Climate Action

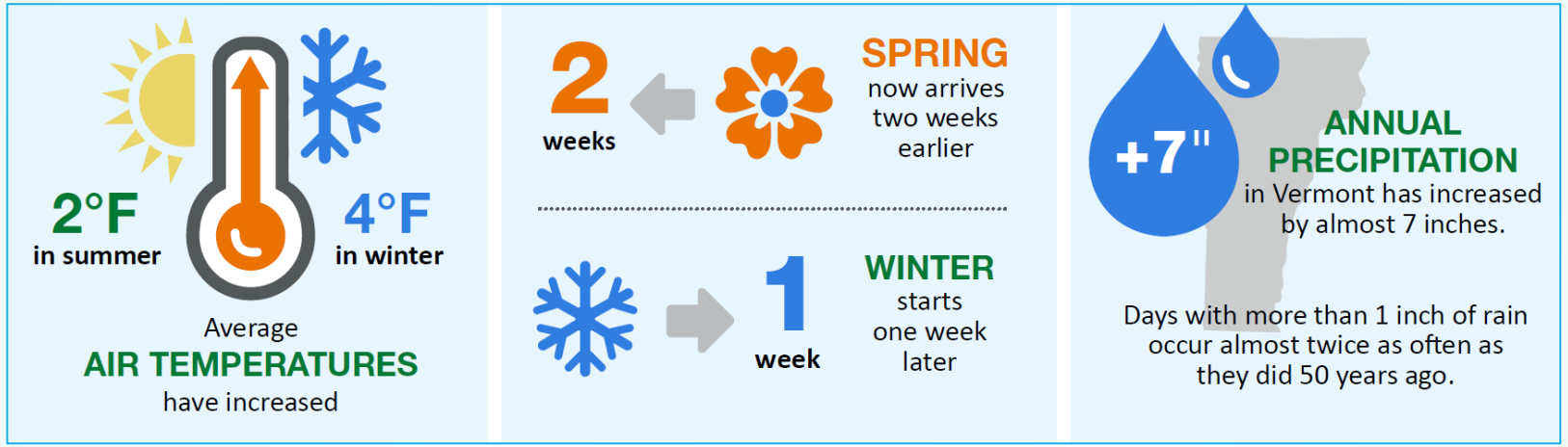
South Burlington Climate Action Task Force (CATF)

presentation to

South Burlington City Council

Recommendation to Consider Charter Change to Permit Regulation of Thermal Energy Systems in Existing Construction

Climate Change in Vermont



*Source: Vermont Health Department website, www.healthvermont.gov/health-environment/climate-health/climate-change

The Intergovernmental Panel on Climate Change (IPCC) report and other summaries of climate change impacts warn that without immediate concerted action coral reefs will disappear, coastal cities will flood, drought will deplete the breadbaskets that today feed the world and ecosystems will fail.

"Climate change is a threat to human well-being and planetary health. Any further delay in concerted anticipatory global action on adaptation and mitigation will miss a brief and rapidly closing window of opportunity to secure a livable and sustainable future for all." Co-Chair Intergovernmental Panel on Climate Change (IPCC) Working Group II. https://www.ipcc.ch/report/ar6/wg2

Climate Change in Vermont*

- 92 bird species of Vermont, including the common loon and hermit thrush, are expected to disappear from the landscape within the next 25 years.
- Climate change exacerbates the threats that invasive plants, insects, and diseases already pose to the health of Vermont's forests.
- Climate change will have a negative impact on fruit-bearing species like apple trees that require a sufficient over-wintering period for success in the next growing season. The maple syrup industry is also at risk due to variations in winter temperatures.
- In 2017, Vermont had the highest rate of reported confirmed and probable Lyme disease cases in the U.S. 1,093 cases of Lyme disease were reported to the Health Department in 2017, the highest annual count ever recorded in Vermont.[1] In the early 1990's, the Health Department received a dozen or fewer confirmed reports of the illness each year.
- Flooding is the most likely natural disaster to occur in Vermont; however, extremes will become more common, such as drought. Additionally, more precipitation damages roads and property and increases runoff creating favorable conditions for cyanobacteria blooms which are harmful to human health.
- Increases in natural disasters in Vermont will likely increase the risk of injury, illness, and death.
- Impacts could affect the quality and safety of food and water, which could lead to increases in food and water-borne illnesses.
- Impacts could contribute to mental health challenges.
- Children, people over 65 years of age, people of low socioeconomic status, Indigenous people, or people with previous health issues are more vulnerable to the health effects of climate change.

Source: Vermont Climate Assessment, 2021 (https://site.uvm.edu/vtclimateassessment/) and Vermont Department of Health, Climate Change in Vermont (https://www.healthvermont.gov/health-environment/climate-health/climate-change)

SB's Climate Action Plan

- The final Climate Action Plan focuses on actions to address the 2 major contributors to GHGs: **Buildings and Transportation**
- Tonight we focus on Buildings, which account for 34% of South Burlington's annual GHGs
- To meet SB's climate change commitments, the plan requires all of the following in respect of the Buildings sector by 2030:
  - 360 housing units to be electrified each year to reduce emissions by 9%
  - 600 homes to be weatherized each year to reduce emissions by 5%
  - 8% of all commercial space (by square foot) to be electrified each year to reduce emissions by 17%
  - All new development >12.5 units/acre to reduce emissions by 4%
  - All new construction - commercial and residential - to be carbon free to reduce emissions by 4%

Charter Change Request

- The CATF requests the Council to consider the following change to South Burlington's charter:

  "To regulate thermal energy systems in residential and commercial buildings, including assessing carbon impact or alternative compliance payments, for the purpose of reducing greenhouse gas emissions throughout the City. No assessment of carbon impact or alternative compliance payment shall be imposed unless previously authorized by a majority of the legal voters of the City voting on the question at an annual or special City meeting duly warned for that purpose."

- This is the same change recently made to the City of Burlington's charter.
- The Charter Change is a small first step. It does not commit South Burlington to do anything, but allows a conversation about policy to begin.

Charter Change Process

- The Council may elect to place a proposed charter change before the voters at a regular or special election.
  - Scheduled elections in South Burlington include Town Meeting Day (first Tuesday in March) each year, and State/Federal primaries (August) and State/Federal elections (November) of each even-numbered year.
- If the vote passes, the charter change is submitted to the Legislature.
  - A locally-approved approved charter amendment may be considered by the Legislature and may be adopted as written, modified, or not adopted.
- If the legislature approves the change, the council would consider regulations under its new authority.
  - In the case of this particular charter change. any assessment of carbon impact or alternative compliance payment would need to be approved by the voters.

Climate Action

...making South Burlington cleaner,
more affordable,
healthier,
and better prepared for the future.

Appendix

Burlington's Charter Change

- The City of Burlington's charter has been amended to provide Burlington the power:

  "To regulate thermal energy systems in residential and commercial buildings, including assessing carbon impact or alternative compliance payments, for the purpose of reducing greenhouse gas emissions throughout the City. No assessment of carbon impact or alternative compliance payment shall be imposed unless previously authorized by a majority of the legal voters of the City voting on the question at an annual or special City meeting duly warned for that purpose."
- The proposed change was approved by voters in November 2021
- The charter change was approved by the Vermont legislature and signed by the Governor in April 2022.
- We understand Burlington is now in the process of developing regulations utilizing its new authority.

Burlington's Charter Change

Mayor Miro Weinberger of Burlington said this after the charter change became effective:

> "The way to achieve the end of our fossil fuel use and address the climate emergency, while improving our quality of life, is to electrify everything, particularly our buildings and vehicles …The passage into law of Burlington's Thermal Energy Charter Change gives us an essential new tool for advancing our work to make Burlington a Net Zero Energy city. I look forward to working with the City Council as we continue on the path toward our bold goal. I am proud of Burlington's leadership on this effort, and I thank the Burlington and Chittenden County legislative delegations for their work to pass the Charter Change, and thank Governor Scott for signing the bill."

Burlington FAQs on Charter Change

Q: Why is the City pursuing this Charter Change?

A: Building energy use is the largest single source of carbon emissions in Burlington. With this Charter Change, the City is asking the State for the authority to assess a carbon impact or alternative compliance fee as an option in regulating thermal energy systems. Then, if the State grants the City this authority by approving this Charter Change, the City would develop a policy proposal and bring it back to Burlington voters to approve through a second vote on a future ballot question. The goal is that the City could use a price-based system like a carbon impact or alternative compliance fee to as an option for regulating buildings – starting with new construction – to ensure that they are designed to use renewable energy for heating, which avoid costly future retrofits and reduce fossil fuel use in Burlington.

Q: Why focus on buildings?

A: Buildings burn fossil fuels, predominately for heating, hot water, and thermal energy use. Thermal energy represents more than one-quarter of Vermont's greenhouse gas emissions, second only to the transportation sector. Buildings can use renewable fuels such as Burlington's 100 percent renewable electricity (generated by biomass, hydro, wind, and solar), instead of fossil fuels, to provide heating and hot water to Burlingtonians by using highly efficient technologies such as cold-climate heat pumps. Additionally, other renewable fuels, such as renewable gas, biodiesel, and biomass also can reduce fossil fuel use.

Q: Would the Charter Change impose new taxes on homeowners, renters, or businesses?

A: No. The Charter Change language does not seek to impose any new taxes or fees. Instead, it asks the State for the authority to assess a carbon impact or alternative compliance fee in the future, as a way for buildings to meet thermal energy system requirements. Any policy change that included the assessment of such a fee would take effect only if approved by Burlingtonians through a future vote. The City's immediate focus would be on bringing forward such a proposed policy that related to new buildings, not existing buildings.

Burlington FAQs on Charter Change

Q: Does the Charter Change allow for a carbon tax in Burlington?

A: No. The proposed Charter Change does not allow for a carbon tax. Rather Burlington would be asking the State for authority to develop a plan – which City voters would approve through a second vote in the future – to allow building owners to pay an alternative compliance or carbon assessment fee as one way to meet thermal energy system requirements for buildings. The plan would offer alternatives to a fee to meet City policy goals, including upgrading energy efficiency and installing renewable heating and thermal systems in buildings to reduce or eliminate fossil fuel use. Again, the City's focus currently is on policies related to new, not existing, buildings.

Q: Would the Charter Change require Burlingtonians to switch their current heating systems?

A: No. The Charter Change does not require such a switch. Rather, it would give the City the authority to develop a proposal to regulate thermal energy systems. Burlington voters would then consider this specific policy proposal in a second, future vote. This policy would be designed to regulate emissions from fossil fuel heating and hot water systems. The City's first area of focus is to ensure that new buildings are designed to use renewable energy for heating so that these new buildings are compatible with our long-term Net Zero Energy and climate goals, avoiding costly future retrofits and reducing fossil fuel use in Burlington.

Q: Where does Burlington's electricity come from? Is it really sustainable?

A: In 2014, Burlington became the first city in the country to generate 100 percent of our electricity from renewable energy. In 2018 this electricity was generated 34% from biomass, 16% from large hydro, 13.5% from small hydro, 27% from wind, and 1.5% from solar. See the following links for more information on where our electricity comes from, sustainability at the McNeil Generating Station, and BED's local and renewable forestry practices. In 2019, Burlington was named the top city in the Northeastern U.S. and fourth in the country for solar per capita by Environment America, and performed similarly in the 2020 rankings.

Burlington FAQs on Charter Change

Q: When the City regulates heating systems, will those regulations require the installation of electric heat? Didn't Burlingtonians switch from electric heat to natural gas a few decades ago?

A: The City is not requiring a switch to any particular heating system or encouraging the transition of heating systems to the old, costly, resistance electric heat found in buildings decades ago. Rather, new policy proposals could support switching to modern, efficient renewable heating sources. These sources include high-efficiency, cold climate heat pumps, which hundreds of Burlingtonians already are installing to heat homes and buildings, and which work even at temperatures well below zero degrees. Cold climate heat pumps are far more efficient and less costly to operate than the old resistance electric heat, and, as a bonus, they also provide efficient and reliable air conditioning during our increasingly warm summers. Other renewable options may include efficient electric heating from ground-source heat pumps (already in use at places like Champlain College, the Sustainability Academy, C.P. Smith and J.J. Flynn elementary schools, and the new Hula office complex), modern wood pellet heating, and conventional heating systems utilizing renewable fuels such as renewable gas, biodiesel, or biomass.

Q: Will increased electric use increase our electric rates?

A: Analysis filed with the Public Utility Commission by Burlington Electric Department as part of its Integrated Resource Plan demonstrates that, while grid upgrades eventually may be needed to reach the Net Zero Energy goals as we electrify our heating and transportation needs, the Net Zero Energy effort, when compared with business as usual, could have a significant, positive economic benefit (in the form of reduced rate pressure) for all Burlington ratepayers. Further, Energy Action Network analysis shows that, for every dollar spent on fossil fuels in Vermont, only a quarter of that money stays in the Vermont economy, while we ship $1.5 billion out-of-state to purchase fossil fuels. In contrast, 62 cents of every dollar spent on electricity stays in the Vermont economy. Therefore, using Burlington's 100 percent renewable electricity to meet more of our heating and transportation needs offers a unique opportunity to buy local with our energy dollars.