

AGENDA
ENVIRONMENT & NATURAL AREAS ADVISORY COMMITTEE
Saanich Municipal Hall - Council Chambers
June 15, 2022 at 6:00 p.m.

***** Territorial Acknowledgement & Inclusivity Statement *****

- 1. ADOPTION OF MINUTES** (attachment) Page 2
 - April 20, 2022
- 2. CHAIR'S REMARKS**
- 3. NATURAL GAS USE IN NEW HOMES - BC ENERGY STEP CODE AND CARBON POLLUTION STANDARDS** (attachments)
 - Dr. Deborah Curry, Canadian Association of Physicians for the Environment Page 6
 - Salome Waters, Saanich Eco Advocates Page 16
 - Rebecca Newlove, Manager of Sustainability Page 28
- 4. UPDATE ON ENVIRONMENTAL SERVICES TRANSITION TO PARKS DIVISION**
 - Eva Riccius, Senior Manager, Parks
- 5. WORKING GROUPS ON STEWARDSHIP**
 - Small group discussions picking up on topics such as tree inventory idea, Naturescape program, etc.
 - Report back/group discussion

* Adjournment *

Next Meeting: TBD

In order to ensure a quorum, please contact Megan MacDonald at 250-475-5494 ext. 3430 or Megan.Macdonald@saanich.ca if you are unable to attend.

MINUTES
ENVIRONMENT AND NATURAL AREAS ADVISORY COMMITTEE

Held electronically via MS Teams

April 20, 2022 at 6:00 pm

Present: Councillor Karen Harper (Chair), Braedan Drouillard, Kaden Calleberg (Youth Member), Kurban Ali Keshvani, Jennifer Grant, Ryan Senechal, Sarah Anderson, Spencer Gillis (Youth Member).

Staff: Eva Riccius, Senior Manager Parks; Carolyn Richman, Environmental Education Officer; Rebecca Newlove, Manager of Sustainability; Rick Hatch, Supervisor of Natural Areas; Adriane Pollard, Manager of Environmental Services; and Austin Winters, Committee Clerk.

Guests: Ian Douglas Bruce, Executive Coordinator of Peninsula Streams Society; Todd Creek Watershed; and Brian Wilkes, Biologist.

MINUTES

MOVED by K. Ali Keshvani and Seconded by S. Anderson “That the Minutes of the Environment and Natural Areas Advisory Committee meeting held March 16, 2022 be adopted as circulated.”

CARRIED

CHAIR’S REMARKS

The Chair noted the following during their Chair’s remarks:

- The Strategic Plan Update and its Term of Reference is relevant to ENAC as it incorporates environment, society and the economy through the means of sustainable development.
- A number of issues that have been adopted by Council are to be integrated into the Strategic Plan Update in the future.
- More metrics and a better means to evaluate what has been accomplished is also being considered in the Strategic Plan Update.
- Saanich Council has met with the W̱SÁNEĆ Leadership Council over the memorandum of understanding that was signed.
- A Vision Zero approach is to be implemented into the Active Transportation Plan going forward, which is to eventually achieve no vehicle related accidents or deaths.

WATERSHED MANAGEMENT PLANNING TOD CREEK

The Executive Coordinator of Peninsula Streams Society delivered a presentation on the concept of an integrated storm water management planning process for the Tod Creek watershed. The following was noted:

- The Tod Creek watershed has undergone significant impacts and modifications that have greatly reduced and continue to limit its health.
- The increasing frequency and severity of seasonal flooding and droughts are further exasperated by growing demands on natural flood infrastructure and local water supplies.

- These factors introduce new challenges and risk to local people and nature, including industry, residents, and vulnerable plant and wildlife populations.
- A formal system of stewardship, conservation, and fair allocation of resources, that includes, respects, and provides benefits to a broad range of interest groups and values, must be developed.
- Tod Creek Integrated Watershed Management (IWM) will follow the framework structure and principles used successfully by other coastal communities analogous in size and scope such as the Bowker Creek Watershed Management Plan.
- Within the framework, management objectives and strategies to allocate scarce resources to identified needs will be documented within an Integrated Watershed Management Plan (IWMP) that lays out actions, responsibilities and desired outcomes.
- The IWMP and process will be guided and reviewed by a diverse and dedicated Steering Committee established through the IWM framework process to ensure targets, commitments, and timelines are being met and that public and private stakeholder engagement is effective.
- The area included would be the entirety of Tod Creek Watershed from its headwaters of Prospect Lake and associated tributaries to its outflow including the marine coastal areas of Tod Inlet.
- Leadership in this initiative will be undertaken by First Nations, local community stewardship groups, and supported by different levels of government and policy groups.

The following was noted during the discussion with committee members:

- A working group may be established to begin looking at issues such as the one brought forward during this presentation to give interested ENAC members an opportunity to delve further on potential solutions or pilot projects.
- Integrated Storm Water Management Planning is currently underway in Saanich.

CLIMATE ACTION REPORT CARD FOR 2021

The Manager of Sustainability delivered a presentation on the 2021 Climate Report Card. The following was noted:

- The updated Climate Plan was approved by Council in January 2020.
- The Plan provides a renewed policy framework and action plan for a comprehensive response to climate change in Saanich over the next 10 years.
- The Plan aims to cut community wide greenhouse gas emissions in half by 2030 and to net zero by 2050.
- The Plan also sets new targets for municipal operations which assists in Saanich's aim to lead by example.
- Saanich has a goal to cut GHG emissions in half operationally by 2025 and then to get to net zero by 2040.
- The focus areas of the Plan include mobility; buildings and infrastructure; food and materials; ecosystems; community well-being; and leadership in district operations.
- The 2021 Report Card is about positive action that is being taken in Saanich, but Saanich is cognisant of the climate emergency that is taking place currently.
- There has been a 17% reduction in GHG emissions since 2007 community wide in Saanich.
- There are 131 actions in the Climate Plan with 86 of those actions were to be initiated within the first two years of the Plan and 62 of those actions are ongoing or on track.
- 24 actions are currently behind schedule or on hold for the Plan.

- 46% of Saanich's total community wide emissions are related to transportation for 2020.
- Accelerating the objectives of the Active Transportation Plan is a key priority of the Climate Plan.
- The e-bike incentive program is also a key part of the Climate Plan to encourage e-bike use.

The following was noted during discussion with committee members:

- COVID created some positive changes in terms of individual's behaviour towards driving less and using more forms of active transportation.
- There is a time lag between actions and outcomes for the District's environmental goals.
- Natural gas was promoted as the green energy source but it is still a fossil fuel and there are greener options.
- An inquiry was made over the feasibility of restricting the use of natural gas in new builds.

BIODIVERSITY IN OUR PARKS

A local Biologist delivered a presentation on the biodiversity in Saanich parks. The following was noted:

- Between April and October 2021, 18 of the major Saanich nature parks were visited and traversed for the purpose of applying a rapid assessment technique to determine the ecological condition of the park vegetation.
- The procedure was to walk the trails in the parks, covering as much as possible, and stop at points where there seemed to be a vegetation change, to estimate the proportion of native to invasive species within view.
- A minor cover of invasives, less than 5%, resulted in good condition. Fair condition was the result if an estimated 5% to 20% of a vegetation layer was invasive species.
- If it was estimated that more than 20% of what was in view was dominated by invasives, then the area was assessed as in poor condition.
- The overwhelming impact of invasive grasses such as orchard grass, annual brome grass, sweet vernal grass and reed canary grass, among others, was made clear.
- The parks are being overgrown by these weeds, despite the very valuable efforts of the volunteer weed pulling crews.

The following was noted during discussion with committee members:

- When natural areas are at their best, people are inspired.
- An inquiry was made over whether signage is put up periodically to explain why sections of parks are cordoned off to the public and pets to which staff said that they do.
- The Pulling Together volunteer program has had a tremendous positive impact on the areas that volunteers are working in.

NATURESCAPE PRESENTATION FOLLOW UP

The Environmental Education Officer provided a follow-up to the Naturescape presentation that was done in November 2021. The following was noted during discussion with committee members:

- A membership program may be established, where a kit and some new yard signs may be obtained through said membership.

- There was an inquiry into the level of integration between Naturescape and Saanich Parks to which staff noted that greater integration is needed.

ADJOURNMENT

The meeting adjourned at 8:21 p.m.

NEXT MEETING

Next meeting is Wednesday May 19, 2022.

Councillor Karen Harper, Chair

I hereby certify these Minutes are accurate.

Austin Winters, Committee Secretary



CANE
Canadian Association of
Nurses for the Environment
Association d'infirmières et
infirmiers pour l'environnement
AIE

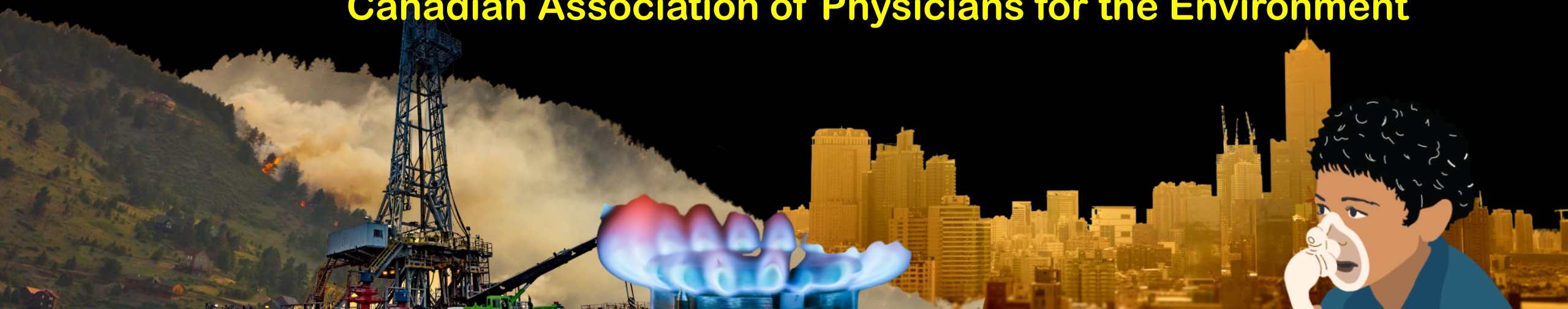


CAPE
Canadian Association
of Physicians
for the Environment
Association Canadienne
des Médecins
pour l'Environnement
ACME

The Health Impacts of Natural Gas

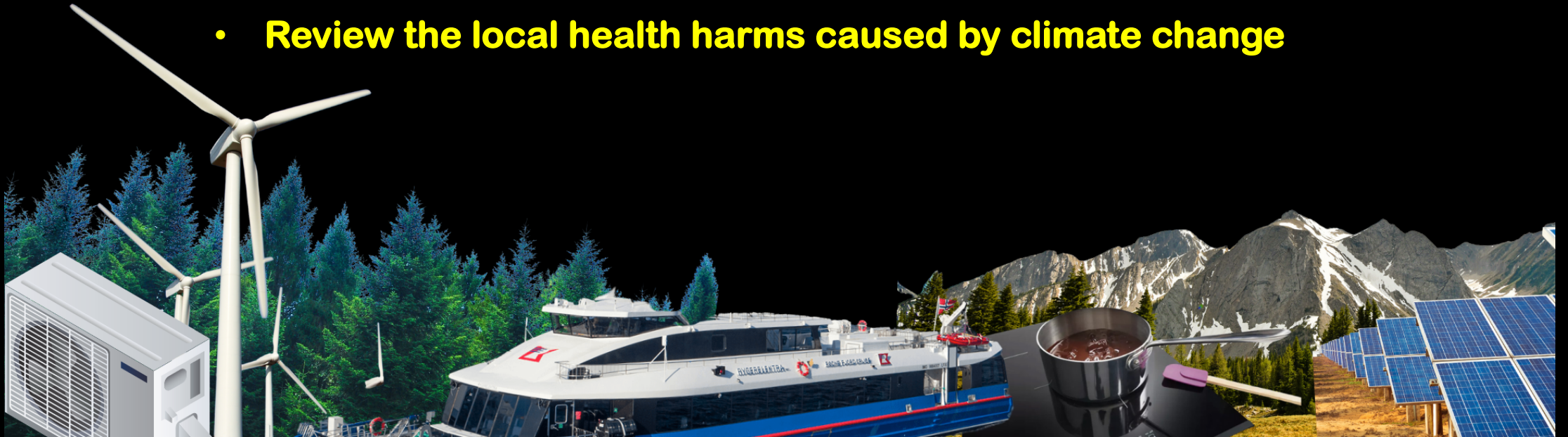
Presented by Dr. Deborah Curry MD CCFP

BC-CAPE Unnatural Gas Subcommittee Member
Canadian Association of Physicians for the Environment



Presentation Agenda

- Review the health harms inherent to fracking for liquified natural gas (LNG) in northeastern BC
- Review the health impacts of natural gas appliance use
- Review the local health harms caused by climate change



Natural Gas Facts

- Natural gas is made of 70-90% methane and when it is burned it creates CO₂
- Methane causes 86 times the warming effect of CO₂ in the atmosphere over a 20 year period. Satellite imaging shows methane emissions 70% higher than previously reported.
- Renewable Natural Gas is created from waste. In BC, 1% of natural gas is currently renewable natural gas. It is also methane, it can leak into the atmosphere at different points along the production process, and it also creates CO₂ when it is burned



The Environmental Impacts of Fracking

On Air:

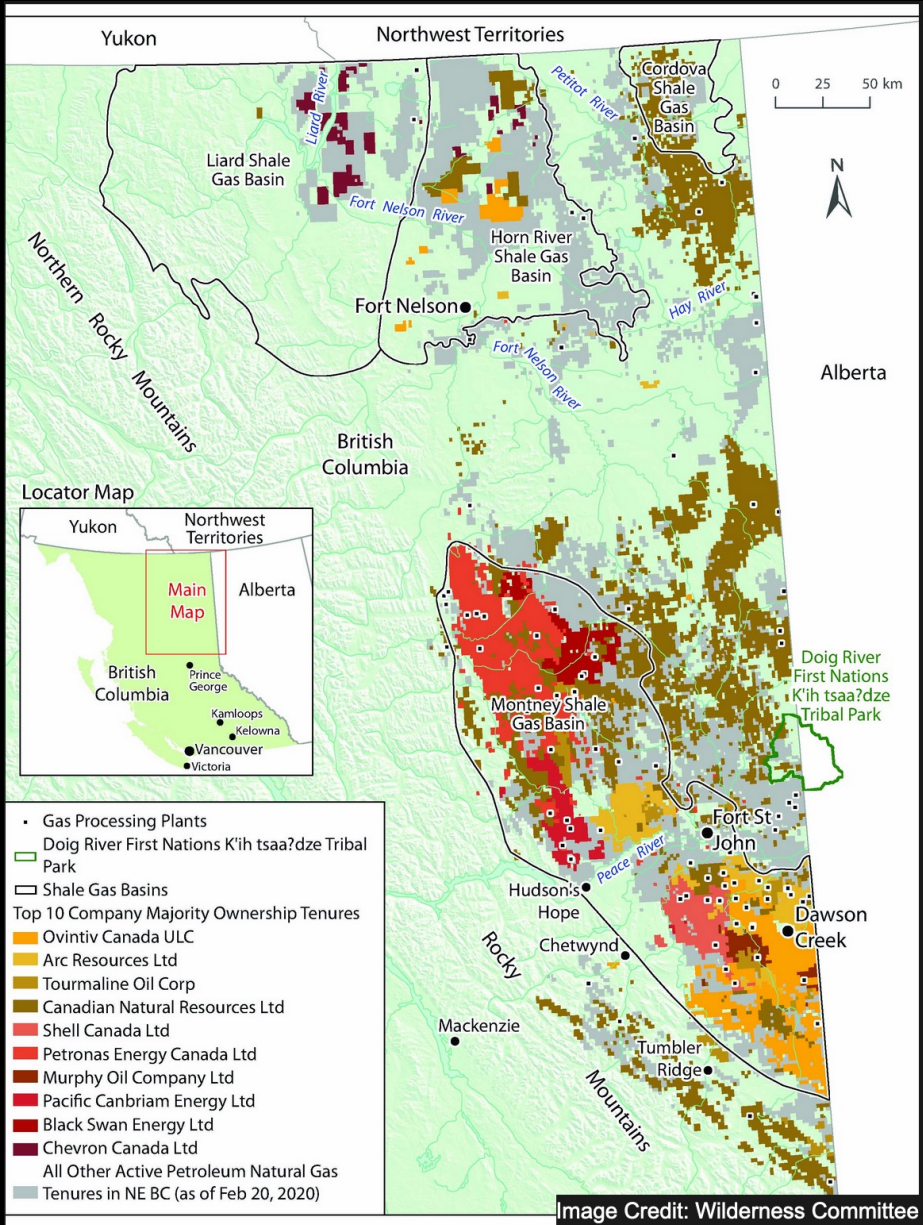
- Volatile organic compounds (VOC) are released from the open pits that hold the water and chemical brew used for fracking
- High levels of various toxic chemicals – such as radon, hydrocarbons, benzene, polyaromatic hydrocarbons (PAHs), and heavy metals – have been found near fracking wells

On Land:

- The fracking infrastructure uses up key agricultural land

On Water:

- Each fracking well uses 10 million litres of fresh water (4 Olympic swimming pools)
- Over 1,000 different chemicals have been used in hydraulic fracturing fluids
- They include known or suspected carcinogens, re-productive and developmental toxicants, and endocrine disruptors



There are over **35,000** fracking wells scattered across northeastern BC as of July 2021.

The Health Impacts of Fracking

- Risk to Pregnancy: low birth weight, pre-term, heart defects
- Higher incidence of Glioblastoma –brain tumor (double the rate)
- Idiopathic pulmonary fibrosis, asthma attacks
- Nose Bleeds, sinus problems, headaches and fatigue
- Higher rates of leukemia in children
- Mental health issues such as depression, anxiety

The Impact of Gas Appliance Use

- **Approx. 1 million homes in BC are fueled by fracked gas**
- **Cooking with gas releases NO₂ into the home and studies show this creates an increase in asthma attacks in children**
- **Alternatives exist such as electric heat pumps, induction stoves, and electric water heaters**

Source: Switch it up BC

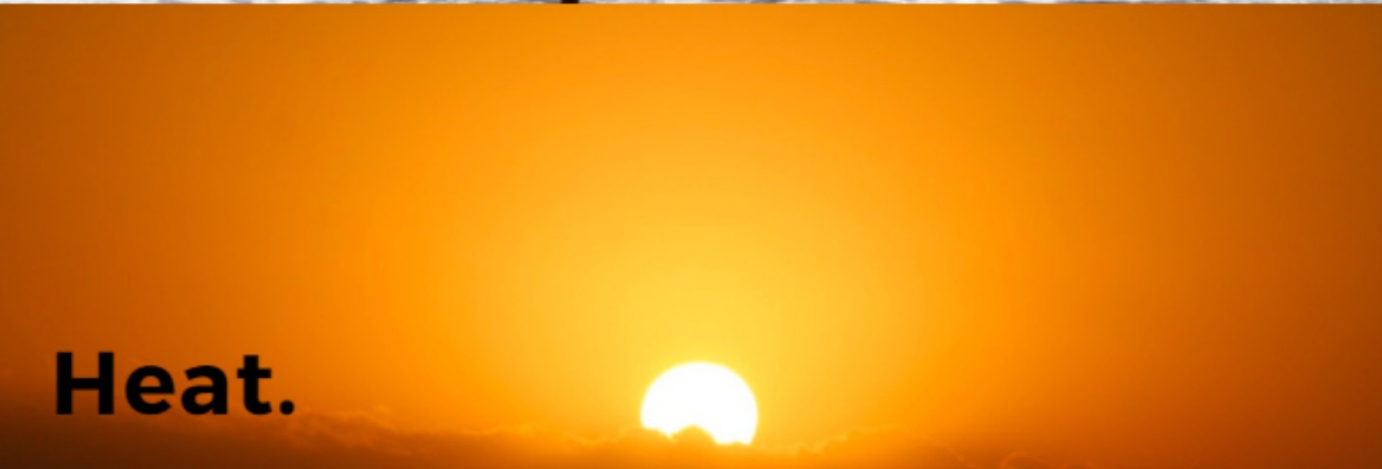




Wildfires.



Flooding.



Heat.

Health Impacts

What Doctors Saw in 2021

Wildfires

Smoke inhalation, severe lung disease, burns, heat injuries, displacement from home/communities

Extreme Heat

Approximately 600 heat related deaths. Thousands hospitalized due to heat-related illness.

Flooding/mudslides

Drowning, displacement (some permanently). Highway accidents due to unsafe and high volume traffic on remaining roads

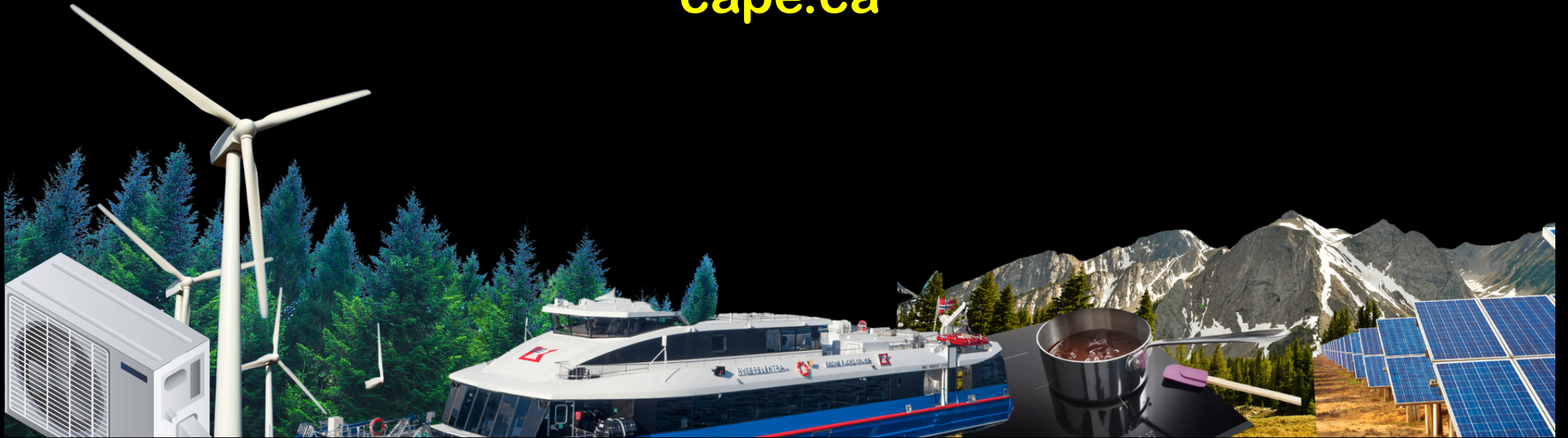
Mental Health

Suicides, overdoses, mental health crises. Fearing the end of the world.

+ COVID 19

Thank you

Visit Unnaturalgas.org
cape.ca



Low Carbon New Homes

Saanich

Helping Achieve our Climate Change Goals

Presented by: Salome Waters, Saanich Eco Advocates, Dogwood
Presented on: March 28, 2022

Our local climate change goals

- Saanich declared a Climate Emergency March 25, 2019
- On Aug. 19, 2019 announced new climate targets adopted to align with the latest IPCC recommendation.
- Sept. 30, 2019 became the first municipality in the Capital Region to endorse a suite of accelerated climate actions.
- Jan. 28, 2020 announced its Climate Plan: 100% Renewable and Resilient Saanich”. Green Buildings strategy

Our local climate change goals

Saanich plans to:

- cut GHG emissions in half by 2030 and to net zero by 2050
- have 100% of new buildings zero emission by 2030
- have 100% of oil heating systems replaced by heat pumps by 2030 and 100% by 2050
- plans to have 40% of existing natural gas heating and hot water systems to be replaced by 2030 and 100% by 2050

Saanich has no information on the percentage of buildings that have reduced heating demands by 30% at this time, but plans that 40% will have this reduction by 2030 and 80% by 2050

CO₂ emissions from buildings are significant

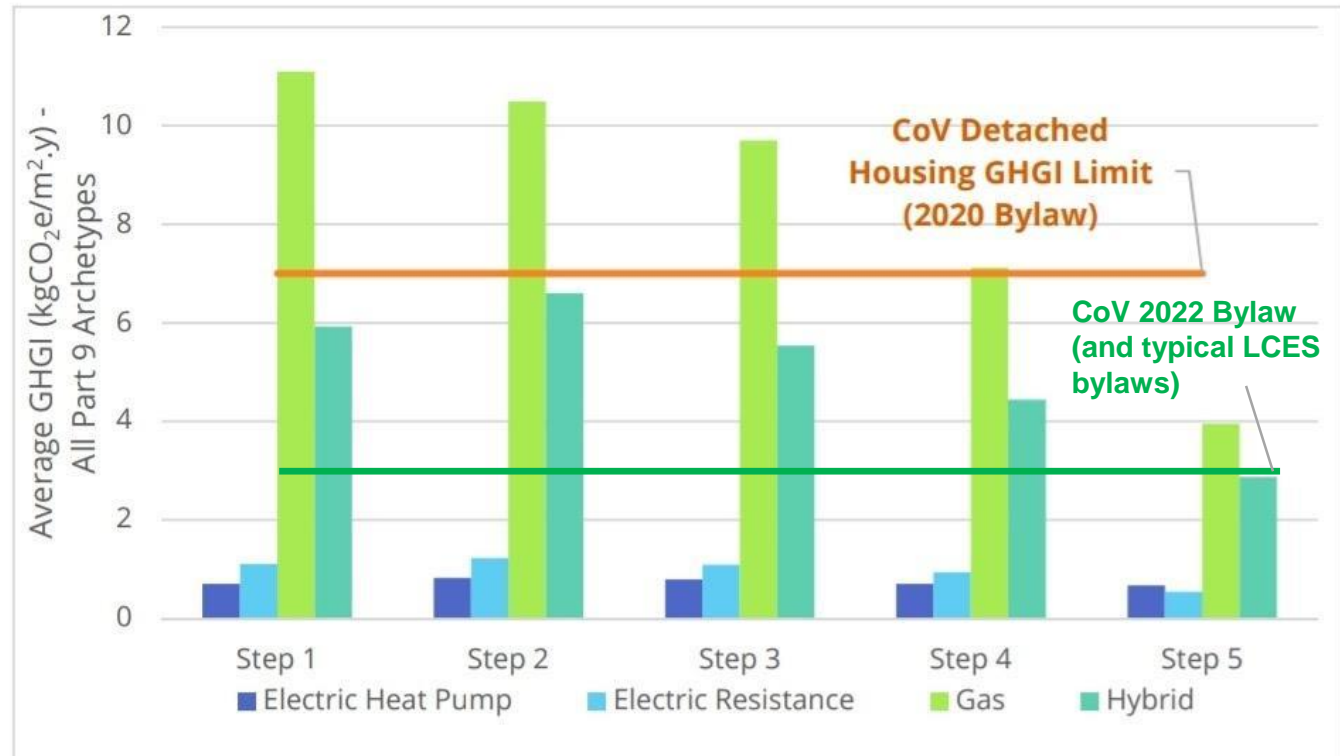
- 35% of community GHG emissions are from buildings according to the latest Saanich Green Plan sources
- Most emissions are from space heating and water heating.
- We need to reduce emissions from buildings to achieve our goals.
- If new buildings are connected to methane gas (“natural gas”) **they will be locking in emissions for decades.**

Emissions from gas vs electricity

Electricity GHG emissions are a small fraction of gas emissions - even compared to a very well insulated (Step Code 5) building.

Figure adapted from:
Integral Group, [“Implications of the BC Energy Step Code on GHG Emissions”](#)

Update: City of Vancouver [“Guide to the Vancouver Building By-law 2022 Update”](#)



Part 9 - GHG Intensity by Mechanical System (average across all archetypes)

We can prevent new buildings from connecting to gas

- Buildings can be heated by clean electricity
- Electric heat pumps are cost effective.
 - Savings over time pay for initial installation costs
 - There are often rebates and incentives available to help pay for initial costs
- Other BC cities have already taken this step, using LCES Bylaws.
 - LCES: Low-Carbon Energy System

LCES Bylaws - adopted and in process

Low Carbon Energy System bylaws to date

- City of North Vancouver Bylaw
- District of North Vancouver Bylaw
- West Vancouver Bylaw
- Richmond Bylaw
- Surrey Bylaw
- Powell River Bylaw
- New Westminster Bylaw
- Victoria Proposal

LCES Bylaws - how they work

- Uses BC Energy Step Code (efficiency requirements)
- New buildings must reach a certain step on the Step Code (e.g. Step 5)
- Allowed to reach a lower step (e.g. Step 3) if they use LCES for space heating and water heating
 - Above example is a two-step difference in steps ($5-3=2$). The larger the difference, the greater the financial incentive to use LCES.

Example Bylaw - City of North Vancouver

- 8.7.4 Applications for a Building Permit for a building containing a residential Occupancy that is required to comply with Part 9 of the Building Code shall:
- (a) be designed to meet or exceed the specified Energy Step Code requirements for the Step indicated in Table 2; and
 - (b) provide sufficient documentation to demonstrate compliance with this Step to the satisfaction of the Chief Building Official.

Table 2

Energy System	Energy Step Code Step
Buildings equipped with Low Carbon Energy Systems	Step 3
Buildings not equipped with Low Carbon Energy Systems	Step 5

[Bylaw 8810, November 23, 2020]

“Low Carbon Energy Systems” means all mechanical systems in a Building that provide thermal conditioning and domestic hot water heating such that the modeled Greenhouse Gas Intensity for the floor area of conditioned space of the Building is no more than 3 kg CO₂e/m²/year. *[Bylaw 8810, November 23, 2020]*

Example Bylaw Motion - City of North Vancouver

North Vancouver Bylaw Adoption – November 23, 2020

Was recommended and carried unanimously

“Construction Regulation Bylaw, 2003, No. 7390, Amendment Bylaw, 2020, No. 8810” (Low Carbon Pathway Amendments Under the BC Energy Step Code)

Moved by Councillor Bell, seconded by Councillor Girard

THAT “Construction Regulation Bylaw, 2003, No. 7390, Amendment Bylaw, 2020, No. 8810” (Low Carbon Pathway Amendments Under the BC Energy Step Code) be adopted, signed by the Mayor and Corporate Officer and affixed with the corporate seal. (CARRIED UNANIMOUSLY)

Our Request

We request that the District adopt an LCES bylaw by June 1, 2022.

Rationale:

- LCES bylaws are legal and viable
- They have been adopted already, by several BC local governments
- They will reduce GHG emissions
- They will prevent many new homes from being locked in to decades of future emissions
- A few months is reasonable, given that so many precedents exist
- Local consultations can be done with minimal effort

For more information, contact us

Salome Waters, salomeandcat@shaw.ca

Dave Thompson davethompson6@gmail.com





The Corporation of the District of Saanich

Memo

To: ENAC Committee

From: Rebecca Newlove, Manager of Sustainability

Date: June 7, 2022

Subject: BC Energy Step Code and Carbon Pollution Standards: Proposed Approach

The CRD, City of Victoria, District of Saanich and District of Central Saanich are undertaking engagement with building industry on the following:

- Upper steps of the BC Energy Step Code; and
- Provincial Carbon Pollution Standards for new buildings.

This work is focused on determining the best way to use the regulatory tools available to reduce operating carbon emissions from new construction.

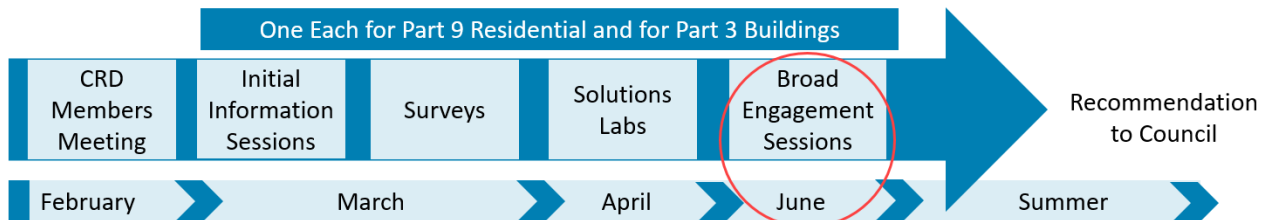
A report presented to Saanich Council on February 14, 2022 outlined the project background, purpose of engagement and timeline for presenting the outcomes and recommendations to Council.

This memo provides PTED with an overview of the project, a summary of the engagement to date and the proposed pathways that are currently being presented to industry for final feedback. The memo is for information only. More details can be found online at www.saanich.ca/stepcode. A final report to Council is expected by August, 2022.

Project Timeline

The engagement process and timeline are outlined in Figure 1 below:

Figure 1: Engagement Process & Timeline



Step Code Adoption to Date

The City of Victoria, District of Saanich and District of Central Saanich have adopted the BC Energy Step Code. Current adoption levels are shown in Table 1.

Table 1: Step Code Adoption in Victoria, Saanich and Central Saanich

Building Type	Compliance Requirement
Part 9 Buildings	Step 3
Part 9 – 111.5 m ² or less*	Step 2
Part 3 – residential wood frame building six stories or less	Step 3
All other Part 3 Buildings	Step 2

*Central Saanich does not have this relaxation for small buildings

For a more detailed refresher on the BC Energy Step Code for Part 9 buildings, please see www.energystepcode.ca and the Capital Region Step Code Industry Workshop Information Sessions presentations available here: www.saanich.ca/stepcode.

Current Council Direction

Several local governments in the region undertook detailed community greenhouse gas (GHG) emission reduction modelling to inform the development of their climate plans. This modelling clearly shows that a rapid decarbonization of new construction is required to meet our 2030 and 2050 GHG emission reduction targets. Based on this, the Councils in the City of Victoria, District of Saanich and District of Central Saanich have set direction to staff to meet the following targets:

- Highest steps of the BC Energy Step Code by 2025
- 100% renewable energy and/or net-zero carbon in new construction by 2030
- 50% community-wide GHG emission reductions by 2030

The City of Victoria and District of Saanich have also directed staff to:

- Accelerate adoption of net-zero carbon new construction/quickly decarbonize new construction
- Integrate a carbon/GHG emissions cap into Step Code adoption

These emission reductions need to be achieved using the BC Energy Step Code and the newly drafted Provincial Carbon Pollution Standards (referred to herein as the Carbon Standards).

Provincial Carbon Pollution Standards

Similar to the BC Energy Step Code, the Carbon Pollution Standards are a piece of provincial regulation, which local governments may reference in their building or zoning bylaws. These regulations are currently being finalized and are expected to come into effect by the end of 2022.

The Carbon Pollution Standards enable local governments to regulate the emissions of new construction in their communities. This is a key tool to assist us in meeting our climate targets. There are four levels proposed:

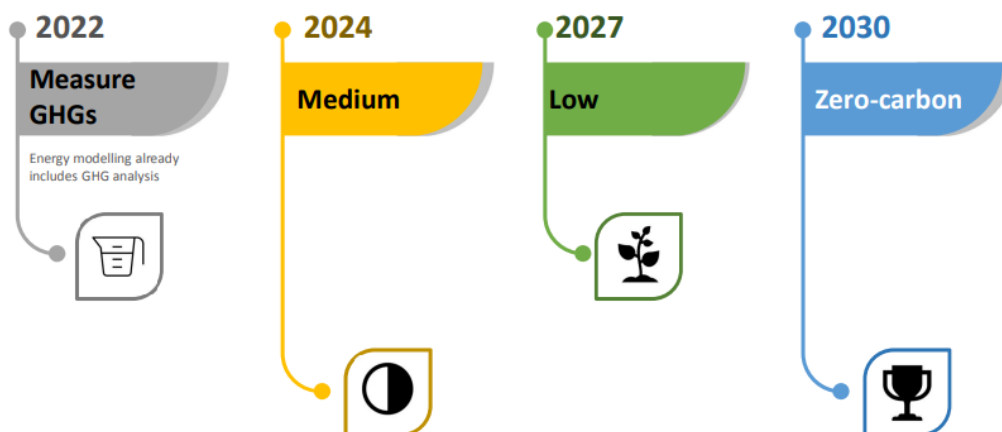
- Measure-only - requires measurement of a building's emissions without reductions, and is intended to build knowledge and capacity;
- Medium carbon - in most cases, will require decarbonization of either space heating or domestic hot water systems;
- Low carbon - in most cases, will require decarbonization of both space heating and domestic hot water systems; and
- Zero-carbon - in most cases will require decarbonization of all energy uses (including appliances such as stoves and fireplaces in addition to space heating and domestic hot water systems).

The Carbon Standard thresholds are delineated by specific GHG emission intensities (GHGi) limits which vary by building occupancy. These metrics are outputs of energy modelling done before and after construction (this energy modelling is already being completed as part of Step Code). Details on the Carbon Standards and measurements were presented as part of the information sessions and solutions lab engagement and are available in the engagement briefing notes available at www.saanich.ca/stepcode.

Provincial Direction & Implementation Timelines

Similar to the Step Code – the Province intends to phase in the Carbon Pollution Standards for new buildings to reach zero carbon by 2030 as outlined in Figure 1 below:

Figure 1: Anticipated Provincial Carbon Pollutions Implementation Timeline



The Step Code will come into effect through the BC Building Code this December 2022, starting with “20% better” minimum standard, which is equivalent (in most respects) to what has already been adopted by the District of Saanich. Progressively higher energy efficiency performance will be introduced into the BC Building Code over time, with next steps in 2027 and then the highest steps by 2032.

Engagement to Date

The CRD and lead local governments have worked closely with the Urban Development Institute (UDI) - Capital Region, the Canadian Home Builders Association (CHBA) - Vancouver Island and the Vancouver Island Construction Association (VICA) in designing and delivering the engagement process. The Victoria Residential Builders Association (VRBA) Executive Director has attended engagement events. The final recommendations for how to adopt the higher steps of the BC Energy Step Code and the Carbon Pollution Standard will be informed by this engagement process, which has included information sessions, an industry survey, and solutions labs to date. The final phase of engagement will include two virtual workshop sessions, a survey and the opportunity for one-on-one discussions with municipal staff. The building industry is the primary audience for this engagement effort given their key role in implementing the new standards.

Data, analysis, best practice and feedback from the first phase of engagement were used to develop draft options for discussion. These were presented and discussed in detail during the second phase of engagement that included in-person solution labs workshops. The feedback from these workshops was then used to update those options which are now being presented as proposed pathways to industry during a third round of engagement.

An interim engagement report is available at www.saanich.ca/stepcode.

Proposed Adoption Pathways

A [Phase 3 Engagement Briefing Note](#) has been developed and is intended to support the final round of engagement in June 2022 and ensure that those inputting to the process have access to a base level of information on the BC Energy Step Code, the Provincial Carbon Pollution Standards, the engagement undertaken to date and the proposed adoption pathways. It is available online at www.saanich.ca/stepcode.

Industry feedback demonstrated a strong preference to focus on the Carbon Pollution Standards versus acceleration of the BC Energy Step Code. Four additional clear messages heard through engagement were to keep it simple, provide time to plan, present the full pathway to 2030/2032 and aim for regional alignment.

Proposed adoption pathways for Part 9 and Part 3 new construction are presented with context in the [Briefing Note](#). In summary, the proposed pathways will not require any further accelerated implementation of the BC Energy Step Code; as of December 2022 it will harmonize with provincial requirements related to energy efficiency/Step Code that come into effect as part of BC Building Code amendments. Instead, this proposed pathway will focus on Carbon Standard requirements (GHGi) only and include just two moves between now and 2032 as outlined in Table 2 below: