EV Corridors & Maryland’s Electric Vehicle Initiatives

Baltimore Regional Transportation Board

November 22, 2016
FAST Act Alt. Fuel Corridors

- MDOT Submitted Nominations August 2016
- Support from Multiple Partners / Stakeholders
- All Maryland Nominations were Designated 11/3/16
Maryland’s Existing EVSE

Existing EV Charging Stations by Corridor

<table>
<thead>
<tr>
<th>Corridor</th>
<th>Level 1</th>
<th>Level 2</th>
<th>DC Fast</th>
<th>Total*</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-95</td>
<td>41</td>
<td>421</td>
<td>23</td>
<td>485</td>
</tr>
<tr>
<td>US 50</td>
<td>15</td>
<td>84</td>
<td>13</td>
<td>112</td>
</tr>
<tr>
<td>I-270</td>
<td>8</td>
<td>145</td>
<td>11</td>
<td>164</td>
</tr>
<tr>
<td>I-70 / I-68</td>
<td>14</td>
<td>168</td>
<td>17</td>
<td>199</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>78</td>
<td>818</td>
<td>64</td>
<td>960</td>
</tr>
<tr>
<td><strong>% of Total</strong></td>
<td>8%</td>
<td>85%</td>
<td>7%</td>
<td></td>
</tr>
</tbody>
</table>
Forecast EVs and EVSE

- 100,000 EVs and 2,227 Chargers in 2020
- 1.4 Million EVs and 32,713 Chargers in 2040

<table>
<thead>
<tr>
<th>Year</th>
<th>Level 1</th>
<th>Level 2</th>
<th>DC Fast</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>47</td>
<td>1,009</td>
<td>64</td>
<td>1,119</td>
</tr>
<tr>
<td>Cost</td>
<td>$46,824</td>
<td>$5,043,148</td>
<td>$5,378,205</td>
<td>$10,468,177</td>
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<tr>
<td>2040</td>
<td>688</td>
<td>14,816</td>
<td>940</td>
<td>16,444</td>
</tr>
<tr>
<td>Cost</td>
<td>$687,811</td>
<td>$74,080,090</td>
<td>$79,001,833</td>
<td>$153,769,735</td>
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</tbody>
</table>
FAST – Maryland EV Corridors
FAST – National EV Corridors

EV Charging Map, US
Maryland State Agency Roles

- **ZEV MOU**
- **Maryland Clean Cars Program**
- **EVIP & AFIP**
- **EV / EVSE (Incentives / Rebates)**
- **Install EVSE**
- **Chair / Staff EVIC**
- **Track EV Registrations**
Maryland Clean Car Program

• Adopted in 2007; Implemented in 2011
• Incorporates CALEV Program in MD
• ZEV mandate
  – requires all automobile manufacturers to make an increasing percentage of their new vehicles zero emission vehicles
  – Mandate began in 2011 and steadily increases to 22% in 2025
ZEV Memorandum of Understanding

- Signed October 2013 (CA, CT, MD, MA, NY, OR, RI and VT)
- Develop a ZEV environment/infrastructure to support ZEV requirements under the CALEV Program
- Highlights key commitments (Lead by Example, Harmonize Building Codes, Evaluate and Establish Incentives, etc...)
- Multi-State Action Plan Released May 2014
  - 11 specific recommendations to:
    - Support MOU goals
    - Guide interstate coordination
    - Advise state-specific action
• **Maryland Funding Options:**
  - Zero Emission Vehicle (ZEV) Investment: $2 billion throughout Country - $800M for CA
  - Environment Mitigation Trust (EMT) [State Funding] $71M for MD

• **ZEV Investment**
  - EV Infrastructure
  - Brand Neutral Outreach
  - Implemented in 30 month increments of $300M; must be fully spent in 10 years
  - Funding due to start in Spring 2017

• **EMT**
  - Up to 15% can be used for EVSE
  - Other projects focused on diesel emissions reduction
EVIP [Electric Vehicle Infrastructure Program]

• DC Fast Charging
• $1M; 50% match
AFIP [Alternative Fuel Infrastructure Program]

- DC Fast Charging
- Min. 50% match
- Max. EV Award $45K
- FY 2017 up to $2M
Additional Incentives

• EV Excise Tax Credit up to $1.8M (FY 14-17)

• EVSE Rebate up to $600K (FY 14-17)

• HOV Lane Exemption Permits for PEVs

• MD Freedom Fleet Voucher (FFV) Program
MDOT EVSE Installations

- TSO
- MTA
- MAA
- SHA
- MdTA
- MPA
EVIC [Electric Vehicle Infrastructure Council]

• Formed 2011; Extended through June 2020
• Council Members Defined in Statute & Appointed
• Chaired / Staffed by MDOT
• 2012 Action Plan
  – 32 Recommendations
• Starting in Feb. meet every other month
• Priorities Identified at 1st meeting in 2016
• Priorities Identified during 1st Meeting in 2016
  – Identify legislative needs in advance of 2017 Session
  – Identify and address infrastructure limitations
  – Coalesce around central marketing theme
  – Identify technical and policy issues associated with workplace and urban charging, including
    • Interoperability
    • Paid vs. unpaid
  – Identify Economic Development Opportunities

• 4 Workgroups
2017 Legislation

• MD EV Tax Credit and EVSE Rebates [Expires FY 17]
• Installation of EVSE
  – Address barriers related to rented housing, multi-unit dwellings, homeowners’ associations, etc.
• Reserved EV Parking Spaces
  – Anti-Icing
  – Signage / Fines
What Can BRTB Do?

• Lead by Example
• EVIC
  – Public Meetings
• 2017 Legislative Session
  – Tax Incentives for EVs and EVSE
• VW Settlement
• Outreach
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