

Vermont Energy & Climate Summit
2017 Pitch Submission Form

1. Pitch Submitted By (Your Name or Organization):

Renewable Energy Vermont

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4. Pitch Title: Driving on Sunshine: Dynamic Rates & Electric Vehicle Charging

5. Pitch Summary:

Specialized, dynamic, competitive, clear, and strategically located electric vehicle charging rates and infrastructure will encourage new private investment and increase use of electric vehicles in Vermont. Smart and consistent rate design can accelerate widespread transportation electrification, achieve ratepayer benefits, reduce dependence on fossil fuels, and reduce climate pollution. Rates should be stable and understandable and provide customer choice.

Vermont should implement a strategic transportation electrification effort by:

- Authorizing and encouraging electric utilities to offer special reduced electricity rates for electric vehicle charging.
- Eliminating statutory and regulatory barriers to competitive or non-utility electric vehicle charging.
- Locating fast chargers in downtown areas in addition to other places where vehicles are parked for long periods of time (workplaces, home, etc.) rather than primarily along interstate transit routes encourage and enable Vermonters and visitors to charge their vehicles while enjoying mainstreet leisure, shopping, dining, and business opportunities, encouraging smart growth and thriving downtown communities.
- Phasing in a small per kWh charge on electric vehicle charging after a certain number of electric vehicles are deployed to fund road maintenance and repairs (state transportation fund) to offset revenue losses from reduce fuel sales.
- Establishing consumer protections, consistent communications, and education for electric vehicle charging.
- Utilizing the full amount allowed of the incoming VW settlement funds for strategically located electric vehicle charging infrastructure.
- Adopt open-source charging / data protocol to support interoperable information exchange for transactions and charger operations

Consumers won't buy an EV if they can't charge it quickly and cheaply.

6. What energy sector(s) does this Pitch apply to? (Check all that apply):

- Energy Efficiency
- **Electricity**
- **Transportation**
- Thermal Heating &/or Cooling
- All (Total Energy)
- None: Non-energy related carbon reduction proposal

7. Which criteria category(ies) does it address? (Check all that apply):

- **Economic Activity**
- **Affordability**
- **Vulnerable Vermonters**
- **Other**

8. Scale of impact on Vermont's energy and climate goals:

Transportation emissions represent approximately 47% (CEP, p. 135) percent of the state's GHG emissions, ## percent of its oxides of nitrogen (NOx) emissions, and ## percent of its diesel emissions. Reducing emissions of greenhouse gases to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050 will require widespread transportation electrification.

The average Vermonter drives ## miles per day, well within the range of available ZEV models. Because ZEVs require longer charge times, range anxiety caused by the lack of infrastructure continues to impede the adoption of ZEVs in rural areas or for drivers seeking to make longer trips.

The average Vermonter spends \$\$\$\$ on gas annually. If someone switches to an EV and has access to affordable carbon free electricity for charging.....

9. Benefits/costs of this proposal for Vermont and Vermonters: Including, where possible, economic, financial, social, and environmental.

By authorizing and encouraging utilities to set special rates for electric vehicle charging and authorizing non-utility energy service providers to sell electricity for electric vehicle charging, the financial risk of necessary new infrastructure is reduced (addressing issue of rate based stranded and/or under- or unutilized assets for utility's).

Deploying electric vehicles can assist in grid management, integrating generation from eligible renewable energy resources, and reducing fuel costs for vehicle drivers who charge in a manner consistent with electrical grid conditions.

Deploying electric vehicle charging infrastructure should facilitate increased sales of electric vehicles by making charging easily accessible and should provide the opportunity to access electricity as a fuel that is cleaner and less costly than gasoline or other fossil fuels in public and private locations.

Smart policies to expand charging access can help sales ramp up while expanding grid flexibility, reducing power costs, and integrating cleaner electricity. If we plan and implement strategies to manage charging before there is widespread EV adoption, we can shift the electricity demand of EVs into the valleys – the off-peak hours – of the grid load profile. Smart EV charging rates optimize our electricity system, reduce the cost of electricity for all consumers in the long run, and allow us to integrate a larger share of wind and solar than might have been possible otherwise, by using EVs to soak it up.

10. Decision-makers necessary for this proposal to be adopted or move forward

Vermont Legislature

Governor

Public Utility Commission

Department of Public Service

Electric Utility's

11. Strategy and key considerations:

States that move forward on policies facilitating EV growth will reduce consumer costs, lower emissions, and help shared energy infrastructure and energy service providers remain economically viable. Those that don't could face a sudden need to build expensive generation and infrastructure to maintain grid reliability and keep customer costs low. Applying performance-based regulation to utility charging infrastructure projects to incentivize investments by rewarding social benefits without exposing ratepayers to undue risk, and recommends regulations rewarding utilities for benefits like ancillary services or demand shaving. Despite the benefits of managed charging, getting consumer buy-in requires utilities and charging service providers to develop a range of outreach and engagement strategies.

12. Timeline: 1 to 3 years