



At Eastern Connecticut
State University

Testimony of William Leahy
Institute for Sustainable Energy at Eastern Connecticut State University
Before the
Energy and Technology Committee
Tuesday, March 17, 2009
Raised Bill 1131

Good afternoon, Senator Fonfara, Representative Nardello and distinguished members of the Energy and Technology Committee. My name is William Leahy and I am the Chief Operating Officer for the Institute for Sustainable Energy (ISE) at Eastern Connecticut State University (ECSU) and I am speaking on behalf of President Elsa Nunez. I am here today to speak in support of a number of proposed bills, including Raised Bill 1131 - An Act Concerning Renewable Energy and Weatherization.

I would like to take this opportunity to thank you for your concerns over the current economic climate in our state and country and specifically its impact on Connecticut's businesses and our workforce. I appreciate your interest in supporting workforce development and training as we gear up for a transition to a Green Collar Economy.

Having spent my entire forty year career engaged in the fields of technical education, energy and sustainability, I feel particularly well qualified to make a positive contribution during this period of transition. There is the potential for many good initiatives which could be incorporated within the raised bills which you are considering today.

I know you are aware of the hundreds of municipal facilities, including over 150 schools that the Institute has benchmarked over the past six years. I fully support the need to assist municipalities in assessing opportunities to reduce their energy use and costs. I wanted you to be aware that many of the provisions outlined in this bill are already underway in communities in Connecticut.

Section 1. Green Community Pilot Program

There are a number of nationally and regionally recognized programs to organize communities around energy efficiency, renewable energy and climate change already in existence, including the EPA 10% challenge, Cities for Climate Protection by ICLEI, and Clean energy Communities.

A pilot project has been launched in the city of **Bridgeport** through an Executive Order initiated by Mayor Bill Finch to create a sustainable Green model city; B-Green2020. I have attached a copy of his executive order outlining the objectives of the initiative for your review. The city has created a process which engaging over 100 stakeholders with taskforce activities including; Green Power and Green Buildings, Green Transportation and Brownfield Recovery, Recycling and Green Spaces, Educational Outreach and Creating 1000 Green Collar Jobs. Members of the

six teams include representatives of all major city agencies, the business development organizations, weatherization providers, all the utilities including; electricity generation & distribution, oil and natural gas, providers of alternative fuels and renewable energy, ISE and private developers and citizens. This is truly a Public/Private Partnership.

The groups are developing strategies and implement projects to make the community more sustainable by creating "family supporting career tracking sustainable jobs," creating a green business incubator, lower the cities energy costs, assist local businesses to prosper, educating residents, reduce pollution and GHG emission, and enhance the image and financial strength of the community. Financing for projects will come from a number of sources, including the CT Energy Efficiency Fund through participation with United Illuminating, the CT Clean Energy Fund, the State Energy Program, the State Weatherization Program, and the American Recovery and Reinvestment Act. In addition the city will encourage using private investors, developers and financing from Energy Service Companies using Performance Contracts. One project includes establishing building standards and weatherizing all public housing and municipal buildings to improve building efficiency, lower energy bills and the tax burden on the community while making the building more comfortable, and reducing GHG. To accomplish this initiative the city will train hundreds of unemployed or under-employed to be weatherization specialist, utilizing the expertise of the ABCD weatherization organization, conducting training at Bullard Havens Tech High School, utilizing Building Performance Institute (BPI) standards and certification through Housatonic Community College.

A similar project is underway in New Britain where a team consisting of the Mayor, CCSU's business school and the Institute for Technical and Business Development, ISE, local business leaders and Connecticut's Department of Labor are developing a project to weatherize the public housing, improve public buildings and create a business incubator center to develop green manufacturing and energy businesses. The objective is to lower energy use and costs while creating sustainable jobs for its community.

Section 5. Weatherization

One of the primary goals of the American Recovery and Reinvestment Act is to create "family supporting, career tracking, sustainable jobs." The Institute has been working with the administration and faculty of the Connecticut Technical High Schools and some of the community colleges to create a continuum of career training that not only provides training for our future trades in high performance "Green" building standards, but also provides re-training for those that are unemployed and underemployed. This training continuum would utilize national certification standards and progress from weatherization specialist, to envelop specialist to energy auditor, while the participants were also learning business skills through the community colleges. From there these individuals could enter the workforce as home improvement contractors, building operations managers or energy improvement specialists, cost estimators or weatherization supervisors. Through this progression, Connecticut could begin to train a significant portion of the 41,000 Green Collar Jobs identified in the ARRA.

In the past the State Weatherization Program managed a budget of approximately \$2 million annually, weatherizing less that 2000 homes a year. The ARRA budget for weatherization is nearly \$65 million for Connecticut. This level of weatherization and funding requires a new approach, and much more aggressive annual goals, supported by high quality certification training. The CT Technical High Schools, the Connecticut Community Colleges and the Institute are working cooperatively to address this issue and ask for your support. Below is a more complete discussion of the Green Collar Job training initiative.

Connecticut Green Jobs Initiative

"The jobs we create will be in businesses large and small across a wide range of industries. And they'll be the kind of jobs that don't just put people to work in the short term, but position our economy to lead the world in the long-term.

We'll create nearly three million jobs by investing in clean energy, by committing to double the production of alternative energy in the next three years, and by modernizing more than 75% of federal buildings and improving the energy efficiency American homes. These made-in-America jobs building solar panels and wind turbines, developing fuel-efficient cars and new energy technologies pay well, and they can't be outsourced."

President- Barack Obama

What is a Green-Collar Job?

• Green-Collar Jobs are

- Jobs that preserve, restore, or improve the environment.
- Jobs that help save energy, advance new energy efficient technologies, and foster a more sustainable regional and national energy system.
- Either blue or white collar positions, updated to adopt sustainability as a core segment of the individuals' job description.
- Career opportunity capable of supporting a family's income, with the potential for advancement.

Why do we Need Green-Collar Jobs?

• Green-Collar Jobs provide us with a host of opportunities and advantages, such as:

- Creating new jobs or retraining the unemployed in a time of economic downturn.
- Providing opportunities for career advancement in the sustainability fields.
- Reducing our dependence on foreign oil, and strengthening national security.
- Promoting the use of domestic renewable energy resources.
- Reducing the tax burdens of inefficient public buildings and public housing.
- Mitigating climate change by cutting green house gas emissions.

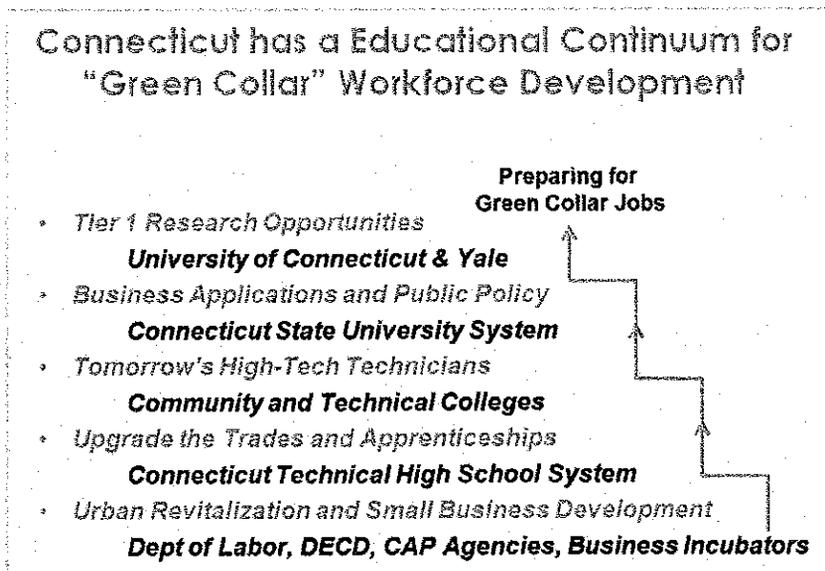
Building a Green-Collar Workforce

☛ Making Green-Collar Jobs Available to Connecticut's Residents:

The key to making these opportunities available to the citizens of Connecticut lies in developing programs for our future workforce. These programs will provide crucial education and skills training to help Connecticut's government operate more efficiently by establishing and implementing minimal efficiency operating standards for all public buildings. Green Collar job training also help businesses to become leaders in emerging sustainable industries, such as; building weatherization and efficiency retrofitting, mass transit and freight rail, "Smart Grid" power systems, and renewable technologies, such as; wind, solar, geothermal and biofuel.

GREEN INVESTMENTS AND JOBS	
STRATEGIES FOR GREEN ECONOMIC INVESTMENT	REPRESENTATIVE JOBS
Building Retrofitting	Electricians, Heating/Air Conditioning Installers, Carpenters, Construction Equipment Operators, Roofers, Insulation Workers, Carpenter Helpers, Industrial Truck Drivers, Construction Managers, Building Inspectors
Mass Transit/Freight Rail	Civil Engineers, Rail Track Layers, Electricians, Welders, Metal Fabricators, Engine Assemblers, Bus Drivers, Dispatchers, Locomotive Engineers, Railroad Conductors
Smart Grid	Computer Software Engineers, Electrical Engineers, Electrical Equipment Assemblers, Electrical Equipment Technicians, Machinists, Team Assemblers, Construction Laborers, Operating Engineers, Electrical Power Line Installers and Repairers
Wind Power	Environmental Engineers, Iron and Steel Workers, Millwrights, Sheet Metal Workers, Machinists, Electrical Equipment Assemblers, Construction Equipment Operators, Industrial Truck Drivers, Industrial Production Managers, First-Line Production Supervisors
Solar Power	Electrical Engineers, Electricians, Industrial Machinery Mechanics, Welders, Metal Fabricators, Electrical Equipment Assemblers, Construction Equipment Operators, Installation Helpers, Laborers, Construction Managers
Advanced Biofuels	Chemical Engineers, Chemists, Chemical Equipment Operators, Chemical Technicians, Mixing and Blending Machine Operators, Agricultural Workers, Industrial Truck Drivers, Farm Product Purchasers, Agricultural and Forestry Supervisors, Agricultural Inspectors

- ☛ Utilizing the existing agencies and our higher education structure, Connecticut could create a continuum of educational programs and certification training to provide participants with the skills necessary to tackle tomorrow's energy career opportunities. These include family supporting, career tracking sustainable jobs.



The Green-Collar Continuum:

☛ Welfare-to-Work / Job Core / Recently Incarcerated Individuals

Traditionally, the Department of Labor and local urban renewal organizations have held the responsibility for creating job training for unemployed and under-employed individuals. Programs should be offered through the Community Colleges taught in the CT Technical High School construction technology labs. The recovery plan provides funding for weatherization training that could evolve into sustainable careers, such as:

- Building retrofitting and weatherization, energy auditors
- Automobile retrofitting (to reduce emissions and raise mpg)
- Brownfield remediation and urban forestry

☛ The Connecticut Technical High School System

Connecticut's technical high school system has the responsibility of preparing students for post-secondary education, including apprenticeships, as well as immediate productive employment. The system responds to employers' and industries' current and emerging workforce needs and expectations identified through business/school partnerships. This would include occupations such as:

- Tradesman and supervisors for energy efficiency construction
- Renewable energy systems installers
- Servicing of alternative fuel vehicles
- Construction and service to transmission and distribution of green energy systems
- Sustainable manufacturing and producing "Green" products
- Residential energy auditing

☛ Connecticut's Community Colleges

Graduates would be prepared in a number of technical certification and associate degree programs related to the construction and manufacturing industries, building operations, alternative fuel transportation and the installation of alternate energy systems. Jobs include:

- Green building construction and building automation specialist
- Advanced transportation systems technician
- Supervisors and Mechanical Engineers in Green Manufacturing
- Renewable energy systems site assessor
- Commercial and Government building energy auditors

☛ CSUS System

Graduates would be prepared in programs related to the operation of the energy systems, managing sustainable businesses, the formation of sound energy public policy, and the administration of public programs that promote a more sustainable Connecticut. Jobs include:

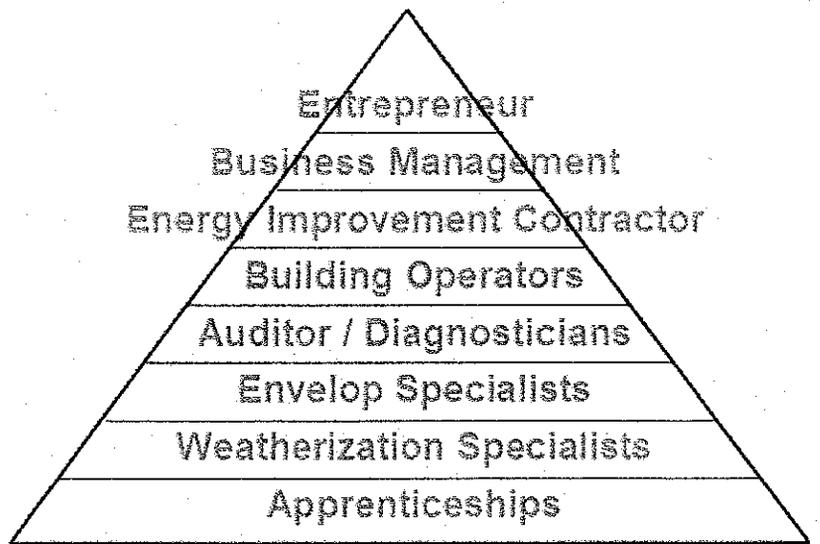
- Energy accountants and analysts, power purchasers and carbon traders
- Energy policy specialists and business entrepreneurs
- Energy efficiency application specialists
- Renewable energy application specialists, including geothermal and fuel cells
- Business, campus and community sustainability coordinators

Setting Priorities

In order for the federal recovery package and the actions of Connecticut government to be successful, the focus should be on creating “family supporting, career tracking, sustainable jobs, not just temporary work that require government subsidy. In planning workforce development, training must truly provide individuals with knowledge and skills that are recognized as being needed by industry and our society and that command compensation above minimum wage. This strategy requires that certification programs be based on recognized industry standards, including appropriate classroom study, field application or apprenticeship and testing.

Initially, many of the jobs created by the federal recovery package may involve work on energy efficiency projects in government building, schools and public housing. Ultimately all training should be based on a career track that encourages the participant to progress beyond the initial job by continuing their education and training, ultimately leading to private sector employment or small business development. Below is a schematic demonstrating how a basic weatherization training program can logically lead to a career path in the private sector. As a model, this example demonstrates how the stimulus package could create workforce development programs that directly benefits taxpayers by, first lowering the burden of taxes spent on high energy bills in public buildings and eventually provides private sector services in their communities for making home and businesses more energy efficiency.

Weatherization Training can lead to “Family-Supporting, Career Tracking Sustainable Jobs”



Thank you for this opportunity to support this important legislation. I encourage you to act on this bill as soon as possible. I would be happy to answer any questions that you may have at this time.

Respectfully Submitted;

William M. Leahy

¹Pollin, et al, "The Job Impact of the American Recovery and Reinvestment Plan"
http://www.americanprogress.org/issues/2008/09/pdf/green_recovery.pdf (September 2008).

¹ Christina Romer, Jared Bernstein; "Green Recovery"
http://otrans.3cdn.net/ee40602f9a7d8172b8_ozm6bt5oi.pdf (January 9, 2009).

The Institute for Sustainable Energy at Eastern Connecticut State University was established in 2001 to provide an unbiased view of energy resources and practical solutions to improving the state's energy profile and to promote a more sustainable energy future for Connecticut. The Institute's focuses on matters related to the formation of public policy, providing educational outreach, supporting energy solutions and maintaining information resources on energy and sustainability. The Institute provides benchmarking and energy planning services, relative to energy efficiency and use of renewable energy sources and the application of high performance building standards, to Connecticut's municipal governments, school systems and state agencies.

William M. Leahy is the Chief Operating Officer of the Institute for Sustainable Energy at Eastern Connecticut State University (ECSU). He holds a BS and MS in Industrial Education from Central Connecticut State University and a MS in Business from Rensselaer. He earned a Certified Energy Manager (CEM) and Certified Sustainable Development Manager (CSDM) from the Association of Energy Engineers and is a LEED Accredited Profession from the US Green Building Council. Leahy has forty years of experience in public education and/or energy management.

In 2002, Leahy was appointed Director at the Institute for Sustainable Energy at Eastern Connecticut State University. Institute is the recipient of the 2004 National Energy Star Partnership Award for Community Leadership in Energy Education from the US Department of Energy and Environmental Protection Agency, as well as numerous recognitions from regional and state organizations.