



MEMORANDUM

DATE: September 19, 2022

TO: Mayor and City Council

FROM: Eric Holmes, City Manager
Lon Pluckhahn, Deputy City Manager
Aaron Lande, Policy & Program Manager
Rebecca Small, Senior Policy Analyst

RE: **Draft Climate Action Framework**

The purpose of this Memo is to:

- Highlight policy questions needing further direction from Council to guide the development of the Climate Action Framework (CAF)
- Provide an update on the implementation of past Council direction related to Natural Systems
- Outline next steps

Background

At the Council workshop on August 8th, Council requested additional time to explore key policy questions raised by the CAF. The September 19 workshop is an opportunity to explore those topics further with relevant staff and experts on hand to answer specific questions. The target outcome of the workshop is to come away with firm Council direction on the topics raised so that staff can revise the CAF accordingly, creating a draft of the document on which Council will feel comfortable taking a final consideration.

In developing the CAF, the project team recognizes that - to achieve the ambitious carbon neutrality goals the Council has endorsed - very comprehensive and aggressive action by both the City and community will be needed. For staff to identify a mix of actions and tactics for inclusion in the CAF that best reflects the desired approach of Council, staff have identified policy questions that need further guidance.

In the course of sub-quorum briefings after the August 8 workshop, it became clear that the CAF is one among a sophisticated and complex ecosystem of plans and strategies city-wide (comprehensive land use plan, parks comprehensive plan, transportation system plan, strategic plan, urban forestry plan, etc.). At the time of the CAF development, each of these is monitored and updated independently, and consequently, there may be inadvertent inconsistencies between plans. The final CAF will presume a hierarchy of guidance within this ecosystem of plans that favors achieving climate goals as a means to achieving other community goals. Further, each of these plans may have a different planning horizon; implementation will presume favoring climate goals as a means to achieving other community goals.

Over time, increasing alignment within this ecosystem is expected to result from implementation, monitoring and updating.

Policy Questions

The policy questions are:

- *Building Energy – energy supply for single-family and low multi-family residential structures*
- *Transportation– Zero-emission vehicles (ZEVs) and step-down fuels*
- *New area of regulation – Two-cycle engines*

The building and transportation policy areas account for approximately two-thirds of total emissions in Vancouver.

Building Energy

Question 1: How should the CAF approach the energy supply of new build single-family and low multifamily (less than four floors) residential buildings?

- Option A: Explore the full range of options related to electrification requirements for new build residential; or
- Option B: Remain consistent with State Building Energy Code but advocate in support of extending electrification requirements to new build residential.
- Option C: Remain consistent with State Building Energy Code and do not seek stronger energy efficiency requirements.

Secondary question:

- If Option C, should the City provide incentives for developers to pursue all-electric or net zero construction?

Context

Earlier this year, the Washington State Building Code Council (SBCC) revised the State Building Energy Code to require electric heat pumps for space and water heating in new construction commercial and multi-family residential over four stories; however, it did not extend the same requirements to single-family and low multifamily residential.

The CAF could potentially extend this electric heat pump to new-build single-family and low multifamily residential homes. Some members of the local building industry have expressed the position that municipalities may not exceed the energy efficiency standards set by the SBCC. However, there is a legal question as to whether Vancouver could impose more stringent requirements than those set by SBCC and successfully withstand a legal challenge. This is a topic that City Staff has not yet fully explored with the City Attorney's Office. If desired, City Council could request the City Attorney's Office to prepare a legal option regarding the defensibility of exceeding energy efficiency standards set by the SBCC.

With that said, there are also potential market impacts that could be felt within the housing industry if the City were to raise residential energy efficiency standards beyond those set by the SBCC.

There is also the possibility that the SBCC could add a heat pump requirement to the residential code, as it is currently considering updates to this section. Vancouver City Council could advocate in favor of this addition during the comment period, which is currently open. This would result in a state-wide requirement to switch to electric space and water heating if successful.

Question 2: How should the CAF approach the energy supply of existing single-family and low multifamily residential buildings?

- Option A: Explore the full range of options related to requiring a transition to electric heat pumps for space and water heating for existing single-family and low multifamily residential buildings; or
- Option B: Remain consistent with State Building Energy Code and work through incentives only to encourage homeowners to transition to electric power for space and water heating?

Secondary question:

- If Option B, should the City advocate for State legislation to provide more tools or incentives to support voluntary fuel transitioning?

Context

Most homes in Vancouver today will still be standing in 2040, and a large-scale transition from gas to electric power in the existing housing stock will be necessary if the City is to meet its stated climate goals. Providing incentives and rebates to residents for switching to electric equipment is helpful but experience from Vancouver's peer cities suggests that incentives alone have limited effectiveness in spurring a widespread transition.

Pairing a long period of incentives with an eventual requirement to transition (for example, beginning in 2030) could spur the transition more effectively. As with many City programs, incentives should be designed to prioritize equity and ensure that lower-income households receive assistance proportional to their level of need. There is the same legal question referenced in Question 1 as to whether Vancouver could implement such a requirement, as it could be interpreted as requiring stronger energy efficiency standards than the State for residential buildings.

Transportation

Question 3: How should the City consider clean fuel transitions for private and commercial use?

- Option A: The City should actively support the distribution of clean fuels, accelerating the systemic availability and capacity for clean fuels.
- Option B: The City should not actively support the distribution of any clean fuels, allowing market forces to deliver these supply changes.
- Option C: The City should actively support clean fuel distribution for some fuels but remain neutral on others, allowing market forces to deliver these supply changes.

Context

Even with the West Coast's emerging statewide mandates for all-electric vehicle sales by 2030, gas- and diesel-powered internal combustion engine (ICE) vehicles will still be on our roads into 2050¹.

There are alternative fuels available, such as renewable diesel, compressed natural gas, propane, ethanol, and biofuels that generate fewer carbon emissions and air pollutants than traditional gas and diesel. Substituting these "step down" or "clean" fuels for traditional gas and diesel fuels is a way to significantly and immediately decrease GHGs and the damage done to local air quality by ICE vehicles during the 30-year transition period to ZEVs. This is an especially effective strategy for reducing emissions and air pollution from larger trucks, freight vehicles, and specialty equipment such as construction machinery for which the market has been slow to introduce zero-emission substitutions.

The State of Washington's [Clean Fuels Standard](#) is organized around this premise. It requires fuel suppliers to gradually reduce the carbon intensity of transportation fuels to 20 percent below 2017 levels by 2038.

¹ Plumer, Brad, Popovich, Nadja, and Migliozi, Blacki. ["Electric Cars are Coming. How Long Until They Rule the Road?"](#) New York Times, March 10, 2021.

Question 4: How should the CAF consider hydrogen fuel cell electric vehicles (FCEV) for public and commercial use?

- Option A: The City generally supports them as an option but should not actively explore opportunities for hydrogen fueling production and distribution facilities.
- Option B: The City supports them and should explore opportunities for development of hydrogen fueling production and distribution facilities
- Option C: The City should not explore hydrogen electric vehicles at this time and should focus on battery electric vehicles as the preferred ZEV option.

Context

While not as common or well-known as battery electric vehicles, FCEVs are another type of *zero-emission vehicle* (ZEVs) – a vehicle that does not produce harmful tailpipe emissions.

FCEVs have the benefit of “fueling up” at a pump like a standard vehicle without the downtime of charging required for battery electric vehicles; the fuel, hydrogen gas, is a renewable fuel that can be produced from water and electricity. FCEVs also avoid environmental problems with battery production and disposal altogether because they use a fuel cell instead of a battery to generate electricity. They are a promising alternative for long-haul trucking and heavy fleet vehicles, although passenger use is increasing.

The greatest limiting factor for this technology is the lack of a developed production and retail distribution network: consumers will not invest in hydrogen vehicles without a fueling network, and retailers are unlikely to build a fueling network in an area without a consumer base. Local governments can play a critical role in this early stage by endorsing the technology and developing partnerships to introduce early fueling facilities.

New Area of Regulation

Question 5: Should the CAF include measures to phase out the use of small two-cycle engine lawn equipment?

If Council agrees that the CAF should include this phase-out, should the CAF include any or all of the following:

- Option A: Restrict municipal use of small two-cycle lawn equipment.
- Option B: Prohibit City contractors from using small two-cycle engine lawn equipment as part of a Green Procurement Policy.
- Option C: Introduce an ordinance for Council consideration to equitably phase out sales and usage of private and commercial small two-cycle engine lawn equipment.
- Option D: Advocate for statewide legislation providing more tools for local air quality protections around small two-cycle engines.

Context

The Council has received public testimony from residents concerned about the air pollution and climate impacts of gas-powered, two-cycle lawn equipment such as leaf blowers. These concerns are well-founded; the two-cycle (or two-stroke) engines that power these types of equipment are heavy polluters which produce significant amounts of emissions due to the way they burn both oil and fuel.

Over 170 jurisdictions across the country, including Multnomah County, have passed legislation banning or phasing out these types of equipment.

Natural Systems Update

At the August 8, 2022, workshop Council directed staff to accelerate and expand the actions in the Natural Systems section of the CAF. Staff worked with Public Works and Parks, Recreation and Cultural Services to identify budget initiatives that would meet Council's direction and have the ability to scale depending on the overall budgetary environment.

The proposed package includes measures to:

- Accelerate urban tree canopy infill.
- Preserve the integrity of the existing mature tree canopy
- Expand natural greenspaces
- Supporting community organizations that train youth and BIPOC residents on green infrastructure skills.

These actions were identified as ones that would rapidly expedite the City's expansion of tree canopy and green space, installing cooling shade and carbon-absorbing green infrastructure in the near-term when they can be of most benefit to the community instead of gradually over many years. These investments would also help reduce inequities in the distribution of green space throughout the City; provide much-needed tree maintenance that is often a barrier for low-income residents; and help connect youth and BIPOC residents to hands-on job experience on green infrastructure projects.

Next Steps

After staff receives further Council direction on the identified policy questions, the CAF will be revised to align and support that policy direction. The revised CAF will be brought back to Council at another workshop this fall for review and discussion. Once Council is satisfied with the direction of the CAF, it will be brought back to Council for Public Hearing and Final Adoption.