Municipality of North Cowichan Environmental Advisory Committee AGENDA

Tuesday, March 16, 2021, 1:30 p.m. Electronically

1. CALL TO ORDER

This meeting, though electronic, is open to the public and all representations to the Environmental Advisory Committee form part of the public record. At this time, due to the COVID-19 Pandemic, public access to meeting rooms at North Cowichan Municipal Hall is not permitted, however, this meeting may be viewed on the District's live stream webcast at www.northcowichan.ca/meetings.

2. APPROVAL OF AGENDA

Recommendation: That the Committee approve the agenda as circulated [or as amended].

3. ADOPTION OF MINUTES

Recommendation: That the Committee adopt the minutes of the meeting held March 2, 2021.

4. BUSINESS

4.1. Presentation from Dr. Dave Preikshot providing an Overview of Emissions inventories and modelling used in 2013 and 2021

<u>Purpose</u>: To provide the committee with further background information on the 2021 CAEP Update projects approach on modelling and GHG inventory in relation to the 2013 plan in order to allow staff and consultants to move onto developing an implementation framework for the committees future consideration.

4.2. Discussion on Future Multi-Criteria Analysis Workshop on Climate Actions

<u>Purpose</u>: To provide the committee members an opportunity to discuss the desired parameters to be used for the Multi-criteria analysis workshop discussed at the March 2nd Environmental Advisory Committee meeting.

5. NEW BUSINESS

6. ADJOURNMENT

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Municipality of North Cowichan Environmental Advisory Committee MINUTES

March 2, 2021, 1:30 p.m. Electronically

Members Present	Councillor Kate Marsh, Chair Neil Anderson Cam Campbell Bruce Coates David Coulson Per Dahlstrom Dr. Jana Kotaska Sandra McPherson Ashley Muckle Dr. Geoffrey Strong
Members Absent	Dr. Jesse Patterson Dr. Shannon Waters
Staff Present	David Conway, Director, Engineering Projects Dave Preikshot, Senior Environmental Specialist Shaun Chadburn, Environmental Programs Coordinator Michelle Martineau, Corporate Officer Tricia Mayea, Deputy Corporate Officer

1. CALL TO ORDER

There being a quorum present, the Chair called the meeting to order at 1:31 p.m.

2. APPROVAL OF AGENDA

IT WAS MOVED AND SECONDED: That the Committee approve the agenda as circulated.

CARRIED

3. ADOPTION OF MINUTES

The Committee noted an error in the February 16, 2021 minutes and requested that they be amended to change the name Neil Armstrong to Neil Anderson under item 3.4.

IT WAS MOVED AND SECONDED: That the Committee adopt the minutes of the meeting held February 16, 2021, as amended.

CARRIED

4. BUSINESS

4.1 Presentation by the Corporate Officer regarding legislation affected through use of group emails

Michelle Martineau, provided an oral presentation on the impacts that using group emails has on decision making by Council.

IT WAS MOVED AND SECONDED:

That meeting be closed to the public at 1:43 p.m. on the basis of section 90(2)(b) of the *Community Charter* for the consideration of information received and held in confidence relating to negotiations between the municipality and the federal government and a third party. CARRIED

The meeting reconvened at 1:56 p.m.

4.2 Presentation by Sandy McPherson and Cam Campbell

Sandy McPherson and Cam Campbell provided a presentation on the background to the 2013 CAEP document. A copy of the presentation is appended to the agenda.

David Conway, Dave Preikshot and Shaun Chadburn answered questions of the Committee.

4.3 Clarification of questions from February 16, 2021 EAC meeting

The Committee reviewed the Clarification of questions from February 16, 2021 EAC meeting document that was included in the agenda for information purposes.

The committee recessed at 3:26 p.m. and reconvened at 3:37 p.m.

4.4 Continuation of review of CAEP actions and priorities

IT WAS MOVED AND SECONDED:

That the Environmental Advisory Committee recommend to Council that the following actions be taken prior to finalizing the Climate Action and Energy Plan update:

- 1. Provide a timeline for recommendations from the EAC regarding actions and priorities
- 2. Staff conduct a background and information workshop
- 3. Staff conduct an appropriately scheduled prioritization workshop led by SSG using a multi-criteria analysis process
- 4. That the Environmental Advisory Committee review the draft final report and make recommendations to Council.

5. NEW BUSINESS

None.

6. ADJOURNMENT

The meeting adjourned at 4:30 p.m.

Certified by Recording Secretary

Signed by Chair;

North Cowichan CAEP to CAEP 2021





Dave Preikshot, PhD, RPBio Senior Environmental Specialist

Purpose

 To provide the committee with further background information on the 2021 CAEP Update projects approach on modelling and GHG inventory in relation to the 2013 plan in order to allow staff and consultants to move onto developing an implementation framework for the committees future consideration.



Outline

- Why was the CAEP update initiated
- What are the differences between accounting for GHG emissions in the two projects
- Why was the original CAEP no longer informative to decision making
- How does the CAEP update model emissions in the future
- Developing a framework for the committee's deliberations on emissions reduction actions.



CAEP Update

The CAEP modelling update was initiated in summer 2019 with the following goals;

- Update the assumptions used in the current GHG model in consideration of technological changes (e.g. renewable energy, electric vehicles etc.) and the costs of those technologies.
- Develop a new GHG emissions model,
- Remodel existing scenarios and resultant implementation plan actions to assess efficacy of actions, assess any new potential actions, and revise the implementation as required.
- Using the new model assess the District's progress towards its' current GHG reduction target and, if necessary, recommend an alternate target(s).
- Develop a more functional and user-friendly tool for ongoing modelling of GHG reduction strategies and monitoring of greenhouse gas emissions.



Part 1: Accounting for GHG Emissions



Carbon Accounting in the CAEP update

- Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC) created by a partnership:
 - World Resources Institute,
 - C40 Cities Climate Leadership Group and
 - Local Governments for Sustainability (ICLEI)
- The GPC provides a robust framework for accounting and reporting city-wide greenhouse gas emissions. It seeks to:
 - develop comprehensive and robust greenhouse gas inventories to support climate action planning
 - establish a base year emissions inventory, set reduction targets, and track performance
 - guarantee consistent and transparent measurement and reporting of greenhouse gas emissions between cities
 - provide internationally recognized greenhouse gas accounting and reporting principles
 - Enable city inventories to be aggregated at subnational and national levels
 - Demonstrate the important role that cities play in tackling climate change



The GPC allows city inventories to be aggregated at the national level to:

- Improve the data quality of a national inventory,
- Measure the contribution of city mitigation actions to national GHG emission reduction targets,
- Identify opportunities for transboundary GHG mitigation,
- Avoid double counting emissions
- Accounts for all GHGs



Inventory boundary (including scopes 1, 2 and 3) Geographic city boundary (including scope 1) Grid-supplied energy from a regional grid (scope 2)



GPC In Action

- Global Covenant of Mayors For Climate and Energy (GCoM) 5460 cities (~500 million citizens) with a plan to reduce carbon emissions, 16 in Canada (~10 million citizens). >10,000 cities with emissions estimates.
- A common reporting framework (CRF) promotes data transparency, and recognizes the critical impact of civic climate action.
- The CRF was formally endorsed by the GCoM Board in San Francisco in September 2018 and is in effect in starting on January 2019. The CRF is built upon the Emission Inventory Guidance, and the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC).
- Cities report standardized data to showcase achievements while unambiguously tracking progress. This facilitates multilevel governance of climate and energy issues and technical and financial support.



Some assumptions and applications of the original CAEP have been changed by improved methodology and monitoring

- Original user model interface (GHG Proof) was discontinued by SSG and replaced by CityInsight
- Agricultural emissions are now larger than originally estimated
- Industrial emissions are now included as per GPC standards
- Carbon sequestration in Municipal Forest is now more quantifiable
- Consumption of gasoline, diesel and natural gas is now quantified
- 2013 estimation of emissions from food transportation is no longer considered valid
- More accurate representation of vehicle trips within North Cowichan and return trips to Victoria and Nanaimo
- Fugitive emissions from oil and natural gas systems now estimated



Significant Changes in Context 2013 v 2021

- BC Step Code for efficient new buildings
- Advances in heating/cooling technology (e.g. heat pumps)
- Advances in building retrofit techniques
- Decreased prices of renewable energy technologies
- Increased availability of energy storage technologies
- Increased variety of electric vehicle models
- Decreased price of electric vehicles
- Increased speed of charging equipment



2013 v 2021 annual emissions estimates

Note:

light industry and fugitive emissions were not included in 2013 estimates

'forest' refers to carbon storage

	CAEP 2013	CAEP 2021	difference
Forest	-4,176	-20,000	-15,824
Transportation	126,893	115,861	-11,032
Res heating	28,282	24,015	-4,267
Comm heating	11,806	5,261	-6,545
Waste and WW	7,376	1,535	-5,841
Fugitive	0	15,826	15,826
Agriculture	6,642	42,272	35,630
Light Industry	0	133,051	133,051



2013 v 2021 annual emissions estimates

Note:

light industry and fugitive emissions were not included in 2013 estimates

'forest' refers to carbon storage





North Cowichan has a very low population density among BC communities of similar size

- The graph shows population density of **North Cowichan** (pop 30,000) vs BC municipalities with populations between 18,000-60,000 (+Victoria and Vancouver for reference)
- North Cowichan has the 2nd lowest population density of similarly sized municipalities
- Emissions policies used in more densely populated jurisdictions for housing and transportation may be difficult to apply in North Cowichan





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Difference in GHG Emissions: Victoria vs North Cowichan

Part 2: Configuring the Emissions Model



Modelling future emissions

Model accounts for:

- Changes in population
- Changes in households
- Household distribution
- Transportation patterns
- Changes in energy use
- All model assumptions can be seen in the data, methods and assumptions document



Modelling changes in new housing density

Present density 2050 Low Carbon density 2050 BAU density Land Use Land Use dwellUnit per Hectare 2016 Land Use dwellUnit per Hectare 2050 - BAP 0 - 0.2 dwellUnit per Hectare 2050 - Compact 0 - 0.2 0.2 - 1 0 - 0.2 0.2 - 1 1 - 2.5 0.2 - 1 1 - 2.5 25-5 1 - 2.5 2.5 - 5 5 - 10 2.5 - 5 5 - 10 10 - 55 5 - 10 10 - 55 10 - 55 MUNICIPALITY OF **NORTH** Cowichan



Difference in new houses 2016-2050 (BAU v compact development in Low Carbon Scenario)







Emissions to Actions

- The original CAEP and CAEP update outline:
 - emissions sectors,
 - categories of emissions reduction actions/strategies, and
 - specific emissions reduction actions/opportunities/measures
- In the CAEP update 25 emissions categories have been identified by SSG using GPC principles





Emissions reductions categories CAEP update: 5 largest sectors ~85% of emissions



Conclusions

- Given the CAEP update process and methodology, we now need to prioritize the updated action list to achieve our emissions objectives
- The 2021 CAEP update has identified
 - new objectives given changes in technology and regulations and
 - which old objectives are no longer applicable.
- SSG has developed new candidate actions, objectives, descriptions, responsibilities etc. to achieve these emissions objectives



Thanks for your time!

• Questions ?

