Transforming the Fleet to Advanced Technology Vehicles

Patrice Kelly
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Air Pollution Challenges
Transportation Sector: CT’s Largest Source of Emissions

2010 Annual CO2 Emissions by Sector (SIT)
- Transportation: 40%
- Electric Power: 9%
- Residential: 19%
- Commercial: 8%
- Industrial: 18%
- Agriculture: 5%
- Waste: 2%

2011 NOX Emissions (NEI)
- Transportation (On Road): 49%
- Transportation (Off Road): 1%
- Electric Generation: 3%
- Residential: 10%
- Commercial: 4%
- Industrial: 4%
- Waste: 27%
- Natural: 2%

Conventional vehicles are getting cleaner due to the Low Emission Vehicle program, but people are also driving more miles.
Connecticut’s Clean Energy- Transportation Opportunity

Fuel Sources for Electric Power Generation in Connecticut in 2012 (EIA)

- Nuclear: 45%
- Renewables: 3%
- Natural Gas: 47%
- Coal: 2%
- Petroleum: 2%
- Other: 1%

Connecticut has the 4th cleanest energy production for CO₂ emissions in the country, making electric vehicles (EVs) significantly better for the environment than conventional vehicles.

(Comprehensive Energy Strategy, 2013)

The CO₂e emissions of EVs are lower in Connecticut than the national average.
State Policy
Comprehensive Energy Strategy
ZEV Memorandum Of Understanding

State Zero-Emission Vehicle Programs
Memorandum of Understanding

WHEREAS, the Signatory States have adopted regulations requiring increasing sales of zero-emission vehicles (ZEVs), or are considering doing so; and

WHEREAS, accelerating the ZEV market is a critical strategy for achieving our goals to reduce transportation-related air pollution, including criteria air pollutants, mobile source air toxics and greenhouse gas emissions (GHGs), enhance energy diversity, save consumers money, and promote economic growth, and

WHEREAS, our states are committed to reducing air pollution, including the emission of GHGs and other air pollutants from the mobile source sector; and

WHEREAS, many of our states have obligations or otherwise seek to reduce GHGs consistent with science-based targets by 2050; and

WHEREAS, motor vehicles are among the largest sources of GHGs and criteria air pollutants that adversely affect the health and well-being of our citizens in all of our states; and

1. Create Action Plan
2. Report ZEV Volumes
3. Develop a ZEV Fleet Strategy
4. Update Building Codes and Standards
5. Hydrogen Fuel Cell Vehicles

Connecticut Department of Energy and Environmental Protection
Multi-State Action Plan

3.3 Million Zero-emission vehicles on the road by 2025

May 2014
ZEV Program Implementation Task Force

Connecticut Department of Energy and Environmental Protection
The Cars are Here
Vehicle Trends

Cumulative PEV Registrations in Connecticut

- PHEVs
- BEVs

Connecticut Department of Energy and Environmental Protection
Market Share

% of On-Road LDV Fleet

- Advance Gasoline Vehicles
- Conventional (Non Plug-in) Hybrids
- Plug-in Hybrid Vehicles
- Battery Electric Vehicles
- Hydrogen Fuel Cell Vehicles

Advanced Clean Cars Summary, ZEV Initial Statement of Reasons 2012 CARB

Connecticut Department of Energy and Environmental Protection
ZEV Activity in Connecticut
Connecticut’s Current Strategy

• Chargers at homes, workplaces, and multi-modal transportation hubs
• Safe and convenient chargers near destinations (food, shopping)
• Fast chargers along interstate transportation arteries

What We Have
272 chargers at over 150 locations around the state
Connecticut Hydrogen Stations Deployed to Support Fuel Cell Vehicles

Connecticut's Proposed and Existing Hydrogen Refueling Stations - December 2013

Legend
- Interstates
- H2 Refueling Stations
- Existing
- Planned
- 10 Mile Buffer Zone of H2 Stations

 Connecticut Department of Energy and Environmental Protection

Outreach and Education are Key

Once people drive advanced technology vehicles they love them

The Department will continue working with the dealers on new collaborations for ZEV success

We encourage you to invite local dealers to do ride and drives at your workplaces
Connecticut Department of Energy and Environmental Protection

Fleets

Connecticut Department of Energy and Environmental Protection
ZEVs Support Success

- Will Expand Consumer Choice
- Add Jobs
- Improve Manufacturer Sales

Economy

- Diversify Transportation Fuel Options
- Increase Energy Security
- Improve Consumer Choice

Energy

- Zero Emissions
- Reductions to Ozone Precursors

Environment

Connecticut Department of Energy and Environmental Protection
EV Charging Station Grants
Goals

• To enhance the market for electric vehicles (EVs) in Connecticut
• Give motorists the option to re-fuel with locally-generated electricity from domestically-produced fuels
• Provide publicly-accessible EV charging stations in places where they are needed in the state
Source of Funds

Current funding is made available pursuant to the Northeast Utilities-NStar merger agreement of April 2012.
The Incentives: Private Program

- **Minimum Amounts:** $2,000 per unit or $4,000 per location
- **Priority Areas:** maximum award $\frac{1}{2}$ the cost up to $5,000 per unit or $10,000 per location.
  - No cost to public
  - Open 24/7
  - At major traffic generator (town hall, downtown)
  - Area presently underserved
The Incentives: Municipal/State Agency Program

- Minimum Amounts: $1,000 the cost up to $2,000 per unit or $4,000 per location
- Priority Areas: maximum award 100% of the cost up to $10,000.
  - No cost to public
  - Open 24/7
  - At major traffic generator (town hall, downtown)
  - Area presently underserved
The Requirements:

- Open to the Public
- Post on U.S. Department of Energy Website: http://www.afdc.energy.gov/locator/stations/
- Not-for-Profit
- Install Signage provided by DEEP
EV Charging Signage

Connecticut Department of Energy and Environmental Protection
Preferences

• Operational ASAP
• No Charging Fee or Nominal Fee for Three Years
• Operating 24/7
• Providing lighting, and shelter
• Situating each EV charging unit so it can accommodate at least two vehicles.
Location Preferences

- At a Major Traffic Generator
- Along transportation corridors, including state highways
- Near restaurant, retail and/or entertainment opportunities
- At high profile/high traffic installations, such as those at train stations and airports
Current Status & Opportunities
Awards to date:

• Private Program for Businesses & Organizations:
  – 73 New Charging Units
  – 42 Recipients
  – 54 Locations

• Municipal/State Agency Program:
  – 28 New Charging Units
  – 15 Recipients
  – 21 Locations
Existing and Proposed CT EV Charging Stations
Round 2 Municipal/State Agency Incentive Program

• Opened October 6, 2014
• Closes November 18, 2014
• Applications are being accepted.
EVConnecticut is a partnership between the Connecticut Department of Energy and Environmental Protection and the Connecticut Department of Transportation.

**EV Charging Station Incentive Programs**
Learn about current state incentives (up to $5,000 per charger) and federal tax credits available for facilities installing publicly accessible EV charging stations.

View a list of companies that are available to provide EV charging equipment or
How Can We Reach You?
Thank You

Patrice Kelly
Patrice.Kelly@ct.gov
Bureau of Air Management