



GrowJobsCT

MANUFACTURING MAKES CT'S FUTURE

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Testimony of John Harrity
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Supporting Proposed Bills:

HB 5362 – AN ACT CONCERNING RENEWABLE ENERGY

And

SB 349 – AN ACT CONCERNING ENERGY EFFICIENCY INVESTMENTS IN
UNDERSERVED COMMUNITIES

Energy and Technology Committee
March 2010

Senator Fonfara, Representative Nardello, members of the committee: my name is John Harrity. I serve as Director of GrowJobsCT, a coalition of business, labor and community groups, along with elected officials, that focuses on the need to sustain and expand manufacturing jobs in the state of Connecticut.

I am here to speak in support of two raised bills: HB 5362: AN ACT CONCERNING RENEWABLE ENERGY, and SB 349: AN ACT CONCERNING ENERGY EFFICIENCY INVESTMENTS IN UNDERSERVED COMMUNITIES.

I speak in favor of HB 5362 as clearly defined plan to greatly increase our renewable portfolio, as mandated by this legislature, through prudent support of solar power installations. In my opinion the best feature of the proposal is incentives for photo voltaic manufacturers to locate here. While installing millions of dollars worth of equipment from China does increase our renewable energy infrastructure, clearly the best “bang for the buck” comes from the manufacture of renewable energy equipment here, by Connecticut manufacturing workers, both for our own use and for export.

I would also like to suggest to the committee that one of the most promising and reliable sources of renewable energy – the fuel cell – is produced here in Connecticut, employing now more than 3,000 workers in our state – more than 13% of global employment in this field.

Connecticut also has the potential to produce in-state other renewables, including photo voltaic and solar thermal, as well as wind turbine power, and there ought to be added incentives for manufacturing these technologies here, and employing Connecticut workers.

Attached to my testimony you will see an outline for a five-point plan to encourage deployment of Connecticut-made renewable energy technology. Though mainly applicable at this point to fuel cells, this language would apply to any renewable energy technology that chooses to move their manufacturing here to take advantage of this program.

In brief, the five points of this five-year plan include:

- Funding 25 MW a year of renewable energy generation – principally manufactured in Connecticut – through a capital investment program managed by the CT Clean Energy Fund, including low interest financing.
- A requirement that the electric distribution companies purchase power from Class I renewable generation principally manufactured in Connecticut, up to 25 MW per year and 125 MW over 5 years, at a price necessary to enable the projects, subject to the approval of the DPUC.
- A feed-in tariff paid to owners and operators of Class I renewable power generation equipment made in Connecticut to enable the financial viability of the purchase and operation of the project. This value of this tariff will decline each year for projects applying in those years.
- Utility ownership of up to 20 MW of renewable power generation, using equipment made in Connecticut.
- 5 MW per year, for a total of 25 MW over 5 years, of renewable energy generation equipment made in Connecticut, at state building and facilities.

These points, drawn up by stakeholders in Connecticut's hydrogen and fuel cell industry, run parallel to provisions contained in HB 5362. It is hoped that these points can be incorporated into the bill to create a complete package of aggressive support for both fulfilling our obligations to increase our renewable portfolio, and the crucial need to expand employment opportunities for Connecticut workers.

Briefly, on SB 349 – AN ACT CONCERNING ENERGY EFFICIENCY INVESTMENTS IN UNDERSERVED COMMUNITIES, I want to express my support for the bill to address ongoing inequities in communities experiencing the most distress from both historical neglect and certainly now with the greatest economic downturn in our lifetimes. SB 349 specifically includes job training money for energy projects, in the communities where such projects are often most needed.

Again, from our point of view, this combines energy imperatives and economic development in a way that maximizes the impact of the dollars spent.

Thank you.

John Harrity

AAC Job Creation in the Renewable Energy Generation Industry

The State of Connecticut shall support and provide incentives for the annual development of approximately 50 megawatts for five years or 250 MW by December 31, 2016, of Class I renewable energy capacity derived from Class I renewable energy electric generation facilities using equipment principally manufactured in the state.

Support for this incentive includes five major areas:

- The Clean Energy Fund (CCFE) managed by the Renewable Energy Investments Board, shall expand the existing renewable energy program and set rules for a capital investment incentive program that would result in at least 25 MW per year for five years or 125 MW of new Class I renewable energy electric generation capacity using equipment principally manufactured in the state by December 31, 2016. Low interest financing from the CCEF or the DPUC shall be made available to all projects that qualify as a Class I renewable energy electric generation facility using equipment principally manufactured in the state
- Electric distribution companies shall establish long-term contracts, subject to DPUC approval, to buy the power produced by commercial, industrial, and institutional Class I renewable energy electric generation facilities using equipment principally manufactured in the state, located on the customer's premises that would result in 25 MW per year for five years or 125 MW of new installations in the state by December 31, 2016. For these contracts, the electric companies, with approval from DPUC, shall adopt a purchase price for the power produced from these facilities necessary to enable project implementation. Project contracts may be extended for the useful life of the energy facility. The DPUC shall authorize the electric distribution company to recover in rates its costs of such contracts.
- Each electric distribution company shall file with the DPUC, for its approval, a tariff for production-based payments to owners or operators of commercial and industrial Class I renewable energy electric generation facilities for up to 25 MW per year for five years or 125 MW of new Class I renewable energy capacity using equipment principally manufactured in the state by December 31, 2016. The electric companies shall continue to issue production-based payments to owners or operators of commercial and industrial Class I renewable energy electric generation facilities throughout the useful life of the project. The tariff shall be adequate to ensure project implementation and shall be based upon the fully allocated cost of constructing and operating the Class I renewable electric generation facilities as if such construction and operation were to be undertaken or procured by the electric distribution company itself. The DPUC shall authorize the electric distribution company to recover in rates its costs of such tariffs. The utility shall also be permitted to purchase and sell other energy attributes (such as recovered thermal energy) to customers.
- The electric distribution companies may build, own, and operate new Class I renewable energy electric generation facilities using equipment principally manufactured in the state, where such individual installation does not exceed 20 MW in electrical generation capacity. The electric distribution companies may operate the Class I renewable energy electric generation facility throughout the useful life of the project. The DPUC shall authorize the electric distribution company to recover in rates its costs to construct, own and operate such Class I renewable energy electric generating facilities, including a reasonable return on its investment and the utility shall also be permitted to sell other energy attributes (such as recovered thermal energy) to customers .
- The DPW and DOT shall issue a joint RFP for development of Class I renewable energy electric generation facilities at state buildings and facilities using equipment principally manufactured in the state for a target of at least 5 MW per year for five years or 25 MW by December 31, 2016. This requirement may be funded directly through the project, through the CCEF, supported by a long-term contract, supported by a tariff, or owned and operated by an electric company on land

leased by the state under certain circumstances to be approved by the DPUC. DPW and DOT shall have discretion to enter into performance based contracts for amortization of the Class I renewable energy facilities, with use of necessary state and federal grants for project viability. The DPW and DOT shall evaluate the use of fuel cells and other Class I renewable energy electric generation equipment principally manufactured in the state in all buildings and projects undertaken in the state through 2016 and shall provide the basis for any decision not to incorporate fuel cells or other Class I renewable energy electric generation equipment principally manufactured in the state in such projects. Such basis must include an economic analysis with an assessment of impacts on job retention and job creation, impact to the state's environment, emergency preparedness, energy independence and the total energy efficiency of the project.

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Large fuel cells at risk without U.S. aid

Amanda DeBard

The United States leads the world in manufacturing stationary fuel cells — large sources of clean energy — but the industry is warning Congress that the technology and expertise could be shipped overseas unless the federal government does more to encourage domestic production and use.

Stationary fuel cells are on-site power generators that emit almost no pollutants while producing energy. They are powerful enough to supply electricity, heating and air conditioning for a 1,000-room hotel, a 33,000-student college campus or large industrial structures such as the Pepperidge Farm plant in Connecticut and Sierra Nevada brewery in California.

The energy source is pricey, though, ranging in the millions of dollars per unit. Yet demand for the fuel cells in Japan and South Korea far outstrips domestic supply, partly because foreign governments provide tax incentives or subsidies to companies that import and use the stationary fuel cells.

"We need legislation with provisions to promote deployment of fuel cells," said Bill Foster, vice president of government business development for FuelCell Energy Inc., the world's largest manufacturer of stationary fuel cells.

Mr. Foster said that including the industry among the many "green" technologies being supported by the federal government is critical to keeping jobs in the U.S. and ramping up the use of this clean energy supply. The Obama administration's main fuel cells focus has been on cars and buses, largely overlooking the stationary sources.

UTC Power, a division of United Technologies Corp. that manufactures stationary fuel cells, said the industry "needs the government to become a customer."

"We need volume, we need customers, and I think the government could become a large consumer," said Michael Brown, vice president of government affairs and general counsel to UTC. "To have the government step up and say, 'We're going to buy 500 fuel cells a year' would jump-start the marketplace."

Mr. Foster said that his Danbury, Conn.-based company is working with Congress for special attention in upcoming bills. He asserts that allowing more energy from fuel cells to be counted as part of a federal renewable-electricity standard (RES) would also promote wider use. The standard is part of pending energy legislation and would mandate that a certain percentage of the nation's energy come from clean sources by a certain date. The proposed RES would only allow fuel-cell energy generated from qualified biofuel sources — not natural gas — to contribute to the standard.

In the meantime, in the absence of federal legislation to drive fuel-cell use, some states are using the federal Investment Tax Credit to promote the use of stationary fuel cells. California and Connecticut also have incentive programs that when coupled with the federal tax credit have helped expand the use of stationary fuel cells.

Mr. Brown said additional incentives and partnerships with energy companies and utilities also would benefit the young industry.

The industry is also targeting Connecticut lawmakers in Congress to include fuel-cell provisions in federal legislation. Mr. Foster said Democratic Rep. Christopher S. Murphy and Democratic Rep. John B. Larson have been fuel-cell champions because FuelCell Energy Inc. and UTC Power both have their headquarters in Connecticut.

Although the technology is commercially viable, it is still relatively unknown, posing a major roadblock for the industry, the industry asserts.

Stationary fuel cells range in size, with some measuring about one-fourth the size of a tennis court. They are powered by biofuels — gasses from food processing, landfills and wastewater treatment — natural gas, ethanol, diesel and coal gas. The fuel cell is a combustion-free energy source, as it produces heat and electricity directly from chemical energy, somewhat like a battery. It also emits negligible amounts of nitrogen oxides and sulfur oxides as well as relatively small amounts of carbon dioxide compared to fossil-fuel-powered electricity plants.

Fuel cells are also a baseload power source and can compete with nuclear and coal-fired electricity to provide the minimum amount of power a utility must make available to its customers. In contrast, wind, solar and other renewable sources can only supply peak-load

power, power largely demanded in the late afternoon when consumers return home from work.

The upfront capital cost to produce stationary fuel cells is high, so a larger customer pool, especially in the U.S., would help bring down the cost, the industry asserts.

FuelCell Energy Inc. has sold or has orders for 91 megawatts of stationary fuel cells, with 68 megawatts of that sold to South Korea. The company said it is fearful that without government help, the domestic manufacturing industry will be transferred to nations with a greater demand — a fate that already has befallen wind turbine and solar panel makers.

UTC Power, a South Windsor, Conn.-based company, also produces stationary fuel cells that can heat and cool commercial buildings and fuel cells for transportation.

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