CLEAN TRANSPORTATION IN DELAWARE
1) What are alternative fuels?

2) The Fuels

3) What’s Delaware Doing?
WHAT ARE ALTERNATIVE FUELED VEHICLES?

• “Vehicles that run on a fuel other than traditional petroleum fuels (i.e. gas and diesel)”

- Propane
- Natural Gas
- Electricity
- Biodiesel
- Ethanol
- Hydrogen
THERE'S A FUEL FOR EVERY FLEET!

- LNG Liquefied Natural Gas
- CNG Compressed Natural Gas
- LPG Propane
- Biodiesel
- Ethanol
- Electricity
- Hydrogen
DELAWARE’S ALTERNATIVE FUELS

“Vehicles that run on a fuel other than traditional petroleum fuels (i.e. gas and diesel)”

- Propane
- Natural Gas
- Electricity
- Biodiesel
- Ethanol
- Hydrogen
THE FUELS
PROPANE

- By-Product of Natural Gas
- Compressed at high pressure to liquefy
- Domestic Fuel Source
- Great for:
  - School Buses
  - Step Vans
  - Larger Vans
  - Mid-Sized Vehicles
COMPRESSED NATURAL GAS (CNG)

- Predominately Methane
- Uses existing pipeline distribution system to deliver gas
- Good for:
  - Heavy-Duty Trucks
  - Passenger cars
  - School Buses
  - Waste Management Trucks
  - DNREC trucks
• 8 Propane Autogas Stations
• 1 CNG Station
• Fleet and Public Access with accounts
ELECTRIC VEHICLES

• Electricity is considered an alternative fuel

• Uses electricity from a power source and stores it in batteries

• Two types:
  • Battery Electric
  • Plug-in Hybrid

• Great for:
  • Passenger Vehicles
EV INFRASTRUCTURE

- 61 charging stations in Delaware
  - At 26 locations
- 37,000 Charging Stations in the United States
- Three types:
  - Level 1
  - Level 2
  - D.C. Fast Charging
# TYPES OF CHARGING STATIONS

<table>
<thead>
<tr>
<th>Charger</th>
<th>Current Type</th>
<th>Voltage (V)</th>
<th>Charging Time</th>
<th>Primary Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>Alternating Current (AC)</td>
<td>120 V</td>
<td>2 to 5 miles per hour of charge</td>
<td>Residential</td>
</tr>
<tr>
<td>Level 2</td>
<td>AC</td>
<td>240 V</td>
<td>10 to 20 miles per hour of charge</td>
<td>Residential and Commercial</td>
</tr>
<tr>
<td>DC Fast</td>
<td>Direct Current (DC)</td>
<td>480 V</td>
<td>60 to 80 miles per 20 min. of charge</td>
<td>Commercial</td>
</tr>
</tbody>
</table>
CLEAN TRANSPORTATION INCENTIVE PROGRAM

- Clean Vehicle Rebate Program
- Electric Vehicle Charging Equipment Rebate Program
- Alternative Fueling Infrastructure Grants
- Heavy Duty Vehicle Rebate Program
CLEAN VEHICLE REBATE PROGRAM

- Rebates released so far:
  - Electric and Plug-in Hybrid Rebates: 260
  - Dedicated Propane Rebates: 7

- Rebates have been given to applicants from all three counties
REBATES!

Started on November 1, 2016!

<table>
<thead>
<tr>
<th>Type of Vehicle/Vehicle Technology</th>
<th>Rebate/vehicle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery electric vehicles</td>
<td>$3,500</td>
</tr>
<tr>
<td>Plug-in hybrid electric vehicle</td>
<td>$1,500</td>
</tr>
<tr>
<td>Retrofitted electric vehicles</td>
<td>$1,500</td>
</tr>
<tr>
<td>Electric vehicles with an MRSP over $60,000</td>
<td>$1,000</td>
</tr>
<tr>
<td>Dedicated propane vehicles</td>
<td>$1,500</td>
</tr>
<tr>
<td>Dedicated natural gas vehicles</td>
<td>$1,500</td>
</tr>
<tr>
<td>Class 7 &amp; 8 dedicated natural gas vehicles</td>
<td>$20,000</td>
</tr>
</tbody>
</table>
ELECTRIC VEHICLE CHARGER REBATES

- Rebates towards the purchase of an electric vehicle charging station
  - Residential (up to $500)
  - Commercial (up to $2,500)
  - Workplace (up to $5,000)

- 77 Rebates for EVSEs so far!
ALTERNATIVE FUELING INFRASTRUCTURE GRANTS

**Recipients:**
- **Sharp Energy (three projects)-** Propane
- **Chesapeake Utilities-** CNG
- **Royal Farms-** D.C. Fast Charging
- **Division of Parks and Rec.-** Level 2 Charging
- **University of Delaware-** Level 3 Charging Stations
BY THE NUMBERS

• Over 2,000,000 lbs of CO2e have been prevented annually.
• 267 vehicles to the road
• 76 home electric vehicle charging stations
• 12 Public Charging Stations
• 3 new Propane Stations
• 1 new CNG station
THE FUTURE IS HERE (ALMOST)!

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