**Vermont Climate Action Plan - Working Together for a Thriving Vermont**

**DRAFT CLIMATE ACTION PATHWAYS AND STRATEGIES FOR SECTORS**

***Invitation For Public Comment***

Vermont’s Global Warming Solutions Act requires the state to **c*ut climate pollution to net zero by 2050.*** This means we have to get rid of as much climate pollution as we can and balance what we can’t with actions that remove carbon from the atmosphere. We also need to prepare for and reduce the impacts of a changing climate so that Vermont is resilient and thrives into the future.

The Global Warming Solutions Act calls for a Vermont Climate Action Plan by December 1, 2021. The Vermont Climate Council is developing the plan with the Agency of Natural Resources and the involvement of a broad range of stakeholders. Working through five sub-committees, a set of initial action pathways and strategies have been drafted.

The following is a summary of the initial pathways and strategies. Strategies will be prioritized based on the ability to meet the Global Warming Solutions Act requirements, justice and equity, delivery of multiple benefits and technical and economic feasibility. Vermonters are invited to add ideas and share their views on strategies to prioritize. Input from the public will be used by the sub-committees to help set the priorities in the Vermont Climate Action Plan.

**Resilient Agriculture and Ecosystems**

**Pathway One: Sustain and Expand Carbon Capture and Storage in Vermont’s Natural and Working Lands, Soils and Waters**

* Incentivize practices that increase forest coverage to store carbon.
* Support forest research efforts and increase support for municipal tree planting efforts.
* Expand existing state programs focused on the adoption of no-till, cover crop, rotational grazing and other climate smart practices.
* Develop and implement a State of Vermont ‘Pay for Ecosystem Services Program’ to support healthy soils and carbon storage.
* Create and support accessible and equitable research, partnerships and education including Traditional Environmental Knowledge, workforce development, environmental and climate education at all grade levels and offering information and technical assistance to landowners.

**Pathway Two: Sustain, Restore and Enhance the Health of Vermont’s Natural Working Lands, Soils and Water**

* Promote the conservation of farmland, forests and wetlands and restore and protect wetlands and river and stream bank areas.
* Prioritize conservation of lands that achieve multiple goals such as biodiversity and connectivity.
* Promote and incentivize practices to adapt forest management to meet the demands of a changing climate.
* Increase efforts to generate more soil organic matter including pollinator habitat creation, compost application and improving water resources.
* Focus on river corridor and floodplain reconnection and restoration such as investing in berms and riparian buffers.
* Align existing natural resource management programs with climate goals through river corridor easements, wetland restoration and afforestation practices.

**Pathway Three: Support Vermont’s Farmers, Foresters and Land Workers to Cut Climate Pollution and Increase Resilience to Impacts**

* Increase technical assistance and resources for forestland owners, planners and managers to cut emissions and adapt to climate change.
* Include Tribal Members, Traditional Environmental Knowledge and youth in resource management planning.
* Enhance support for energy transformation and energy efficiency on working lands.
* Update the state’s emissions inventory to account for carbon capture and storage on working lands.
* Expand state programs including methane capture and energy generation on farms and climate feed management.
* Support research and development and expansion of new markets for wood products.
* Invest in farm and forest viability planning and technical assistance.

**Pathway Four: Grow and Connect Local, Sustainable Natural and Working Land Economies, Markets and Food Systems**

* Develop, expand and sustain local markets, infrastructure and distribution for food, agriculture and forest products.
* Alleviate food insecurity including creating a Local Food Access Funding program for low-income consumers to access local food.
* Create and implement fair trade and equitable labor practices.

**Efficient Transportation Systems and Vehicles**

**Pathway One: Electrify Transportation**

* Grow the market for EVs by improving incentives for low and moderate-income car purchasers.
* Increase availability of public fast-charging stations along roadways and at workplaces and large institutions.
* Incentivize residential charging, prioritizing underserved communities and multi-family housing.
* Create an EV “navigator service” providing information regarding how to purchase and operate an EV.
* Work with car dealers and others to develop the EV supply chain, workforce and market development strategies.
* Expand state, municipal and private EV fleet programs.
* Adopt leading emission standards such as California’s commitment to phase out of new fossil fuel vehicles over the next 15 years.
* Develop and implement a state action plan for zero emission vehicles.
* Offer financial support for the purchase of state EV transit and bus fleets and assist with school bus electrification.
* Expand research and development and outreach programs for Heavy Duty fleet operators.
* Set the goal that all public heavy duty trucks and buses purchased after 2025 are electric based on cost effectiveness.
* Launch a point of purchase incentive program by 2025 for all transportation options (bikes, ATVs, motorcycles, etc.)

**Pathway Two: Improve Vehicle Efficiency**

* Implement a point of purchase incentive program for EVs.
* Expand and create new programs that help low-income Vermonters access more efficient vehicles such as Mileage Smart.
* Investigate the climate pollution reduction benefits of lowering interstate highway truck speeds.

**Pathway Three: Opportunities to Advance Low Carbon Fuels**

* Explore biodiesel, renewable natural gas, hydrogen fuel cells and other low-carbon options for transportation.
* Research strategies such as a regional Low Carbon Fuel Standard.

**Pathway Four: Increase Transportation Choices**

* Expand transit, inter-town bus, commuter rail, rail and riding sharing services.
* Secure funding for transit infrastructure.
* Improve bike and pedestrian infrastructure including expanding the Complete Streets program and funding to local governments.

**Pathway Five:** **Land Use and Smart Growth**

* Foster smart land use by funding critical infrastructure in walkable, transit friendly urban and village centers.
* Increase programs that revitalize downtowns and stimulate investment and job growth in Vermont’s community centers.
* Establish a State Planning Office to support smart growth and climate action.
* Better integrate state, regional and local land use and transportation planning.
* Provide guidance to communities on ways to reduce single vehicle use.
* Conserve large forest blocks, farmland and open spaces outside of community centers

**Access to Clean, Reliable Energy**

**Pathway One: Achieve 100% Renewable Electricity Supply Statewide**

* Implement a 100% Renewable Energy Standard to replace the current goal of 75% by 2032.
* Assess how to support the operation of existing renewables in Vermont and the region while cost effectively expanding.

**Pathway Two: Manage Energy Use to Limit Cost Impacts and Climate Pollution**

* Set up programs that provide utility customers incentives to reduce energy use during peak hours.
* Promote energy storage in combination with renewable energy adoption to increase resilience and improve grid efficiency.
* Encourage the design of rates that promote electrification such as offering lower rates for off peak energy use hours.
* Advance energy conservation and fuel switching such as weatherization and switching to heat pumps.

**Pathway Three: Access to Electrification for All**

* Provide low-cost financing for multi-family and older buildings to go electric and integrate weatherization and renewable energy adoption.
* Support the creation of local Community Resilience Zones that provide access to energy generation and storage and communications during and after extreme weather events.

**Better Buildings**

**Pathway One: Building Enhancement Through Weatherization at Scale**

* Identify and bring together financial tools to advance weatherization.
* Adopt complementary policies such as rental property efficiency standards, building energy labeling and building energy codes.
* Grow the weatherization workforce.

**Pathway Two: Better Heating Through a Clean Energy Standard**

* Apply a performance standard to fossil fuel heating providers to spur the shift to low-carbon fuels.
* Give fuel companies and energy dealers and contractors access to Clean Heat Credits when opting for heat pumps, pellet stoves, wood chip boilers, biofuels and renewable and district energy.

**Climate Action in Waste, Industry and Agriculture**

**Pathway One: Cut Climate Pollution from Wastewater Treatment Facilities**

* Cut methane emissions by reducing combustion and identify opportunities to capture and use biogas.
* Reduce emissions by limiting the transportation of waste by adding processors and removing water.
* Optimize the energy efficiency performance of equipment.

**Pathway Two: Reduce Emissions from Industry**

* Install detection systems in facilities with large refrigeration systems to avoid the leak of ozone depleting (HFC) chemicals.
* Launch a refrigerant (HFC) end of life program to promote proper disposal and to switch to alternatives in existing equipment.
* Explore ways to reduce emissions from gases used in semiconductor manufacturing.

**Pathway Three: Leverage, Expand and Adapt Agricultural Programs that Deliver Climate Benefits**

* Develop a climate feed management program.
* Expand programming for agroforestry and silvopastoral systems.
* Adopt climate friendly resource management practices such as river corridor easements, wetland restoration and afforestation.
* Partner on methane capture and energy generation on farms.

**Pathway Four: Invest in Working Lands Conservation and Education**

* Invest in farm, working and natural land conservation to promote a healthy economy, food security and climate resilience.
* Support farm viability planning and technical assistance.
* Enhance Climate Smart Agriculture research and technical assistance and fund and learn from university and field research.

**Pathway Five: Foster Partnerships to Generate Strategies for Farmers to Address Climate Change**

* Advance collaboration between stakeholders to increase farmer access to climate smart resources and programs.
* Maintain the Agriculture and Ecosystems Sub-Committee to help implement the Vermont Climate Action Plan.

**Strong Rural Communities**

**Pathway One: Increase Local and Regional Resilience Capacity**

* Provide communities with tools and resources to assess climate risks and identity changes and investments needed to reduce them.
* Reduce financial burdens and speed up post-extreme weather event recovery.
* Support municipal/regional planning and rural, under-resourced and marginalized communities to prepare for climate impacts.
* Expand collaboration across public, nonprofit and private organizations involved in preparedness.
* Support workforce development in skills needed to cut pollution and increase resilience.

**Pathway Two: Enhance Resilience in Transportation, Communications, Water/wastewater and Energy Infrastructure**

* Identify and assess threats to infrastructure in rural communities. Coordinate preparedness across sectors and geographies.
* Identify and prioritize protection for critical systems starting with communities that have experienced investment inequalities.
* Expand programs that conserve and buy-out flood vulnerable properties and structures to reduce loss and improve natural river function.
* Evaluate needs and pursue near term, no regrets investments in energy and communications resilience.

**Pathway Three: Support the Reduction of Fossil Fuels in Municipalities, School Districts and Residences.**

* Collect energy use data for public buildings, vehicle fleets and utilities.
* Use local energy planning to replace fossil fuels and support local energy committees to be part of energy planning and implementation.
* Cut climate pollution by transforming Vermont’s transportation system.

**Pathway Four:** **Promote Resilient Land Use**

* Increase investments in more climate resilient, equitable, resource efficient compact, walkable communities that protect natural resources.
* Develop public and private funding for flood protection for properties and upstream ecosystem restoration programs.
* Promote compact communities and flood protection and limit development in hazardous areas.
* Modernize planning rules to incorporate current and future climate risks and coordinate decision making across state entities.
* Fund research on the emissions and resilience impacts of development.

**Pathway Five:** **Access to Safe, Energy Efficient and Affordable Housing, Jobs and Services for All Vermonters**

* Update state and local land use rules, practices and investments to eliminate barriers to compact, walkable housing developments.
* Increase investments in private market and non-profit owned affordable housing.
* Improve rental properties by assisting property owners to rehabilitate existing, underutilized buildings.
* Support efforts to eliminate housing discrimination.
* Increase funding for community-based homeless prevention and rehousing and research on the impact housing developments can have on climate and resilience goals.