

Renewable and Low-emissions Energy Implementation Plan

ISSUE

The City of Saskatoon (City) has committed to a target of 80% reduction in corporate and community greenhouse gas (GHG) emissions by 2050. The *Low Emissions Community (LEC) Plan* outlines actions to achieve this target including increasing solar and renewable energy generation throughout Saskatoon. During the 2019 Business and Budget deliberations, City Council approved funding for an Integrated Solar and Renewable Energy Strategy with the purpose of identifying and prioritizing renewable energy opportunities for the community and corporation to implement actions from the *LEC Plan*.

This Report presents *Alternative Currents: A Renewable and Low-emissions Energy Implementation Plan* (Alternative Currents), which focuses on what the City has done and can do to switch to renewable, low carbon fuel sources, and requests approval in principle for the Implementation Plan.

RECOMMENDATION

That the Standing Policy Committee on Environment, Utilities, and Corporate Services recommend to City Council that *Alternative Currents: A Renewable and Low-emissions Energy Implementation Plan*, be approved in principle.

BACKGROUND

At its Preliminary Business Plan and Budget meeting in November 2019, City Council approved \$180,000 in capital funding for the Integrated Solar/Renewable Energy Strategy project (#2650).

At its meeting held on June 29, 2020, City Council received the Renewable Energy Strategy Update report as information.

A summary of the council reports and resolutions that preceded the above resolutions can be found in Appendix 1.

Official Community Plan

Alternative Currents is in alignment with the following policy of the *Official Community Plan, 2020 (Bylaw No. 9700)*:

- E3.2(2a) Seek opportunities to increase energy generation from innovative energy sources and green technology, such as solar, hydropower, and landfill gas collection.

City of Saskatoon 2022-2025 Strategic Plan

Alternative Currents aligns with the City's *2022-2025 Strategic Plan*; in particular, its goal of Environmental Sustainability, which includes the outcome "Greenhouse gases

are reduced in a way that maximizes co-benefits and doesn't leave anyone behind". *The 2022-2025 Strategic Plan* includes key actions to achieve this outcome, including:

- Implement climate actions in the *Low Emissions Community Plan* and the *Corporate Adaptation Strategy* within proposed timeframes.
- Develop initiatives to increase the use of renewable energy or low emissions energy sources and promote opportunities for property owners to generate their own electricity from renewable sources.

Additional Strategic and Planning Alignment

Alternative Currents responds to numerous actions in the *Low Emissions Community Plan* and the *Corporate Climate Adaptation Strategy*. The proposed actions help achieve our GHG reduction targets and Saskatoon Light & Power's internal renewable energy target of 10%. This implementation plan also works in alignment with other City plans, including *Saskatoon's Green Infrastructure Strategy*, and the *Corporate Asset Management Plans*.

Engagement

From January 2021 to July 2022, City Administration engaged the community through three phases to shape Alternative Currents. A total of 884 participants took part in the engagement activities through meetings and surveys. Engagement goals, intended audiences, activities, dates, participation rates, and detailed engagement results are provided in *Appendix 4 – Final Engagement Report*.

Generally, feedback from the engagement showed support for renewable and low-emissions energy development in Saskatoon, as well as support for developing this Implementation Plan. Participants called on the City to lead by example by demonstrating the viability of clean energy, efficiency measures, and electrification to build confidence in the community. Participants also expressed the need for strong incentives to implement projects within the community, and costs were viewed as being the largest barrier for uptake. As well, educational gaps for renewable energy were identified, including how individual actions can lead to change, what steps are involved in implementing a renewable project, and which sources to trust for accurate and factual energy information.

DISCUSSION/ANALYSIS

The LEC Plan sets a framework for energy in which "electricity is almost completely provided by renewable energy sources (supported by solar PV, and procured renewable energy), all but eliminating emissions". To achieve the significant energy emission reductions identified in the Plan, 12 actions are required. Alternative Currents identifies the initiatives and timelines to complete these LEC actions.

Alternative Currents provides background around how energy is used and generated in Saskatoon and Saskatchewan, and the outlook for low-emissions electricity generation by the City, community, and SaskPower. It then outlines the opportunities and challenges for Saskatoon to switch fuel-sources and support the growth of renewable energy to sustainably cool and power buildings, fuel vehicles, and enable industrial and

commercial processes. Finally, it provides a phased implementation plan to progress Saskatoon's LEC actions and targets.

In many cases, identified initiatives are dependent on the previous phase, and will only go ahead if the prior work concludes with a recommendation to proceed. In every case, specific initiatives require funding approval through the City's multi-year budget.

Alternative Currents: A Renewable and Low-emissions Energy Implementation Plan is attached as Appendix 2 of this report. Further information on renewable and low-emissions energy that guided the implementation plan is attached.

FINANCIAL IMPLICATIONS

Phase 1 signifies that a business case will be developed to support funding requests during the next budget cycle. Any Phase 2 or higher initiatives scheduled for the 2022/2023 budget cycle have approved budgets for this phase and cycle. Further financial requirements for initiatives scheduled for 2024 and beyond will be brought forward through future reporting, and initiatives will be submitted for approval on a budget-by-budget basis. Initiative financing could be considered through various mechanisms including capital funding requests from reserves, loans, and external funding opportunities.

Applications have recently been submitted for federal funding opportunities including the Low Carbon Economy Challenge – Champions Stream. If successful, federal contributions would support the City in meeting our LEC targets through several renewable energy initiatives. The City will continue to pursue funding applications as opportunities arise.

For funding applications, municipalities must usually provide matching funding, as well as funding to support ineligible expenses, such as internal staff time and operational expenditures. As such, initiatives that receive funding during City Council's budget deliberations are well positioned to leverage additional funding from external sources, while unfunded initiatives are often unable to meet the matching requirements, and therefore, not often eligible for external funding unless a new funding source is identified or reallocated from an existing project and pending City Council approval.

OTHER IMPLICATIONS

There are no privacy or legal implications identified.

Triple Bottom Line Implications

A Triple Bottom Line assessment was undertaken to identify opportunities to maximize benefits of the strategy. Details can be found in *Appendix 5 - Triple Bottom Line Implications – Renewable and Low-emissions Energy Implementation Plan*.

Triple bottom line analyses will be completed for specific initiatives as they are developed to better understand benefits, limitations and trade-offs, and look for improvements.

NEXT STEPS

Additional information on business cases and funding requirements will be brought forward for approval on a project-by-project basis.

Progress towards the initiatives within Alternative Currents will be implemented and monitored through the Climate Action Plan program and reported to City Council through the Climate Action Plan Annual Progress Report. Alternative Currents will be updated following updates to the *LEC Plan*. Some of the identified initiatives will extend beyond 2030, so updates to this implementation plan will reflect extended timelines and any new initiatives that are identified.

Pending funding, a comprehensive reassessment of the *LEC Plan* will review the GHG projections, financial savings, and status for all actions that is planned for 2025.

APPENDICES

1. Summary of Renewable and Low-emissions Energy Council Resolutions
2. *Alternative Currents: A Renewable and Low-emissions Energy Implementation Plan*
3. Online Appendix: Renewable and Low-emission Energy Technologies
4. Final Engagement Report
5. Triple Bottom Line Implications – Renewable and Low-emissions Energy Implementation Plan

Report Approval

Written by: Pam Groat, Project Engineer

Reviewed by: Amber Weckworth, Climate, Section and Data Manager
Jeanna South, Director of Sustainability

Approved by: Angela Gardiner, General Manager, Utilities and Environment