



May 8/24

Item No. 13.1.3

Environment & Sustainability Standing Committee

TO: Chair and Members of the Environment & Sustainability Standing Committee

SUBMITTED BY: _____ **- ORIGINAL SIGNED -**

DATE: April 26, 2024

SUBJECT: Corporate Renewable Energy Purchase Options

June 23, 2020 Halifax Regional Council motion (item No.9.1.6):

MOVED by Councillor Austin, seconded by Councillor Mason

THAT Halifax Regional Council:

1. Authorize the direction contained in the HalifACT 2050: Acting on Climate Together plan, as contained in Attachment A of the staff report dated May 4, 2020;
2. Direct the Chief Administrative Officer to carry out the actions contained in the HalifACT 2050: Acting on Climate Together plan as part of the multi-year budgeting and business planning process, including establishing a target of net-zero municipal operations by the year 2030.
3. Direct the Chief Administrative Officer to prioritize efforts in the following critical core areas:
 - a. Create new retrofit, resilience, and renewable energy programming;
 - b. Develop a detailed and costed plan for retrofitting existing municipal buildings to be netzero ready and climate resilient;
 - c. Develop an electric vehicle strategy, increase charging infrastructure and replace fleet vehicles with electric vehicles;
 - d. Explore opportunities to require net-zero standards for new buildings in the municipality;
 - e. Develop a framework for assessing and protecting critical infrastructure;
 - f. Support communities for climate adaptation and climate-related emergencies; and
 - g. Develop a financing strategy to operationalize the HalifACT 2050 plan over 30 years.
4. Accept in principle the need to resource the plan and direct the CAO to return to Council with a resource plan for consideration in the 2021/2022 budget; and

5. Request that the Chief Administrative Officer provide annual progress reports on the implementation of the HalifACT 2050: Acting on Climate Together plan, to Regional Council through the Environment and Sustainability Standing Committee.

June 08, 2021 Halifax Regional Council motion (item No. 11.1.2):

MOVED by Councillor Austin, seconded by Councillor Cuttell

THAT Halifax Regional Council direct the Chief Administrative Officer to:

1. Submit an expression of interest to the Province of Nova Scotia for enrollment in the Green Choice Program to procure 100% of the Municipality's corporate electricity need through renewable resources;
2. Pay the non-refundable application fee of \$500 to apply for enrollment in the Green Choice Program; and
3. If accepted into the Green Choice Program, negotiate a Subscriber Agreement and return to Regional Council with the finalized Subscriber Agreement, including term length and financial risk considerations for approval.

LEGISLATIVE AUTHORITY

Halifax Regional Municipality Charter, S.N.S. 2008, c. 39:

Section 34(3): "The Council shall provide direction on the administration, plans, policies, and programs of the Municipality to the Chief Administrative Officer."

Section 313(1): "Subject to the Public Utilities Act, the Council may contract with Nova Scotia Power Incorporated or another municipality for transmission and supply of electric power."

Section 79A(1): Subject to subsections (2) to (4), the Municipality may only spend money for municipal purposes if (a) the expenditure is included in the Municipality's operating budget or capital budget or is otherwise authorized by the Municipality; (b) the expenditure is in respect of an emergency under the Emergency Management Act; or (c) the expenditure is legally required to be paid.

RECOMMENDATION

It is recommended that the Environment & Sustainability Standing Committee recommend that Halifax Regional Council:

1. Direct the CAO to enter into negotiations with both Roswall and the Green Choice Program administrators to purchase renewable electricity for corporate consumption from either/or both parties as deemed most suitable to the Municipality; and
2. Award and execute an Alternative Procurement agreement for the provision of renewable electricity with one or both suppliers, subject to terms and conditions agreeable to HRM and approved by Legal Services.

BACKGROUND

In June 2020, Halifax Regional Council unanimously approved the Municipality's long-term climate action plan, HalifACT, which outlines a suite of actions required to achieve a low carbon future. One of these actions is showing municipal leadership by achieving net-zero municipal operations by 2030. To achieve this target, the Municipality is actively retrofitting its building stock, ensuring all new builds meet

Administrative Order 2021-002-OP, Respecting Net-Zero Construction¹ and transitioning public transit and light-duty fleets away from diesel and gasoline to lower carbon alternatives. These efforts will reduce emissions associated with these operations significantly, however our electricity consumption will increase. While electricity is lower emitting compared to the alternatives, it is not zero emitting and is not expected to be by our target date of 2030. To achieve our target of net-zero municipal operations by 2030, the purchase of renewable electricity is necessary.

DISCUSSION

The Municipality currently has two opportunities to purchase renewable electricity, through the Province of Nova Scotia's Green Choice Program and/or a Power Purchase Agreement with Roswall Development/Renewall Energy Inc.

Green Choice Program

The Green Choice Program (GCP) is an initiative of the Province of Nova Scotia. The GCP will allow entities that consume more than 10,000 MWh of metered electricity annually the opportunity to purchase renewable electricity from wind developments that are expected to be operational by December 31, 2028. The Province is procuring renewable electricity that Nova Scotia Power Inc. (NSPI) must accept from these wind farms through a Power Purchase Agreement (PPA) and then sell to consumers at current electricity rates which includes demand, storm rider, fuel adjustment mechanism and connection fees.

Participants of the GCP will pay a program administration fee of \$1.00 per megawatt hour (MWh), up to a yearly maximum of \$100,000. This fee is intended to be fixed for the duration of the program; however, the Minister may review this within five years of the program's launch. Additionally, participants will receive a credit that is based on the avoidance of a direct carbon tax. The value of the credit, in \$/MWh, will be based on an output-based pricing system that replaces Nova Scotia's previous cap and trade system. The estimated value, with an uncertainty of +/-35%, ranges from \$1.26-2.61/MWh in 2026 to \$6.17-\$12.82/MWh in 2035.²

Contract terms will be available in 5-year increments up to a maximum of 25 years. A longer term does not result in a discount on rates, but guarantees the supply of renewable electricity for its duration. Electricity consumption through non-metered accounts like street lighting is not eligible for the GCP.

With direction from Halifax Regional Council in 2021³, staff submitted an expression of interest to participate in the GCP. Since then, the GCP was paused due to a change in government until relaunching in December of 2023. Potential participants have been advised that the draft PPA will be public this spring and that all approved participants will have until 90 days prior to the expected delivery date to execute.

Roswall Development

Roswall Development is a private entity whose team has built and financed over \$150 million worth of wind and solar projects in the past decade.⁴ In 2021, Roswall was approved as a Licensed Retail Supplier by the UARB, through the Province of Nova Scotia's Renewable to Retail program. This approval allows Renewall Energy Inc., Roswall's public facing retail entity, to sell locally produced renewable electricity directly to consumers. Currently, Renewall Energy Inc. is the only licensed energy retail supplier in Nova Scotia. Renewable electricity will initially be supplied by the Mersey River Wind Farm that is projected to be operational by the end of 2025.⁵ Two additional phases of development are planned to be operational

¹ <https://cdn.halifax.ca/sites/default/files/documents/city-hall/legislation-by-laws/2021-002-OP.pdf>

² [GCP Carbon Cost Forecast](#)

³ https://cdn.halifax.ca/sites/default/files/documents/city-hall/regional-council/210608rc1112_0.pdf

⁴ Who We Are. [Roswall](#), accessed October 2023

⁵ Roswall Renewable to Retail. [Roswall Development Inc.](#), 2023

by the end of 2026. Renewall will procure renewable electricity from the wind farms through a PPA, pay required tariffs to NSPI and then sell to consumers.

Renewall will sell renewable electricity to consumers via various PPAs. One will be for Large Volume (rate class 11 and above), one will be for Small Volume (rate class 10 and below) and one will be for street lighting. With both the Large and Small volume PPAs, the starting electricity rate for consumers will be lower than the NSPI rate at the time service commences, and will increase annually at a fixed rate of 1% over the contract term. The PPA for street lighting will start at the current NSPI rate and will increase annually at a fixed rate of 1% over the contract term. Demand fees, storm rider charges, and connection fees will be passed through from NSPI and be subject to future increases. PPA term lengths can be either 10, 15 or 20 years for the Large Volume PPA, with a higher initial discount on electricity rates for longer terms.

For each option, the Municipality will have the opportunity to negotiate an offtake increase as high electricity consuming initiatives, like the Mill Cove Ferry Service, come online.

Financial Considerations

In 2022, total corporate electricity consumption (not including street lighting) was approximately 50 GWh, resulting in an annual operating cost of approximately \$6.5 million. Street lighting is not metered and instead, the electricity cost is based on the number and type of lighting fixtures. In 2022, the annual operating cost for street lighting was \$2.5 Million. Therefore, total annual electricity costs for both corporate buildings and streetlighting in 2022 was approximately \$9.0 million.

Forecasting electricity rates 20 years in the future comes with a high margin of error. However, based on the information presented, it is expected that purchasing renewable electricity through either option will result in lower annual operating costs when compared to business as usual (BAU). The BAU scenario considers a conservative 1.82% annual compound increase, as per the last 10-year Consumer Price Index average for electricity in Nova Scotia. The GCP option considers both the upper and lower bands of the estimated carbon credit. While a slight discount, the GCP follows the BAU path and is subject to future rate increases. The Roswall option considers a small electricity rate discount in year one, and a fixed 1% annual increase.

Next Steps

If this recommendation report is approved, staff will continue liaising with Roswall and negotiate a long-term power purchase agreement that is in the best interest of Municipality. In parallel, staff will continue collaborating with the Province and await details of their Green Choice Program Participant Agreement. If deemed in the best interest of the Municipality, the CAO will execute an Alternative Procurement agreement for the provision of renewable electricity with one or both suppliers, subject to terms and conditions agreeable to HRM and approved by Legal Services.

FINANCIAL IMPLICATIONS

As mentioned above, forecasting electricity rates 20 years in the future comes with a high margin of error. However, based on the information presented, it is expected that purchasing renewable electricity through either option will result in lower annual operating costs when compared to business as usual (BAU).

As the recommended options anticipate lower costs than the current suppliers, there should be a decrease or slower growth of electricity costs in future budgets.

RISK CONSIDERATION

Renewall Energy Inc. is currently the only licensed energy retail supplier in Nova Scotia and NSPI is a regulated utility. Both must adhere to relevant provincial regulations such as the Nova Scotia Electricity Act. As such, the Municipality can purchase renewable electricity from Roswall via an Alternative Procurement as there is absence of competition due to lack of licensed retailers and through NSPI via an exemption to the procurement policy.

The primary risks associated with the GCP is the volatility of energy rates and the unknown value of the carbon credit. In the GCP, participants will still be charged a per kWh rate for electricity consumed, which is subject to future NSPI rate increases. In the analysis above, a conservative annual compound rate increases of 1.82% was used, but recent rate increases have been far greater. The future value of the carbon credit remains unknown. The credit is based on the Province of Nova Scotia's Output Based Pricing System and will vary from participant to participant based on rate class, overall electricity consumption, and the electricity generation mix year to year. The credit is also subject to any relevant change of laws that may be applicable.

The following table identifies contemplated risks associated with each opportunity. Legislative & Legal Services has reviewed a draft Power Purchase Agreement provided by Roswall Development. Legal & Legislative Services has not reviewed the GCP Participant Agreement as it is not yet public, so the information presented below is based on discussions with the GCP administrator.

Risk	Discussion
The generation facilities are not operational by the planned date	<p>Roswall Development plans to be operational by 2025 but there is a clause within the draft PPA that allows the Municipality the right to terminate if the project is not developed. The GCP plans to be operational by 2027/28 but all eligible participants will have until 90 days prior to the expected delivery date to execute the Participant Agreement.</p> <p>With each opportunity, there are no fees paid until the facilities are operational.</p>
The facilities do not generate enough renewable electricity	<p>With each opportunity, the Municipality will stay connected to NSPI's grid and purchase electricity as per usual should the renewable electricity generated from either stream not meet the demand.</p>
The Municipality reduces its electricity need below the purchase commitment	<p>If the Municipality's actual electricity consumption is less than what is committed too, the Municipality can notify Renewall and they will have the ability to adjust. A request to adjust the range in any direction cannot be declined. A rate change is unlikely as renewable electricity would likely be able to be sold to another entity.</p> <p>For the GCP, the participant agreement will allow for adjustments as needed.</p>
The Municipality increases its electricity need above the purchase commitment	<p>If the Municipality's actual electricity consumption is more than what is committed to, the Municipality can notify Renewall and they will provide the increased need if available. This increase will be subject to current market rates and conditions.</p> <p>For the GCP, an increase will be approved should supply be available.</p>
Utility rates do not trend as expected	<p>Given the historic trend of increasing electricity costs, goods costs, pressure on the need for increasing profit, and legislative requirements to transition off coal, it is unlikely that utility rates will trend lower than expected. This assumption is further supported by the need to rebuild aging infrastructure and respond to increasing severe climate events.</p>

COMMUNITY ENGAGEMENT

No community engagement was required.

ENVIRONMENTAL IMPLICATIONS

Corporate emissions are a direct result of energy use related to buildings, street lighting, and vehicles owned and operated by the Municipality. In 2022, corporate emissions were 56 kilotonnes of eCO₂. 68% of these emissions were a direct result of electricity consumption within our buildings and street lighting.

While purchasing renewable electricity will result in a significant decrease in corporate emissions, this will not negate the need to continue performing deep energy retrofits on our buildings. Performing deep energy retrofits will reduce overall energy demand but also improved comfort, health and safety for users.

ALTERNATIVES

The Environment and Sustainability Standing Committee may decide not to forward the recommendation to Halifax Regional Council. This is not recommended as the purchase of renewable electricity is necessary to achieve our target of net-zero municipal operations by 2030.

ATTACHMENTS

None

A copy of this report can be obtained online at [halifax.ca](https://www.halifax.ca) or by contacting the Office of the Municipal Clerk at 902.490.4210.

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