Transportation

Vermont Climate Council Cross Sector Mitigation Team Presentation - June 10, 2021

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Approach to Date:

Summarize what's known and set priorities based on existing knowledge*

- Convened small group of transportation experts; outlined goals, sought input
- Identified key pathways and methods and began a strategies list; examined other state/VT climate plans
- Considered the Council's recommended template
- Estimated an initial level of importance/priority for each pathway method

* This effort is DRAFT and must be viewed as an initial step based on existing plans, studies and general knowledge. It is not complete. It's *preliminary* and *requires* the review and comment from an array of stakeholders and the expertise of state consultants. The premisses on which it relies must be considered by a wide range of public interests, before further action.

Goals

In summary:

- Lead to diverse transportation choices to meet all personal needs and serve the state economy
- Incorporate equity, cost effectiveness, and bring economic, health and other benefits while recognizing the cost of BAU
- Together pathways & strategies will make quantified progress (data driven) towards the state’s GHG emissions reduction requirements
- Listen, learn, respond. Refine goals and strategies informed by transportation providers, utilities, impacted constituencies and more. Repeat over time.
- Focus on fuels & technologies that are widely available — e.g. high-efficiency & electrification — now while maintaining flexibility to allow for future innovation

Goals

In Summary (Cont)

- Consider ease of implementation and build off of existing programs
- Incentivize behavior to achieve emissions goals & disincentivize behaviors that don’t
- Transportation is a federal, multi-state regional, state and local partnership. Align federal, regional, state and community policies, programs and implementation to the extent possible.
- Play leadership roles in: CA emissions and ZEV programs, NESCAUM, and TCI
- Leadership on climate change must occur at the highest levels of state government and be driven by robust inter-agency coordination

Goals

In Summary (Cont.)

- Harness current (one time) and long term federal dollars & programs and seek long term sustainable funding to drive programs and achieve goals
- Grow the state’s investment in non-highway transportation systems
- Keep working towards the states land use goals. Smart growth; ie investing in downtown and village mixed use development, is the foundation necessary for a more efficient and cleaner transportation system now and in the future.

Pathways

The basics

1. Electrification - Light (LDV) & heavy duty (HDV) vehicles, and other (bikes, motor cycles, etc.)
2. Increased fossil fuel efficiency - LDV & HDV vehicles
3. Low Carbon Fuels - Non- electric fuels for light & heavy duty vehicles
4. Reduction of SOV trips through increased transportation choices
5. Compact land use/design - Drives the feasibility of the other pathways
6. And a few other necessary things

Electrification

The Big One

- **Importance High** - technology readily available for light duty, costs coming down, known replacement of fossil fuel (assuming overall decreasing VMT of fossil fuel vehicles). HDV are not at the same point of vehicle advancement as LD.

- Strategies are numerous - 11 for LDV and 3 for HDV! Such as purchase incentives for individuals and fleets; home, public, employer and more charging infrastructure programs: building code improvements; tackling charging interoperability, ZEV program, limiting fossil fuel vehicle sales in the future and more…

- Equity, funding, cost, availability of vehicles suitable for rural lifestyles and small business are some of the challenges that need to be addressed

- And plenty of cost savings and other economic benefits to households and businesses, including keeping fuel dollars in state.

Increase Fossil Fuel Efficiency

Making the VT fleet (registered vehicles) more efficient overall

- **Importance: Medium - High** - technology is readily available across models, costs coming down, known reduction of fossil fuel (assuming decreasing VMT)
- Metric is to increase the overall MPG efficiency of the registered VT fleet. Opportunity to incentivize the purchase of more efficient conventional vehicles through Mileage Smart, Replace Your Ride, a potential fee-bate, other programs.
- An interim step (10 years) until there are more EVs and more EV models in the used car market. Helps get higher MPG SUVs and truck (AWD) required by rural residents and to businesses and trades people. Availability of vehicle driven by federal policies (CAFE).

Low Carbon Fuels

(Other than Electricity Biodiesel, ethanol, CNG, Hydrogen)

- **Importance: Low - Medium (?)**
- Sustainably produced biodiesel has promise in the future especially for on farm use.
- Ethanol is sold today. Account for upstream emissions?
- CNG for mid duty trucks? Costs?
- Hydrogen technology remains in RD and is not readily available.

Reduce SOV* Trips by Increasing Transportation Options

The Harder One

- **Importance: Medium now - High in the long run**

- Increase transit, inter-city bus, rail, TDM (ride share, vanpool, etc.), micro-transit, walking and biking by growing state and municipal programs and infrastructure. Use state and federal transportation dollars wisely.

- Co-benefits are numerous - transportation alternatives for those that can’t afford a car or can’t drive due to age or disability - assuming the service is safe, affordable and in the right locations and at a useful frequency (for transit)

- Public health benefits and cost savings for all

* Single Occupancy Vehicle

Land Use

Drives the feasibility of the other pathways

- **Importance: High**

- Grow the state sustainably

- Adhere to long held land use goals of concentrated mixed use development - dense, multi-use villages, towns and cities - surrounded by rural countryside, thus discouraging sprawl and car dependent land use patterns, making walking & transit feasible & protecting farm, forest and open lands and the environmental services they provide - carbon storage, food security, and more.

- Achieved through supporting the state's numerous planning and other programs and directing infrastructure dollars for waste water, transportation, and more to villages, town centers and downtowns.

Funding and Government Structure & Coordination

Helps Make it Happen

- **Importance: High**
- Use federal dollars to the extent possible but also seek sustainable funding sources, such as the Transportation & Climate Initiative (TCI)
- Climate change mitigation programs are led at the highest level of government and through robust interagency actions.
- Consider an Environmental Justice/State Equity Board/other to ensure equity
- Maintain a strong commitment to the CA emissions and ZEV programs; actively participate in multi-state initiatives such as NESCAUM, TCI, other TBD