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UPDATE – PROPOSED COAL MINING EFFLUENT REGULATIONS

Technical Information Sessions
February 2020



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DM Meeting: Proposed Coal Mining Effluent Regulations

WHAT: Joint BC, AB, SK, NS Deputy Ministers' Meeting

WHEN: October 6, 2020 (11:30 - 12:30 MST)

WHERE: Toll-free: 1-866-792-1317
Conference ID: s.17

Attendees:

Alberta Environment and Parks

Bev Yee, Deputy Minister (Chair)
Ronda Goulden, Assistant Deputy Minister

Saskatchewan Environment

Sarah Harrison, Deputy Minister
Wes Kotyk, Assistant Deputy Minister

British Columbia

Kevin Jardine, Deputy Minister, Environment and
Climate Change Strategy
Fazil Mihar, Deputy Minister, Energy Mines and
Petroleum Resources

Nova Scotia Environment

Scott Farmer, Deputy Minister

Meeting Objectives:

- To discuss concerns with the proposed Coal Mining Effluent Regulations (CMER).
- To strategize on a coordinated approach among the four impacted provinces to better influence proposed changes and process for moving the regulations forward.

Meeting Agenda:

	Item	Purpose	Lead
11:30 - 11:40	Introductions and meeting objectives		Bev Yee
11:40 - 11:45	Update on draft federal CMER • Verbal update	Information & Discussion	Ronda Goulden
11:45-12:10	Key jurisdictional feedback to the federal government to date • Provincial highlights • Areas of consensus and opportunities for alignment	Information & Discussion	All AB, BC, SK, NS
12:10 - 12:25	Options for messaging back to the federal government: • Joint DM meeting with ECCC Deputy Minister • Joint or Individual Ministerial letters • Other opportunities before Gazette Part 1 in Spring 2021	Discussion	All
12:25 - 12:30	Next Steps	Summary	Bev Yee

MEETING

Joint DM Meeting with AB, BC, SK, and NS on proposed Coal Mining Effluent Regulation (CMER)

Date

PURPOSE

- Environment and Climate Change Canada (ECCC) is developing a coal mining effluent regulation. Alberta and other impacted provinces (BC, SK and NS) are concerned ECCC is not responsive to feedback.
- The meeting will confirm the alignment of concerns and strategize a coordinated response to ECCC.

MEETING DETAILS

Meeting/Event Date and Time:	• Joint DM Meeting on CMER (AB, BC, SK, NS) • October 6, 2020 11:30 AM to 12:30 PM	
Location:	• Teleconference: 1-866-792-1317 (ID: s.17)	
Attendees:	Alberta Environment and Parks Bev Yee, Deputy Minister (Chair) Ronda Goulden, ADM	Saskatchewan Environment Sarah Harrison, Deputy Minister Wes Kotyk, ADM
	British Columbia Kevin Jardine, DM, Environment and Climate Change Strategy Fazil Mihar, DM, Energy Mines and Petroleum Resources	Nova Scotia Environment Scott Farmer, Deputy Minister

CONSIDERATIONS FOR DEPUTY MINISTER

- ECCC is planning to publish the proposed Coal Mining Effluent Regulation (CMER) in Canada Gazette, Part 1 early in 2021, and Part 2 in fall 2021.
- s.13; s.16
- Alberta, NS, SK and BC submitted concerns on the CMER to ECCC. The concerns of the four impact provinces are well aligned.
- ECCC has not acknowledged concerns received, which is contributing to the provinces' shared concerns.
- ECCC has indicated the publishing of the draft CMER in Gazette 1 is part of the consultation process.
- s.13; s.16

BACKGROUND

- BC, NS, SK and AB have shared their perspectives with each other.
- In general the provinces' shared concerns include:
 - The proposed regulation will have significant impact on the industry and the economies.
 - There appears to be regulatory overlap with provincial jurisdiction which could create unnecessary regulatory burden for industry.

- The approach ECCC is taking does not reflect the site-specific differences and associated risks with the mines.
- There is significant difference between the coal mines and their environmental impacts across the country and this should be reflected in the approach.
- More detail on each of the provinces' perspectives is below.

Alberta:

- Alberta recommends implementation of regulation through a risk-based, outcomes-focused approach. This could include broader applicability of the alternative approach, or even site-specific application.
- The proposed CMER could have significant negative economic impacts on Alberta and Canadian communities. Thorough socio-economic and risk-based analysis is essential.
- Focusing on risks to outcomes and their mitigation will help to ensure the regulation focuses on the social, economic and environmental outcomes Canadians expect.
- Alberta has requested an opportunity to review an updated draft of the regulations, prior to publication in the Canada Gazette Part 1. The proposed CMER introduces new effluent limits and environmental effects monitoring requirements for coal mines, which apply a one-size-fits-all approach to coal mines, and fail to consider the significant diversity among facilities.
- At minimum, the proposed regulatory changes will have cost implications for the coal sector, yet unknown impacts on water quality and aquatic ecosystem health in Alberta.

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DECISION NOTE

DATE: February 5, 2021

PREPARED FOR: Honourable George Heyman, Minister of Environment and Climate Change Strategy

ISSUE: Decisions necessary to establish greenhouse gas emissions reduction targets for individual sectors per the *Climate Change Accountability Act* (CCAA)

RECOMMENDED OPTIONS:

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BACKGROUND:

- The CCAA requires that the Minister of Environment and Climate Change Strategy establish, by March 31, 2021, greenhouse gas (GHG) targets for individual sectors and review those targets before the end of 2025 and at least every five years thereafter.
- Sectoral targets will not impose any legal requirements on third parties.

DISCUSSION:

Sectoral targets are guideposts to achieve British Columbia (B.C.)'s economy-wide emission reduction targets. Sectoral targets provide clear sector-specific objectives that can help improve investment certainty and foster entrepreneurial opportunity. They also draw greater attention to different emissions categories and enhance accountability to address them.

Setting sectoral targets by the legislated timeline requires two immediate decisions:

1. How are sector groupings defined?
2. What are the target levels for each sector grouping?

Proposals about some sectoral design features were presented in the Discussion Paper including:

- Setting the target date for 2030
- Establishing percentage reduction from 2007 levels as the target metric
- Setting a target range rather than a fixed point

Each of these proposals had been approved by the Minister Heyman and were supported by stakeholders in their Discussion Paper feedback. s.13

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. These margins for change will reduce as the target date gets closer in time.

Other sectoral target design features, like the use of other compliance options (e.g. verified offsets) or the inclusion of additional emission sources or sinks currently out of scope in B.C.'s Provincial Emissions Inventory (e.g. those from human-caused forest management emissions) will require further analysis and engagement. The Province plans further engagement with Indigenous, industry, environmental and other organizations. s.13

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The Province uses two key tools to establish sectoral targets: 1) targeted engagement through a Discussion Paper distributed to Indigenous, industry, environmental and other organizations; and 2) economic and emissions modelling, GHG policy analysis and technology readiness considerations.

The Discussion Paper lists six principles that should be considered in the design of sectoral targets:

- *Feasibility*: targets should be ambitious but feasible.
- *Cost-effectiveness*: targets consider differences in abatement options and costs in sectors.
- *Transparency and credibility*: targets must be based on publicly available data and documented methods with clear reasons for emission reduction allocation across sectors.
- *Flexibility*: targets need to be adaptable over time to new information and circumstances.
- *Competitiveness*: Targets will be designed with business competitiveness in mind.
- *Fairness*: the distribution of emissions reductions should be seen as fair.

Stakeholders generally supported these principles, although for some environmental organizations, competitiveness was a lower priority. Other principles, including accounting for economic growth, were suggested by industry.

1. Sector Groupings

To establish sectoral targets, sectors need to be clearly defined. Sectors can be defined using a smaller or larger number of groupings. The level of disaggregation is limited by Provincial Inventory (PI) data used to calculate progress to B.C.'s GHG targets and assign emissions to sectors. The PI does not always break down emissions into each sub-sector.

Having fewer sectors provides greater flexibility, as it allows reductions to occur in the part of the sector where they are most feasible and cost effective. Individual sub-sectors can grow as long as the overall sector achieves a reduction. It is also the most resilient to challenges with data uncertainty. A greater number of sectors increases the clarity of expectation on sub-sectors. Having more sectors provides greater transparency by clarifying the expected level of effort for each group via its own target. Attachment 1 illustrates the options for sector groupings.

Discussion Paper feedback from the industrial sector favoured having a lower number of sectors—3 or 4—due to the greater flexibility and cost-effectiveness that it provides. In general, environmental non-governmental organizations (ENGO's) and those within the transportation sector preferred a greater number of sectors to create more accountability for sub-sectors and support specific policy development for sub-sectors requiring different solutions.

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RECOMMENDATION:

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Approved / Not Approved:

Honourable George Heyman, Minister of
Environment and Climate Change Strategy

Date

Attachment(s):

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- Attachment 2: Description of Modelling Undertaken to Estimate Sectoral Targets

s.12; s.13

Assistant Deputy Minister

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Attachment 2: Description of Modelling Undertaken to Estimate Sectoral Targets

CAS undertook economic modelling to inform the establishment of sectoral targets using Navius' gTech model—the same model used to forecast reductions from B.C. climate policy. gTech is an energy-economy model that comprehensively represents all economic activity, energy consumption and greenhouse gas emissions in B.C. Additional information on gTech and CleanBC modelling is available in the 2020 methodology report titled [Supporting the development of CleanBC](#).

In the 2020 model run that forms the primary analysis used in the targets analysis, the 2018 Provincial Inventory is the baseline of emissions, and s.13

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This allows the model to determine how each sector's emissions will be reduced when the most cost-effective reductions economy-wide are found. s.13

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For each option, achieving the high end of the range in each sector exceeds a level of reduction needed to meet BC's economy-wide 2030 target. Achieving the low ends of the ranges results in some gap (-4-8 Mt CO₂e) to target. s.12; s.13

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MEETING NOTE

MEETING DATE: December 4, 2020

PREPARED FOR: Honourable George Heyman, Minister of Environment and Climate Change Strategy

TOPIC: Summary of final advice from Climate Solutions Council for 2020

ATTENDEES: Merran Smith, Colleen Giroux-Schmidt, Climate Solutions Council Co-Chairs, Deputy Minister Kevin Jardine, Assistant Deputy Minister Jeremy Hewitt

KEY MESSAGES:

- I would like to congratulate the Climate Solutions Council on a very successful first year, and sincerely thank you for your hard work to provide advice on a range of complex topics.
- As you have noted in your Annual Summary Report, government has already acted on much of the Council's advice to date and will continue to carefully consider further advice from the Council.
- I particularly appreciate that the Council has tackled challenging topics in its first year and has been able to reach consensus on such things as how to close the gap to the 2030 target, and how government might consider offsets in future climate planning.
- This shows that the Council has learned to work together productively to achieve a single voice, which is a particular credit to the hard work of the Co-Chairs.
- This also is the true strength of the Council--though it is a broad group with different perspectives, it is able to work together and compromise to find consensus.
- I am very proud to profile your advice in the upcoming Climate Change Accountability Report and look forward to a productive relationship in 2021.

KEY FACTS:

- The Climate Solutions Council (the Council) delivered its final advice to government on November 26, 2020 via three pieces of correspondence:
 - Congratulations note to Minister Heyman (1 page)
 - Letter of advice (7 pages)
 - Annual summary report (23 pages, which includes the 7-page letter of advice)
- The congratulations letter requests a meeting with the Minister.

Attachment(s):

- CSC_CongratulatoryLetter_Nov262020
- CSC_AdviceLetter_2030Target_Nov262020
- CSC 2020 Annual Letter to Government_FINALwappendices_26NOV20

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The Honourable George Heyman

Minister, Environment and Climate Change

November 26, 2020

Congratulations on your appointment as Minister of Environment and Climate Change. The Climate Solutions Council, appointed in 2020 under the *Climate Change Accountability Act*, provides strategic advice to the B.C. government on climate action and clean economic growth. The Council includes members from First Nations, environmental organizations, business, academia, youth, labour and local government. The Council supports a sustained and committed approach to climate action that drives down emissions, increases economic opportunities and improves community resilience. The broad representation on this Council is, in our view, a major strength in delivering on our mandate to provide advice to the B.C. government.

While CleanBC is an ambitious plan, it currently only provides the pathways to achieving 75% of the emission reductions B.C. will need to meet our 2030 targets. One of the core mandates of the Climate Solutions Council is to provide strategic advice to the government on how to close this gap and meet our CleanBC emission reduction target. We have proposed solutions to help B.C. meet its legislated targets and are providing you with the appended advice to start that conversation.

The Council has a productive relationship with the staff in your ministry and we look forward to working with you over the mandate. We would be pleased to advise you at any time to further climate action and clean economic growth, realizing CleanBC and B.C.'s 2030 targets. We would like to invite you to meet with the Council co-chairs or the full Council at your earliest convenience to discuss the attached advice.

Regards,



Merran Smith
Executive Director
Clean Energy Canada
Co-Chair, B.C. Climate Solutions Council



Colleen Giroux-Schmidt
Vice President, Corporate Relations
Innergex Renewable Energy
Co-Chair, B.C. Climate Solutions Council

B.C. Climate Solutions Council members:

David Black, President, MoveUP
Lee Brain, Mayor, City of Prince Rupert
Ian Bruce, Acting Executive Director, David Suzuki Foundation
Matt Horne, Climate Policy Manager, City of Vancouver
Lydia Hwitsum, First Nations Summit Political Executive
Mark Jaccard, Director of the School of Resource and Environmental Management, Simon Fraser University
Khelsilem, Councillor, Squamish Nation Council
Adriana Laurent, Co-Founder and Project Administrator, UBC Climate Hub
Skye McConnell, Manager of Policy and Advocacy, Shell Canada
Kurt Niquidet, Vice President, Council of Forest Industries
Nancy Olewiler, Director of the School of Public Policy, Simon Fraser University
Danielle (DJ) Pohl, President, Fraser Valley Labour Council
Tom Syer, Head of Government Affairs, Teck Resources
Karen Tam Wu, Regional Director for British Columbia, Pembina Institute
Jill Tipping, President & Chief Executive Officer, BC Tech Association
Joie Warnock, Assistant to the President, Unifor

The Honourable George Heyman

Minister, Environment and Climate Change

November 26, 2020

In line with its mandate, B.C.'s Climate Solutions Council has two critical items it wishes to bring to your attention. Recent ministry modelling shows that B.C. is not at present on track to meet its 2030 greenhouse gas (GHG) emissions target and **will need to find an additional 8-11 million metric tonnes of emissions reductions** beyond what is currently contemplated in CleanBC by 2030. To address this gap, the Council has undertaken its own modelling work and has advice on actions B.C. can take to achieve these targets while supporting sustainable economic growth and advancing an ambitious climate agenda that leaves no one behind. **The modelling demonstrates that the 2030 target is achievable. Meeting or exceeding the 2030 target is a critical milestone in achieving a net zero target by 2050.**

Achieving the British Columbia government's 2030 GHG emissions target

To address the gap between B.C.'s 2030 emissions target and the estimated 2030 emissions that would result from the current slate of policies in its CleanBC initiative, the Council (in collaboration with CAS staff) engaged Navius Research Inc to model emission reduction pathways. While modelling, by its nature, is not precise, it is the best tool available to inform our advice. Navius evaluated policy options for achieving additional GHG reductions relative to CleanBC by:

- Identifying low cost emission reduction opportunities;
- Evaluating two different policy approaches to achieve low cost emission reductions; and
- Identifying the policy ambition required to meet the target under both policy approaches.

The two different policy approaches were:

Policy 1: A carbon price on the economy at a rate sufficient to meet 100% of the 2030 target;

Policy 2: A set of sector-specific flexible regulations in buildings, transportation, electricity and industry that reach the 2030 target.

Policy Approach 1 demonstrates that if carbon pricing **were the only policy** that increased in stringency above its CleanBC level, the price would need to rise from its \$50 level in 2022 by annual increments of at least \$15 per year.

Policy Approach 2 holds the carbon price constant at \$50 and then requires increasing the stringencies of existing CleanBC flexible regulations more quickly than under current policy. The modelling suggests the following policy changes as the most effective approaches to emission reductions:

- The zero-emission vehicle mandate should increase from its CleanBC level of 30% of new vehicle sales in 2030 to 40% and perhaps higher. In practice, leading jurisdictions are setting 100% zero emission targets for all new vehicles for dates ranging from 2025 to 2035.
- The low carbon fuel standard would need to increase from a 20% reduction in life-cycle carbon intensity in 2030 to about a 40% reduction. A shift of this magnitude is enabled by a larger drop in transportation carbon intensity due to the more rapid adoption of electric vehicles and the fuel-switch by more trucks to HDRD (a biodiesel); and
- A reduction in the carbon intensity of natural gas (through biomethane and perhaps hydrogen) by increasing the 2030 clean gas portfolio standard from the CleanBC 15% to about 25%.

Strengthening policy design to optimize climate and economic impacts

While the modelling work informs achievable pathways to the targets, government needs to strengthen the policy design details to optimize those potential reductions and reduce barriers to British Columbians and B.C. businesses that want to do the right thing by transitioning to clean energy. We offer three examples to help illustrate this point:

- The BC Hydro Phase 2 review contains promising work but needs to be finalized and recommendations released. The draft recommendations can cost effectively accelerate the switch to electricity for buildings, transportation and industry. BC Hydro's current rates and connection policies are an unnecessary barrier to electrification.
- The carbon tax rate needs to change from a uniform rate for all liquid fuels to one that recognizes the different carbon intensity of renewable fuels (as has been done for renewable natural gas) to incentivize fleet operators to transition to renewable fuels.
- The Low Carbon Fuel Standard (LCFS) should be a significant economic and carbon reduction opportunity in British Columbia. The ambiguity in the current rules for generating LCFS credits for electric mobility needs to be eliminated to enable the broad spectrum of companies and organizations to undertake investment and benefit from LCFS credits.

In summary, the Council thus strongly recommends the British Columbia government:

- 1) **Commit in 2021 to one of the pathways or an appropriate combined package of the policies to meet the 2030 emission target (e.g. Policy Approach 1, Policy Approach 2, or a mix of the two approaches), while ensuring policies and actions incorporate equity, Indigenous peoples, engagement and competitiveness to ensure success.**
- 2) **Direct staff to strengthen and optimize existing policies to maximize emission reduction and strengthen economic opportunities.**

The Council reiterates that British Columbia remains 8-11 million metric tonnes short of its 2030 emission target, **but that there are concrete actions the government can take to meet its target, which could contribute to job creation, economic opportunities and increased equity and reconciliation in**

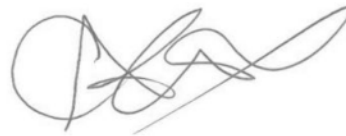
B.C. The Council also stresses the importance of how these policies are considered and implemented is critical to success. Please review Appendix 1 and 2 for details on these key considerations.

The Council has a productive relationship with the staff in your ministry and we look forward to working with you over the mandate. We would be pleased to advise you at any time to further climate action and clean economic growth, realizing CleanBC and B.C.'s 2030 targets.

Regards,



Merran Smith
Executive Director
Clean Energy Canada
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Joie Warnock, Assistant to the President, Unifor

Appendix 1: Advice to support B.C.'s climate action and clean economic growth

The following section summarizes Council advice related to how best implement CleanBC and advance an ambitious climate agenda that leaves no one behind.

Equity

While climate action ultimately improves our health and economic position across society, all policies have impacts, particularly in the shorter-term. We have seen that climate change disproportionately impacts lower income households, women, marginalized communities, and youth. The distribution and scale of impacts associated with climate action policies will differ across society, sectors, regions, and the type of policies that are implemented.

Understanding potential consequences of proposed policies highlights the vital importance of program design. Government must ensure that climate policies are created to be fair and inclusive, and that policies address inequities and alleviate impacts while effectively reducing carbon pollution.

Indigenous Peoples

As the British Columbia government moves to meet the 2030 targets, it is essential that the government meaningfully and appropriately engage Indigenous governing bodies on all policy and program choices. The government must make every effort to collaborate with and support First Nations, with priority for advancing Indigenous peoples, rights, and reconciliation.

Engagement

Government must ensure that climate policies are put through a rigorous engagement process to ensure impacts – intended and unintended – are transparently assessed, communicated, and understood. As the province moves forward with both the implementation of the current CleanBC plan and additional actions required to achieve legislated GHG reduction targets, the government needs to ensure the evaluative process has a commensurate commitment to effective engagement. Understanding and addressing potential consequences of proposed policies is complex, with the evaluation process requiring a deeper, iterative engagement with experts and impacted groups.

Competitiveness and emissions-intensive trade-exposed industries

In B.C., the emissions-intensive trade-exposed (EITE) industries pay the full amount of the carbon tax on their total combusted emissions, but carbon taxes paid above \$30 per tonne are returned to industry via the CleanBC Program for Industry. The impact of the \$0-30 carbon tax on EITE industries needs to be addressed to prevent carbon leakage to other jurisdictions.

We recommend the government improve the program for EITE industries so that it adequately addresses the competitiveness risks that B.C.'s trade exposed industries face while driving down the sector's emissions to help meet British Columbia's 2030 emission target. The Council has initiated this work in parallel with the British Columbia Business Council and expects to provide advice to government shortly.

Appendix 2: Offsets and the previous Climate Solutions and Clean Growth Advisory Council

The previous Climate Solutions and Clean Growth Advisory Council did not provide advice to the government on offsets. However, in the 2019 *Climate Solutions and Clean Growth Advisory Council: Final Report*, the Council did recommend that:

“The B.C. government should be a proactive voice, with the government of Canada, to ensure that any Internationally Traded Mitigation Outcomes (ITMOs – a specific type of international offset mechanism) have a high degree of credibility and transparency. Irrespective of future decisions regarding the use of ITMOs, the B.C. government should also continue to identify and implement opportunities to close the gap to its 2030 targets.”

Opportunities to use offsets to meet climate targets

The Council would like to take this opportunity to reaffirm its expectation that the B.C. government meet or beat its legislated 2030 climate targets. The Council notes that while offsets may assist the B.C. government in meeting 2030 targets, it is also a mechanism and opportunity for the government to exceed its 2030 targets and meet its goal of net zero by 2050. The following provides the Council’s review of offset principles, benefits and challenges.

Characteristics of high-quality offsets

A survey of global best practices identifies high-quality offsets as those meeting the following conditions:

- Offsets must represent **real**, actual emission reductions.
- Emission reductions must be **additional** / incremental to what would have occurred in the absence of the offsets payment.
- Offsets must represent emission reductions that are **permanent** and non-reversible, or if they are reversible, this should be accounted for.
- Sufficient data quantity and quality must be available to ensure emission reductions are **verifiable** by an independent auditor.
- Emission reductions must be **quantifiable** through reliable measurement or estimation.
- Offset ownership is **enforceable** and undisputed where enforcement mechanisms exist to ensure that all program rules are followed, and the program’s integrity is maintained.
- Offsets must provide **co-benefits** over and above emissions reductions that assist with the reconciliation and self-determination of Indigenous peoples or assist with other equity and inclusiveness goals.
- Offsets must be **limited** in their role to meet climate targets to ensure that government's focus is predominantly on reducing the emissions from transportation, buildings and industry, and

that they are not used to meet more than some percent of the outstanding gap to a national or sub-national climate target.

- The emissions reductions from offsets must be **discounted** to reflect the likelihood that some will not be additional despite the best efforts to meet additionality expectations.
- B.C. should not participate in carbon markets without assurance that human rights and the rights of Indigenous peoples will be protected.
- Where possible, offsets used to meet climate targets must be **located** within a jurisdiction with equal or stronger climate policy.

The Council recognizes that:

- Carbon offsets have been enabled under international law since the 1997 Kyoto Protocol (first used internationally in 2001) and may be enabled under Article 6 of the *Paris Agreement* to develop a global carbon market to help nations meet their climate targets. There was no agreement reached at COP25.
- Carbon offsets have been used in B.C. since 2009 to assist with British Columbia's Carbon Neutral Government obligations under the Carbon Neutral Government Regulation.
- CleanBC does not specifically enable or endorse carbon offsets as a means to meet provincial climate targets beyond carbon neutral government operations.
- A number of new and expanded projects that would add to B.C.'s overall emissions have been proposed or are currently in federal or provincial environmental assessment processes. Several of these project proponents are considering the use of offsets; however, these discussions are preliminary.
- In 2019, the Canadian Council of the Ministers of the Environment (CCME) endorsed the *Pan Canadian Greenhouse Gas Offsets Framework* to provide guidance to jurisdictions that are developing or operating an offset program, with a longer-term goal of having a consistent suite of requirements and transferability across Canada.
- The federal government is also developing the Federal Greenhouse Offset System to encourage cost-effective domestic GHG emissions reductions and removals from activities that are not covered by carbon pollution pricing or that go beyond legal requirements.
- The province has made a strong commitment to reconciliation by enacting the *B.C. Declaration on the Rights of Indigenous Peoples Act* in accordance with the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).
- Some B.C. Indigenous Nations are interested in stewardship activities in their territories and are looking at forest / land-use carbon offsets to provide medium-term revenue streams.

With the above considerations in mind, the Council would like to note that there are benefits and challenges of employing offsets to meet climate targets, which are summarized as follows:

Benefits of offsets:

- Provides opportunities for entities / emitters to reduce their carbon footprint that otherwise would not be able to afford to do so (e.g. using offset funding to switch remote communities off of diesel power generation).
- Provide opportunities for verified offsets to be utilized while new technologies to reduce GHG emissions are developed and implemented.
- Provides opportunities for entities / emitters to remain viable that would not otherwise be able to do so without offsets (e.g. preventing a facility from closing or locating in a jurisdiction with weaker climate policies).
- Provides opportunities for Indigenous peoples and landowners to derive revenue from stewardship projects on their lands.

Challenges with offsets

- Can be a disincentive for an entity / emitter to invest in carbon reduction (i.e. they buy offsets instead of reducing emissions).
- Can be administratively complex, costly and open to manipulation.
- Some offsets will not be additional (i.e. the projects would have happened without the offset payment).
- Certain types of offsets (e.g. forestry / land use) may not be permanent due to natural or human-caused disturbance (e.g. forest fires, drought) or may take many years to sequester carbon (e.g. planting trees).

Climate Solutions Council: Annual Summary Report

November 26, 2020

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- Plans and Action to Mitigate and Manage Climate Risks

- Opportunities for Sustainable Economic Development and Job Creation

- Effects on Individuals and Businesses

Advice to achieve B.C.'s 2030 Greenhouse Gas Emissions Target

Adaptation

Conclusion

Overview

The Climate Solutions Council (Council) is honoured to submit our first annual report of advice to the Minister of Environment and Climate Change Strategy as part of our mandate related to the Climate Change Accountability Act. The Council would like to thank the Government of British Columbia for its commitment to climate leadership and have included our recommendations and advice to achieve that goal.

The Council includes members from First Nations, environmental organizations, business, academia, youth, labour and local government. The Council supports a sustained and committed approach to climate action that drives down emissions, increases economic opportunities and improves community resilience. Since establishment of the Council in February 2020, the COVID-19 pandemic has impacted previous assumptions and both short- and long-term plans for Government, business and communities. We thank the B.C. Government for its ongoing efforts to protect the health and safety of British Columbians.

Over the first 6 months of its term, the Council's advice was focused on opportunities to align COVID-19 stimulus and recovery measures with CleanBC and provincial climate targets in order to realize the opportunity to "build back better" We also advised on the implementation of policy commitments in the first phase of CleanBC such as the *Zero Emissions Vehicle Act*, the Clean Portfolio Standard, and the BC Hydro Phase 2 Review. With government releasing its economic recovery plan on September 17th, the Council continues to emphasize the importance of applying a climate and equity lens to all measures, building on the objectives, values, and actions of CleanBC, and strengthening the adaptability, resilience and competitiveness of B.C.'s post-COVID economy. Without focused action, B.C. risks being left behind leading jurisdictions that have realized the opportunity to link economic stimulus to innovation and decarbonization goals.

When CleanBC was released, there was an acknowledgement that the plan contained actions to meet only 75% of the necessary emissions reductions to meet our 2030 target and that the plans to reach the final 25% would be in place within 18 to 24 months. As we are rapidly approaching the 2 year anniversary of Clean BC, the Council strongly advises government to move with haste to put the necessary actions into place to meet 100% of the 2030 target. In that spirit, the Council continued our work this fall with a focus on providing strategic advice, based on modelling, to guide B.C. to meet its 2030 targets. The modelling demonstrated that the 2030 target is achievable if the appropriate measures are taken and meeting or exceeding the 2030 target is a critical milestone to achieving a net zero target by 2050.

About the Climate Solutions Council

The Climate Solutions Council is an advisory group with a legislated mandate to provide advice to the Minister of Environment and Climate Change Strategy on matters respecting climate change, including the following:

- i. Plans and action to achieve climate targets and reduce emissions.
- ii. Plans and action to mitigate and manage climate risks.

- iii. Opportunities for sustainable economic development and job creation while the Province transitions to a low-carbon economy.
- iv. The effects on individuals and businesses that result from actions to address climate change, including actions to reduce greenhouse gas (GHG) emissions and manage climate change risks.
- v. Any other matters specified by the Minister respecting climate change.

Established in February 2020, the Council continues the advisory role of the previous Climate Solutions and Clean Growth Advisory Council, which completed its mandate at the end of 2019. It includes members from First Nations, environmental organizations, business, academia, youth, labour, and local government. The Council views this broad representation as a major strength in delivering on its mandate.

The Council has met regularly and been actively engaged with government. We have:

- Met thirteen times over eight months, twelve of which were held virtually (March – November 2020);
- Provided written advice to government six times; and
- Tackled diverse topics including meeting the 2030 targets, COVID recovery, climate preparedness and adaptation, industrial competitiveness, youth engagement, and accountability reporting.

The Council wishes to thank government staff, particularly at the Climate Action Secretariat, for their ongoing commitment and hard work to support the Council.

Feedback on Progress to Date

The Council appreciates that the economic recession brought about by COVID-19 is unlike previous downturns. In addition to job losses and diminished employment prospects, British Columbians have lost loved ones and broader societal issues have entered the spotlight. Rather than delaying implementation of CleanBC, continued commitment to and investment in climate action is critical to building back a more equitable province that is better positioned to thrive in the world as it continues to confront climate disruption. The importance of recovery and stimulus measures linked to CleanBC was recognized by government in BC's Economic Recovery Plan.

The economic crisis arising from the pandemic has led to a temporary decline in global greenhouse gas emissions. But as the economy recovers from the crisis, these emissions will rise again. As this Council prepares our annual letter, the first to be included as part of the Minister of Environment and Climate Change Strategy's accountability report to the Legislature, we recognize that B.C.'s emissions have increased by 6 per cent (3.5 Mt CO₂e) from the 2007 baseline as of the 2018 Provincial Greenhouse Gas Emissions Inventory, a net increase of 2.6 Mt CO₂e from 2017.

Although 2018 emissions also do not reflect the impact of actions laid out in CleanBC that are projected to achieve 75% of 2030 target reductions, this uptick in emissions is concerning and reinforces the need for swift government action to get emissions back on track to meet B.C.'s emissions target of at least 40 percent below 2007 emission levels by 2030. To meet this responsibility, the Council recommends that

B.C.'s new government take decisive action to implement the remaining policies laid out in CleanBC and develop and implement further programs and policies needed to achieve the province's legislated 2030 target while improve equity, advance reconciliation with Indigenous peoples, create sustainable communities and economies across the Province

To maximize both the economic and job-creating benefits of post-COVID-19 stimulus, investments related to CleanBC should be both accelerated and increased. Announcements and progress to date on these measures have laid a foundation to shape business and investment decisions. By increasing the pace and scale of these programs, B.C. can both create more stable employment opportunities and achieve additional emission reductions that assist in getting the province on track for our 2030 climate change targets. The Council also acknowledges that the implementation of CleanBC has both costs and benefits to businesses. Investment in clean growth needs to continue through challenging economic times while also addressing the competitiveness concerns of industry, particularly the emissions-intensive, trade-exposed sectors.

Recommended Principles and Criteria for B.C.'s Economic Stimulus

A growing number of jurisdictions have begun rolling out economic recovery plans, and those that have historically led on climate action continue to do so by aligning recovery efforts with ongoing innovation and deployment of climate solutions. Germany, for example, has committed nearly one-third of its 130 billion-euro recovery budget. The European Commission's planned recovery similarly includes a focus on climate action, including significant multi-year investments in building renovations (prioritizing schools, hospitals, and social housing), clean hydrogen, renewable energy, and clean transportation. In California, Governor Newsom has appointed a task force to help California recover as quickly and safely as possible, creating a fair, green, and prosperous future.

Building on learnings from other jurisdictions, the Council's letter of June 12, 2020, provided a recommended framework of principles and criteria to put CleanBC at the center of economic recovery plans and ensure that short-term actions are consistent with a longer-term transition to a sustainable low-carbon society and economy. Below are the principles and criteria the council recommended:

Principles

- **Benefit every part of British Columbia**
Reduce inequality and create opportunity for all British Columbians, including vulnerable populations disproportionately impacted by climate change and COVID-19.
- **Create sustainable jobs**
Target investments in areas that will create sustainable jobs and grow businesses that produce low carbon goods and services. For example, take advantage of high job multipliers in the retrofits and clean economy sectors. Improve skills and employability of the workforce in partnership with post-secondary and apprenticeship programs, and support a just transition.

- **Accelerate progress on CleanBC and climate action**
Drive transformative change by investing in low carbon pathways such as electrification, renewable fuels, hydrogen, zero emissions transportation, low carbon and energy efficient buildings. Remove barriers and support B.C. businesses and industries to enhance competitiveness and enable production of low carbon goods and services.
- **Advance Indigenous peoples**
Affirm and implement B.C.'s *Declaration on the Rights of Indigenous Peoples Act* (DRIPA), with priority for advancing Indigenous peoples, rights, and reconciliation.
- **Increase resilience to climate impacts**
Incorporate climate resilience into COVID-19 recovery and rebuilding plans, informed by B.C.'s Strategic Climate Risk Assessment and future climate conditions, and delivered in communities across B.C.
- **Maximize local impact and local benefit**
Focus on stimulus that will revitalize and grow local economies

Criteria

In order to assess potential stimulus projects or programs, we developed five criteria that relate to the above principles. Given the need to be nimble and recognizing challenges in securing reliable and consistent data, these are qualitative “yes/no/neutral” criteria that can be used for an initial screen. To qualify for near term stimulus, potential investments should be scored yes or neutral for all of the criteria. More detailed scrutiny, including use of quantitative data where available, could subsequently be applied to those projects that pass initial screening.

Objective	Criterion	Measure / Indicators	Data Sources
Economic stimulus	Jobs, business reopening, improves private and public sector financial stability	Increased hours worked, reduces unemployment, business reopening, reduces bankruptcies, reduces GDP loss, stimulates investment	Economic models, economic data (StatCan-labour force surveys), industry surveys
Environment quality	- Supports CleanBC goals - Reduces GHGs; Supports transition to low C economy - Increases climate resilience	- GHGs trend down - Does not increase carbon-intensity	- Fuel consumption in short term - GDP - GHGs
Reconciliation	Supportive of truth and reconciliation, UNDRIP	Inclusion of Indigenous peoples and principles in decision making	- Follows from type of program; descriptive
Government capacity	Institutional/implementation capacity and within budget,	- Cost within stimulus budget - Available delivery	- Program costs - Data from pilot

	consistent with federal priorities and programs	mechanisms - Supports discussions with federal government	programs - Other jurisdictions' experience
Equity	Reduces inequality and addresses affordability in identified groups	Identify groups: low income, regional, marginalized, racialized, not male dominated; inequality ideally reduced, but at least none worse off	- Follows from type of program - Descriptive

With the above principles as a guide, and applying the screening criteria, the Council assessed which strategic stimulus initiatives align with CleanBC priorities and are both “shovel ready” and “shovel worthy”. This resulted in Council making the recommendations provided in the table below. The status of these recommendations as of October 31, 2020, is provided along with details regarding the level of adoption (NOTE: for recommendations made before June 21, the criteria above had not yet formally been developed). For all recommendations which have been partially or fully adopted into government programs, Council recommends monitoring their uptake and maintaining them if seen to be successful and identifying those successful actions that could be augmented to further their effectiveness.

Date	Climate Solutions Council Advice	Status	Comments
Plans and action to achieve climate targets and reduce emissions.			
April 8 th , 2020	Implement the Clean Portfolio Standard. Move forward with enabling legislation in 2020 with a design that supports renewable gas, hydrogen and other options to reduce the carbon emissions that gas utilities are responsible for. The policy should have a long-term objective of phasing out natural gas from fossil fuel sources.	Under consideration	Design and implementation of the Clean Portfolio Standard is pending.
April 8 th , 2020	Finalize the BC Hydro Phase 2 Review with an emphasis on changes to electricity rate structures that will make it more cost-effective for all customer classes to switch from fossil fuels to clean electricity, and develop complementary actions that provide further financial support for lower income households.	Under consideration	A final report from Phase 2 of the Review is pending.
April 15 th , 2020	Continue moving ahead with programs, policies, and regulations that have been committed to under Phase 1 of the CleanBC plan.	Adopted	Implementation of Phase 1 continues. Government released a 2019 Climate Change Accountability

			Report in February 2020 on progress to date.
May 11 th , 2020	Electrify public transit. Through loans or grants, support the efforts of both BC Transit and TransLink to build infrastructure to increasingly electrify their bus fleets, replacing end-of-life diesel buses with electric buses.	Partially adopted	Some funding is available in partnership with the federal government for projects including bus fleet electrification, but dedicated loans or grants to electrify public transit have not been established. • Through the Government of Canada's Public Transit Infrastructure Fund (PTIF) and Investing in Canada Infrastructure Program (ICIP), the Province of B.C., the Government of Canada and local governments are partnering to fund \$1.2 billion in transit investments over the next decade in communities served by BC Transit, including for new or replacement electric buses. • In August 2020, the Canadian and British Columbian governments committed up to \$47 million towards a second intake of the Green Infrastructure - CleanBC Communities Fund (CCF). Eligible projects include those that increase access to clean-energy transportation.
May 11 th , 2020	Increase energy upgrades in housing by: a. Increasing and adjusting the incentives available for single family homes under Better Homes BC to encourage deeper retrofits at each home, prioritizing fuel switching, efficiency, and climate adaptation. Provide additional top-ups to low- and medium-income households to ensure equity. b. Increasing the incentives and total amount of funds available	Partially adopted	Limited actions have been taken to increase energy upgrades in housing. a. In response to COVID-19, select rebates under Better Homes BC have been temporarily doubled from October 1 to December 31, 2020. Top-ups specific to low- and medium-income households are not provided. b. Incentives and funds for non-profits through Better Buildings BC have not been increased.

	through the Better Buildings BC programs for non-profits. c. Providing a separate grant stream for affordable housing owners that are not eligible for Capital Renewal Funding to help pay for basic renovation costs. d. Enabling Property Assessed Clean Energy (PACE) Financing for residential and commercial buildings.		c. A separate grant stream for affordable housing owners has not been offered. d. B.C.'s Economic Recovery Plan allocated \$2 million for a PACE Roadmap and Pilot Program.
May 11 th , 2020	Transition public sector buildings off fossil fuels. This could be advanced by increasing funding to the Carbon Neutral Capital Program and CleanBC Communities Fund.	Partially adopted	Some additional funding has been made available: The second intake of the CleanBC Communities Fund, which has been allocated \$47 million from the Canadian and B.C. governments, enables local governments to receive funding for projects that increase the energy efficiency of public sector buildings such as installing heat pumps.
May 11 th and June 12 th , 2020	Accelerate EV charging and hydrogen refueling infrastructure build-out within and in-between B.C.'s towns and cities, through additional and/or enhanced support.	Adopted	Government has made new investments in EV and hydrogen refueling stations: • In September 2020, B.C. Government announced \$5.4 million in funding through the new CleanBC Go Electric Public Charger program to provide rebates for the installation of fast-charging stations; and \$10 million for the construction and operation of 10 hydrogen fuelling stations in the province. • B.C. Government is partnering with federal government, local governments and First Nations communities to fund 55 EV charging stations in the northern and central regions of the province and 28 charging stations on Vancouver Island.

May 11 th and June 12 th , 2020	Create safe, active transportation opportunities by offering additional support to (i) convert some of the available road space for safe active transportation and (ii) expand incentives that encourage active transportation use.	Adopted	Government has allocated additional funding to active transportation initiatives as follows: • Active Transportation – Connections, Road Widening and Maintenance has been allocated \$16.675 million under BC's Economic Recovery Plan. • In August 2020, B.C. Government announced a new Active Transportation Planning Grant of \$600,000 over two years, which will enable local governments to receive funding to incorporate or strengthen active transportation components of their community development plans. • In July 2020, B.C. Government announced increased rebates for e-bikes for individuals and businesses and introduced a one-year pilot rebate project for cargo e-bikes.
June 12 th , 2020	Raise incentive caps on retrofits in homes and buildings, including social and Indigenous housing and public buildings by increasing the amounts in existing programs, including CleanBC Indigenous Community Energy Coach, and CleanBC Indigenous Community Heat Pump Incentive programs, to support more extensive retrofits to generate deeper reductions in GHGs.	Under consideration	In response to COVID-19, select rebates under Better Homes BC have been temporarily doubled from October 1 to December 31, 2020. Incentives dedicated to social or Indigenous housing, such as the programs recommended by the Council, have not been raised.
July 20 th , 2020	Bring the Zero-Emission Vehicles Act regulations into force quickly and communicate an interest in transitioning the province to 100% ZEV sales sooner than 2040.	Partially adopted	The Zero-Emission Vehicles Regulation was brought into force on July 30 th , 2020. Government has not communicated an interest in an earlier transition to 100% ZEV sales.
Plans and action to mitigate and manage climate risks.			
June 12 th , 2020	Invest in Community Flood Hazard Mitigation , increasing funding for flood plain mapping and for replacing, restoring, and improving bridges, culverts, and roads, including resource roads, to reduce flooding vulnerability of	Adopted	Government has made new investments in flood hazard mitigation under the Community Emergency Preparedness Fund (CEPF): • \$3.46 million for flood risk assessment, mapping, and mitigation planning to 24 local

	vital supply routes and access to communities across B.C.		government and First Nations communities (July 9, 2020); • \$7.9 million for structural flood mitigation (Nov. 20, 2020); • \$2.5 million for flood risk assessments, mapping and mitigation planning (January 2021).
June 12 th , 2020	Increase funding for policies and programs across the province that increase climate resilience, invest in and regenerate natural assets, and can have the dual benefit of reducing GHG emissions. Each of these could employ youth and other demographics with high levels of unemployment associated with COVID-19's economic impacts. These include slash removal, protecting cultural heritage sites, and improving ecosystem resilience in B.C. parks.	Partially adopted	As part of COVID-19 recovery measures, Government announced a \$1.8-million Youth Employment Program with BC Parks and the Conservation Officer Service. Broader policies or programs to employ youth in climate resilience activities have not been announced.
June 12 th , 2020	Increase funding for B.C.'s farms to invest in beneficial management practices (BMPs) that improve climate resilience and reduce GHG emissions.	Under consideration	No new funding commitments have been made to the BMP program.
Opportunities for sustainable economic development and job creation while the Province transitions to a low-carbon economy.			
May 11 th and June 12 th , 2020	Grow and train the workforce and develop the supply chain to build and renovate low-carbon homes and buildings. Increasing grants and caps through the CleanBC Building Innovation Fund to accelerate demonstration projects and to stimulate local supply and manufacturing of low carbon building components will grow the number of B.C. suppliers to domestic markets and beyond.	Partially adopted	Government actions to date have provided a second round of funding under the CleanBC Building Innovation Fund and additional funds to support mass timber construction, a low-carbon building component, as follows: • B.C.'s Economic Recovery Plan allocates \$8-million for a second intake of the CleanBC Building Innovation Fund and \$3-million for Mass Timber Demonstration Projects. • On September 17, 2020, B.C. Government announced a \$108.8-million investment in the British Columbia Institute of Technology's

			(BCIT) new student housing project that will utilize mass timber.
May 11 th , 2020	Support the Indigenous Clean Energy Initiative and Indigenous community-owned utilities. An augmented focus on Indigenous clean energy and exploration of new business models can be a catalyst for economic development across the Province.	Partially adopted	Government has taken some action to support Indigenous clean energy and utilities. In August 2020, nearly \$2.8-million was awarded to 13 Indigenous-led clean energy projects under the B.C. Indigenous Clean Energy Initiative. Future intakes or funding have not been announced. Regarding Indigenous utilities, the BC Utilities Commission's Indigenous Utilities Regulation Inquiry released a final report on April 30, 2020, but action on its recommendations has not been taken.
May 11 th and June 12 th , 2020	Create a program that helps B.C.'s small and medium-sized enterprises adopt technologies to measure and reduce their GHGs, increasing resilience to maintain and grow jobs as well as support homegrown B.C. technology SMEs with market validation and business growth.	Under consideration	A program to assist small and medium-sized businesses to measure and reduce their GHGs has not been announced.
May 11 th and June 12 th , 2020	Create a CleanBC Industry Innovation Recovery Fund that stimulates private sector investment in emissions reductions projects such as: a. The collection, transportation, and processing of harvest residuals to create biofuels and renewable gas. b. Emissions reductions projects for large industrial operations. c. Early development activities for industrial electrification projects. This opportunity would focus on identifying and executing activities (such as planning, surveying, screening, field assessments) and has potential to leverage federal electrification funding.	Under consideration	An Industry Innovation Recovery Fund under CleanBC has not been announced.
May 11 th and	Adopt measures to increase the production of liquid clean fuels in B.C.	Under consideration	Measures to achieve the CleanBC commitment to increase production

June 12 th , 2020	through targeted support to spur new and/or expanded supply.		of liquid clean fuels in B.C. have not been announced.
May 11 th , 2020	Accelerate Construction of Climate-Friendly Units of Affordable Housing. These new housing developments should be energy efficient with zero emissions heating and hot water systems, and constructed using low carbon materials and practices such as wood and modular construction. They should also include climate adaptation measures, such as overheating protection and wildfire-proofing.	Partially adopted	Affordable new housing developments have been announced throughout the province, but so far these are not necessarily required to be climate-friendly. Recent positive examples include: - Government partnership to build 50 new affordable rental homes in a passive house building in Port Alberni; and - CleanBC Communities Fund investment in an energy self-sufficient affordable housing project at Kanaka Bar Indian Band.
The effects on individuals and businesses that result from actions to address climate change			
May 11 th , 2020	All stimulus and climate action programs should include meaningful capacity for Indigenous communities and ensure that Indigenous community-owned companies are central in stimulus initiatives.	Partially adopted	Investments in infrastructure, transportation, and buildings to support CleanBC goals are available to Indigenous communities and organizations, but specific supports and capacity-building are not always provided.
June 12 th , 2020	Increase funding for new social and Indigenous housing allocated under existing programs including the Community Housing Fund and Indigenous Housing Fund.	Under consideration	No new funding commitments have been made to these programs. The Community Housing Fund has an intake open from May 2020 – January 2021.
June 12 th , 2020	Support immediate training programs that could be in place in the near term, targeted at youth and those out of work, to build the skills that support achieving relevant CleanBC initiatives and increase climate resilience.	Under consideration	Immediate training programs to build the skills to support CleanBC initiatives and increase climate resilience have not been announced.
May 11 th , 2020	The development of a low-carbon industrial strategy was a key commitment in CleanBC, and this work needs to proceed with urgency to	Under consideration	B.C.'s government and business leaders signed a memorandum of understanding to develop a strategy

	improve the competitiveness of B.C.'s industries.		in 2018 but to date one has not been released.
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Advice to achieve B.C.'s 2030 GHG Emissions Target

The Council has also submitted a core piece of advice on achieving the B.C. Government's 2030 GHG emissions target. Recent Ministry modelling shows that B.C. is not at present on track to meet its 2030 target and will need to find an additional 8-11 million metric tonnes of emissions reductions beyond what is currently contemplated in CleanBC by 2030. To address this gap, the Council has undertaken its own modelling work and has advice on actions B.C. can take to achieve these targets while supporting economic growth and advancing an ambitious climate agenda that leaves no-one behind. **The modeling demonstrates that the 2030 target is achievable.** Meeting or exceeding the 2030 target is a critical milestone to achieving a net zero target by 2050. This advice was submitted in conjunction with this annual report, and is appended to this letter as Appendix 2.

Adaptation

In 2020, the Council had a number of engagements with government staff on climate preparedness and adaptation. As part of the Council's advice for COVID recovery measures, three ideas for plans and action to mitigate and manage climate risks were recommended including investing in community flood hazard mitigation, increasing funding for climate resilience programs focusing on employment, and funding for B.C.'s farms. The Council was pleased to see over \$15M allocated to some of these ideas as part of Government's Stronger BC plan. In the fall of 2020, the Council approved a formalized subcommittee to focus on adaptation.

Conclusion

The Council would like to thank the Government of British Columbia for its continued climate leadership and for establishing the Council as part of the new *Climate Change Accountability Act*. The Council brings together academic, business, Indigenous, labour, and NGO representatives to provide objective, non-partisan advice to government. We feel that we have made a positive contribution to the provincial climate dialogue and our work together on post-COVID-19 economic recovery has helped us better understand each other as well as what it takes for British Columbia to remain a globally desirable destination to live and work.

The Climate Solutions Council feels B.C. is well positioned to be a showcase on how smart and effective climate action can also improve equity, advance reconciliation with Indigenous peoples, create sustainable communities and economies across the Province, and build resilience.

We trust that this report provides a useful summary of our work and advice to date, and look forward to continuing to deliver on our mandate over the coming year.

Regards,



Merran Smith
Executive Director
Clean Energy Canada
Co-Chair, B.C. Climate Solutions Council



Colleen Giroux-Schmidt
Vice President, Corporate Relations
Innergex Renewable Energy
Co-Chair, B.C. Climate Solutions Council

B.C. Climate Solutions Council members:

David Black, President, MoveUP
Lee Brain, Mayor, City of Prince Rupert
Ian Bruce, Acting Executive Director, David Suzuki Foundation
Matt Horne, Climate Policy Manager, City of Vancouver
Lydia Hwitsum, First Nations Summit Political Executive
Mark Jaccard, Director of the School of Resource and Environmental Management, Simon Fraser University
Khelsilem, Councillor, Squamish Nation Council
Adriana Laurent, Co-Founder and Project Administrator, UBC Climate Hub
Skye McConnell, Manager of Policy and Advocacy, Shell Canada
Kurt Niquidet, Vice President, Council of Forest Industries
Nancy Olewiler, Director of the School of Public Policy, Simon Fraser University
Danielle (DJ) Pohl, President, Fraser Valley Labour Council
Tom Syer, Head of Government Affairs, Teck Resources
Karen Tam Wu, Regional Director for British Columbia, Pembina Institute
Jill Tipping, President & Chief Executive Officer, BC Tech Association
Joie Warnock, Assistant to the President, Unifor

Appendix 1: Council Terms of Reference

Appendix 2: Letter of Advice titled “Achieving the British Columbia government’s 2030 Emissions Target” dated November 26, 2020

Climate Solutions Council – Terms of Reference

Terms of Reference March 2020

A. Mandate

1. The Climate Solutions Council is an advisory group with a legislated mandate to provide advice to the Minister of Environment and Climate Change Strategy on matters respecting climate change, including the following:

- i. Plans and action to achieve climate targets and reduce emissions.
- ii. Plans and action to mitigate and manage climate risks.
- iii. Opportunities for sustainable economic development and job creation while the Province transitions to a low-carbon economy.
- iv. The effects on individuals and businesses that result from actions to address climate change, including actions to reduce greenhouse gas emissions and manage climate change risks.
- vi. Any other matters specified by the Minister respecting climate change.

2. The Climate Solutions Council will:

- i. Strive for consensus in their feedback and advice to government.
- ii. Agree that information and ideas discussed at the meeting are confidential and not to be shared outside the meeting, except through agreed-upon messaging.
- iii. Meet face-to-face at *least* three times a year for discussions to provide feedback and advice. In addition to face-to-face meetings, the chair(s) and the Head of the Climate Action Secretariat will meet monthly.
- iv. Formalize the use of sub-committees (e.g. Technical, Engagement, and Adaptation sub-committees), with individual terms of reference for each group. Sub-committees may be established and/or concluded on advice of the chair(s) or the Climate Action Secretariat.
- v. Advise Climate Action Secretariat on public engagement, including a session(s) focused on youth engagement.
- vi. Annually, provide a summary report of the Council's advice to the Minister, to be made publicly available through a website, which includes comment on progress to meeting climate targets and reducing emissions, and mitigating had managing climate risks.

3. The Minister of Environment and Climate Change Strategy is required to include advice from the Climate Solutions Council in his/her annual accountability report to the Legislature and responds to advice received.

4. At the beginning of each calendar year, the head of the Climate Action Secretariat and the chair(s) will meet to develop a work plan for the year that aligns with section A.1 and the priorities of the Minister and the chair(s). This is to ensure that Climate Solutions Council members and government have a common understanding of the Council's objectives for the coming year.

B. Advisory Council Members

1. The Climate Solutions Council will consist of up to 20 members representing broad aspects of B.C. society with varied areas of expertise. The Council must include at least one representative from each of the following groups:

- Indigenous peoples;
- Local governments;
- Environmental organizations;
- Academics;
- Unions;
- Persons living in rural and remote communities; and
- The business community.

2. At least half of the members must be women.

3. The members will bring their knowledge, perspective and experience and will take an evidence-based approach to discussions.

4. The Minister of Environment and Climate Change Strategy has discretion to appoint new members, and there will be no provision for alternate members.

5. The Minister must publish the names of the Climate Solutions Council members on a publicly-accessible website maintained by the ministry.

C. Logistical Support

1. Meeting support will be provided by the Climate Action Secretariat.

2. The Climate Action Secretariat will act as the point of coordination for information from across government. All ministries across government with responsibility for climate and energy policy will provide expert support to the advisory council.

3. Members of the advisory council are to be reimbursed for travelling and out-of-pocket expenses reasonably incurred by them in fulfilling their duties on the advisory council.

4. The Climate Action Secretariat will work with the chair(s) to identify additional and/or external resources and expertise needed to fulfil the Climate Solutions Council's mandate, subject to Deputy Minister approval. This approval will not be unreasonably withheld.

5. These Terms of Reference will be reviewed and updated biannually.

The Honourable George Heyman
Minister of Environment and Climate Change Strategy

In line with its mandate, B.C.'s Climate Solutions Council has two critical items it wishes to bring to your attention. Recent ministry modelling shows that B.C. is not at present on track to meet its 2030 greenhouse gas (GHG) emissions target and **will need to find an additional 8-11 million metric tonnes of emissions reductions** beyond what is currently contemplated in CleanBC by 2030. To address this gap, the Council has undertaken its own modelling work and has advice on actions B.C. can take to achieve these targets while supporting sustainable economic growth and advancing an ambitious climate agenda that leaves no one behind. **The modelling demonstrates that the 2030 target is achievable. Meeting or exceeding the 2030 target is a critical milestone in achieving a net zero target by 2050.**

Achieving the British Columbia government's 2030 GHG emissions target

To address the gap between B.C.'s 2030 emissions target and the estimated 2030 emissions that would result from the current slate of policies in its CleanBC initiative, the Council (in collaboration with CAS staff) engaged Navius Research Inc to model emission reduction pathways. While modelling, by its nature, is not precise, it is the best tool available to inform our advice. Navius evaluated policy options for achieving additional GHG reductions relative to CleanBC by:

- Identifying low cost emission reduction opportunities;
- Evaluating two different policy approaches to achieve low cost emission reductions; and
- Identifying the policy ambition required to meet the target under both policy approaches.

The two different policy approaches were:

Policy 1: A carbon price on the economy at a rate sufficient to meet 100% of the 2030 target;

Policy 2: A set of sector-specific flexible regulations in buildings, transportation, electricity and industry that reach the 2030 target.

Policy Approach 1 demonstrates that if carbon pricing **were the only policy** that increased in stringency above its CleanBC level, the price would need to rise from its \$50 level in 2022 by annual increments of at least \$15 per year.

Policy Approach 2 holds the carbon price constant at \$50 and then requires increasing the stringencies of existing CleanBC flexible regulations more quickly than under current policy. The modelling suggests the following policy changes as the most effective approaches to emission reductions:

- The zero-emission vehicle mandate should increase from its CleanBC level of 30% of new vehicle sales in 2030 to 40% and perhaps higher. In practice, leading jurisdictions are setting 100% zero emission targets for all new vehicles for dates ranging from 2025 to 2035.

- The low carbon fuel standard would need to increase from a 20% reduction in life-cycle carbon intensity in 2030 to about a 40% reduction. A shift of this magnitude is enabled by a larger drop in transportation carbon intensity due to the more rapid adoption of electric vehicles and the fuel-switch by more trucks to HDRD (a biodiesel); and
- A reduction in the carbon intensity of natural gas (through biomethane and perhaps hydrogen) by increasing the 2030 clean gas portfolio standard from the CleanBC 15% to about 25%.

Strengthening policy design to optimize climate and economic impacts

While the modelling work informs achievable pathways to the targets, government needs to strengthen the policy design details to optimize those potential reductions and reduce barriers to British Columbians and B.C. businesses that want to do the right thing by transitioning to clean energy. We offer three examples to help illustrate this point:

- The BC Hydro Phase 2 review contains promising work but needs to be finalized and recommendations released. The draft recommendations can cost effectively accelerate the switch to electricity for buildings, transportation and industry. BC Hydro's current rates and connection policies are an unnecessary barrier to electrification.
- The carbon tax rate needs to change from a uniform rate for all liquid fuels to one that recognizes the different carbon intensity of renewable fuels (as has been done for renewable natural gas) to incentivize fleet operators to transition to renewable fuels.
- The Low Carbon Fuel Standard (LCFS) should be a significant economic and carbon reduction opportunity in British Columbia. The ambiguity in the current rules for generating LCFS credits for electric mobility needs to be eliminated to enable the broad spectrum of companies and organizations to undertake investment and benefit from LCFS credits.

In summary, the Council thus strongly recommends the British Columbia government:

- 1) Commit in 2021 to one of the pathways or an appropriate combined package of the policies to meet the 2030 emission target (e.g. Policy Approach 1, Policy Approach 2, or a mix of the two approaches), while ensuring policies and actions incorporate equity, Indigenous peoples, engagement and competitiveness to ensure success.**
- 2) Direct staff to strengthen and optimize existing policies to maximize emission reduction and strengthen economic opportunities.**

The Council reiterates that British Columbia remains 8-11 million metric tonnes short of its 2030 emission target, **but that there are concrete actions the government can take to meet its target, which could contribute to job creation, economic opportunities and increased equity and reconciliation in B.C.** The Council also stresses the importance of how these policies are considered and implemented is critical to success. Please review Appendix 1 and 2 for details on these key considerations.

The Council has a productive relationship with the staff in your ministry and we look forward to working with you over the mandate. We would be pleased to advise you at any time to further climate action and clean economic growth, realizing CleanBC and B.C.'s 2030 targets.

Regards,



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Appendix 1: Advice to support B.C.'s climate action and clean economic growth

The following section summarizes Council advice related to how best implement CleanBC and advance an ambitious climate agenda that leaves no one behind.

Equity

While climate action ultimately improves our health and economic position across society, all policies have impacts, particularly in the shorter-term. We have seen that climate change disproportionately impacts lower income households, women, marginalized communities, and youth. The distribution and scale of impacts associated with climate action policies will differ across society, sectors, regions, and the type of policies that are implemented.

Understanding potential consequences of proposed policies highlights the vital importance of program design. Government must ensure that climate policies are created to be fair and inclusive, and that policies address inequities and alleviate impacts while effectively reducing carbon pollution.

Indigenous Peoples

As the British Columbia government moves to meet the 2030 targets, it is essential that the government meaningfully and appropriately engage Indigenous governing bodies on all policy and program choices. The government must make every effort to collaborate with and support First Nations, with priority for advancing Indigenous peoples, rights, and reconciliation.

Engagement

Government must ensure that climate policies are put through a rigorous engagement process to ensure impacts – intended and unintended – are transparently assessed, communicated, and understood. As the province moves forward with both the implementation of the current CleanBC plan and additional actions required to achieve legislated GHG reduction targets, the government needs to ensure the evaluative process has a commensurate commitment to effective engagement. Understanding and addressing potential consequences of proposed policies is complex, with the evaluation process requiring a deeper, iterative engagement with experts and impacted groups.

Competitiveness and emissions-intensive trade-exposed industries

In B.C., the emissions-intensive trade-exposed (EITE) industries pay the full amount of the carbon tax on their total combusted emissions, but carbon taxes paid above \$30 per tonne are returned to industry via the CleanBC Program for Industry. The impact of the \$0-30 carbon tax on EITE industries needs to be addressed to prevent carbon leakage to other jurisdictions.

We recommend the government improve the program for EITE industries so that it adequately addresses the competitiveness risks that B.C.'s trade exposed industries face while driving down the sector's emissions to help meet British Columbia's 2030 emission target. The Council has initiated this work in parallel with the British Columbia Business Council and expects to provide advice to government shortly.

Appendix 2: Offsets and the previous Climate Solutions and Clean Growth Advisory Council

The previous Climate Solutions and Clean Growth Advisory Council did not provide advice to the government on offsets. However, in the 2019 *Climate Solutions and Clean Growth Advisory Council: Final Report*, the Council did recommend that:

“The B.C. government should be a proactive voice, with the government of Canada, to ensure that any Internationally Traded Mitigation Outcomes (ITMOs – a specific type of international offset mechanism) have a high degree of credibility and transparency. Irrespective of future decisions regarding the use of ITMOs, the B.C. government should also continue to identify and implement opportunities to close the gap to its 2030 targets.”

Opportunities to use offsets to meet climate targets

The Council would like to take this opportunity to reaffirm its expectation that the B.C. government meet or beat its legislated 2030 climate targets. The Council notes that while offsets may assist the B.C. government in meeting 2030 targets, it is also a mechanism and opportunity for the government to exceed its 2030 targets and meet its goal of net zero by 2050. The following provides the Council’s review of offset principles, benefits and challenges.

Characteristics of high-quality offsets

A survey of global best practices identifies high-quality offsets as those meeting the following conditions:

- Offsets must represent **real**, actual emission reductions.
- Emission reductions must be **additional** / incremental to what would have occurred in the absence of the offsets payment.
- Offsets must represent emission reductions that are **permanent** and non-reversible, or if they are reversible, this should be accounted for.
- Sufficient data quantity and quality must be available to ensure emission reductions are **verifiable** by an independent auditor.
- Emission reductions must be **quantifiable** through reliable measurement or estimation.
- Offset ownership is **enforceable** and undisputed where enforcement mechanisms exist to ensure that all program rules are followed, and the program’s integrity is maintained.
- Offsets must provide **co-benefits** over and above emissions reductions that assist with the reconciliation and self-determination of Indigenous peoples or assist with other equity and inclusiveness goals.
- Offsets must be **limited** in their role to meet climate targets to ensure that government's focus is predominantly on reducing the emissions from transportation, buildings and industry, and

that they are not used to meet more than some percent of the outstanding gap to a national or sub-national climate target.

- The emissions reductions from offsets must be **discounted** to reflect the likelihood that some will not be additional despite the best efforts to meet additionality expectations.
- B.C. should not participate in carbon markets without assurance that human rights and the rights of Indigenous peoples will be protected.
- Where possible, offsets used to meet climate targets must be **located** within a jurisdiction with equal or stronger climate policy.

The Council recognizes that:

- Carbon offsets have been enabled under international law since the 1997 Kyoto Protocol (first used internationally in 2001) and may be enabled under Article 6 of the *Paris Agreement* to develop a global carbon market to help nations meet their climate targets. There was no agreement reached at COP25.
- Carbon offsets have been used in B.C. since 2009 to assist with British Columbia's Carbon Neutral Government obligations under the Carbon Neutral Government Regulation.
- CleanBC does not specifically enable or endorse carbon offsets as a means to meet provincial climate targets beyond carbon neutral government operations.
- A number of new and expanded projects that would add to B.C.'s overall emissions have been proposed or are currently in federal or provincial environmental assessment processes. Several of these project proponents are considering the use of offsets; however, these discussions are preliminary.
- In 2019, the Canadian Council of the Ministers of the Environment (CCME) endorsed the *Pan Canadian Greenhouse Gas Offsets Framework* to provide guidance to jurisdictions that are developing or operating an offset program, with a longer-term goal of having a consistent suite of requirements and transferability across Canada.
- The federal government is also developing the Federal Greenhouse Offset System to encourage cost-effective domestic GHG emissions reductions and removals from activities that are not covered by carbon pollution pricing or that go beyond legal requirements.
- The province has made a strong commitment to reconciliation by enacting the *B.C. Declaration on the Rights of Indigenous Peoples Act* in accordance with the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).
- Some B.C. Indigenous Nations are interested in stewardship activities in their territories and are looking at forest / land-use carbon offsets to provide medium-term revenue streams.

With the above considerations in mind, the Council would like to note that there are benefits and challenges of employing offsets to meet climate targets, which are summarized as follows:

Benefits of offsets:

- Provides opportunities for entities / emitters to reduce their carbon footprint that otherwise would not be able to afford to do so (e.g. using offset funding to switch remote communities off of diesel power generation).
- Provide opportunities for verified offsets to be utilized while new technologies to reduce GHG emissions are developed and implemented.
- Provides opportunities for entities / emitters to remain viable that would not otherwise be able to do so without offsets (e.g. preventing a facility from closing or locating in a jurisdiction with weaker climate policies).
- Provides opportunities for Indigenous peoples and landowners to derive revenue from stewardship projects on their lands.

Challenges with offsets

- Can be a disincentive for an entity / emitter to invest in carbon reduction (i.e. they buy offsets instead of reducing emissions).
- Can be administratively complex, costly and open to manipulation.
- Some offsets will not be additional (i.e. the projects would have happened without the offset payment).
- Certain types of offsets (e.g. forestry / land use) may not be permanent due to natural or human-caused disturbance (e.g. forest fires, drought) or may take many years to sequester carbon (e.g. planting trees).