



STATE OF CONNECTICUT

DEPARTMENT OF TRANSPORTATION

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Office of the
Commissioner

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Public Hearing – February 4, 2013
Transportation Committee

Testimony Submitted by Commissioner Jim Redeker
Department of Transportation

Proposed H.B. 6055 – An Act Promoting the Use of Fuel Cells in Vehicles.

The goals listed in H.B. 6055 were originally proposed in a joint document prepared in January 2011 by the Connecticut Center for Advanced Technology (CCAT) and the Department of Transportation (ConnDOT) entitled "Connecticut Hydrogen and Fuel Cell Deployment Transportation Strategy: 2011-2050".

ConnDOT appreciates the minimal goal outlined for phasing in fuel cell transit buses as compared to the more ambitious and unachievable goals identified in past proposals.

Currently, the Department owns one fuel cell bus and has had leases on four other buses. Two of the four leased are currently operating at transit properties outside of Connecticut at the request of UTC Power and the leases on the other two buses will expire this spring. The purchase of another new vehicle is in process. Given our current fleet size of about 600 full-size transit buses, the 2015 goal would be six buses.

However, as one of the two pre-eminent innovators using fuel cell buses in transit service in this country, the Department and its operating entity, CTTRANSIT, suggest that our experience with fuel cell buses shows they are still not ready for prime time. While the problems are not with the fuel cell power plant, the integration of the power source with the batteries, the hybrid system and the other elements of the propulsion system have proven very difficult to sustain in safe and reliable condition in the harsh transit operating environment. Fuel cell bus prices have yet to come down since our operation of them began in 2007. The reliability of the overall systems has improved slightly. But it is a rare day when we have the full complement of fuel cell buses in operating condition.

While the goal is noble, and perhaps beneficial to Connecticut's technology economy, the introduction of fuel cell buses into urban transit service is still fundamentally a research and demonstration project. An expansion of this program at this time is not sustainable financially or from a staffing perspective. The purchase price of fuel cell buses is still dramatically more expensive than regular rolling stock – about four times the cost. With discretionary funding at the federal level being largely phased out, and overall federal capital spending being held at historic levels but not growing, there is not sufficient reason to use our constrained capital program to go forth with expanding or even maintaining our current fuel cell bus fleet at the expense of an overall reliable fleet to meet everyday service. And with the recent sale of UTC Power, there needs to be an assurance that CTTRANSIT will still have access to the fueling facility in South Windsor that has been used for the hydrogen fueling of these fuel-cell-powered buses since the beginning of the experiment.

The Department still has a strong commitment to clean fuels. Last year a 400 kW stationary fuel cell was installed at the CTRANSPORT Hartford bus storage and maintenance facility. Later this year another similar-sized stationary fuel cell will be installed at the new Hamden maintenance and storage facility. But future opportunities for using fuel cells in urban transit may lie less in the use of on-board fuel cells for vehicles and lean more towards the use of stationary fuel cells to run microgrids that can be sources of electricity for what may be an evolution towards pure-electric vehicles, or using the hydrogen reformation equipment to produce fuel to run hydrogen-powered internal combustion engines. The systems needed to execute those possibilities are less daunting than the integration of all the necessary power and propulsion elements into a transit vehicle whose first priority, after all, is to move people on a safe and reliable form of transportation.

For further information or questions, please contact Pam Sucato, Legislative Program Manager for the Department of Transportation, at (860) 594-3013.