House Energy & Technology Committee Proposed Electric Vehicle Investments & EV Utility Rate Design

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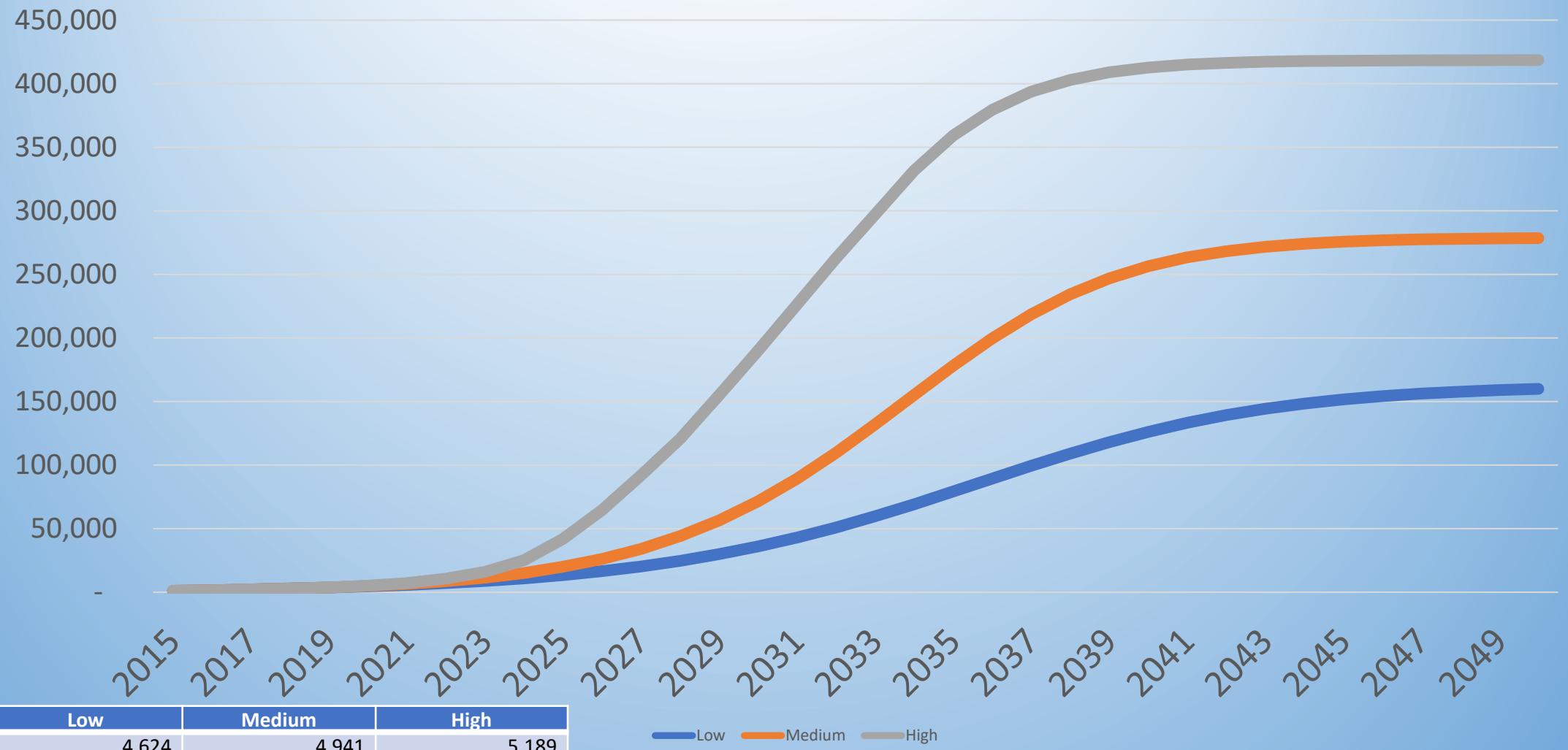
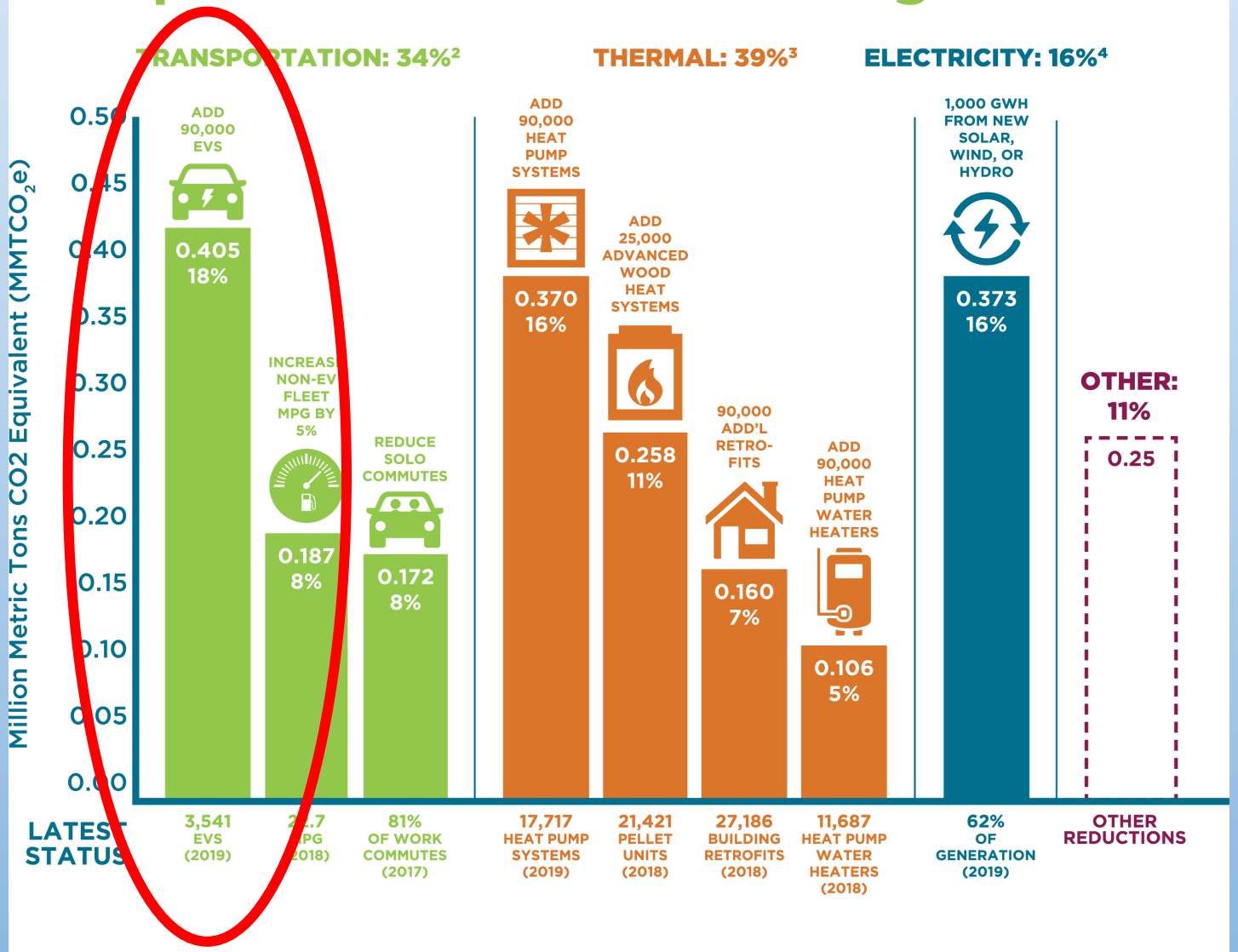
Electric Vehicle Futures



Year	Low	Medium	High
2020	4,624	4,941	5,189
2025	13,476	20,007	41,969
2030	36,080	71,624	190,125
2035	79,179	178,162	359,077
2040	126,184	256,417	412,689
2045	151,678	275,702	418,038
2050	159,931	278,561	418,464

Vermont System Planning Committee, June 2020

2.3 MMTCO2e reduction by 2025 is required to meet the Paris Agreement[1]



1. Vermont Agency of Natural Resources. January 2020. **2.** Transportation data is the latest available from the Energy Information Administration (EIA) (2019), Vermont Agency of Transportation/UVM Transportation Research Center (2019), and Drive Electric Vermont (Oct 2019). **3.** Thermal data from EIA (2019), Efficiency Vermont (2019), Department of Public Service (2019), Biomass Energy Research Center (2019), Department of Forests, Parks & Recreation (2019). **4.** Electric data from the Department of Public Service (2019) and ePUC (Certificates of Public Good: September 2019).

Source: Energy Action Network

Governor's EV Proposal Package

Overarching Goals

Remove barriers to adoption of EVs

- Higher purchase price
- Lack of customer and sales force knowledge of EVs
- Distance between public charging stations

Increase Access for All Vermonters

- Stacked Incentives with Replace Your Ride Program
- More Transportation Options such as Ebikes, Emotorcycles, Transit Passes, Shared Mobility, Ride Hailing & Microtransit

Implement Supportive Policies

- EV Rate Design
- Electric Demand Charge Modifications

Governor's EV Proposal Package

Build on the Successes of Prior Investments In EV

EV Incentives for New Vehicles

- FY20 $1.1M
- FY21 $950K
- **FY22 $2M *Proposed***

EV Charging Equipment

- 2014 $200K – Community Based
- 2019 $1M – Highway Fast Charging Network – within 30 miles of all Vermonters
- 2020 $1.7M – Highway Fast Charging Network – within 30 miles of all Vermonters
- 2021 $750K – Infill of Highway Network
- **2022 $1M *Proposed* – Multi Family Dwellings**

Governor's EV Proposal Package
Roll Out New Investments

VT Replace Your Ride Program ($1.5M *proposed*)

- Income sensitized program
- Scrap a registered and inspected older high-polluting vehicles
- Receive and incentive of up to $3,000 towards one or more of the following clean-transportation options:
  - A new or used Electric Vehicle (or Plug-in Hybrid)
  - Electric Bicycle or Motorcycle
  - Public transit Passes
  - Shared-mobility options such as CarShare VT or bike-share programs
  - Vouchers for private ride hailing like Lyft/Uber or other new mobility programs

Governor's EV Proposal Package

Roll Out New Investments (*continued*)

EV Sales Incentives for Dealers and Salesforce ($250K *proposed*)

- Incentives for auto dealers and salespersons to sell electric vehicles
- Education regarding electric vehicles and complimentary incentive programs

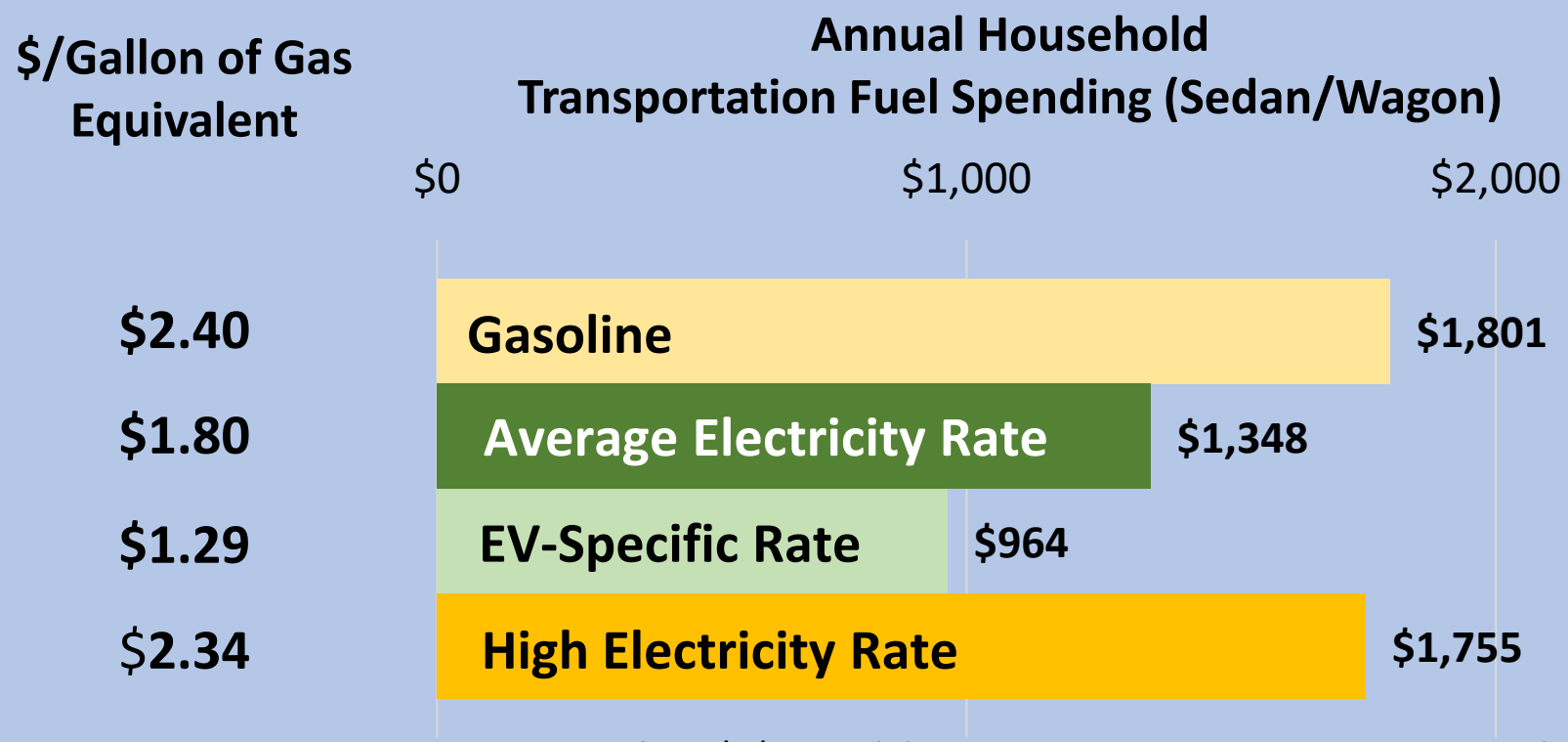
Public Transportation Electrification Plan

- Working in coordination with Vermont's public transit providers, prepare a long-range plan which will outline the costs, timeline, training, maintenance, and operational actions required to move to a fully electrified public transportation fleet

Public Transit Electric Buses

- Funding for 7 electric buses for the public transit network

Fuel Cost Comparison



Fuel and Electricity Prices

(1) $2.40/gallon of regular gas is AAA reported Vermont average for 2/1/2021; (2) Average residential electricity rate of $0.179/kWh); (3) GMP Time-of-Use Off-Peak EV Rate of $0.128/kWh; (4) WEC marginal residential rate of $23.292 for block over 100 kWh/month

Spending Assumptions (Sources: CNT H+T Affordability Index; EPA eGallon Calculator)

23,107 miles per year per household, 30.8 miles per gallon for gas vehicle, 0.326 kWh/mile for electric vehicle

Governor's EV Proposal Package

Implement New Complimentary Policies

EV Electric Utility Rate Design (Pricing)

- Smooth utility loads and reduce the cost of EVs to the system (for lower electricity prices)
- Introduce EV rates that can be differentiated for the benefit of EV customers
- Secondary benefit of controlled loads to help serve environmental objectives

Modify Utility Demand Charges

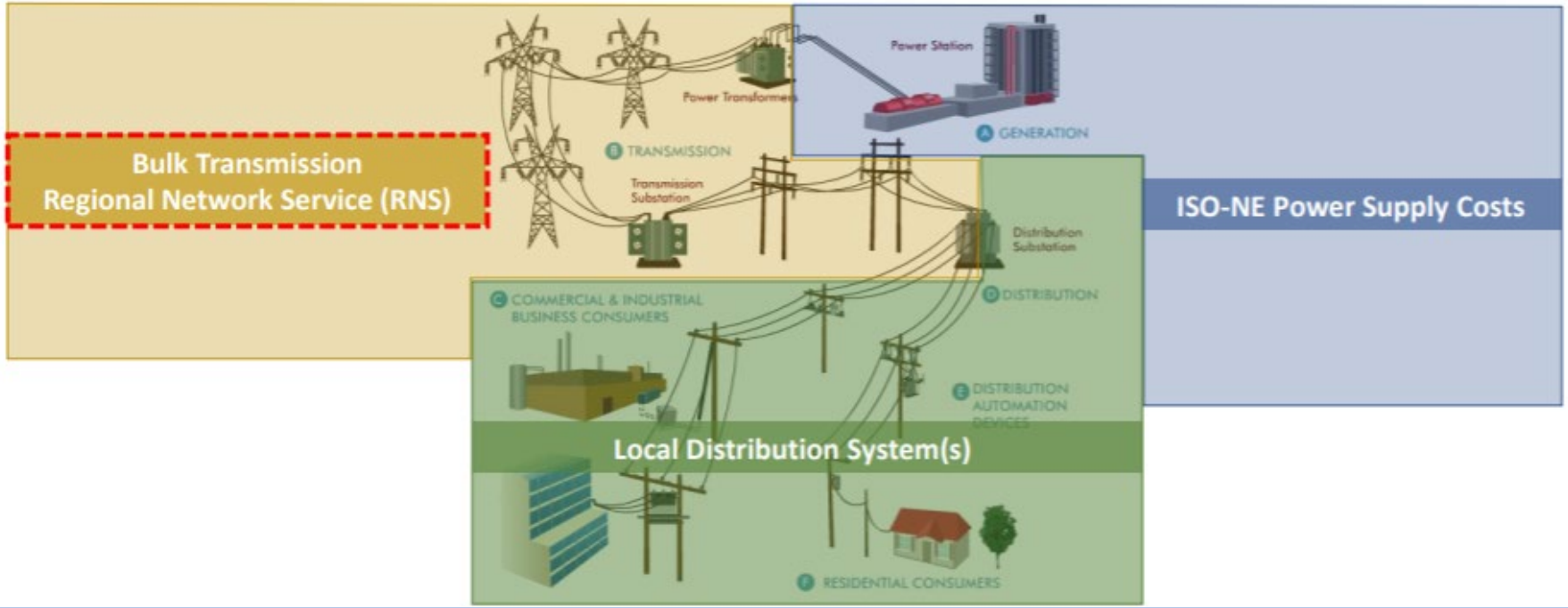
- Demand charges are fees applied to the electric bills of commercial and industrial customers based upon the highest amount of power drawn during any (typically 15-minute) interval during the billing period to lessen the burden of providing electricity
- Support commercial providers of Level III DC Fast Charging stations who are providing a new market product with a very limited return on investment at this time.
- Restructuring demand charges for Fast Charging Stations will attract more installations

Electric Cars Are Coming, and Fast. Is the Nation's Grid Up to It?

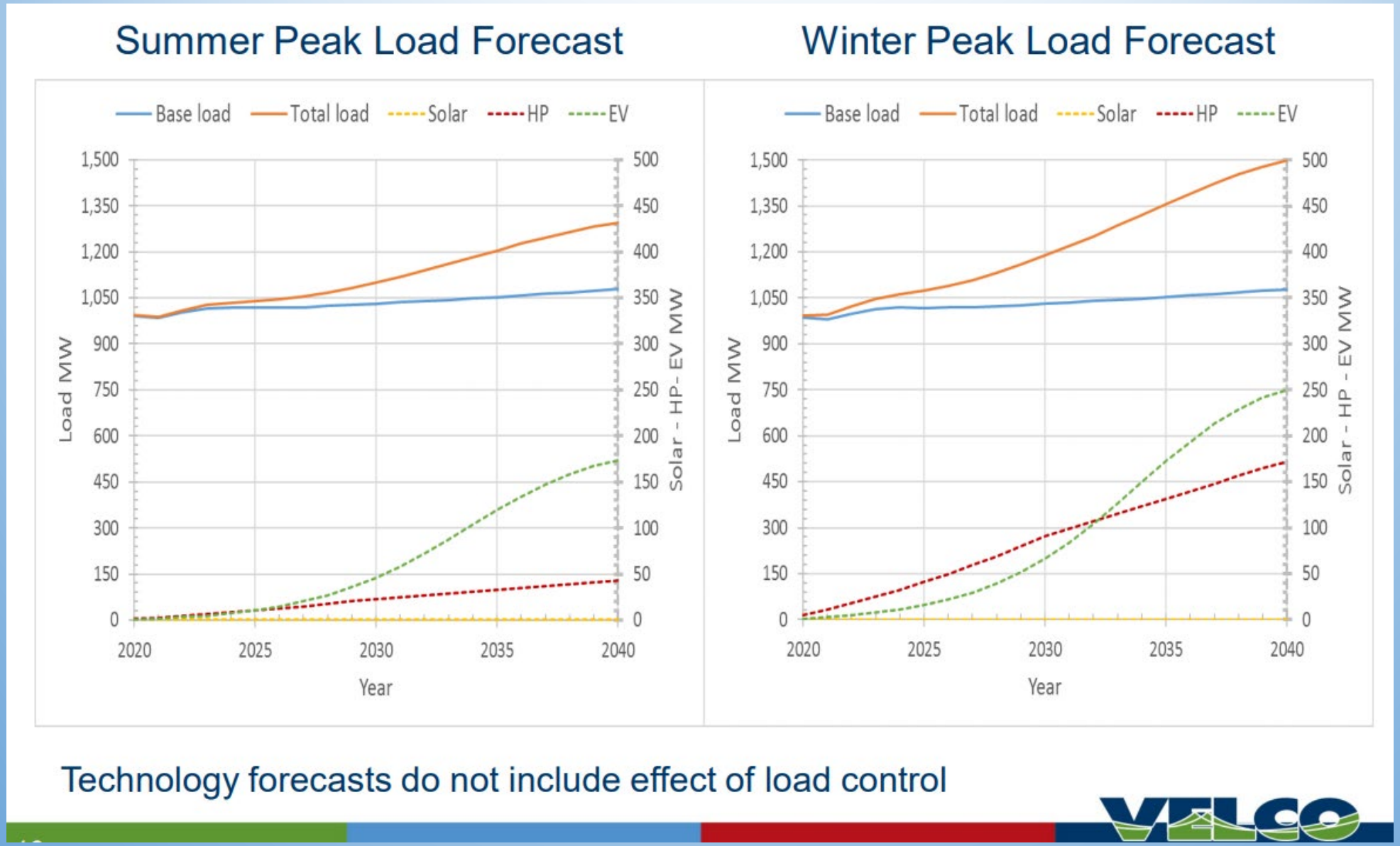
GM's decision this week to phase out gasoline vehicles is the latest in a major shift that will mean drastic new demands on electric utilities.

New York Times, January 29, 2021

OVERVIEW OF LSAM™ "UTILITY COST KPIS"



VELCO Peak Load Forecast Components



Source: VSPC 1/27/21 presentation on draft VELCO 2021 Long-Range Transmission Plan (medium adoption scenario)

Observations

- EV rates/load management are important to Vermont electricity consumers and Vermont climate objectives
- The Public Utility Commission (PUC) can be used to sensibly apply standards set in law to address individual utility circumstance
- Now is the time for policy and regulatory reform

Questions