

July XX, 2018

Dear Honorable Governor Phil Scott,

It is our pleasure to offer you this report; a compilation of our findings and recommendations intended to meet the important charge you put forward to us – the 21 members of your Climate Action Commission – last July.

We agree with your assessment, Governor: We can still control our own destiny. Vermont can seize the opportunity to lead the economic innovation that climate change will bring over the coming decades. We agree that we can utilize our fundamental strengths and competitive advantage to tackle this urgent issue, bringing sustainable prosperity to our small but strong state.

You asked us to “develop a strategy to reduce greenhouse gas emissions and combat climate change that addresses these fundamental principles:

- solutions that reduce greenhouse gas emissions must spur economic activity, inspire and grow Vermont businesses, and put Vermonters on a path to affordability;
- the development of solutions must engage all Vermonters, so no individual or group of Vermonters is unduly burdened; and
- programs developed to reduce greenhouse gas emissions must collectively provide solutions for all Vermonters to reduce their carbon impact and save money.”

We put forward to you today a report that outlines our shared understanding of where we are today and what is both beneficial and needed for Vermont to do our part to mitigate the impacts of climate change and seize the economic opportunity in a smart, strategic and equitable response.

We offer these recommendations with sincere hope that they serve as a platform for you and other Vermonters to identify the arenas to lead and manifest, more swiftly, the transformation of our energy system to one that is more efficient, clean, resilient, affordable and accessible to all Vermonters – in particular the most vulnerable. We stand ready to work with you, your state agencies and the people of the great State of Vermont to further refine and, importantly, implement these recommendations. We greatly appreciate the opportunity you provided for us to examine and tackle this critical issue. We hope you agree that we have taken your charge seriously and that our recommendations serve as a platform for action and further leadership in the job-creating energy innovation sector.

Thank you again and in advance for leading on this important issue and in advance for doing all you can – with us and others – to make meaningful, measurable progress.

Sincerely,

21 members names

Introduction

In July 2017, Governor Phil Scott convened the Vermont Climate Action Commission, charging this Commission with “develop(ing) a strategy to reduce greenhouse gas emissions (GHG) and combat climate change that addresses these fundamental principles:

- solutions that reduce greenhouse gas emissions must spur economic activity, inspire and grow Vermont businesses, and put Vermonters on a path to affordability;
- the development of solutions must engage all Vermonters, so no individual or group of Vermonters is unduly burdened; and
- programs developed to reduce greenhouse gas emissions must collectively provide solutions for all Vermonters to reduce their carbon impact and save money.

As the 21 members of the Commission, we offer Governor Phil Scott and the citizens of the State of Vermont this report, which highlights our findings and outlines recommendations intended to meet the charge put forward by the Governor.

The Context: Challenge and Opportunity

Climate change is a fundamental threat to world civilization, to the sustainability of natural systems and species diversity, and to the peace and safety of humanity. Closer to home, it also imperils Vermont’s economy and environment. Despite these threats, as Governor Scott noted in his 2018 State of the State Address, “our fate is not predetermined.”

All of us need to be part of mitigating and reversing global climate change. The most powerful lever to do this is economic: transforming our economy away from carbon-based energy sources, improving efficiencies, advancing recycling, composting and carbon sequestration, and transforming transportation and heating away from carbon fuels.

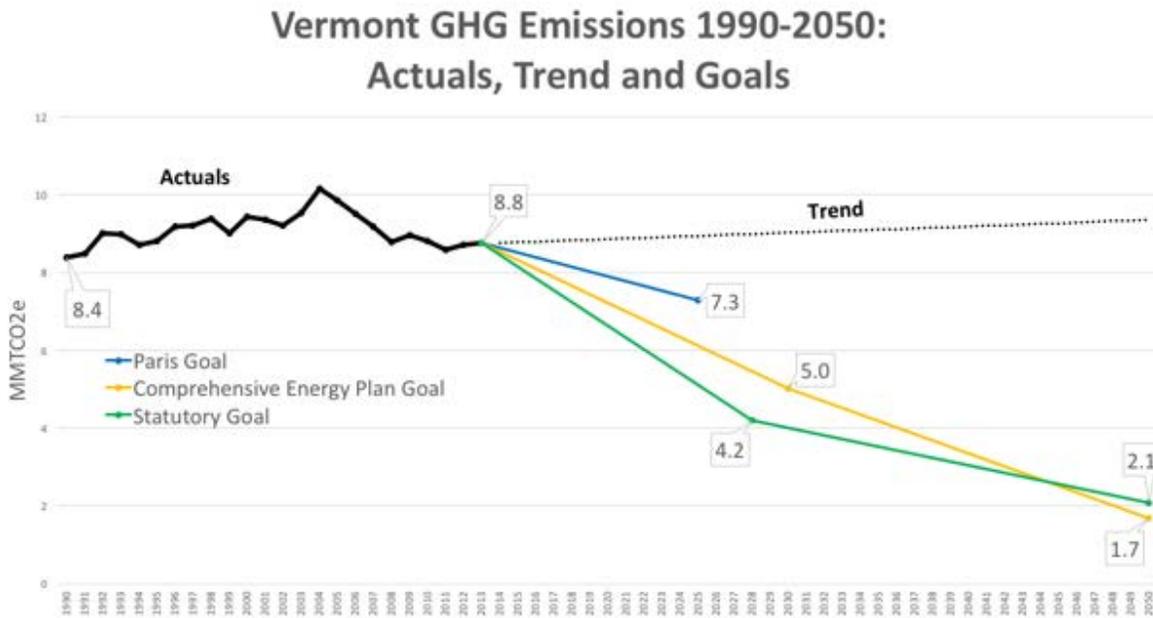
Creative Vermont businesses, ranging from utilities to solar and battery storage developers, to contractors, manufacturers, agricultural businesses, and inventors working on electric flight, are already contributing to progress. In the global competition to creatively answer climate change, places that lead will benefit by capturing the attention of entrepreneurs, investors and youth. In this context, being a place that dedicates itself to building economic answers to climate challenges can also directly respond to some of the economic challenges that Vermont faces today and, in fact, and over time, can be a path to economic renewal throughout the state.

Where We Are Today

Our ability to undertake this work successfully is founded upon meeting the state’s climate goals, as contained in its statutory greenhouse gas reduction goals as well as Vermont’s 90 by 2050 renewable total energy goal. Those goals are:

- **Statutory Greenhouse gas reduction goals** – a 50 percent reduction of GHGs by January 1, 2028 and a 75 percent reduction by January 1, 2050.
- **Comprehensive Energy Plan goals** – 25 percent by 2025, 40 percent by 2035 and 90 percent of all energy needs through efficiency and renewable supplies by 2050.

If Vermont continues on its current trajectory, it is clear that we will not meet these goals. Moreover, we risk missing the economic opportunities that will enable Vermont to thrive in the years ahead. Below is a chart outlining where we stand today in terms of greenhouse gas emissions and where we need to go in terms of meeting our statutory GHG reduction goals, the Comprehensive Energy Plan GHG reduction goals and the Paris Climate Agreement goals. Shifting this trajectory will take concerted effort and investment to tip the scales, and will result in more affordable homes, businesses, and transportation, a stronger economy, and a cleaner environment.



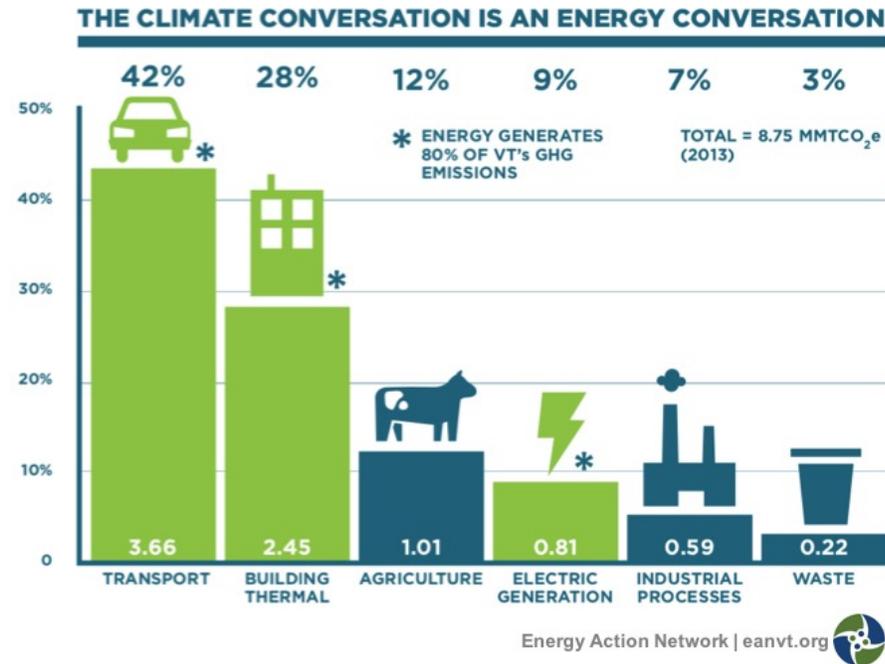
The Likely Scope and Scale:

[Outline an estimation (so that people can get a sense of the magnitude required) of how much/what will it take?]

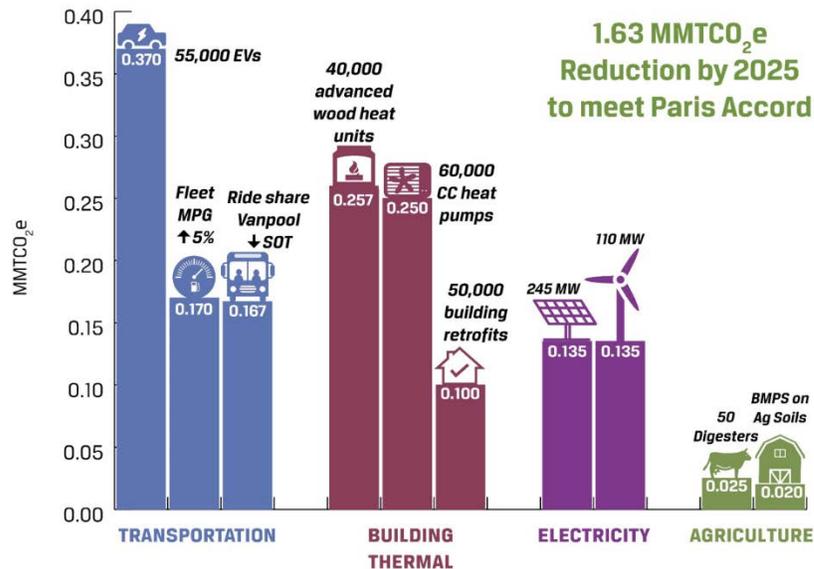
- How many EVs likely needed? And/or how many VMT's reduced?
- How much efficiency/many homes WX'd?
- How many MW of new DG or larger-scale RE likely needed?
- How many new AWH heating systems or cold climate heat pumps for building fuel switch likely needed?
- Other?]

As just one example of what it might take, in June 2018, the Energy Action Network used calculations based on Energy Information Administration, Vermont Public Service Department and the Vermont Agency of Transportation to outline just one scenario of investments needed in different sectors to meet the 25 by 2025 renewable energy goal. This is intended to highlight the likely scale of transformation required. It underscores as well that no single pathway will be sufficient. There is no silver bullet solution, policy or approach. To achieve our greenhouse gas and Comprehensive Energy Plan goals, some combination of all of these drivers – and likely others –

will be required. For example, the Climate Action Commission believes there are additional opportunities to sequester carbon in Vermont’s agricultural soils and forests. The recommendations of the Climate Action Commission are intended to support and accelerate this multi-pronged approach.



10 of Highest Impact Drivers for Reaching 2025 Goals



What Vermont Might Look Like with a Smart, Strong and Strategic Climate Response

If Vermont can seize on this opportunity to lead the climate economy and get ahead of the massive economic disruption that is beginning to take place, Vermont will be well positioned to flourish. Reaching the 2016 Comprehensive Energy Plan (CEP) goals will mean a thriving Vermont economy, more affordable and healthier lives for Vermonters, and a significant competitive advantage over those states and nations that fail to grasp this opportunity.

Developing the technology to integrate distributed, renewable energy resources into the electric grid, improving the efficiency and energy use of our homes and business, and advancing additional climate economy opportunities will continue to be a major factor in Vermont's economic growth. Encouraging that sector to grow in Vermont will lead to good jobs – tech jobs, manufacturing jobs, and skilled technician jobs.

Vermont's energy burden – the proportion of income individuals spend on fuel for their cars, homes, and businesses – is high. By making it easier to use non-motorized and alternatively-fueled transportation, Vermonters will pay significantly less to move around without losing the convenience and freedom enabled by our current transportation model. By weatherizing our existing building stock, and increase locally sourced, sustainably harvested biomass and high efficiency electric heat, Vermonters will be able to more affordably keep their homes comfortable in the winter. These major changes to our two primary greenhouse gas (GHG) emission sectors – transportation and buildings – are beginning already, but they need to be brought rapidly to scale to achieve the financial and GHG savings envisioned.

Vermont's transition to more efficient, lower emission economy will also have tremendous benefits for the health of the state – leading to significant savings in the health care system and increasing the quality of life for Vermonters. While Vermont's air quality is generally very good, local sources of pollutants contribute with other environmental triggers to Vermont being tied for the fourth highest asthma rate in the country.

It's important to remember that Vermont has already felt the effects of a changing climate, primarily through more intense and frequent storms that have led to devastating and costly floods as well as a dramatic increase in tick-borne diseases, among other challenges. The changes we make now will help to reduce greenhouse gas emissions and extract carbon from the atmosphere, but we will still be faced with significant climate related events for which we must prepare. While this report does not specifically address adapting to a changing climate, we know that resilience efforts are needed in parallel with our recommendations for climate mitigation and economic adaptation. Therefore, the recommendations made here work to advance climate adaptations and also improve Vermont's resiliency.

Getting There Will Take Time – But We Won't Get There if We Don't Act Now

To achieve this transformative vision for what Vermont could look like will take time – a generation or more – to achieve, but to get there we must increase momentum and take meaningful steps forward immediately. There is no one policy that will ensure this transition occurs, so we must begin taking action on multiple fronts to reach our goals.

In many sectors of the economy responding to climate change is moving quickly, but for others, the opportunities are just beginning to emerge. We must take intentional actions to encourage

these economic sectors to strengthen now, so they can flourish and drive the change for the long-term.

Investment and Return

The actions we recommend will reap long-term savings for Vermonters. To capture those savings, upfront investments must be made. Many Vermonters will need help in making the transition. In many cases, our recommendations include opportunities to increase all Vermonters ability to access long-term savings. The natural tendency in a government commission is to encourage the state to make these investments, but we do not believe that government needs to be the lead in all instances. The state has a lead role to play, however, in ensuring supportive policies are in place and that there is a level playing field for all Vermonters. Without either of these pivotal pieces, there is a risk of falling far short of our goals and having the opportunity seized only by economically advantaged Vermonters.

We propose each recommendation with three indicators: the relative GHG impact, the ease to implement, and the scale of investment needed. The scale of investment indicator provides an order of magnitude estimate for what's needed to tip the scales to produce the outcome we seek. It does not factor in the long-term net savings for Vermont and Vermonters, but all of our recommendations take the affordability charge in the Governor's charge to the Commission very seriously. We anticipate economic and GHG returns in all of our recommendations.

Successful climate action can meet the charge to the Climate Action Commission toward advancing economic innovation, opportunity and job creation, making Vermont more affordable for all, and protecting the most vulnerable of its citizens. We have taken that charge to heart in evaluating all ideas and building each of our recommendations for action in this report.

A Vision for Vermont

In developing these recommendations, the Commission prioritized five focus areas. The first three were based on needed GHG emissions reductions: transportation, building energy, and land use. The Commission also identified focus areas in Vermont's growing climate economy to capture Vermont's competitive advantage. Finally, the Commission identified ways to harness Vermont's natural and working lands to store carbon. These represent areas of focus but not the complete picture in meeting Vermont's GHG reduction and climate change goals.

In drafting the report, the Commission made the decision to organize its recommendations around the ways it will impact Vermont and the lives of Vermonters. The recommendations are summarized by infographics relevant to each of four topics: homes and workplaces, getting around, the climate economy, and carbon sequestration. The full list of recommendations is included in **Appendix XX**.

Each infographic includes estimates of the impact on GHG emissions/storage, the cost savings created, the investment need, and the ease of implementation. **[Add description of each estimate]**

Appendix XX details the process used to arrive at these recommendations.

Homes and Workplaces

Getting Around

Communities and Landscapes

The Vermont brand evokes strong images of working lands and thriving centers. For decades, Vermont has attracted tourists with beautiful natural and working landscapes surrounding quaint downtowns and village centers. These iconic images, however, represent more than marketing iconography. They represent Vermont's competitive advantage in creating economic opportunity and resilience in the face of a changing climate.

We are blessed with carbon sequestering forests and agricultural lands increasingly being used as productivity-enhancing carbon storage. We have traditional settlement patterns that will enable efficient and cost-saving energy reductions now and in the future.

To answer the GHG reduction component of our charge, Vermont must use building and transportation more efficiently. Vital to the success of the recommendations discussed in those sections above is how we intentionally use land resources. We must realize compact development patterns, known as "smart growth," that will enable efficient use of transportation and building energy while fostering strong and thriving communities.

Vermont also has a tremendous opportunity to sequester additional carbon in our forests and soils. This has the potential to fundamentally alter our net GHG emission, but also provide economic benefit to our farmers and forest landowners. We should seize this opportunity where Vermont, despite its size, has a distinct advantage over more developed states.

Achieving Smart Growth

Smart growth represents an approach to land use that incorporates vital and compact city, town and village centers surrounded by working farms, forests and open space. This development pattern is more energy-efficient, environmentally sustainable, and economically responsible than the sprawling, auto-oriented patterns that defined the second half of the 20th century. Smart growth also provides a solid foundation to prepare and adapt Vermont's landscape for climate change.

Smart growth is energy efficient because it creates more housing choices close to jobs, stores, services and schools, which encourages more walking and biking and makes public transit work better. Supporting this type of development means fewer vehicle miles traveled. That reduces greenhouse gas emissions, creates cleaner water and air, saves energy and money, and helps us meet the efficiency goals in the state's Comprehensive Energy Plan. Additionally, compact development is often less intense to heat and cool – and can enable high efficient district heating options that simply are too expensive in more dispersed development.

Our scenic and working lands also provide critical environmental functions and provide economic vitality. Focusing growth in city, town, and village centers reduces development pressures to fragment agricultural and arboreal landscape. Large forest blocks, for example, clean and protect the water supply, minimize erosion, store flood waters, provide wildlife habitat, clean the air, capture carbon, provide outdoor recreation, and maintain Vermont's landscape. Farms and forests also provide food and cover for wildlife, help control flooding, and protect

wetlands. Protecting large blocks of productive agricultural soils and connected forest lands is critical to help Vermonters and wildlife adapt to climate change.

Not only does smart growth reduce our carbon footprint, it also creates economic activity and saves taxpayers money. [To add: information on the economic advantage of compact development]

Vermont's municipalities can realize significant savings by reducing long-term costs to provide and maintain public infrastructure and municipal services (i.e. water, wastewater treatment, public transportation, schools) through efficient economies of scale. In fact, development in compact centers generates more public wealth and costs less to service than the sprawl alternative on a per acre basis.

Demographic change, greenhouse gas emissions, severe weather, and financial challenges prompt a fresh look at Vermont's smart growth strategies and land use governance as means to address climate change. Smart growth works when development goals, investments, and regulatory structures align to make Vermont's centers attractive places to live, work and play, while ensuring the viability of farm and forest landscapes, and natural systems functions outside of centers.

Vermont has planned for and sought the implementation of smart growth principles for decades, but we have failed to consistently focus on implementing the many plans that have been written over the years. The recommendations below propose to focus almost exclusively on leading us to actual smart growth on the ground.

The commission recognizes that one obstacle for prioritizing such strategies for GHG reduction is that it can be challenging to measure the causal impacts of smart growth development patterns. This is the case partly due to available information, but also because the relatively slow pace of development in most of Vermont does not lead to short term returns – especially when compared with technological solutions that evolve more rapidly and demonstrate, on paper, a fast return on investment. Nevertheless, the Commission recognizes that Vermont's underlying land use pattern will ultimately make new technologies and other energy saving strategies far more successful than they would be if developed in isolation.

The smart growth and land use initiatives included below represent an important, foundational set of strategies to adapt to climate change and start reducing GHG emissions. Since changing land use patterns is a long-term undertaking, taking and investing in these basic steps now is essential.

However, this package of actions is only the foundation, and the Commission recognizes that additional work by state agencies will be needed to develop further innovations in this area and measure and communicate the long-term GHG reduction benefits of smart growth investments.

Increasing Carbon Storage and Economic Returns for Vermonters

[Add intro language from the sequestration group on the important of this as a GHG limiting piece and an economic engine for Vermont farms and forest landowners]

Communities and Landscapes Recommendations:

Recommendation:	GHG Impact	Savings Impact	Investment Needed	Ease
Develop Smart Growth Impact Metrics	NA	NA	\$	
Action Step(s)		Designated Lead (Other Stakeholders)		
1. Develop a set of indicators for Vermonters to use to evaluate the impacts of development, whether smart or otherwise		ACCD (ANR, NRB, VTrans, VDH, AAFM, RPCs, and land use stakeholders)		
Background: The application of conventional smart growth principles has proven positive economic and greenhouse gas emission reductions ¹ but Vermont’s form of compact development often does not reach the scale of conventional smart growth. Therefore, developing a set of indicators for Vermonters to use to evaluate the impacts of development will be critical to measuring and defining success in this arena.				

Recommendation:	GHG Impact	Savings Impact	Investment Needed	Ease
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¹ <https://www.epa.gov/smartgrowth/smart-growth-and-climate-change>

² <https://www.epa.gov/smartgrowth/smart-growth-and-climate-change>

Recommendation:	GHG Impact	Savings Impact	Investment Needed	Ease
Expand Interagency and Intergovernmental Support to Communities to Implement Smart Growth Principles	NA	NA	\$	👍 👍 👍
Action Step(s)	Designated Lead (Other Stakeholders)			
1. Develop an Inter-Agency Smart Growth Collaborative to integrate policies and programs that promote and incent compact, walkable development through coordinated municipal assistance	ACCD (ANR, VTrans, VDH, AAFM, RPCs, and municipalities)			
2. Create a pilot program to provide wrap around state and non-profit support to two communities for all-in approach	ACCD (ANR, VTrans, VDH, AAFM, RPCs, and municipalities)			
3. Develop funding model for unique rural wastewater challenges	ANR (ACCD, RPCs, and municipalities)			
4. Develop outreach materials for municipalities to better understand the value of smart growth	ACCD			
5. Conduct smart growth audits	ACCD/RPCs			
6. Encourage local planners to defer to regional plans in order to more efficiently complete the planning process	ACCD/RPCs			
Background: Many communities in Vermont lack the resources to be able to move from developing a vision and a plan to implementing smart growth principles. This recommendation serves to address some of the access barriers that smaller Vermont towns have trouble overcoming.				

Recommendation: Leverage Health Care Partnerships	GHG Impact 	Savings Impact 	Investment Needed 	Ease 
Action Step(s)		Designated Lead (Other Stakeholders)		
1. Increase funding and technical support for programs that apply smart growth principles to improve community health and wellness, such as RiseVT and 3-4-50.	Green Mountain Care Board (VDH)			
2. Build capacity among health professionals and advocates to engage with local, regional, and state planning processes and infrastructure decisions.	VDH (ACCD)			
3. Explore mechanisms for increasing health care funds dedicated towards community investments that promote healthy living, such as through hospital community benefits.	Green Mountain Care Board (VDH)			
4. Explore ways to incentivize cities and towns to sign-on as healthy communities through RiseVT or 3-4-50 programs, such as including healthy community status as a scoring criterion for funding or technical assistance requests to state agencies.	VDH (ACCD)			
5. Integrate Health Department staff and/or community health partners into processes and decisions that affect community design and transportation systems.	Health in All Policies Task Force			
<p>Background: Behavioral patterns, social circumstances, and environmental exposures account for 60% of health outcomes, with genetic predisposition accounting for 30%.³ Even though healthcare only contributes to 10% of health outcomes, over \$2 billion was spent in Vermont in 2016 to treat largely preventable chronic diseases.⁴ Smart growth is a good investment for health because it helps increase opportunities for physical activity, reduce risk of transportation-related injuries, increase access to healthy food, and provide equitable access to education, employment, and vital services. Recognizing this, the public health sector has stepped up its efforts to promote healthy, active communities, which often also supports smart growth strategies. One example is the ongoing work of the Healthy Communities and 3-4-50 programs at the Health Department; a newer example is the RiseVT initiative. As the health care system shifts to a more prevention-focused approach, hospitals and other health care providers should be key partners and funders of smart growth strategies that promote better community health.</p>				

³ <https://www.nejm.org/doi/full/10.1056/NEJMsa073350#t=article>

⁴ http://www.healthvermont.gov/sites/default/files/documents/pdf/hpdp_3-4-50_Statewide%20Data%20Brief%20072617.pdf

Recommendation: Align Smart Growth Policies for an Evolving Transportation System	GHG Impact 	Savings Impact 	Investment Needed 	Ease 
Action Step(s)		Designated Lead (Other Stakeholders)		
1. Continue to focus on integrated multi-modal planning; expand investments in complete-streets infrastructure and amenities to encourage walking and biking.	VTrans			
2. Align transportation investments in ways that reduce highway maintenance costs, support smart growth locations, and expand transportation choice.	VTrans (RPCs, municipalities)			
3. Convene a stakeholders group to identify barriers and propose pathways to complete-streets implementation.	VTrans, (ANR, VDH, RPCs, municipalities, schools, social service representatives, and advocacy organizations)			
4. Implement the March 2015 Work Plan, <i>Revising the Vermont State Standards (VSS), M2D2: Multimodal Development and Delivery</i> .	VTrans			
6. Prepare for autonomous vehicle technology by removing statutory barriers to deployment in ways that favor public transit, transit-oriented development, shared use of AVs, and other approaches that reduce overall vehicle miles traveled and scattered development.	VTrans (RPCs, municipalities, Governor, Legislature, advocacy organizations)			
Background: Transportation creates more greenhouse gas emissions than any other sector of the economy, both in Vermont and across the nation. Although vehicle electrification represents a critical strategy to reduce these emissions, technology alone will not be enough to meet Vermont’s emission-reduction targets while growing the economy, accommodating an increasing population, preserving Vermont’s scenic landscape, protecting the natural environment, and addressing the transportation needs of the variety of users of the transportation network. A multimodal transportation system organized around smart-growth principals can serve these purposes.				

Recommendation: Targeted Land Conservation	GHG Impact 	Savings Impact 	Investment Needed 	Ease 
Action Step(s)	Designated Lead (Other Stakeholders)			
1. Make strategic, science-based land acquisitions and provide technical assistance to willing private landowners	DFW (conservation partners)			
2. Increase investment in land conservation and acquisition through funding mechanisms such as VHCB, LWCF, and general funds to the Fish & Wildlife Department and Forest, Parks, and Recreation.	Governor and Legislature			
<p>Background: Targeted land conservation efforts to achieve important climate adaptation goals can yield significant results for both sequestering carbon and making Vermont more resilient. For example, focus investments in areas that will provide the most functional flood resilience value by looking at local regulations, land conditions, conservation easements, particularly in areas upstream of floodplain development. Additionally, provide technical assistance to willing private landowners to create healthy, functioning ecosystems that help sequester carbon and other greenhouse gases, improve flood resiliency, and maintain Vermont’s working landscape. Investments in such parcels such as key habitat connectors or areas necessary to maintain important forest blocks will dissuade development in sensitive natural areas, and can support the working landscape and recreational opportunities.</p>				

Recommendation: Implement Act 171 Intergenerational Transfer Report Recommendations	GHG Impact 	Savings Impact 	Investment Needed 	Feasibility 
Action Step(s)		Designated Lead (Other Stakeholders)		
1. Centralize technical assistance programs and funding.	Vermont Farm & Forest Viability Program			
2. Expand existing agricultural sector succession planning services/capacity to forestland owners.	Vermont Farm & Forest Viability Program			
3. Develop a VT Succession Planning Curriculum.	Vermont Farm & Forest Viability Program			
4. Increase Awareness of Succession Planning through UVA	Vermont Farm & Forest Viability Program			
5. Provide grants to landowners to help cover costs of legal, accounting and other necessary services.	Vermont Farm & Forest Viability Program			
6. Explore/Develop succession tax incentives, options and tools.	Vermont Farm & Forest Viability Program			
<p>Background: Maintenance of large blocks of economically viable, working forestland discourages forest parcellation and fragmentation, and is a key smart growth strategy. Much of the state’s forestland is privately owned and will change hands the coming decade; supporting programs that facilitate land transfer without parcellation is critical. Implementation of the Act 171 intergenerational transfer report is a primary strategy to achieve this goal. As outlined in that report, Vermont is at a critical demographic juncture where the majority of forested land is owned privately by people 65 and older. That land is at its greatest risk of subdivision and fragmentation when it changes hands, so outreach to current owners interested in keeping land intact is critical and can be relatively cost effective.</p>				

Recommendation:	GHG Impact	Savings Impact	Investment Needed	Ease
Expand Natural Resource Planning and Bylaws That Address Forest Blocks, Habitat Connectivity and River Corridors				
Action Step(s)	Designated Lead (Other Stakeholders)			
1. Provide direct assistance to RPC's and municipalities through outreach and webinars.	DFW (VNRC and RPCs)			
2. Boost local and regional planning related to forest blocks and habitat connectors, per Act 171 and River Corridors (authorized by 24 V.S.A. § 4424).	ACCD (ANR, VNRC, RPCs, and watershed groups)			
3. Distribute existing guidance materials and promote trainings that were developed by ANR, ACCD, VNRC, and RPCs to implement Act 171.	ACCD, ANR, VNRC, RPCs			
4. Invest in increased staffing capacity at DFW, DEC and within RPC's to apply the best available science to assist with this work.	Legislature and Governor			
Background: Act 171 requires local and regional planning to identify important forest block and habitat connectivity areas, and to plan for development in these areas to minimize forest fragmentation. The ANR, ACCD and VRNC have already developed model bylaws, written guidance and a webinar on ways to implement Act 171 to maintain a resilient landscape that can respond to the challenges of climate change. In addition, Vermont's land use statutes strive to ensure that the design and construction of development in flood, river corridor protection, and other hazard areas are accomplished in a manner that minimizes or eliminates the potential for flood and loss or damage to life and property in a flood hazard area, and that minimizes the potential for fluvial erosion and loss or damage to life and property in a river corridor protection area. Together, these natural resource planning requirements support smart growth and provide a framework to promote climate change resilient communities, but action is needed to improve staff resources and the implementation of strategies to accomplish the planning goals.				

Recommendation:	GHG Impact	Savings Impact	Investment Needed	Ease
Regulation Aligned with Location-based Impacts			NA	
Action Step(s)	Designated Lead (Other Stakeholders)			
1. Support the Act 47 Commission by providing input, data, and policy recommendations.	NRB (ACCD, ANR, VTrans, AAFM, Act 47 advisors and stakeholders)			
2. Pass legislation making improvements to Act 250 and/or other land use statutes	Legislature			
3. Implement necessary guidance and rules	NRB (ACCD, ANR, VTrans, AAFM)			
<p>Background: The Commission recommends supporting the Act 47 Commission (Act 250 at 50) in exploring, and subsequently addressing through legislation, jurisdictional and criteria questions that address changes needed to support development in compact centers and farm and forest integrity in the rural countryside. The economic challenges of compact development are often exacerbated by the regulatory structure. In addition, the maintenance of rural working lands and important natural resources are often hindered by gaps in the regulatory structure. The Commission supports the evaluation of challenges associated with redeveloping downtowns as well as protecting important natural resources and working lands that are critical to adapting to a changing climate with the goal of achieving comparable protections in a manner that flips the current paradigm where greenfield development is easier and cheaper than in areas that are targeted for concentrated growth.</p>				

Jobs and the Economy

Leadership and Investments

The members of the Vermont Climate Action Commission appreciate the leadership of the Scott administration in developing the charge of the commission, re-affirming the Vermont Comprehensive Energy Plan and the state's emissions goals and holding to Vermont's share of the global commitment to combat climate change affirmed in the Paris Accord. Gubernatorial leadership will be crucial to realizing the transformational opportunity before us.

Climate action globally and in Vermont will require significant leadership and investment. The magnitude of the climate challenge is unprecedented in human history. Answering climate change, locally and globally, with appropriate, systematic and on-going action will be crucial to the ecology of our state and the planet and the advance of human civilization.

Confronting these daunting challenges also offers virtually unprecedented economic opportunity. Innovation in the economy, and leadership in public policy, can advance solutions to climate change that are the right thing to do, and that will be rewarded economically. Ongoing commitment and meaningful and supportive policies, programs and partnerships will be required. Places that lead in the development of business and policy solutions in the climate economy will benefit by attracting youth, entrepreneurship and opportunities for renewed prosperity. Vermont should be one of those places; a rural model of innovation and economic renewal.

The recommendations in this report have been elaborated as starting points toward long-term State of Vermont goals to reduce carbon and other greenhouse gas emissions, to meet our energy needs with renewable sources, and ultimately, to contribute to an economy that advances opportunities and affordability for all and lifts up and protects the most vulnerable Vermonters.

There will be costs entailed in the transformative nature of the changes needed—both costs to some existing businesses and sectors, and costs in needed investment in policies, incentives, and initiatives going forward.

The Governor's Climate Action Commission considers many of those costs as an investment in the energy system and economy of the future. We worked hard to minimize those costs and recommend solutions that will lead to long-term affordability, economic growth, and savings for all Vermonters. We encourage you to evaluate opportunities to build sector investments in weatherization, efficiency, wood heat, smart growth, sequestration, renewable generation and vehicular electrification, and the other strategies entailed in this report as priorities for your administration. We also encourage you to invest in more robust economic analysis to inform policy decisions. Many of these investments will generate economic returns and additional state taxes that will offset the initial cost.

Transformative change will require significant investment. Unfortunately, the current marketplace does not return a financial investment for many steps necessary to meet the climate change goals. Our progress from current incentives and citizens willing to go beyond the norm are not enough. Much more needs to be done. We must change the economic drivers of climate change and tip the scales towards the choices that will limit the devastating impacts of climate change.

This will require hard choices. We can reform and equalize our tax system to induce behavior change, we can mandate change through statutory or regulatory action, we can let the market

efficiently allocate prices through a system like cap and invest or carbon pricing, or we can accept that that we will not meet our goals through voluntary action in the current market where the price of carbon is not properly accounted for in the costs of our goods and services.

We took what the Governor communicated to the Commission in his January 25, 2018 letter to heart. There will be costs borne on Vermonters under any market-based carbon reduction program. There will be new winners and losers. And there will be a need to help Vermonters adjust to and afford energy costs today – and into the future. Our goal is to ensure that all Vermonters have access to the cost savings we envision, are not disadvantaged relative to our neighboring states and, instead, are economically stronger from Vermont's forward-looking commitment to reducing our significant reliance on imported fossil fuels. A national approach to tackling this issue would level the playing field across the country, but under the current federal administration, the prospects are dim. And opportunity exists with strategic approaches at a smaller scale.

In light of those facts, we propose that the State of Vermont take a regional, national and international leadership position on building a coalition to create a system of such breadth that Vermonters can benefit most and face the least consequences. Our primary international trading partner, Quebec, has successfully joined with Ontario and California to create a cap and trade system while growing its economy XX% since 20XX. Additionally, all Canadian provinces by the end of this year must select a carbon reduction strategy, whether by cap and trade or tax.

There is significant opportunity for Vermont to build momentum in partnership with other states and provinces in a way that benefits us today – and far into the future. To reach a broad spectrum system will take leadership, and we recommend that Vermont advocate for the creation of as broad a program as possible to amplify the positive impacts and mitigate the negative impacts Vermonters will face as we address the true cost of carbon.

In the interim, the Commission recommends that climate action be considered as a fundamental priority of the administration for the use of limited general fund dollars. Tackling climate change justifies raising new revenues over time. Bonding could also be beneficial where there are long term returns, as in the potential case of low income weatherization where health and energy savings impacts, improved affordability, and a rising quality of life for Vermont's most vulnerable families justify this form of structured investment with interest. There may also be settlements from power line or other infrastructure development that could contribute to climate action in an ongoing way.

As members of your commission, we look to Vermont's continued leadership to advance the economy for the future while protecting the most vulnerable. The Governor provides a unifying voice for all Vermonters to champion the direction forward, to speak for needed policies and investments, to educate all Vermonters about climate change and its implications (including the costs we are already paying today), to encourage their household and collective action, and to seize the economic opportunity for a healthy, secure and prosperous future for Vermont. The Governor empowered us to recommend bold actions that will move Vermont forward. We have tried to answer that call, and we look forward to continuing to support your leadership on these issues and to working more broadly with Vermonters to refine and implement these and other strategies that will position Vermont as a leader and innovator on job-creating climate action.

Appendices:

A. Process

[In this appendix, we will summarize the overall process to arrive at these recommendations – Governor’s EO, public process, December recommendations, January strategic planning session, February deep dive, working group process.

Additionally, each working group will have an opportunity to present information about the process they went through to evaluate themes and prioritize work areas. For example, the smart growth working group will describe how it prioritized steps aimed at implementing smart growth principles rather than focus efforts on additional planning requirements.]

B. List of ideas

[In this section, we will list the full slate of recommendations. Each idea will have the infographic followed by additional detail about the reason for the recommendation, additional information about proposed action steps, and any other detail necessary for the Governor to make a determination as to whether to support or continue to explore. This is where your existing/refined writeups for the recommendations will live.

To be defined: Whether and how this list should be prioritized. The full commission will make that determination]