DRAFT
Connecticut Path to Clean Fuels and Clean Vehicles
Connecticut Department of Energy and Environmental Protection

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CRCOG Transportation Meeting
Commitment

Comprehensive Energy Strategy

By integrating energy, environmental, and economic goals, the Strategy breaks new ground and advances a broad and robust structure for thinking through energy options.

Emphasis is placed not on “picking winners” but on using limited government resources to leverage private capital and increase the flow of funds into energy efficiency, renewable power, natural gas availability, and a 21st century transportation infrastructure that promotes mobility options, transportation-oriented development, and market-based opportunities for clean fuels and clean vehicles.
Significant Activity Under Way

- Build out publicly recognizable infrastructure to assure range confidence
- Develop workplace charging education and technical assistance program
- Initiate state agency workplace charging, leading by example
- Assess potential fleet wins
- Engage, through CCAT, in DOE public/private H2USA Initiative
- Initiate ZEV Dealer Recognition Program

- Assess HOV access for Plug-ins
- Prioritize site for chargers at commuter lots and transportation hubs
- Install fast chargers along the interstate corridor
**EVConnecticut**

**What We Have**
177 chargers at 100 locations around the state

**Our Goal**
Chargers within a 15 mile range anywhere in state

**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
Connecticut Proposed and Existing Hydrogen Stations

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

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


Source: CCAT
ZEV Memorandum of Understanding

On October 24, 2013 Governor Malloy and Governors from seven other states signed an MOU agreeing to put 3.3 million zero emission vehicles (ZEVs) on the road in the eight signatory states by 2025

Strategy

• Create an Action Plan
• Develop annual reports for the number of ZEVs registered in CT
• Work with Energy Planners to develop equitable electric rate structure necessary for widespread ZEV deployment
• Evaluate ZEVs for fleet use
• Align building codes and standards to facilitate ZEV infrastructure
• Evaluate opportunities to deploy hydrogen fuel cell electric vehicles
Achieving MOU Goals

Statewide Public Charging Network
State Fast Charger Network
Public Information Website
Dealer Awards
California Low Emission Vehicle Program

Action Plan Implementation → MOU Goals
Background

- Transportation is the Largest Emitter
- Leveraging Connecticut’s Clean Energy
- Consumer Choice
- Building Range Confidence
**Transportation is the Largest Emitter**

2010 Annual CO₂ Emissions by Sector (SIT)

- Transportation: 40%
- Electric Power: 9%
- Residential: 19%
- Commercial: 8%
- Agriculture: 18%
- Waste: 2%

2011 NOₓ Emissions (NEI)

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

**In Connecticut, mobile sources account for 40% of all CO₂ emissions**

**In Connecticut, on road vehicles account for 49% of all NOₓ emissions**

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

Connecticut has the 5th cleanest energy production for CO$_2$ emissions in the country, making electric vehicles (EVs) significantly better for than environment than conventional vehicles.

Climate Central Report 2013

The CO$_2$e emissions of EVs are lower in Connecticut than the national average.
Consumer Choice

In 2002, there were only three hybrid vehicle models commercially available for sale in the United States; ten years later there are 38.

In 2006, there were no plug-in electric vehicles on the market in the United States; only six years later there are 13 different models.
**EV Consumer Factors**

**ENTHUSIASM**
- Environmentally Minded
- Solar PV Owners
- Hybrid Owners

**QUALITY AND AVAILABILITY**
- ZEV sales are 3x higher in ZEV states
- Highest rated cars in any class

**COST**
- Monthly Payment + Fuel Costs are competitive with conventional vehicles
- High Fuel Economy is important to consumers

**CONFIDENCE**
- “Range Confidence”
- Familiarity with EVs through coworkers, neighbors and family

**EV Consumer**
ZEV Regional Action Plan

Consumer Education
Increase Consumer Awareness About:
• Range Confidence
• Charger/ H2 Refueling Locations
• Vehicle Benefits
• Incentives

Infrastructure
• Utility Engagement
• Align Demand and Infrastructure
• Easy Payment Systems

State Policy and Incentives
• Model Legislation
• Build Alliances
• Signage Practices

Dealer Engagement
• Find ZEV Champions
• State Dealer Association Engagement
• Assess Best Practices and Provide Dealer Training
EV Charging Infrastructure Incentive Programs

• Goals
• Requirements & Preferences
• Awards to Date
• Municipal Award Program
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 within a 15-minute drive of any location in the state
The Requirements:

- Open to the Public
- No Charging Fee for Three Years
- Post on U.S. Department of Energy Website
- Install Signage
EV Charging Signage
Preferences

• Operational ASAP
• Operating 24/7
• Providing lighting and shelter
Location Preferences

• 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
Awards to date:

- Total Grants: $177,500
- 75 New Charging Units
- 48 Recipients
- 58 Locations
EV Charger Program for Municipalities & State Agencies

- Announcement in Early Spring
- DAS Procurement Contracts
- Minimum $2000-$5,000 per unit
- Working on options for supplemental funding to cover the total cost for underserved areas
Contact Information

For More Information:
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