Light-Duty Fleets and the ZEV Action Plan

Sustainable Fleet Technology Conference & Expo
Durham, North Carolina
August 22, 2018

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What is NESCAUM?

**Northeast States for Coordinate Air Use Management**

A nonprofit association of air quality agencies in the Northeast

Our purpose is to provide scientific, technical, analytical, and policy support to the air quality programs of the eight Northeast states.
The Multi-State ZEV Task Force

Nine states working together to identify and remove barriers to ZEV adoption

Formed in 2013 in a Governor’s Memorandum of Understanding

Facilitated by NESCAUM

All Task Force Member states have adopted California’s ZEV requirements per CAA §177
## State Greenhouse Gas Emissions Targets

States have committed to ambitious GHG reduction goals, typically resulting in 80% reductions by 2050.

<table>
<thead>
<tr>
<th>State</th>
<th>2020</th>
<th>2030</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>0%</td>
<td>40%</td>
<td>80%</td>
</tr>
<tr>
<td>Connecticut</td>
<td>10%</td>
<td>45%</td>
<td>80%</td>
</tr>
<tr>
<td>Maryland</td>
<td>25%</td>
<td>40%</td>
<td>90%</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>25%</td>
<td>80%</td>
<td></td>
</tr>
<tr>
<td>New Jersey</td>
<td>0%</td>
<td>80%</td>
<td></td>
</tr>
<tr>
<td>New York</td>
<td>40%</td>
<td>80%</td>
<td></td>
</tr>
<tr>
<td>Oregon</td>
<td>10%</td>
<td>75%</td>
<td></td>
</tr>
<tr>
<td>Rhode Island</td>
<td>10%</td>
<td>45%</td>
<td>80%</td>
</tr>
<tr>
<td>Vermont**</td>
<td>10%</td>
<td>50%***</td>
<td>75%</td>
</tr>
</tbody>
</table>
Transportation GHG Emissions

2015 GHG EMISSIONS IN THE NINE MOU STATES
Light-duty vehicles are the single largest contributor to greenhouse gas emissions in the states.

Data Source: 2018 State Inventory Tool (EPA)
Multi-State ZEV Action Plan

80 market-enabling actions for states, automakers, dealers, utilities, charging and fueling companies, and other key partners

The Five Focus Areas:

1. Consumer Education and Outreach
2. Charging and Hydrogen Fueling Infrastructure
3. Consumer Purchase Incentives
4. Light Duty Fleets
5. Dealerships
Light-Duty Fleets: Overarching Strategy

“Promote and support the electrification of public and private fleets to build broader consumer interest through exposure to electric vehicle technologies, while reducing the adverse environmental impacts and operational costs of fleet operations.”
Progress Since 2014

Dedicating Funding
• CA, CT, MA, MD, NJ, RI, and VT offer charging infrastructure incentives

Setting Targets
• MA, NJ, RI, and VT have set state targets

Investigating Aggregate Purchasing
• EV Smart Fleet Initiative
Challenges

Lack of knowledge and expertise
  • Product offerings, benefits, charging options

The need for high-level support
  • Direction from the top

Access to planning and purchasing tools
  • Evaluation tools and procurement contracts

Cost Differentials
  • Upfront cost barriers
High Priority Recommendations

1. States should set electrification goals, establish procurement policies, and provide public and private fleet managers with access to tools and data to support electrification.

2. States should offer financial incentives to state and local government fleets for acquisition of ZEVs and charging/fueling infrastructure.

3. States and automakers should increase outreach to fleet managers to raise awareness of the benefits of adding ZEVs to fleets.
EV Smart Fleets

Results - Fleet Procurement Analysis Tool
Procurement Name: Demo Fleet Procurement

Procurement Summary

Vehicle Cost per Mile (Nominal)

<table>
<thead>
<tr>
<th></th>
<th>2017 Chevrolet Malibu ICE (Baseline)</th>
<th>2017 Chevrolet Bolt EV BEV (Comparison)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procurement Type</td>
<td>Purchase (Cash)</td>
<td>Purchase (Cash)</td>
</tr>
<tr>
<td>Number of Vehicles Procured</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>Years of Use/Ownership</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Miles Procured</td>
<td>1,995,000</td>
<td>1,995,000</td>
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<tr>
<td>Total NPV Vehicle and Operating Cost</td>
<td>$887,762</td>
<td>$950,542</td>
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<tr>
<td>Total Tax Incentives Captured</td>
<td>$-</td>
<td>$142,500</td>
</tr>
<tr>
<td>Total Non-Tax Incentive Captured</td>
<td>$-</td>
<td>$-</td>
</tr>
<tr>
<td>Total Discounts Captured</td>
<td>$-</td>
<td>$-</td>
</tr>
<tr>
<td>NPV Vehicle Total Cost less Incentives and Discounts</td>
<td>$887,762</td>
<td>$808,042</td>
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<tr>
<td>NPV Total Cost of Infrastructure</td>
<td>$-</td>
<td>$-</td>
</tr>
<tr>
<td>Total NPV Cost</td>
<td>$887,762</td>
<td>$808,042</td>
</tr>
<tr>
<td>Total NPV Cost / Mile</td>
<td>$0.445</td>
<td>$0.405</td>
</tr>
</tbody>
</table>

The baseline is 8.98% more expensive than the comparison vehicle.

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Resources

ZEV Action Plan

EV Smart Fleets
https://atlaspolicy.com/rand/

Tool: Fleet Procurement Analysis Tool
Report: Electric Vehicle Procurements for Public Fleets