSION:

The town has been active in implementing climate change policies and programs since 2005 and has taken significant steps to reduce its impact on the environment.

Given Council's strong commitment to reducing its impact on the environment, staff are utilizing funding opportunities to support the transition of the existing diesel transit fleet to Battery Electric Buses (BEB). As a result, Oakville Transit requires the supply and installation, as well as the on-going operation and maintenance, of energy infrastructure.

Staff sought highly skilled and qualified public agencies with expertise in energy delivery, storage, redundancy, and charging to support Oakville Transit's transition to battery electric transit vehicles through the procurement process. The implementation and operation of the energy infrastructure will require the Town to enter into long-term capital leases and long-term service agreements. As such, staff seek council's authorization to execute the energy infrastructure capital lease and energy services agreement with the successful proponent.

An expansion of the existing transit garage is being recommended as part of RFP-48-2021 to realize cost efficiencies by constructing energy infrastructure and

additional bus lanes at the same to future proof the facility to the year 2050. Staff are seeking council's authorization to execute a contract with the successful proponent of RFP-48-2021 to design and build the expansion of the transit garage.

CONSIDERATIONS:

(A) PUBLIC

Oakville residents and transit customers will benefit from the environmental benefits of electric buses. In addition, the transit customer travel experience will be improved as a result of technology upgrades and improvements.

(B) FINANCIAL

A long-term financing plan will be required to fund a capital lease, energy services agreement, and expansion of the transit facility with the successful proponent of RFP-48-2021. Operating costs will be included in the annual operating budget while annual capital lease costs will be added to the capital forecast and will be updated each year. Capital costs will be funded by a combination of debt financing, capital reserve and, if successful, grant funding.

(C) IMPACT ON OTHER DEPARTMENTS & USERS

Transit has worked with Finance, Legal, and Facilities teams for this report and project.

(D) CORPORATE STRATEGIC GOALS

This report addresses the corporate strategic goal(s) to:

This report addresses the corporate strategic goal(s) to:

- Protect greenspace and promote environmentally sustainable practices
- Improve town's multi-modal transportation network to support effective movement of people and goods
- To be the most livable town in Canada

(E) CLIMATE CHANGE/ACTION

Energy use and carbon emissions reductions have a direct effect on our climate, as they are the main drivers for climate change mitigation. By electrifying transit vehicles, the Town would be addressing climate change mitigation through its corporate activities.

APPENDICES:

None

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