

PURPOSE

This report responds to the direction by the City of Greater Sudbury to:

CC2019-334

- a) engage the community to obtain feedback on the draft CEEP from the public and energy stakeholders as described in the report entitled “Greater Sudbury Community Energy and Emissions Plan” from the General Manager of Growth and Infrastructure, presented at the City Council Meeting on November 12, 2019;
- b) finalize the CEEP for Council’s consideration no later than the end of the second quarter of 2020; and,
- c) prepare a CEEP Implementation Strategy – Phase One (i.e., the first five years) no later than the end of 2020.

COMMUNITY ENGAGEMENT – DRAFT CEEP (CC2019-334)

Status: Completed

Staff facilitated a stakeholder workshop session on November 21, 2019 (25 attendees) and a public engagement session on November 28 (24 attendees) to obtain feedback on the draft CEEP. In addition, staff placed the draft CEEP on the City’s public engagement online platform “Over to You”, resulting in over 200 visitors to the site in late 2019. In total from January 2018 to December 2019, the Over to You site attracted 1500 visitors from which 19 comments were received. Finally, in order to better gauge sentiment on matters relating to climate change and greenhouse gas emissions from the broader local public, staff commissioned a public opinion telephone survey from a professional polling firm. To ensure a statistically meaningful sample size, 525 people from various communities in Greater Sudbury were surveyed.

Given the ambitious target of net-zero GHG emissions by 2050, community support of the CEEP is critical to its implementation. The community engagement efforts reveal that climate change resonates strongly with local citizens and organizations. The telephone survey showed that 82% of participants are concerned about climate change and 79% support the City’s Climate Emergency Declaration.

Several community stakeholders have provided letters of support, demonstrating their leadership and commitment to helping Greater Sudbury achieve net-zero emissions by 2050 (see Appendix 2).

CEEP FINALIZATION (CC2019-334)

Status: Completed

In late 2019, the City of Greater Sudbury finalized the CEEP after receiving feedback from the public, stakeholders and members of City Council. The CEEP identifies the community-wide

efforts required to meet a net-zero GHG emissions by 2050 target. The modeling and cost analyses outlined in the CEEP demonstrate that, while the target is very ambitious, the actions and goals presented are technically feasible and economically beneficial for the entire community.

The CEEP identifies eight strategy sectors:

1. Compact, complete communities;
2. Energy efficient buildings;
3. Water, wastewater, and solid waste;
4. Low-carbon transportation;
5. Industrial efficiency;
6. Local clean energy generation;
7. Low-carbon energy procurement; and,
8. Carbon sequestration.

The CEEP also identifies a total of 18 recommended goals tied to the strategy sectors. The goals must be achieved for the target of net-zero GHG emissions by 2050 to be attained. Goals include those over which the municipality has considerable control during implementation, such as achieve net-zero emission in City buildings by 2040 (Goal 4), electrify 100% of City transit and fleet by 2035 (Goal 9), and increase the reforestation efforts of the Regreening Program (Goal 18). The CEEP also includes goals over which the municipality has far less control, such as increasing industrial energy efficiency 35% by 2040 (Goal 11) and 100% of new vehicle sales being electric by 2030 (Goal 10). Achieving these goals relies on coordinated efforts among stakeholders, upper level government incentives, innovation, education and awareness moving forward.

CEEP IMPLEMENTATION STRATEGY – PHASE ONE (CC2019-334)

Status: On schedule for completion by end of 2020.

Concerns over the spread of COVID-19 resulted in the declaration of a State of Emergency in Ontario and the City, which set new priorities for Council's immediate consideration. Notwithstanding the pandemic and declarations, work on the CEEP and its associated Phase One Implementation Plan continues and is on track for completion by the end of 2020 as per Resolution CC201-334.

Thus far, staff have undertaken the following actions related to the CEEP Implementation Strategy – Phase One:

- Identification of municipal CEEP-related actions, in collaboration with individual City Directors, which could be implemented within the first five years. These actions have been discussed at a July, 2020, Business Leadership Group (BLG) meeting with input from the Executive Leadership Team (ELT) and will be refined in the fall of 2020.

- Identification of municipal projects (e.g., street light retrofit to LED) that staff from various divisions are currently undertaking that are helping to implement the CEEP.
- Securement of letters of support for the CEEP and its implementation from several CEEP stakeholders (see Appendix 2).
- Discussions with numerous individual stakeholders to strengthen support for the CEEP's implementation and better understand stakeholders' energy projects whether already completed or to be initiated in the near-term.
- In August, City staff submitted to the Federation of Canadian Municipalities (FCM) preliminary information in support of a feasibility study for local Property Assessed Clean Energy (PACE) financing. Such financing may be the most important means of advancing the CEEP's goal of 50% increased energy efficiency by 2040 of the existing building stock (i.e., mostly private residences). FCM informed the City that the project meets the criteria for FCM's Community Efficiency Financing funds. City staff intend to submit a formal application to FCM to support a feasibility study for PACE financing.
- Discussions with staff of other municipalities and organizations on strategies and measures taken in implementing their CEEP or CEP (Community Energy Plan).

CEEP IMPLEMENTATION - CONSIDERATIONS

The finalization of Greater Sudbury's CEEP is an important step in becoming a net-zero community by 2050. The CEEP sets ambitious goals in each of the eight strategic sectors that must be achieved to attain the net-zero target within 30 years. Now, the Greater Sudbury community must face the daunting task of implementing the CEEP.

Important considerations in the CEEP's implementation include:

- Dealing with uncertainties associated with a 30-year implementation timeframe;
- Greater Sudbury is one of many municipalities world-wide faced with implementing plans to reduce GHG emissions;
- GHG reduction opportunities related to COVID-19 recovery;
- Community-based implementation through collaboration;
- Tracking and reporting implementation achievements; and,
- Adopting a climate lens in decision-making.

Dealing with Uncertainties

The CEEP's model and implementation framework is based on assumptions, which may be perfectly valid today but not so in 10 years, let alone 30 years. The longer the timeframe, the greater the influence of uncertainty on factors determining future realities and forecasting systemic change is difficult to predict beyond 10 years with any accuracy due to developments in three key areas: technology, policy and society.

Given these inherent uncertainties, especially over a 30-year timeframe, the approach recommended by staff is to adopt an incremental approach to the CEEP and its implementation. As such, the CEEP will be reviewed and updated on a 5-year basis. Its model will be applied every five years to ascertain whether the CEEP objectives are being met and, if not, determine where areas of additional focus should lie. The CEEP Implementation Strategy – Phase One outlines actions to be undertaken from 2021 to 2025, the first 5 years of CEEP implementation.

Greater Sudbury is Not Alone in its Efforts to Reduce GHG Emissions

Climate change affects everyone and reducing GHG emissions is a shared responsibility. We are all in this together. Greater Sudbury is joining the ranks of thousands of municipalities around the world taking action to reduce energy and emissions and stimulate a green economy. While each municipality faces its own unique set of challenges, CGS staff will follow Council's lead in continuing to strengthen relationships with other municipalities to discuss best practices, common barriers and solutions, future initiatives and potential collaborations. Local stakeholders will also maintain a shared experience in climate-related initiatives with peers in other jurisdictions.

GHG Reduction Opportunities Related to COVID-19 Recovery

Government responses to the COVID-19 pandemic have significantly changed patterns of energy demand around the world. It has been estimated that the daily global CO₂ emissions were reduced by 17% by early April 2020 compared with the mean 2019 levels, just under half from changes in surface transportation ([Nature, 2020](#)). As the world begins planning for a post-pandemic recovery, the United Nations is calling on governments to green their recovery plans and shape the 21st century economy in ways that are clean, green, healthy, safe and more resilient ([United Nation, 2020](#)).

City staff estimate that with 22% of the Greater Sudbury municipal workforce working from home for at least some of the time between April 4 and July 18, 2020 (75 work days), GHG emissions were reduced by about 117 tonnes. Annually, this translates into a potential reduction of 407 tonnes from the over 2 million kilometers that would not need to be traveled to get to and from work. Of course, this is a rough estimate based on a number of assumptions, but it does demonstrate what could be achieved through relatively simple changes to the structure of work (i.e., work from home option for some employees). Scaling up a 'work from home' policy to an equivalent portion of the entire Greater Sudbury workforce (i.e., 22%) could result in a reduction of nearly 12,000 tonnes of GHG per year.

A Framework for Collaborative Implementation

As previously stated, attaining net-zero GHG emissions by 2050 will require everyone's participation. As such, implementation of the CEEP is dependent on close collaboration not only between municipal divisions but also with a variety of local stakeholders, including residents. Development of a framework for collaboration will be a key action to be completed within the first year of the Phase One implementation period and will be established and maintained through the active participation of local stakeholders.

Tracking Change, Assessing Implementation Success, and Reporting

Successful implementation of the CEEP will depend on the ability to accurately track, assess and report on changes in energy use in various sectors through metering or fuel sales. GHG emissions in turn are estimated from the energy use based on modeling. All of the actions initiated to meet one of more goals of the CEEP are expected to lead to either energy reductions or GHG reductions, often both. While the status of all CEEP actions can be monitored and reported, not all actions will lead to direct and measurable energy reductions. Some actions will entail the development of policies, education campaigns, or incentive programs that may influence energy use but in themselves do not lead to directly measurable energy reductions. Active transportation infrastructure, for example, can lead to fewer trips by private vehicle but its use is highly dependent on weather, time of year, social acceptance and willingness to personally adopt new transportation routines. Other actions lead to energy reductions that can not only be measured directly but can also be reliably predicted through modeling. Street light conversion to LED technology, for example, leads to predictable outcomes in terms of reduced electricity use and concomitant reductions in GHG emissions.

The development of robust and relevant means of tracking, assessing and reporting change in energy use and GHG emissions will be another key action to be accomplished within the first two years of the Phase One implementation period. These methods will be developed through the collaborative efforts of local stakeholders.

Wherever possible, CEEP actions will be assessed by directly measuring their impact on energy use and resulting GHG emissions. Where direct energy measurement is not possible, the actions' influence on energy will be estimated based on modeling and related assumptions. Where energy measurement can neither be directly measured nor estimated, an action's influence on energy will be inferred through energy or other data related to the action. For example, the influence of active transportation infrastructure on energy use and GHG emissions will, in the end, only be reflected by annual liquid fuel sales in the City, which of course could also be influenced by other factors, such as wider adoption of electric vehicles.

Climate Lens

The United Nations calls climate change the defining issue of our time. As such, the decisions we all need to take, whether mundane or of strategic importance, should wherever possible be weighed and evaluated in relation to their influence on energy and GHG emissions. A few

municipalities and other organizations have begun discussions on the notion of a climate lens through which options for particular decisions can be assessed in terms of climate influences. A climate lens would need to consider not only influences on GHG emissions, but also potential cost and energy reductions, as well as climate adaptation implications. For example, a decision may not have significant implications for GHG reductions if the energy used is electricity since Ontario's electricity supply mix has a relatively low GHG emissions profile. But the decision could lead to large reductions in electricity use that lead to significant cost savings. These savings, in turn, could be used to make changes in other areas of the municipal operations that result in significant GHG reductions. The development of a climate lens will be yet another key project to be undertaken early in the first phase of CEEP implementation.

NEXT STEPS: CEEP IMPLEMENTATION STRATEGY – PHASE ONE (2021 to 2025)

The City's EarthCare Sudbury program will coordinate the implementation of the CEEP during at least the Phase One period (i.e., 2021 to 2025). For over two decades, EarthCare Sudbury has been working with various municipal divisions, with community stakeholders and with the public on sustainability and climate change initiatives. As such, it is well-positioned to initially play a coordinating role in the CEEP implementation. Many of the tasks related to coordination, such as hosting meetings and workshops for stakeholders and the public, community engagement through various channels, including social media, and reporting to the community can be undertaken within the existing operating budget. EarthCare Sudbury's nine sustainability focus areas allow considerable flexibility in budget allocation in any given year.

Over the fall of 2020, staff will refine divisional projects aimed at reducing energy use and GHG emissions during the early stage of CEEP implementation. Project briefs will be included in the CEEP Implementation Strategy – Phase One for reference and funding requirements for individual projects will be addressed during the annual budget process by relevant divisions. Staff will collaborate to ensure that the capital prioritization tool includes a climate-related ranking criterion.

Although the CEEP Implementation Strategy – Phase One will focus on City operations and projected actions, there are many community-focused goals within the CEEP including a) achieving 35% active mobility transportation mode share by 2050, b) increasing industrial energy efficiency 35% by 2040 and c) 100% of new vehicle sales being electric by 2030. Achieving these goals will rely on community groups, upper level government incentives, innovation, education and awareness moving forward and will benefit from the development of a practical framework for collaborative implementation.

Over the fall of 2020, staff will also be hosting two stakeholder working sessions that will serve to directly inform the development of the CEEP Implementation Strategy – Phase One. In particular, the workshops will focus on such projects as 1) framework for collaborative

implementation, 2) tracking change, evaluating implementation success and reporting, and 3) climate lens. These projects are foundational to the CEEP implementation and will benefit greatly from community input.

It is anticipated that the implementation of the CEEP will adapt to changing policy, financial, social and technological circumstances. Opportunities will arise in some areas and constraints will appear in others. Adapting to these changes will be ongoing and will involve sustained stakeholder collaboration and public engagement.