Report to Council

Date: June 22, 2020

To: Council

From: City Manager

Subject: Update on Council's Environmental Protection Priorities

Department: Policy & Planning

Recommendation:

THAT Council receives, for information, the report from Policy & Planning, dated June 22, 2020, with respect to an update on Council's Environmental Protection Priorities.

AND THAT Council directs staff to investigate the resource and financial implications to accelerate progress on the actions outlined in the Community Climate Action Plan.

AND FURTHER THAT Council directs staff to provide an update on the status of the Sustainable Development Goals related to protecting the environment once the report is complete.

Purpose:

To provide a response to Council's request from Open AM Session of Council on Monday, February 10, 2020 under Issues Arising from Correspondence & Community Concerns, for an update on initiatives related to Council Priority of environmental protection and climate action (R0112/20/02/10).

Background:

Recently, Council was provided a report on the progress the City is making on each of Council's six priority areas (May 25, 2020 PM Council Session, item 5.8). This report brought to light that of the 39 result statements the Environmental Protection Priority "Greenhouse Gas (GHG) Emissions are Decreasing" was one of only three areas not trending in the right direction.

The Intergovernmental Panel on Climate Change (IPCC) warns that global warming needs to be limited to 1.5°C by 2030 to reduce the risks of extreme weather, rising sea levels and other impacts. Unprecedented changes in land use, transportation and buildings are needed to reach this goal which requires reducing human-caused GHG emissions by 45 per cent from 2010 levels by 2030.[1] In response,

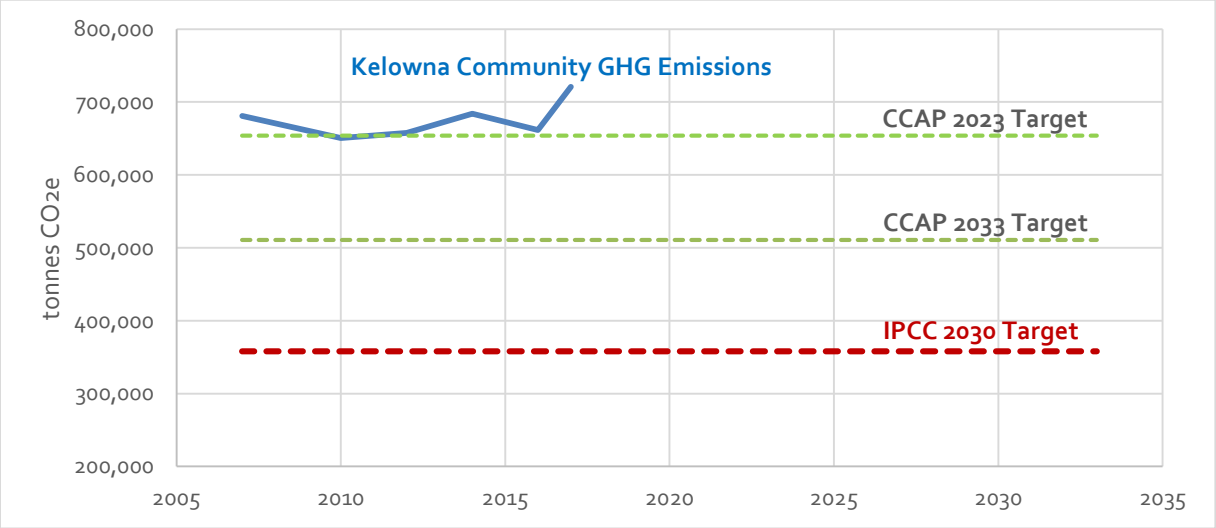
[1] Intergovernmental Panel on Climate Change (IPCC), October 8, 2018. Summary for Policymakers of IPCC Special Report on Global Warming of 1.5°C approved by governments. https://www.ipcc.ch/2018/10/08/summary-for-policymakers-of-ipcc-special-report-on-global-warming-of-1-5c-approved-by-governments/

many local governments are investigating ways their communities can accelerate progress on reducing emissions or determining what actions are needed to align with the IPCC recommendations.

Environmental Protection Priority: Greenhouse gas emissions are decreasing
Progress: Needs improvement: not trending in the desired direction

The Environmental Protection Council Priority result statement "greenhouse house gas emissions are decreasing" focuses on two areas: community and corporate GHG emissions. On the community side, *Kelowna's Community Climate Action Plan* (CCAP) focuses on actions the City can lead to help the community reduce its GHG footprint as local governments can influence GHG emissions reductions through land use planning, transportation options, building requirements and waste services. Over the short-term, the five-year life of the Plan, the CCAP defines a path to slow GHG emissions growth – to reduce GHG emissions by 4% below 2007 levels by 2023. The CCAP also identifies a mid-target of 25% below 2007 levels by 2033 and a long-term target of 80% below 2007 levels by 2050. These targets, however, are below what the IPCC states are needed to be achieved to avoid catastrophic impacts. For the City to align with the IPCC 1.5°C recommendation, the mid-term target would have to be nearly doubled.

Figure 1: Kelowna GHG Emissions compared to targets



While GHG emissions may vary from year to year due to weather (e.g., a cold winter would require more natural gas use for heating), progress on achieving the CCAPs short-term target is questionable as illustrated in Figure 1, let alone being on course to achieve the IPCC's more aggressive goals. The City has not been able to achieve absolute GHG emissions reductions in line with the CCAP targets, which is paramount to limiting the extent and impact of climate change. Even when examining per capita GHG emissions, the community appears to have stalled and is not progressing in achieving reductions on a per person basis. With the community expected to grow by 50,000 residents by 2040 it is paramount that progress on reducing per capita GHG emission contributions far outpace the rate of population growth to ensure total GHG emissions decline.

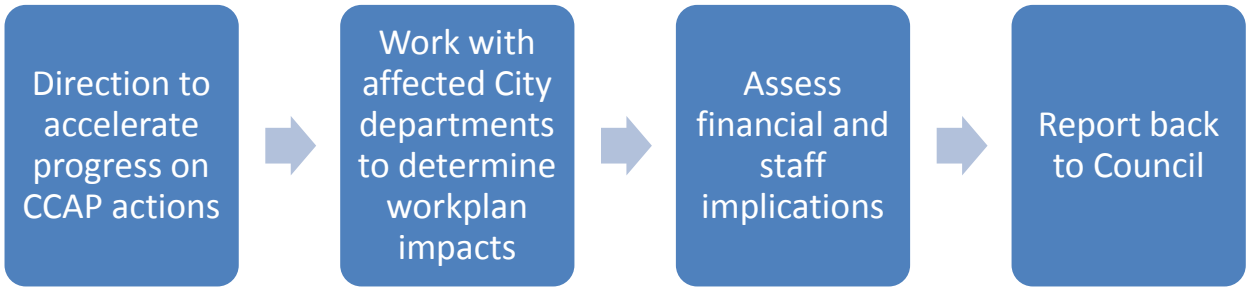
Since its endorsement, the City has been working on implementing the actions outlined in the CCAP. Over seventy-eight per cent of the 47 actions are in progress, ongoing or complete (see Attachment A for the status of each CCAP action). In addition to those actions outlined in the CCAP, a summary of the diverse actions being taken across the organization was recently provided in the annual *Climate*

Action Revenue Incentive Program report. While it is imperative that everyone – residents, businesses, industry, and senior levels of government – take action to reduce GHG emissions, the City's actions and leadership are essential to support the transition to lower GHG emissions in Kelowna. Creating a complete, compact community with diverse transportation options while increasing energy efficiency and renewable energy in buildings will ultimately help progress climate action in the community over the long term.

Should Council choose to accelerate action to reduce GHG emissions, there are two options.

1. **Accelerate progress on the CCAP**
   As outlined in Figure 2, staff could investigate the resources required (i.e., staff and financial commitments) to expedite the actions outlined in the Community Climate Action Plan. Attachment B summarizes some of the initiatives that are underway and provides examples of how these actions could be accelerated. Most of these examples are actions from the CCAP that have not yet started, do not have resources to implement, or were identified as an ambitious action. Others are examples from different communities that also could have significant impact. Some of the proposed actions would also need to be assessed to determine if there are community financial impacts and how those costs effect post COVID economic recovery.

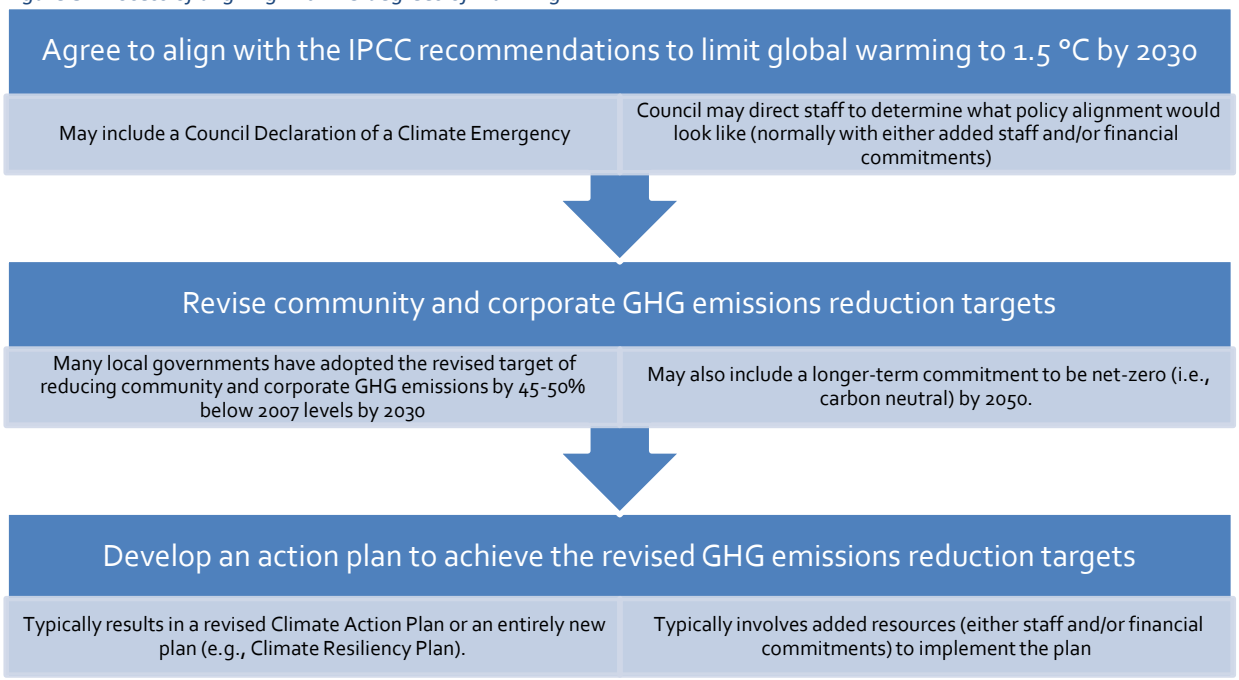
   Figure 2: Process to accelerate progress on CCAP



2. **Align with IPCC's targets**
   Determining how to align with the IPCC's 1.5°C target is more complex as illustrated in Figure 3. The first step would be to investigate the resources required to revisit the CCAP's targets and undertake a process to develop and model the actions required to reduce GHG emissions by 45 per cent by 2030. As seen in other communities like Vancouver and Richmond, bold actions in transportation, buildings, and urban forestry are required to achieve this degree of GHG emissions reduction. Attachment B includes an additional column to provide examples of how the City could move beyond accelerating reductions to align with the IPCC targets. These examples are for discussion only and are inspired by other communities who are currently working towards this target. To fully understand what would be required to achieve the IPCC target, in-depth modelling and action development would have to be undertaken[2].

[2] Preliminary investigation indicates modelling and developing new actions to align with the IPCC would cost $30,000+ depending on the level of engagement with the community. This cost is exclusive to modelling, and would not involve the development of a Low Carbon Resiliency Plan.

Figure 3: Process of aligning with 1.5 degrees of warming



The second part of the Environmental Protection Council Priority result statement "greenhouse house gas emissions are decreasing" speaks to the leadership role the City plays in reducing its own corporate GHG emissions, which make up approximately one per cent of community GHG emissions. As presented during the *Climate Action Revenue Incentive Program* report provided at the June 1 PM Session (item 4.7), recent changes in utility billing revealed that some of the City's electricity and natural gas accounts were not included in the usage reports provided by FortisBC, resulting in corporate GHG emissions being under reported. Over the coming months, staff will reconcile the historical data so that a historical trend can be established to see how the City is progressing on its goal to reduce corporate GHG emissions by 12 per cent below 2007 levels by 2022 as identified in the *Corporate Energy and GHG Emissions Plan* (2018).

Environmental Protection Priority: **Resiliency & adaptability to climate change**
Predictive modeling & forecasting
Emergency response & preparation

Progress: On track: trending in the desired direction

The other three result statements that address Council's Environmental Protection Priority focus on forecasting, modelling and adapting so the community will be resilient to climate change. A changing climate has major consequences for local governments as they are the ones who are on the front lines of flooding, wildfires, and storms; responsible for infrastructure; provide first responder services; and educate and prepare residents.[3] The extent of how much the climate will change depends on how well the global community is able to reduce GHG emissions in the near term as greenhouse gases that are released today can impact climate for years to come. A joint report commissioned and released earlier

[3] Don Lidstone, QC and Ian Moore, September 25, 2019. "Declaring a Climate Emergency – Legal Issues" for Planning Institute of BC Climate Emergency Webinar.

this year by the regional districts in the Okanagan, *Climate Projections for the Okanagan Region*, models the changes that the Okanagan climate will experience over the coming decades. Significant changes are projected with hotter, drier summers; warmer winters; increased precipitation in all seasons except summer; and a shifting of the seasons.[4]

Each of the Environmental Protection priority result statements related to adaptation are trending in the right direction as various departments undertake initiatives to prepare our community. These include fuel modification in parks to reduce wildfire threat, improvements to stream channels to reduce flooding and changes in development standards to account for a changing climate. The City, however, does not yet have a Climate Adaptation Plan to provide comprehensive direction to prepare the community for the anticipated changes. If a decision is made to revisit the CCAP targets to align with the IPCC, there is an opportunity to create a low carbon resilience plan (also known as a climate ready future plan) at the same time, addressing both climate mitigation and adaptation concurrently.[5]

Other Environmental Protection Focus Areas:
Progress: To be determined

All the Council priorities related to environmental protection focus on climate mitigation (reducing greenhouse emissions) and adaptation (preparing for the impacts of climate change). To have a more robust understanding of the state of the environment in Kelowna, issues beyond climate must be considered (e.g. biodiversity, habitat loss, water resources, and air quality). Kelowna's natural environment is unique. The lakes, valley hillsides, streams and air draw many people to live and visit, contributing significantly to the local economy and as expressed through Imagine Kelowna, the community wants these assets protected.[6] Kelowna's natural environment is susceptible to the impacts of human development and activity and ongoing impacts could have long term and irreversible consequences to the livability of the city.

Recently, the City has been working with the British Columbia Council for International Cooperation (BCCIC) as part of a pilot project to determine how local governments are progressing on the implementation and achievement of the UN Sustainable Development Goals. The UN Sustainable Development Goals (UN SDG) are 17 goals with a universal call to action to protect the planet, end poverty, and improve the lives and prospects of everyone, everywhere.[7] Seven of the UN SDGs being tracked as part of the pilot project help provide a broader understanding of environmental protection in Kelowna. This includes goals related to protecting habitat on land and in water, waste reduction, air quality, and clean water. It is anticipated that BCCIC will have a report complete later this year at which time staff will provide an update to Council.

Ultimately, protecting the natural environment will help deliver on climate mitigation and adaptation goals. For example, preserving a streamside riparian area protects habitat and water quality, but it also

---

[4] RDCO, RDNO, RDOS, Pinna Sustainability, February, 2020. Climate Projections for the Okanagan Region. https://pub-rdco.escribemeetings.com/filestream.ashx?DocumentId=2073
[5] Preliminary investigation indicates the cost to develop a Climate Resiliency Plan would be $150,000 +
[6] Imagine Kelowna includes the following goals related to environmental protection: Protect land, water & air; preserve Okanagan Lake as a shared resource; embrace transportation options; grow vibrant urban centres and limit sprawl; protect agricultural land; and take action in the face of climate change.
[7] United Nations Sustainable Development Goals: The Sustainable Development Agenda.

acts as a carbon sink to lower GHG emissions and provides an area to attenuate flood waters associated with climate change.

Conclusion:
Whether accelerating progress on the CCAP, identifying and implementing new actions to align with the IPCC, or undertaking a climate resiliency plan, all these initiatives would not only result in reduced GHG emissions, they would also achieve goals and deliverables outlined in other City plans and projects. For example, improving walking, bicycling and transit reduces GHG emissions from the transportation sector, but it also provides residents with diverse, affordable options to get around; reduces road congestion; reduces air pollution; and creates a more active community. Likewise, improving energy efficiency in buildings not only reduces energy usage and GHG emissions, it also reduces household energy costs and can improve indoor air quality, which aligns with the Healthy Housing Strategy.

During the last several months, COVID-19 has brought unprecedented changes to the world. While most of the changes have upheaved the systems and processes that serve us, favorably the world's response has had positive impacts on the global climate. It is estimated that daily global GHG emissions decreased by 17% in the peak of the COVID-19 pandemic restrictions in April 2020 compared with mean 2019 levels.[8] While the circumstances of these improvements are not ideal, COVID-19 provides a glimpse of what could be accomplished with long term behavior change. This is an opportunity to leverage climate action for a strong economic recovery, while accelerating progress on emissions reductions.[9]

The issue and challenges presented by climate change cannot be solved by local government alone. Senior government will need to regulate change and citizens will need to adjust their behavior. Local government, however, needs to lead in implementing plans, programs and services that will shift the community towards a low carbon lifestyle.

Internal Circulation:
Divisional Director, Planning & Development Services
Development Services Director
Development Planning Department Manager
Corporate Strategy & Performance Department Manager
Strategic Transportation Planning Manager
Energy Program Manager
Utility Planning Manager
Long Range Policy Planning Acting Manager

[8] Le Quéré, C., Jackson, R.B., Jones, M.W. *et al.* (2020). Temporary reduction in daily global CO_2 emissions during the COVID-19 forced confinement. *Nat. Clim. Chang.* (2020). https://doi.org/10.1038/s41558-020-0797-x.
[9] BC Municipal Climate Leadership Council and the Community Energy Association. Policy Insights for COVID Job Creation infographic.

Considerations applicable to this report:

Existing Policy:

OCP Objective 6.2:	Improve energy efficiency and reduce community greenhouse gas emissions
OCP Policy 6.2.1	*GHG Reduction Target and Actions*. The City of Kelowna will, in partnership with senior governments; local residents and businesses; NGOs; external agencies; and utility providers, work towards reducing absolute community greenhouse gas emissions by: • 4% below 2007 levels by 2023; • 25% below 2007 levels by 2033; • 80% below 2007 levels by 2050. The City of Kelowna's efforts will be focused on creating a dynamic community that embraces sustainable transportation options, energy efficient buildings and vibrant urban centres. City will support the reduced use of fossil fuels in buildings by encouraging renewable energy supplies, and energy efficient technologies in new and existing buildings. The City will lead through example and strive to meet the BC Climate Action Charter Targets for the reduction of GHG emissions from municipal infrastructure.
OCP Policy 7.1.3	Greenhouse Gas Reduction Criteria. Incorporate greenhouse gas reduction criteria in infrastructure projects for evaluation / modeling and procurement. OCP Policy 7.19.2 Energy Reduction Priorities. In working to reduce greenhouse gas emissions, place a primary focus on reducing demand, then prioritize further efforts in the following sequence: re-using waste heat, using renewable heat, and then finally on using renewable energy.

Financial/Budgetary Considerations:

Accelerating the actions provided in the Community Climate Action Plan will have implications financially and on staff resources. Staff need to investigate and discuss with impacted departments to understand the full resource implications.

Considerations not applicable to this report:

External Agency/Public Comments:
Communications Comments:
Legal/Statutory Authority:
Legal/Statutory Procedural Requirements:

Submitted by:

T. Guidi, Sustainability Coordinator C. Ray, Community Energy Specialist

Approved for inclusion: D. Noble-Brandt, Dept. Manager, Policy & Planning

cc:
Divisional Director, Planning & Development Services
Development Services Director
Development Planning Department Manager
Corporate Strategy & Performance Department Manager
Strategic Transportation Planning Manager
Energy Program Manager
Utility Planning Manager
Long Range Policy Planning Acting Manager