

Testimony of

Joel M. Rinebold

Director of Energy Initiatives

Connecticut Center for Advanced Technology, Inc.

before

Energy and Technology Committee

March 17, 2011

regarding

Raised Senate Bill No. 1168

An Act Concerning an Electric Vehicle Infrastructure

Introduction

The Connecticut Center for Advanced Technology, Inc. ("CCAT"), offers this testimony for Raised Senate Bill No. 1168 - An Act Concerning an Electric Vehicle Infrastructure.

CCAT is a nonprofit corporation that provides services and resources to entrepreneurs and businesses through collaboration with industry, academia, and government. The Energy Initiative of CCAT has been established to improve the economic competitiveness of the region through solutions that lower energy costs and increase long-term energy reliability. CCAT administers the Connecticut Hydrogen-Fuel Cell Coalition; administers the Connecticut Biodiesel Program; provides assistance to small and medium sized manufacturers to assess opportunities for the application of advanced generation technologies, such as combined heat and power systems; undertakes energy planning for Connecticut municipalities and institutions such as the University of Connecticut; administers the US DOE Hydrogen Fuel Cell educational outreach program for the New England states, New York, and New Jersey; and administers the US Small Business Administration Northeast Electrochemical Energy Storage Cluster for New England and New York.

The Energy Initiative of CCAT has also worked with government, industry, and interested stakeholders to complete the state's Plan for Fuel Cell Economic Development and the Connecticut Hydrogen and Fuel Cell Deployment Transportation Strategy: 2011-2050.

This Bill contains components that are favorable to the development and use of advanced vehicle technologies and alternative fuel vehicles, including hydrogen fuel cell powered vehicles and electric vehicles. Section 3 of this Bill includes a provision to establish an "electric vehicle infrastructure support account" to provide grants to businesses seeking to upgrade infrastructure to support the use of electric vehicles and hydrogen fuel cell powered vehicles statewide. Hydrogen fuel cell powered vehicles typically have a range of approximately 270 miles and have a fuel efficiency of approximately 52 miles per gallon equivalent. The average price per gallon equivalent for hydrogen dispensed is assumed to cost \$4.67 in 2011, but is expected to decrease to \$3.58 in 2050. However, because of the high efficiency of fuel cells, the price of fuel per mile traveled is much lower for hydrogen than for conventional fuels such as gasoline or diesel.

Support for this state's hydrogen and fuel cell industry is appropriate as both the equipment that produces hydrogen for the fuel cell, and certain fuel cells for transportation applications are manufactured here in Connecticut. Unlike other advanced vehicle technologies, hydrogen production and fuel cells would

provide jobs in Connecticut for engineering and manufacturing, not just servicing. The use of hydrogen and fuel cells for transportation applications provide significant emission reductions for passenger vehicles and mass transit. A fuel cell powered passenger vehicle using hydrogen from renewable sources can reduce greenhouse gas emissions by approximately 10,000 pounds per year compared to gasoline powered passenger vehicles.

In regard to Section 6b, CCAT has experience in developing infrastructure plans through an open process with considerable stakeholder input, and is well positioned to assist the Office of Policy and Management to develop a plan to promote the development of infrastructure for alternative fueled vehicles, subject to the availability of funding.

Conclusion

CCAT is supportive of the concepts raised in this Bill to promote the development of infrastructure to support the use of advanced vehicle technologies and alternative fuel vehicles, including hydrogen fuel cell powered vehicles and electric vehicles.

CCAT will make itself available to the Committee and legislature upon request to assist in the refinement of this legislation.

Respectfully submitted,

Joel M. Rinebold
Director of Energy Initiatives