Electric Vehicles Infrastructure Council





Electric Vehicle Infrastructure Council Final Report Overview

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SIPRAC Meeting

October 14, 2010

Phoenix Auditorium **DEP Headquarters - Hartford, CT**



Electric Vehicles Infrastructure Council





The Council's Mission

- Strategize on preparing state for rapid and seamless integration of EVs into the market
- Coordinate inter-agency decision making on critical issues
- Establish performance measures for meeting infrastructure funding, environmental and regulatory goals
- Align state and national goals for EVs
- Report findings



Electric Vehicles Infrastructure Council





EVIC Timeline

- Governor Rell's Executive Order No. 34 Issued November 2009 established the EVIC
- Council Meetings The Council met and gathered information over 8 months and held 8 meetings: 1/28, 2/11, 4/23, 5/21, 6/4, 7/9, 8/18, and 9/1
- Preliminary report Issued to Governor Rell on February 1
- Final Report Due September 1
- **Final recommendations** including continuation of EVIC with several sub-working groups



The Council Members





Chairs: Kevin DelGobbo, Chairman, DPUC Joan McDonald, Commissioner, DECD

Members: Frank Sanzo, DAS; Roddy Diotalevi, UI; Watson Collins, NU; John Getsie, DMV; Graham Stevens, DEP; Marie O'Brien, CDA; Dan Smachetti, DOT; Jack Carey, DOT; Michael Cassella, Connecticut Municipal Electrical Energy Cooperative; Jamie Young, Governor's Office; John Mengacci, OPM; Lise Dondy, CCEF; Peter Longo, CI; William Leahy, Institute for Sustainable Energy; Robert Hammersley, Transportation Strategy Board; Kevin Hennessy, CBIA; Stephen J. Humes, McCarter & English Attorneys at Law

Other Participants: Peggy Diaz, DPUC; Joseph Oros, DECD; David Goldberg, Connecticut Clean Energy Fund; Ellen Pierce, DEP; Lisa Humble, DPS; Robert Nuzzi, DPS; Megan Pomeroy, The United Illuminating Company

EV Industry Update





- Between 2010 and 2012 more than a dozen highway capable EV models will be introduced
- Consumer dynamics are major factor to successful EV launch
- Support for EV market can be provided through economic incentives and regulatory action
- U.S. DOE July 2010 Workshop on Plug-In Vehicle Infrastructure



EV Barriers/ Solutions





Barriers

- **Price issues** purchase price for Hybrid car and Plug-in hybrid **vs.** traditional ICE vehicles
- Battery cost larger size, greater cost
- Market acceptance unfamiliarity, limited availability, range anxiety, safety concerns, infrastructure uncertainty
- Installation issues costs and delays due to building codes, inspections, approvals, metering requirements

Solutions

- **Price issues -** offer grants, tax incentives; EV maintenance and operability costs expected to be less than ICE; charging off-peak
- **Battery cost** technology expected to drop cost by ~25-30% by 2020
- Market acceptance increase EV availability and visibility; educate consumers on EV enviro and energy benefits; potential demand response/ REC opportunities
- **Installation issues** streamline permitting process, offer optional metering and financing packages

Connecticut Policy Actions





Existing State Policy Incentives for EVs

Enviro

- U.S. EPA to finalize a more stringent national ambient air quality standard (NAAQS)
- CT adopted two significant legislative policy drivers supporting EVs in order to reduce pollutants

<u>DRS</u>

- State law exempts passenger vehicles with city or highway fuel efficiencies from sales tax
- Several additional EV tax incentives have expired:
 - Sales tax exemptions for AFVs
 - Business tax credits for AFV purchases and investments

<u>DAS</u>

• Law requires 50% of passenger cars and light duty trucks purchased for state fleet use alternate fuel; this increases



Connecticut Policy Actions (cont'd)





Existing State Policy Incentives for EVs CT Department of Motor Vehicles

- Registration Fee reduction
- Clean Air Act Fee
- Sales and Use Tax exemption
- Emissions Testing and Emission Fees exemption
- Greenhouse Gas Reduction Fee exemption
- DMV developing website with EV information



EVIC Areas of Focus





- Infrastructure
- Home-based EV charging
- Further policy planning
- Environmental considerations
- EV incentives
- EV education, marketing, outreach opportunities



Registered Electric Vehicles and Electric Vehicle Charging Stations As of 8/31/10









Key Issues





Customer and Stakeholder Education:

- Home charging installation process and streamlining permitting requirements and contractor installation of residential EV charging equipment
- Rate Design options for metering and charging
- Interplay of CO₂ reduction programs affecting utility and transportation sectors
- Incentives to encourage CT consumers to buy and operate EVs
- Process to move forward, series of monthly meetings with presentations to the Council



Key Recommendations





5 Strategic Priorities for EVs in CT

- Gain early access to 1st wave of mass-produced EVs
- Enact legislation, in next session, to provide consumers & businesses with tax incentives/grants or other convenience benefits to provide some price parity with gasoline-powered vehicles
- Support build-out of appropriately sized, statewide EV charging infrastructure network through partnerships with public & private entities
- Develop a suitable framework for regulatory & energy policies to address time-of-use rates, pricing & charging infrastructure options for consumers
- Work collaboratively with neighboring states to develop regional corridor for access to public charging stations



EVs Have Come a Long Way









Connecticut sets first speed limit at 12 MPH on May 21, 1901

Today's EVs





Connecticut and utility officials have worked for years to prove the state is more willing than most to embrace electric vehicles.





Above, automakers showcase their electric cars at the State Capitol. At left, an electric car charging station at the Connecticut Light & Power campus in Berlin.





? QUESTIONS?

