

AGENDA
ENVIRONMENT AND NATURAL AREAS ADVISORY COMMITTEE
Wednesday, February 20, 2019, 6:00– 8:00 PM
Committee Room 2, Municipal Hall

1. **ADOPTION OF MINUTES** (attachment)
 - Adoption of January 16, 2019 minutes
2. **CHAIR'S REMARKS**
3. **HOME ENERGY RETROFIT MUNICIPAL FINANCING PILOT** (attachment)
 - Report from the Manager of Sustainability
 - Presentation by the Sr. Sustainability Planner
4. **ENAC 2019 COMMITTEE PRIORITIES** (attachment)
 - Committee discussion
5. **TREATED AGRICULTURAL POST DISCUSSION** (attachment)
 - Committee discussion
6. **NEW BUSINESS**

* Adjournment *

* * Next Meeting: March 20, 2019 * *

Please email jeff.keays@saanich.ca or call at 475-1775 ext. 3430 if you are not able to attend.

**GO GREEN! MEMBERS ARE ENCOURAGED TO
BRING THEIR OWN MUG TO THE MEETING**

MINUTES
ENVIRONMENTAL AND NATURAL AREAS ADVISORY COMMITTEE
Held at Saanich Municipal Hall, Committee Room #2
January 16, 2019 at 6:00 p.m.

Present: Chair: Councillor Rebecca Mersereau

Members: Alfred Birch, Kevin Brown, Al-Nashir Charania, George Klima, Ryan Senechal, Carmel Thomson, Emily Truman.

Staff: Adriane Pollard, Manager Environmental Services; Maggie Baynham, Dr. Sustainability Manager and Jeff Keays, Committee Clerk

Regrets: Kyle Empringham

MINUTES

MOVED by K. Brown and Seconded by A. Charania, "That the minutes of the Environmental and Natural Areas Advisory Committee meeting held September 19, 2019, be adopted as amended."

CARRIED

WELCOME AND INTRODUCTIONS

The Chair welcomed the committee members to the first meeting on 2019. The committee participated in a round table where they shared their backgrounds, previous committee experience, and goals for the upcoming term.

The Clerk will maintain a record of the discussion for the committee's future reference.

CHAIR'S COMMENTS

The Chair thanked the members for their commitment to the community and the shared environment. Looking to the term ahead, the Chair noted that Saanich has a demonstrative legacy with regard to environmental protection and programming; accordingly, chairing this committee will be a privilege.

Meaningful participation from all members is vital to fulfilling the committee's mandate. Ideas, suggestions and requests for future items and initiatives are welcomed.

The Chair noted that the evening's agenda was rather heavy, and couldn't include everything all at once, to this end the committee will reserve further discussion about the year's priorities and goals until the New Business item of the agenda.

ELK/BEAVER LAKE INITIATIVE

The Chair introduced, Jill Robinson, Project Coordinator – CRD, who provided the committee of the CRD's ongoing Elk/Beaver Lake initiative. The following highlights were noted:

- The Elk/Beaver Lake Initiative (EBLI) was created by the Capital Regional District (CRD) in 2016 and endeavors to undertake actions that will:
- Lead to a reduction in the frequency and toxicity of cyanobacteria (a.k.a. blue-green algae, 'BGA') blooms in Elk and Beaver Lakes,
- Improve fish habitat, manage weed growth, and ensure continued recreational use.
- In 2016, the CRD Parks and Environmental Services provided funding for one part-time coordinator, and a budget for continued water quality monitoring, the selection and implementation of an in-lake remediation option, and preparation of a watershed management plan.
- The EBLI was established in response to public demand for focus on the struggling lake ecosystem.
- In addition to annual toxic cyanobacteria blooms, there is concern over:
 - the sustainability of a healthy fishery under low oxygen (anoxic) conditions;
 - the proliferation of nuisance aquatic weeds;
 - the presence of invasive aquatic and terrestrial species; and
 - public health and safety during water contact recreation.
- CRD agreed to fund the EBLI through 2019 (four years).

Committee discussion followed the presentation, the following highlights are noted:

- There is no current integration with the surrounding forest interface.
- Surrounding forests can have an impact on external loads, sources could be identified and prioritized.
- There are numerous opportunities for restoration initiatives for other bodies of water within the Colquitz Watershed.
- There has been considerable public engagement and involvement from a variety of community stakeholders.
 - Numerous volunteers and community groups have contributed to the assessment and planning of in-lake improvements.
 - The enjoyment of recreation activities such as rowing, swimming, and fishing have driven the objectives of the EBLI.
- There is significant erosion to the lake's shoreline, a watershed/parks management plan should be considered to mitigate these impacts.
- The initiative is a collaborate effort, facilitated by an inter-governmental working group that includes the CRD, the District of Saanich, the Government of BC and VIHA.
- The program is funded through the 2019 fiscal year.
- Seeking funding for an additional four (4) years to undertake the implementation.
- The agricultural community has been the largest recipient of the harvested milfoil.

The Chair thanked, Ms. Robinson for the informative presentation.

REVIEW OF TERMS OF REFERENCE, COMMITTEE PROCEDURES & DATES

Jeff Keays, Committee Clerk, provided an overview of the committee's terms of reference, procedures and proposed meeting dates. Copies of all relevant policies and procedures were circulated on-table. A summary of the topics presented include:

- Guiding Legislation and Policies
- Role and Mandate of ENAC
- Expectations and Responsibilities of Committee Members
- Code of Conduct – Respectful Workplace
- Personal Safety of committee members
- Access and Privacy at the District of Saanich

ELECTRIC VEHICLE INFRASTRUCTURE REQUIREMENTS FOR NEW DEVELOPMENT - PROGRESS UPDATE

The Senior Sustainability Planner provided the committee with an overview of the Electric Vehicle Charging Strategy. The following highlights are noted:

- Council adopted the September 21, 2017 Motion from PTED at their January 8, 2018 meeting.
- In 2017 Council adopted new long-term targets for renewable energy (100% by 2050) and GHG emissions (80% reduction by 2050 over 2007 totals).
- Personal transportation accounts for 58% of Saanich's GHG emissions.
- EVs can help achieve an 18% decrease in GHGs.
- Zero Emissions Vehicle (ZEV) Mandate:
 - Supply side policy.
 - ZEV mandate bans sale of new internal combustion engines by 2040 (for passenger vehicles and light duty trucks).
- Local governments have an important role in facilitating access to charging (home and on the go).
- 2018 Q3 EV sales are up 151% in BC from Q3 2017.
- EV sales accounted for 15% of all passenger car sales (BC) in 2018.
- Benefits of Electric Vehicles:
 - five times more efficient;
 - lower fuels costs;
 - decreasing battery costs; and
 - less maintenance.
- Latent demand for EVs (as portion of market share) is primarily constrained by home charging access.
- Good policies can increase EV market share.
- There are currently three types of charging infrastructure
 - L1 – 120 V (8-12 hrs. full charge) = \$500 retrofit cost.
 - L2 – 240 V (4-6 hrs. full charge) = \$2,500 - \$15,000.
 - DCFC – Variable DC Voltage (30 mins for 80% charge) = \$75,000.
- EV owners charge their vehicles at home 80-90% of the time
- With batteries and range increasing, L2 is preferred for performance and consumer expectation.

- Findings of the Capital Region EV and E-Bike Infrastructure Planning Project -- Public Survey:
 - 27% of people living in multi-family residences said access to a charging station was their largest barrier to market entry.
 - 92% felt that it was important for local governments to ensure new construction future proofed to allow for future EV charging equipment.
- Findings of the Capital Region EV and E-Bike Infrastructure Planning Project – Development Industry Survey
 - 79% had installed a charging station and 63% had a development “EV ready” (conduit or wiring for one or more stalls).
 - 68% supported or strongly supported local governments in the CRD requiring new development to EV ready.
- Climate Plan Engagement – Public Survey
 - EV adoption is one of the top three climate action priorities (41% of respondents).
- Since 2017, 7 local governments have adopted L2 infrastructure requirements for 100% of stalls in new residential developments.
- There was a shift away from partial installation (e.g. 20% of stalls) for a variety of reasons.
- The City of Richmond (with funding support from BC Hydro) produced a guide for local governments, developers and Stratas.
- The City of Richmond also developed a costing study of the installation and operating costs of different charging requirements for various building archetypes.
- Proposed Approach:

Single-Family, Duplex and Town House Developments	Multi-Family Development	Commercial and Institutional Development (TBC with additional analysis)
1 on-site parking space per unit to be energized (L2), excluding secondary and garden suites.	All off-street residential parking spaces in multi-fam. dwellings to be energized (L2), excluding visitor parking.	10% of parking spaces to be energized I2 EVSE up to a maximum of 12 stalls. Applies to Devs. With 10+ off-street spaces

- Next Steps:
 - Establish performance standards
 - Host Engagement with the Urban Development Institute (UDI)
 - Seek input from key stakeholders e.g. Vancouver Island Strata Owners Association, Drive Electric Victoria etc.
 - Summarize Phase 2 engagement results and amend proposed approach as required.
 - Final recommendation to Committees and Council.
 -

Committee discussion followed the presentation, the following highlights are noted:

- The priority for the current program is for home-charging.
- There is a high demand for additional public charging facilities.
- BC Transit is transitioning to an electric fleet by 2030.
- Addressing the latency of demand in the entry into the market is a key

component of the strategy.

- Regional transit improvements, in the near-term, is a low-hanging fruit and is being incorporated into the CRD's Strategic Plan.
- There is a report coming forward (that considers the numerous retro-fit strategies for existing single-family homes, condos and apartment buildings.

TREATED AGRICULTURAL POSTS

The Chair welcomed Alan Galambos to the meeting. Mr. Galambos was referred to committee by Council to provide the committee with information regarding the sale of unlabelled agricultural posts that have been treated with Chromated Copper Arsenate. The following was highlighted:

- Across Victoria and indeed across Canada, hardware, lumber supply stores, and nurseries sell to the public the standard green pencil posts treated with Chromated Copper Arsenate (CCA) without warning labels.
- Improper handling of the posts themselves can cause several cancers, plants located near the post can take up the arsenic and enter our food, and burning of the posts concentrates the arsenic into an incredibly toxic ash and smoke.
- In 2016, after purchasing a home in the District, Mr. Galambos discovered ash from a burn pile left by the properties previous owners.
- Suspicious of the pile, the ash was tested for heavy metals and leachability.
- Tests revealed high level of arsenic, 344 parts per million (ppm), and very high levels of chromium and copper, confirming that the ash was a result of the burning of CCA treated garden posts.
- Due to the toxic leachability level of the arsenic (4.13ppm), twice the allowable limit a Heartland, the District of Saanich refused to allow the disposal of the material, including through the Hazardous Waste program.
- JOMA Environmental was retained to collect the ash/soil mixture, during the removal process it was determined that there was significant contamination to the soil. Approximately 3 tonnes of soil were removed.
- Prior to 2004, pressure treated wood for nearly all applications used CCA due to its effectiveness in prolonging the life of wood.
- Mounting evidence of CCA resulted in the voluntary phase out for residential lumber across the world.
- Although residential lumber is now treated with substantially less toxic materials, warning labels are still required to be affixed to each piece of lumber.
- CCA is still the treatment of choice for wood for industrial purposes such as power and telephone poles, bridge beams and other large structures.
- Despite the known dangers CCA remains the almost universal treatment of choice for agricultural posts.
- After considerable research and communication with Municipal, Provincial and Federal Governments it was determined that the responsibility of regulation of pesticides (the classification into which CCA falls) to the Federal Ministry of Health, through the Pest Management Regulatory Agency.
- Numerous replies by Sr. Levels of Government received to-date reflects that no single government agency accepts the responsibility for the sale of unlabelled CCA treated posts to the public.

Committee discussion followed the presentation, the following highlights are noted:

- Could the matter be addressed through workers' rights, and through an Occupational Health and Safety perspective?
- The Ministry of Health has not demonstrated significant interest in the matter.
- This information should also be brought to the Peninsula Agricultural Advisory Committee (the Clerk will provide contact information for PAAC).
- The committee will resume discussion on the item at February.

The Chair thanked Mr. Galambos for his informative presentation, and reiterated that the committee will return the matter in February. The Clerk will follow up with Mr. Galambos as appropriate.

NEW BUSINESS

The committee discussed items for future consideration, a more robust visioning exercise will be included in the next agenda. The Chair will send correspondence soliciting member feedback that will help facilitate the February discussion.

ADJOURNMENT

The meeting adjourned at 8:10PM

NEXT MEETING

Next meeting is scheduled for February 20, 2019

Councillor Mersereau, Chair

I hereby certify these Minutes are accurate.

Committee Secretary



The Corporation of the District of Saanich

1420-30

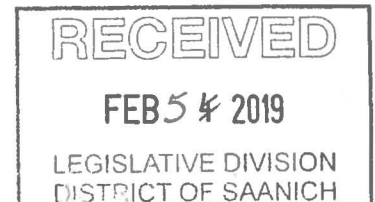
Memo

To: Planning, Transportation and Economic Development Advisory Committee;
Environment and Natural Areas Advisory Committee

From: Ting Pan, Manager of Sustainability

Date: February 5, 2019

Subject: Home Energy Retrofit Municipal Financing Pilot
File: 2560-40 • 100% Renewable Energy



PURPOSE

The purpose of this memo is to:

1. Provide background information on considerations for a municipal retrofit financing program, including the use of Local Area Services; and
2. Outline an option to move forward with a pilot program for consideration at a Council strategic planning session.

BACKGROUND

Background and Rationale

On October 2, 2017, Council gave direction for staff to update Saanich's Climate Action Plan, and endorsed the following community-wide targets:

- To become a 100% Renewable Energy Community by 2050; and
- To achieve an 80% reduction in community greenhouse gas (GHG) emissions by 2050 (below 2007 levels)

In Saanich, energy use from buildings accounts for a third of the community's GHG inventory. Moreover, it is estimated that there are approximately 4,600 oil heated homes, with heating oil representing a disproportionately high 22% of our building emissions, and over 6% of our total community emissions.

With the majority of today's building stock likely to be in existence in 2050, facilitating energy retrofits and low-carbon fuel switching within existing buildings is a critical pathway for achieving the vision of a 100% Renewable Saanich.

Retrofit programs currently and historically offered by the Province and utilities have been based on a rebate model, wherein homeowners undertake a home energy retrofit and are later reimbursed for a portion of the expense. While Saanich has enjoyed a relatively high uptake on these programs, the model prohibits participation from many households; according to the 2016 census, over 6,000 owner-households (18%) are spending 30% or more of their income on shelter costs, leaving little financial leeway to invest in the capital costs of home energy retrofits.

A financing program in Saanich would enable homeowners to invest in more costly energy upgrades without the burden of high capital costs, and repay the District through energy cost savings over time.

A pilot program concept has been developed that would:

- Finance the replacement of oil heating systems with air source heat pumps;
- Offer zero interest financing up to \$12,000 to be repaid over 10 years;
- Prioritize lower-income households that may otherwise be unable to participate in rebate programs due to the large upfront capital cost; and
- Streamline the contractor selection and financing processes to help homeowners overcome administrative and time barriers.

By offering zero interest financing and focusing on oil tank replacements in the pilot phase, energy cost savings would cover the annual repayments with no net increase to daily living expenses. Through municipal financing, the debt can run with the property as opposed to the individual, and is recouped annually with a parcel tax levy on the property tax notice. As a result, homeowners benefit from a healthier, more comfortable home with lower energy bills, while overcoming barriers around short-term home ownership and affordability.

While financing is available in the marketplace, a municipal financing product has the potential to address key barriers and market gaps that are currently limiting the uptake of energy retrofits. Specifically, it enables:

1. Access to more competitive interest rates than available on the market;
2. Fewer eligibility criteria and potential for participation by lower-income homeowners that may not qualify for traditional loans;
3. An application that can be streamlined within the program process;
4. The debt to remain with the property if the home is sold; and
5. An opportunity to align and support municipal targets through program criteria, such as lowering GHG emissions and improving affordability.

Municipal Financing Precedents

Municipal financing has been tested in a number of communities including Nelson, Halifax and Toronto in order to reduce the cost barrier of home energy upgrades. There are two types of financing models: “on-bill financing” and “property-assessed financing” (also referred to as Local Area Service financing, Local Improvement Charges (LIC), or Property Assessed Clean Energy (PACE) financing).

On-bill financing is facilitated through an energy utility, and has been successful through municipal utilities in Nelson and Penticton. Because Saanich does not own its own energy utility, on-bill financing is not advised.

Property-assessed financing allows property owners to borrow funds for energy efficiency upgrades and have the debt run with the property. Municipalities use a Local Area Service

Charge to establish the service (the energy efficiency financing), and funds are repaid with property taxes over a set term (e.g. 10 years). This tool was first tested in Canada by Toronto and Halifax, following legislative amendments by their respective Provincial governments to specifically enable and streamline property-assessed financing. Since then, a number of smaller municipalities in Nova Scotia and Ontario are now offering similar programs.

- **Halifax Solar City Program, Halifax Regional Municipality, 2013 – present:** Halifax was the first city in Canada to apply Local Improvement Charges to energy retrofit projects on private property. The Halifax Solar City pilot was focused on a single retrofit, providing a turnkey project for residents interested in installing solar hot water systems. During the two-year pilot, 10 year financing was provided by the City at a 3.5% fixed interest rate and had 388 participants. A one-time administration fee of \$920 was also charged.

In 2015, the program was extended for an additional three years with a target of reaching 450 more homes. Modifications to the program added solar photovoltaic (PV) and solar hot air as eligible installations, and changed the financing model such that the administration costs were covered by a higher 4.75% interest rate. The second round of the program has seen 155 participants and \$3.2M financed. The streamlined and accessible program design make it easy for homeowners to participate, and is attributed to the unprecedented uptake in the pilot phase.

- **Home Energy Loan Program (HELP), City of Toronto, 2014 – present:** HELP uses the Local Area Service function enabled under Ontario legislation to provide homeowners with low interest loans for home energy retrofits. The program launched as a three-year pilot in 2014 with \$2.1 million in funding committed, and in 2017 was evaluated and extended. A drawback of Ontario's legislation is that a bylaw must still be created for each property, whereas in Halifax a single bylaw is created for the program, under which any property may participate under an agreement.

A wide suite of upgrades is eligible for the HELP program, including high efficiency HVAC systems and water heaters, window and door replacements, air sealing, insulation, heat recovery systems, toilet replacements, and alternative energy installations such as solar and geothermal. Maximum funding available is 10% of the property's assessed value, up to \$75,000, and interest rates vary from 2% - 3.5% depending on the term of the loan. The pilot phase received 485 applications and had 125 participants; a program requirement for mortgage lender approval has limited the ability of many homeowners to participate.

BC Context and Pathway for the Use of a Local Area Service

Municipalities in B.C. have repeatedly called on the Province to support the use of Local Area Services through enabling legislation that would create a clear pathway for their application in the context of energy upgrades on private property. Notably, endorsed UBCM resolutions were passed in 2014, 2016 and most recently in 2018; however, responses from the Province to date have indicated they do not intend to explore an amendment, citing that the original intent of Local Area Services was to finance improvements on public rather than private property, and raising concerns about capacity for local governments to take on such a program.

Although the Province has not endorsed the use of Local Area Services for this purpose, staff maintain there is a defensible pathway forward under current legislation. The Community Charter, S.210 indicates that a Local Area Service is a "municipal service that is to be paid for in whole or in part by a local service tax"; and services may be provided "that the council considers

provide particular benefit to part of the municipality". While physical, municipally-owned infrastructure has been the traditional application of Local Area Service Charges, the combination of significant GHG reductions (originally compelled through the Province's Local Government [Green Communities] Statutes Amendment Act in 2008) and reduced risk of oil spills translates into a direct benefit and service for the community as a whole. Costs of Local Area Services may be recovered through a parcel tax, as per S. 216.

While the recommended pathway forward (described in the following sections) entails using grant funding and municipal funds in order to make financing available for a sizable pilot, a second pathway was explored that was reliant on Saanich accessing a long term loan in order to fund the program. Such a loan would have to be enacted through a loan authorization bylaw which, in addition to adding layers of complexity and administration would mean that the financing could not be tied to the property, one of the key benefits of property-assessed financing. In addition, a scenario that relies on the municipality taking out a loan would mean additional funding would be required in order to offer zero percent interest for participating households. As such, it is recommended that if Council would like to proceed with the program, it is done through a combination of grant and core funding that is recovered over 10 years.

It should be noted that while municipal financing is deemed feasible under current legislation, amendments by the Province have the potential to further streamline and enable greater impact through the following changes:

- Allowing rental homes to be benefitting properties under the program by providing a limited exception to the assistance rule in S. 25 of the Community Charter;
- Allowing a single bylaw to establish the program for all participating properties, rather than having to establish a bylaw for each property; and
- Stipulating that borrowing for the program does not count against the municipality's debt limit or debt service limit.

The Nova Scotia and Ontario legislatures both passed amendments to legislation in 2012 to explicitly enable municipalities to establish property-assessed financing programs for energy efficiency in private homes, and in so doing, helped to streamline the process for municipalities and homeowners alike. On June 6, 2018, Alberta passed Bill 10, Property Assessed Clean Energy (PACE) legislation that enables municipalities to develop and enact PACE bylaws and deliver retrofit financing. Energy Efficiency Alberta, a Provincial agency, will be delivering the program on behalf of participating municipalities when it launches later in 2019. The Province will provide customer support and work with municipalities to establish their respective bylaw and set up the repayment mechanism through the municipal property tax system.

A pilot program in Saanich may be seen as an opportunity to test and showcase this innovative form of retrofit financing in BC, and further strengthen the rationale for legislative amendments. Should the Province be willing to consider these amendments, a larger Provincial role could be deliberated, such as the development of a central loan loss reserve fund or a centrally administered program to facilitate the ability for all municipalities – large and small – to offer such a service.

Pilot Program Design Concepts

Research suggests that a successful retrofit financing program must be attractive and accessible to the homeowner, while also minimizing risk and administrative burden for the municipality. As such, the overarching goals of program design should seek to achieve:

1. **Affordability:** zero or below-market interest rates on upgrades that present a good return on investment;
2. **Accessibility:** low barriers to entry for program participation and an effective outreach strategy to facilitate access and uptake;
3. **Stability:** sufficient program duration to foster familiarity, market confidence, and take advantage of word-of-mouth diffusion;
4. **Simplicity:** a program design that is easy to navigate and minimizes administration and decision-points for the homeowner;
5. **Quality:** contractor buy-in and accreditation, with risks to the municipality and homeowner addressed through contractual and program processes; and
6. **Impact:** efficient use of resources to maximize GHG reductions, leverage third party rebate programs, and amplify community benefits such as reduced energy costs and risk of oil spills.

The following summarizes program design concepts that would help achieve the abovementioned goals of a Home Energy Retrofit Municipal Financing Pilot. It should be emphasized that this memo is intended to support Council's decision around pursuing this type of program; the specific parameters may be reviewed and amended if there is a desire to move forward.

Keep it simple: in the pilot phase, limit the offer to the replacement of oil heating systems with air source heat pumps (ASHPs)

Keeping the focus of the program narrow was one of the key success factors for Halifax's Solar City program, and will have the highest return on GHG reductions and energy cost savings. There are an estimated 4,600 oil-heated households in our community, each representing approximately 7 tCO₂e (tonnes of carbon dioxide equivalent) per year. With a community-wide GHG inventory of nearly 513,000 tCO₂e in 2017, a complete conversion of oil-heated homes to renewable energy would reduce our GHG emissions from buildings by over 20%, and overall emissions by over 6%. The proposed pilot entails 50 homes, which would reduce community GHG emissions by 350 tCO₂e per year, and 7,000 tCO₂e over the lifetime of the equipment.

Beyond the climate impact, oil heating systems continue to pose a significant environmental and financial liability for the District and its residents; between 2012 and 2017, there were 27 furnace-related oil spills, 21 of which were from above ground oil tanks. Homeowners are responsible for covering the cleanup costs of an oil spill from their property, which the Province estimates typically ranges from \$65,000 to \$118,000 per spill. Nevertheless, the District bears significant costs as well, with an estimated \$175,000 being spent on staff time, equipment, and administration for the oil spill responses between 2012 and 2017.

Based on Natural Resource Canada's EnerGuide Ratings for over 1,800 records of oil-heated homes in Saanich, homeowners could save between \$1,450 and \$3,500 per year on heating

costs by switching to an ASHP. The median energy cost savings is estimated to be \$2,200 for conversion of an oil tank to a heat pump, or approximately \$183 per month. It is important to note that the EnerGuide Rating System uses standard operating conditions, such as an assumed temperature set-point of 21°C during the day to calculate energy consumption, and actual use may vary. It is likely that homeowners using oil actually set their temperatures lower given the exorbitant cost, but cost savings are nevertheless likely to be significant.

While it is recommended that oil-heating conversions be the primary focus in the pilot phase for the reasons listed above, the program could consider expanding the offer to other energy efficiency upgrades upon completion of a successful pilot.

Offer funding up to \$12,000, to be repaid over 10 years

There are two types of ASHP systems: a central system which relies on the same ductwork used for oil-heating, and a ductless or “mini-split” system, which can have one or more indoor ‘heads’ to convey heat. Of the 140 Saanich participants in the Province’s Oil to Heat Pump Program as of May 2018, 73% chose a central system with an average installation cost of \$9,100, and the most expensive system costing \$14,000. The average cost for the ductless system was \$11,500. The recently announced Efficiency BC program has increased the provincial incentive to \$2,000 for oil to heat pump replacements, upon which both Saanich and the Capital Regional District has committed “top-ups” that will bring the total rebate up to \$2,700 per household. This will further reduce the cost, and provide more financial leeway if an electrical panel upgrade is required to accommodate the heat pump.

A pilot program with a \$12,000 financing cap would require up to \$570,000 for 50 participating homes over a two year period, with repayments received over the subsequent 10 years (see Table 1). The program will be reviewed upon completion of the two-year pilot and if successful, Council may consider extending or expanding the program, including the possibility of pooling the repayments into a revolving green fund, which could sustain 5 to 10 additional participants per year, indefinitely.

Table 1: Pilot Financing Scenario (2 Year)

Year	New homes in program	Total Homes with Local Area Service Bylaw	Financing Cap per Home	Total Financed (cumulative, minus repayments)	Annual Homeowner Repayments
1	25	25	\$ 12,000	\$ 300,000	
2	25	50	\$ 12,000	\$ 570,000	\$ 30,000
3	0	50		\$ 510,000	\$ 60,000
4	0	50		\$ 450,000	\$ 60,000
5	0	50		\$ 390,000	\$ 60,000
6	0	50		\$ 330,000	\$ 60,000
7	0	50		\$ 270,000	\$ 60,000
8	0	50		\$ 210,000	\$ 60,000
9	0	50		\$ 150,000	\$ 60,000
10	0	50		\$ 90,000	\$ 60,000
11	0	25		\$ 30,000	\$ 60,000
12	0	0		\$ -	\$ 30,000
13	0	0		\$ -	\$ -

Make it irresistible: offer zero percent interest financing

High interest rates have been attributed to low uptake with other financing programs. Zero percent interest will mean that for virtually all homeowners, the annual repayment (up to \$1,200 per year) will not exceed the energy cost savings realized from the upgrade. The annual cost savings from the most efficient homes (who would derive the least benefit as compared to the oldest, leakiest homes) is still estimated to be around \$1,475 per year, with average cost savings likely to be around \$2,200 per year. Given the savings, the program will remain viable even in the face of changing energy costs¹.

The recommended funding approach is to apply for external grant funding to cover over 60% of program costs, and to contemplate the use of municipal funds to cover a portion of the financing (which would be repaid over 10 years). More information on the budget and proposed funding pathway is outlined below and summarized in Table 2. A number of alternate scenarios were considered, including seeking a loan in order to offer a financing program. However, one of the benefits of using grant and core funding is that zero percent interest financing can be offered without having to issue a subsidy or grant to cover the interest rate for participating properties.

Prioritize lower-income households who may otherwise miss out

Investing in the upfront costs of a high efficiency heating system can be prohibitive for many homeowners, and is an issue that the prevailing rebate program model does not address. According to the 2016 census, there are over 6,000 owner-households in Saanich that are spending more than 30% of their income on shelter costs. It is unlikely that these homeowners would prioritize investment in a heat pump or other high cost efficiency measures, even if the upgrade pays for itself through reduced operational costs over time.

Given there is likely a sizable market that is not able to participate in current rebate programs, and there is a limited amount of financing that Saanich can support through a pilot, it is recommended that lower-income households are prioritized through program design. One such way to achieve this would be to hold a set number of program spaces (e.g. 50% per year) for households that meet a certain income qualification (such as households that make less than \$77,282 per year, the median household income for Saanich). If these are not filled for a given year, they are rolled into the next year and available for households of any income level to apply for. This would strike a balance between prioritizing lower income households and ensuring the program is seeing sufficient uptake to achieve its carbon reduction goals.

Homeowners that rent their homes and do not use the home as their primary residence will not be eligible to participate due to Community Charter restrictions on providing assistance to businesses.

Create few hoops to jump through

Experience from other municipal finance programs has shown that minimizing the eligibility criteria and other upfront barriers, as well as ensuring a streamlined, easy-to-navigate process is critical to program success. Aside from the income-qualification required for a portion of

¹ Costs for carbon-intensive energy sources (such as oil and gas) are increasing as BC fulfills its commitment to raise the carbon tax from \$30 per tonne (prior to April 2018) to \$50 per tonne by 2021. This equates to an average increase of \$80 per year for gas-heated homes, and \$165 extra per year for oil heated homes. Electricity prices are currently frozen, but had seen rate increases of about 3% per year until recently. This would equate to an approximate \$45 per year increase for the average consumer.

participants, eligibility criteria should be limited to: owning and occupying a single family home or duplex; being in good standing with property taxes; and, using oil as the primary heating system for the home (verified through a pre-retrofit EnerGuide Evaluation).

In addition to minimizing upfront barriers, the program administration should be streamlined for the homeowner. This can be achieved in a number of ways, including: having a pre-qualified roster of approved contractors for homeowners to select from; incorporating EnerGuide evaluations as part of program participation; and, having contractor payments disbursed directly through the program.

Have a third party administer the program.

Existing local organizations have expertise and experience with administering energy retrofit and incentive programs, and can operate the program more efficiently than in-house program delivery. Benefits that third-party administration may offer include familiarity with technical criteria and specifications, relationships with energy advisors and contractors, existing tracking and quality assurance systems, familiarity with common customer questions and concerns, and the ability to cross-promote other rebate and incentive programs that could complement this offering.

Based on similar programs, administration by a third party is estimated to be around \$8,000 - \$10,000 per year, with an additional \$35,000 for program design and communications (see Table 2). These estimates would be verified through a procurement process contingent on Council direction to pursue the program and successful grant applications. There are some program functions, such as establishing the legal agreements and Local Area Service for participating properties that would require considerable resources from Finance and Legal Staff. The City of Toronto's HELP program required a 0.2 FTE Financial Analyst position to perform a similar role.

Offset program costs with grant funding.

This would be the first property-assessed financing program of its kind in BC, and could pave the way for similar financing programs amongst other municipalities if successful. There are two potential granting programs that have expressed interest and alignment with the project, and that if successful, could provide up to \$445,000 of funding towards the pilot. The FCM Green Municipal Fund offers 50% funding, up to \$350,000 for pilot projects, and the Real Estate Foundation of BC would be approached for \$95,000. In-kind staff costs of approximately \$59,000 would be required to establish and administer the program, and the remaining 30% (\$220,000) would be from District funding (to be repaid by homeowners over 10 years). See Table 2 for details on estimated costs. Costs in Year 1 would be higher due to the initial resources required to establish the program. There is a possibility that the requirements for Finance staff cannot be met with existing capacity and that additional budget would need to be allocated to support the implementation.

Table 2: Pilot Funding Scenario (2 Year, 50 household pilot)

Funding Source	Year 1 Cash	Year 1 In-Kind	Year 2 Cash	Year 2 In-Kind	Total
External Grant Funding					
Program Design	\$ 25,000				\$ 25,000
Annual Administration (3rd party)	\$ 10,000		\$ 10,000		\$ 20,000
Communications and Outreach	\$ 7,000		\$ 3,000		\$ 10,000
Contingency	\$ 10,000				\$ 10,000
Energy Evaluation Subsidy	\$ 7,500		\$ 7,500		\$ 15,000
Program Evaluation and Info Sharing			\$ 15,000		\$ 15,000
Financing for Homeowners (capital costs)	\$ 200,000		\$ 150,000		\$ 350,000
District of Saanich					
Financing for Homeowners (capital costs)	\$ 110,000		\$ 110,000		\$ 220,000
Staff Support: Financial Analyst		\$ 18,000		\$ 9,000	\$ 27,000
Staff Support: Legal Review		\$ 3,500		\$ 1,500	\$ 5,000
Staff Support: Senior Sustainability Planner		\$ 18,000		\$ 9,000	\$ 27,000
Total	\$ 369,500	\$ 39,500	\$ 295,500	\$ 19,500	\$ 724,000

NEXT STEPS

Staff intend to bring the contents of this memo to Council for their consideration in Q1 2019. Council may wish to refer the proposed pilot to an upcoming strategic planning session for deliberation and to secure the required resources if they wish to pursue the project.

The Real Estate Foundation of BC grant application deadline is on March 7, 2019, and FCM receives rolling applications. Should Council wish to move forward with the project, staff will seek immediate direction to submit applications to both funders.

Staff offer relevant committees the opportunity to provide a motion to Council. If the Advisory Committees wish to make a motion to support this pilot to the Council, the motion will be included in the upcoming council report.

Ting Pan
Manager of Sustainability

MB/TP/jsp

cc: Sharon Hvozdzanski, Director of Planning
Paul Thorkelsson, Administrator
Valla Tinney, Director of Finance
Michael Hargraves, Municipal Solicitor



The Corporation of the District of Saanich

Memo

To: Environment & Natural Areas Committee
From: Rebecca Mersereau, Chair
Date: 2/20/19
Subject: Summary of ENAC Member Priorities, V2

PURPOSE

To share topics identified by committee members as priorities for ENAC consideration in 2019, in order to inform a work planning discussion at the next meeting on February 20th.

BACKGROUND

in early February members were asked to share a list of five prioritized issues of interest to inform a work planning discussion at the next meeting. This was done in light of changes in membership in recent years and recognition that outside of the Committee’s role of advising Saanich staff and Council on current corporate initiatives, the Committee may be interested in exploring additional issues.

DISCUSSION

Five committee members submitted issues of interest, presented in the table below and in the chart on the next page, with like items grouped by colour.

Member	1 st Priority	2 nd	3 rd	4 th	5 th
1	Saanich Urban Forest Strategy	Regional Natural Areas planning collaboration	EDPA 2.0	Natural Areas community engagement	Saanich significant trees program
2	Park ambassadors on beaches	Wildlife conservation in Saanich parks	Park and beach cleanups	Dog-friendly areas and fencing	
3	Reduction of GHG by residents and industries	Increased usage of mass-transit and human-powered transport	Protection of natural areas	Reduced usage of plastics and toxins	Protection of air, water, & soil
4	Urban forests*	Stormwater management*	Panama Flats*	Biodiversity strategy*	Environmental Bill of Rights*
5	Source water protection	Green infrastructure network & wildlife corridors	Urban forest protection & management	Integrated stormwater management	Biodiversity conservation strategy

* In no particular order

ENAC Member Priorities



The Sale of Unlabelled Agricultural Posts Treated with Chromated Copper Arsenate (CCA) – An Unregulated Health and Environmental Disaster

Across Victoria and indeed across Canada, hardware stores, lumber supply stores, and nurseries sell to the public the standard green pencil posts treated with chromated copper arsenate (CCA) without warning labels. This is done in spite of the fact that improper handling of the posts themselves can cause several cancers, plants near the post can take up arsenic and enter our food, and burning of the posts concentrates the arsenic into an incredibly toxic ash and smoke.

In 2016, my wife, a keen gardener, and I moved to Vancouver Island (Cordova Bay) and found, on the property, an area of ash from a burn pile left by the previous owner, shown in Figure 1 below.



Figure 1 – Area of Ash Left by Previous Owner

Suspicious of the contents of the ash and feeling it may have come from the burning of old treated posts, my wife asked that we not till it into the ground but gather it for disposal. I scraped it up, together with the top layer of soil, and filled two small garbage cans, shown in Figure 2 below. I then had samples tested for heavy metals and leachability by a reputable testing firm.



Figure 2 – Ash and Soil in Garbage Cans

The tests revealed an extremely high level of arsenic, 344 parts per million (ppm), nearly 14 times the allowable BC level of arsenic in soil for livestock grazing, 25ppm, and very high levels of chromium and

copper, showing that the ash was a result of the burning of CCA treated garden posts. References state that, one tablespoon of the ash can kill a person, five tablespoons a cow.

The tests also indicated that the toxic leachability for the arsenic was 4.13ppm, nearly twice the allowable level for the Hartlands Landfill. The District of Saanich therefore refused to allow the disposal of the material, even through their Hazardous Waste program. District staff warned me to wear a mask whenever handling the ash and suggested we contact a private hazardous waste company for disposal. Although at any time we could have simply tilled the ash in or dumped the material anywhere, we chose to be ethical and dispose of it legally.

At our request, JOMA Environmental collected the ash/soil mixture, using full protective gear as shown in Figure 3 below.



Figure 3 JOMA Environmental Staff Collecting Ash for Disposal

The cost for the disposal alone of the ash/soil mixture was over \$500 and, with the cost of the associated testing, exceeded \$1,000. Even after the removal of the ash, subsequent testing showed that the soil below and surrounding the previous ash pile still contained very high levels of arsenic, forcing us to dispose of several tons of soil, again at our cost.

So how did we get to the point where a commodity so widely used and lethal is sold to an unsuspecting public without warnings of any kind? Prior to 2004, pressure treated wood for nearly all applications used CCA due to its effectiveness in prolonging the life of wood. Then, due to mounting evidence of dangers to tradesmen handling CCA treated wood, residents of houses, and children playing on treated structures in parks, as well as difficulties in disposal, CCA was voluntarily phased out as a treatment for residential lumber across the world.

Residential lumber is now treated with chemicals considered substantially less toxic than CCA, including copper azole. Yet codes require that a warning label is stapled onto each piece of treated lumber (see

Figure 4 below) warning users never to burn it, to wear dust masks, goggles and gloves when working with the wood, and never to use it as mulch.



Figure 4 Warning Label on Residential Lumber treated with Copper Azole at Major Building Supply

A similar label, even stronger, exists on an industry website for the products treated with CCA. It is shown in Figure 5 below.



Figure 5 Warning Label for Use with CCA Treated Wood

CCA is still the treatment of choice for wood for industrial purposes such as power and telephone poles, bridge beams and other large structures, where it is used by mainly regulated users such as BC Hydro, educated in dangers both in handling and disposal. However, surprisingly, CCA still remains the almost universal treatment of choice for agricultural posts. Due to the voluntary nature of the change by industry in 2004, it seems to be distributed and sold without restriction or even labelling, endangering those at each step in the sales, use, and disposal process. Photo 6 below, taken at a Saanich hardware outlet, shows the more toxic, unlabelled CCA treated posts on the left and the labelled copper azole treated wood on the left.



Figure 6 Building Material Outlet in Saanich - Unlabelled CCA Treated Posts (Left) and Labelled Copper Azole Treated Lumber (Right)

So how, in our modern, well governed country, does this happen? Extensive communication with Municipal, Provincial and Federal governments have narrowed the responsibility for the regulation of pesticides (the classification into which CCA falls) to the Federal Ministry of Health, through the Pest Management Regulatory Agency.

In response to repeated queries, the Minister of Health (Sept, 2018) stated that:

- *“current label directions indicate that CCA-treated wood must not be burned, except in authorized disposal facilities.”*
- *“CCA-treated wood is not generally available at lumberyards that serve the general public”*

After receipt of the information above, one morning’s trip confirmed that all four dealers visited in Saanich within a 13km radius sold CCA treated posts to the general public, all without warning labels.

The Federal Minister of Environment stated (Dec. 2018) that:

- *“Provincial responsibilities for pesticides include, but are not limited to, regulating the sale, use, transportation, storage and disposal of pesticides.”*

The BC Provincial Ministry of Environment and Climate Change Strategy for BC stated (October, 2018) that:

- *“Labeling inquiries concerning the protection of workers, are managed by the Workplace Hazardous Materials Information System (WHMIS) under the Federal Hazardous Products Act and Regulations. However, wood and any product made of wood are specifically excluded from this Act. In BC, health and safety concerns regarding workers are managed by WorkSafeBC”*

The research to date appears to reflect that no single government agency accepts the responsibility for the sale of unlabelled CCA treated posts to the public and that, indeed, there may be no regulation preventing it.

As a professional engineer who worked for the BC government for over 20 years, I maintain a strong respect for government, its role in serving the public, and for the dedicated people who make up its staff. However, in the situation described, with its far reaching health and environmental ramifications, the apparent lack of regulation, enforcement, and education to protect consumers of these products is astounding.

Allan R. Galambos, P.Eng.
2019/01/12