



Opportunities for Local Renewable Energy Generation Programs in Hartford, Vermont

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Who we are

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Esme Cole, VT State Representative

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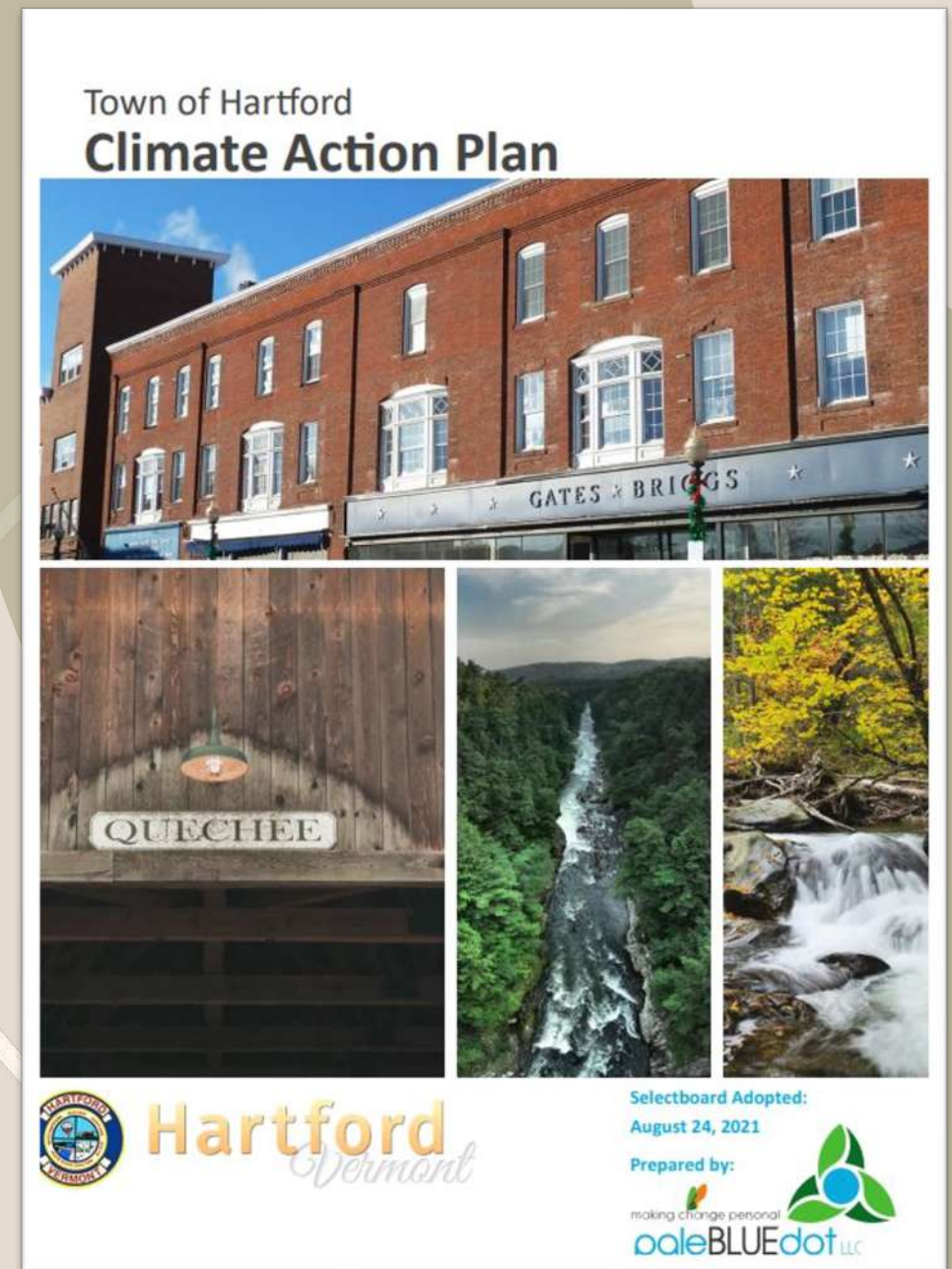


Lynn Bohi, Former State Rep, HEC founder



Climate Action Plan

- Researched and written with consultant Pale Blue Dot in 2020
- Adopted by Selectboard in 2021
- Lays out strategies and goals for next nine years
- Community-face strategies, municipal facing strategies



Introduction

Climate Action Plan Framework

This Climate Action Plan includes an implementation framework designed to achieve community-wide goals for greenhouse gas reduction and climate adaptation and resilience. The plan is organized around a unifying framework organized by sector as illustrated to the right. Each sector has over-arching Strategies established to meet 2030 goals and detailed Actions for implementation. Sector actions include a focus on Climate Mitigation, Climate Adaptation, or both.

Climate Mitigation: addresses the root causes of climate change through the reduction or prevention of greenhouse gas (GHG) emissions. Sectors with this as a significant focus are shown to the right with this symbol:

Climate Adaptation: seeks to lower the risks posed by the impacts of climate change which are now inevitable or likely. Sectors with this as a significant focus are shown to the right with this symbol:



Emissions associated with all electricity and heating fuel/propane consumption within the Town. Approaches to this sector area include improved energy efficiency and resilience. Sector strategies include:

Strategy BE 1: Improve total Community wide residential, commercial, and industrial building energy efficiency by 10% Electricity and 10% Thermal Fuel by 2030.

Strategy BE2: Increase Net Zero buildings within the community to 5% of building stock by 2030.

Strategy BE 3: Achieve 30% residential, commercial and industrial building thermal "fuel switching" (to renewable source) to reduce on-site fossil fuel use by 2030.

Strategy BE 4: Increase on-site distributed renewable energy from 3% to 15% of Residential and Commercial electric use by 2030.



Emissions from on-road vehicle traffic occurring in the community. Approaches to this sector area include reductions in vehicle miles traveled as well as shifts to public transit and alternative modes of transportation like biking and walking. Sector strategies include:

Strategy TL 1: Decrease community wide VMT by 2.9% by 2030.

Strategy TL 2: Increase average population per developed acre by 5% by 2030.

Strategy TL 3: Increase battery electric vehicle (BEV, eBike, etc) utilization to 21.5% of community wide rolling stock by 2030 (for autos, this requires an increase from approximately 25 vehicles in 2019 to 2,333 vehicles in 2030 community-wide).

Strategy TL 4: Establish viable no/low emission vehicle fuel sources to serve community by 2025. Achieve 25% diesel consumption replacement with no/low emission fuels by 2030.

Strategy TL 5: Increase Public Transit Access and Ridership for all forms of trips, including increasing commuter ridership from 1.72% to 8% by 2030.

Introduction



All solid waste generated by residents and businesses within the community and their associated emissions. Approaches in this sector focus on diversion of food, consumer, and construction waste. Sector strategies include:

Strategy WM 1: Achieve 100% organics landfill waste diversion by 2023.

Strategy WM 2: Increase recycling from 5% to 20% of total MSW handled by 2030 in an energy efficient, low emission manner.

Strategy WM 3: Decrease total per capita municipal solid waste handled by 5% by 2030.



Resilience of urban tree canopy, ground cover, greenspace, parks, and ecosystems. Focus includes expansion of tree canopy coverage, improvement of beneficial use of lawn areas, and mitigation of heat island impacts. Sector strategies include:

Strategy GT 1: Increase Tree Cover and Diversity, achieve an increase of 90 acres by 2030.

Strategy GT 2: Increase the use of Native Species and Pollinator Restorations Areas with a targeted conversion of 10% of Town-wide lawn coverage.

Strategy GT 3: Reduce Micro-Heat Island Effect through Town-Wide impervious surface reduction of 2% by 2030.

Strategy GT 4: Care for forest and wildland ecosystem health to enhance their resilience to climate change and capacities for carbon sequestration.

Strategy GT 5: Increase the resilience of the urban tree canopy and greenspaces to climate change impacts.



All potable water, wastewater collection and treatment, flood mitigation, and surface water health. Approaches to this sector focus on water conservation, wastewater reduction, flood mitigation, and stormwater management. Sector strategies include:

Strategy W 1: Promote increased water conservation Town Wide with a targeted reduction of 6% (water and wastewater) by 2030.

Strategy W 2: Mitigate the projected increased flood hazards and impacts due to climate change.

Strategy W 3: Increase stormwater and wastewater treatment capacity to meet newly defined criteria of major storm and climate events by 2027.



Community health impacts and resilience in the face of current and projected climate impacts & risks. approaches in this sector focus on community resilience and connections. Sector strategies include:

Strategy HS 1: Educate, engage, and empower the public on health and safety risks of climate change impacts.

Strategy HS 2: Assist the Town's vulnerable populations in preparing for and mitigating climate change impacts from extreme heat, flooding, storm, and vector borne disease.

Strategy HS 3: Maintain updated plans to address climate risks and impacts.

Strategy HS 4: Strengthen community response capacity and support networks.



Food cultivation and distribution, nutrition insecurity, and food waste. Approaches to this sector include reduction of food waste, food system resilience, strengthening of local food production, and equitable access to healthy food. Sector strategies include:

Strategy LF 1: Increase production of local food, particularly serving low income and food insecure individuals.

Strategy LF 2: Increase access to local food.

Strategy LF 3: Reduce food waste and hunger, achieve a 50% reduction in food insecurity community-wide by 2030.

Strategy LF4: Increase local agricultural resilience to climate shocks.



Economic development, jobs, and business creation potential represented by the actions and goals of all sectors in this Climate Action Plan. Approaches include workforce and economic development, and resilience of businesses. Sector strategies include:

Strategy CE 1: Capture local economic potential of climate action.

Strategy CE 2: Increase workforce development and retention for the climate economy.

Strategy CE 3: Build marketplace climate resilience.

Strategy CE 4: Establish sustainable financing for the Town's climate action implementation.



Past Projects



BUYER'S GUIDE TO
DRIVING ELECTRIC
IN VERMONT'S UPPER VALLEY

ELECTRIC VEHICLES ARE FUN, FAST, AND AFFORDABLE!
CUT COSTS ON BUYING OR LEASING AN EV BY UP TO
\$14,000 THROUGH STATE AND FEDERAL INCENTIVES

Institute for Energy and the Environment
PUBLISHED JUNE, 2022



Community level work: Solarize Campaign

- Increasing residential solar adoption
- Education, advocacy, outreach
- Connect Hartford residents with energy experts including energy law and policy students, solar installers, and financial experts
- Energy Fair spring 2023



Municipal Level Work – Preferred Siting & RFP matrix

Project	Emissions Reductions	Timeline	Economic Emission Efficiency (Includes LACE to determine avoided \$/ton of CO2)	Zoning Compliance	Reliability (partly duplicates Resilience)	Capacity (partly duplicates Economic Emissions Efficiency)	Resilience (partly duplicates Reliability)	Sustainability (partly duplicates emissions reductions)	Equity	Fund-ability	Social Benefits	Secondary Economic Benefits	Weighted Total
150 kW Community Solar, Land Leased from Hartford, with Qualified Income Allocations	5	5	5	5	3	3	3	5	5	4	5	2	108
150 kW Community Solar Project on Land Leased from Hartford	4	5	5	5	3	3	3	5	2	5	3	2	99
500 KWh Municipal Battery Bank	3	3	2	5	5	3	5	3	2	4	2	3	83
Municipal Ground Source Geothermal Heat	5	2	3	4	4	3	4	5	2	4	3	2	87
150 kW Community Solar, Land Leased from Hartford, with EV Charging Below PV Canopy	5	4	5	4	4	3	4	5	2	4	3	3	100
150 kW Community Wind, Land Leased from	4	4	5	3	3	2	3	4	2	3	3	2	84
Community Weatherization Fund with Income Qualified Income Allocations	5	4	5	5	4	5	3	5	5	4	5	4	113

WHAT CAN YOU DO IN YOUR TOWN?

- Integrate energy work and climate action into municipal operations
- Educate your residents, but make it fun
- Determine how your townsfolk best get their news (newspaper, social media, TV)
- Start small, dream big
- Partner with another town on a big project
- Know the non-profits (Vital Communities, Efficiency VT, Drive Electric VT, VECAN)
- Educate yourself

Thank you

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“Never doubt that a small group of thoughtful, committed citizens can change the world; indeed it’s the only thing that ever has”
-Margaret Mead



Resources

Vermont Law and Graduate School IRA webinar: <https://tinyurl.com/33b8tknt>

Vermont Law and Graduate School Decarbonization Webinar: <https://tinyurl.com/4vej5f22>

WindowDressers: <https://windowdressers.org/>

WRAP: <https://dcf.vermont.gov/benefits/weatherization>

Vermont Women's Work: <https://www.vtworksforwomen.org/>

Hartford Energy Commission: <https://tinyurl.com/2tcfbzym>

Hartford Climate Action Plan: <https://tinyurl.com/4ufaujqp>