



2007 STATE POLICY ACTIVITY - FUEL CELLS & HYDROGEN

CONNECTICUT

- **Developed a Fuel Cell Roadmap** - 2006 legislation created the Connecticut Hydrogen-Fuel Cell Coalition to advance the development, manufacture, and deployment of fuel cell and hydrogen technologies and fueling systems. The Coalition, in partnership with the Connecticut Center for Advanced Technology, issued the "Fuel Cell Economic Development Plan Hydrogen Roadmap" in 2007.

DELAWARE

- **Increased Renewable Portfolio Standard requirements (includes fuel cells)** - Delaware's Renewable Portfolio Standard, enacted in 2005, required that renewable energy be used to generate at least 1% of electricity sold in Delaware by June 2007 and 10% by June 2019. In July 2007, the General Assembly passed legislation increasing the renewable energy requirement to 20% by 2019. Industrial customers with a peak load of more than 1.5 MW are exempt from the requirements. Electricity suppliers will receive a 300% credit towards compliance for energy generated by fuel cells using renewable fuels.

IOWA, MINNESOTA, NORTH DAKOTA, SOUTH DAKOTA and MANITOBA

- **Developed an Energy Transition Roadmap (includes hydrogen)** - This roadmap summarizes years of stakeholder negotiation about how the Upper Midwest can best position its energy and agriculture sectors to thrive in the future and represents a consensus among leaders from Iowa, Manitoba, Minnesota, North Dakota, and South Dakota on how best to meet this challenge. Hydrogen, fuel cells and related technologies were not included in the CO2 Scenario model that informed this roadmap cost and technology milestones specific to this region were not developed. The Roadmap instead recommends hydrogen targets and strategies that will help the region contribute to the measurable milestones already developed by industry in coordination with the federal government.

KENTUCKY

- **Passed House Bill 1 (includes hydrogen and fuel cells)** - House Bill 1, passed in August 2007, promotes the advancement of energy policy, science, technology, and innovation in Kentucky. Sections of the Act relating to hydrogen and fuel cells include replacing at least 50% of the state-owned passenger vehicles and light-duty trucks with alternative fuel vehicles, including new fuel cell motor vehicles, to reduce the state government's dependence on petroleum-based transportation fuels. The Act also makes tax incentives available for newly constructed, retrofitted or upgraded

alternative fuel facilities that primarily produce for sale alternative transportation fuels. The Act's definition of alternative transportation fuels includes hydrogen derived from coal.

MINNESOTA

- **Established a Renewable Energy Objective (includes hydrogen)** - Minnesota's Renewable Energy Objective, signed into law in 2007, requires energy companies to deliver 25% of power from renewable resources, including hydrogen, by 2025. Xcel Energy, provider of about half the state's power, will need to provide 30 percent of its energy from renewable sources by 2020.

MISSOURI

- **Established Renewable Energy Targets (includes hydrogen)** - Senate Bill 54 was signed into law in June 2007, modifying provisions relating to renewable energy, alternative fuel, and environmental regulation. The bill encourages an increase in the use of renewable energy from sources such as wind, hydroelectricity, solar power, hydrogen, and biomass by creating renewable energy targets for utilities: 4% renewable energy target by 2012, 8% by 2015 and 11% by 2020.

NEW HAMPSHIRE

- **Established a Renewable Portfolio Standard (includes fuel cells)** - In 2007, minimum renewable standards were established for electric energy portfolios in New Hampshire. Renewably-powered fuel cells, using hydrogen derived from biomass fuels or methane gas, qualify as a Class I resource. Class I resources must comprise 0.5% of a providers' electric power in 2009, 1% in 2010, and increases by 1% each year until the resources constitute 16% of electric energy provided by 2025.

NORTH CAROLINA

- **Established a Renewable Energy and Energy Efficiency Portfolio Standard (includes hydrogen)** - In July 2007 a Renewable Energy and Energy Efficiency Portfolio Standard (REPS) was established for electric membership corporations and municipalities, requiring power sold to retail electric power customers to comprise 3% of North Carolina retail sales in 2012, 6% of retail sales in 2015, and 10% of retail sales in 2018 and thereafter. Hydrogen derived from a qualifying renewable energy resource is included in the REPS.

NORTH DAKOTA

- **Established a Renewable and Recycled Energy Objective (includes hydrogen)** – North Dakota has established a voluntary objective that 10% of all electricity sold at retail within the state by the year 2015 be obtained from renewable energy and recycled energy sources. There is no penalty or sanction for a retail provider of electricity that fails to meet this objective. The objective applies to all retail providers of electricity in the state, regardless of the ownership status of the electricity retailer. Renewable

electricity and recycled energy includes electricity generated from hydrogen, if the hydrogen was produced from eligible renewable resources.

OREGON

- **Established a Renewable Portfolio Standard (includes hydrogen)** - Oregon's Renewable Portfolio Standard, enacted in May 2007, details compliance requirements for large electric utilities that supply 3% or more of all electricity sold to retail consumers, and small electric utilities that supply less than 3% of all electricity sold to retail customers. Electricity generated from hydrogen gas derived from other eligible renewables may be used to comply with a renewable portfolio standard.
- **Increased maximum system size for Net Metering (fuel cells are eligible)** - The limit on non-residential net metered systems was increased in July 2007 from 25 kW to 2 MW. The generating capacity of residential net metered units remains at a maximum of 25 kW. Qualifying systems include fuel cells.

SOUTH CAROLINA

- **Established a Hydrogen Infrastructure Fund** - Senate Bill 243 established the Hydrogen Infrastructure Fund and authorized the South Carolina Research Authority to administer grants for the purpose of promoting the development of hydrogen production. The bill requires state agencies to consider purchasing equipment and machinery operated by hydrogen or fuel cells and allows a sales tax exemption for equipment or machinery operated by hydrogen or fuel cells or used to distribute hydrogen and for equipment and machinery used predominantly for research and development involving hydrogen or fuel cell technologies.

TEXAS

- **Gulf Coast Hydrogen Alliance formed** - Industry, academia and government in Texas have formed the Gulf Coast Hydrogen Alliance to serve as a resource for expanding the economic base for hydrogen along the Gulf Coast. GCHA will act as a catalyst for hydrogen research and business expansion in the Gulf Coast including hydrogen fuel cells; hydrogen internal combustion engines; distributed generation; hydrogen production, storage, distribution and utilization; logistics and material-handling equipment. Founding members include Lamar University; Netzoic, Inc.; TesSol, Inc.; Infinitium Energy, Inc.; and Applied Nanotech, Inc.