



At Eastern Connecticut  
State University

**Testimony of William Leahy**  
**Institute for Sustainable Energy at Eastern Connecticut State University**  
Before the  
Program Review and Investigations Committee  
Monday, March 1, 2010

Good afternoon, Senator Kissel, Representative Mushinsky, and distinguished members of the Program Review and Investigations 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. I am speaking on behalf of President Elsa Nunez. I am here today in support of the progress being made to create workforce development programs for Green Collar Jobs in Connecticut and to comment on the recommendations included in HB 5164: AN ACT IMPLEMENTING THE RECOMMENDATION OF THE PROGRAM REVIEW AND INVESTIGATIONS COMMITTEE CONCERNING THE ALIGNMENT OF POSTSECONDARY EDUCATION AND EMPLOYMENT IN THE GREEN INDUSTRY.

I would like to take this opportunity to thank you for addressing workforce development issues in Connecticut. ISE supports your concerns over the impact which the current economic climate is having on business, jobs and the workforce. We also appreciate your continued interest in supporting the educational needs of our workforce as we transition to a Green Economy.

Having spent my entire forty year career in the fields of technical education, energy and sustainability, I feel particularly well qualified to assist Connecticut in this period of transition. There are many good ideas and initiatives being considered which could be supported by the legislation that you are considering in this session.

Connecticut has taken advantage of a number of opportunities to participate in the American Recovery and Reinvestment Act, moving the state forward towards a more energy efficient and sustainable future through the creation of a highly quality and highly skilled Green-Collar workforce.

Connecticut Energy Sector Partnership, after receiving a \$3 million ARRA grant from the Department of Labor, is utilizing existing organizational and educational frameworks within state agencies and the higher education system to design programs which support the full spectrum of career options including: weatherization specialists, building analysts, water and waste water operations technicians, green manufacturing specialists, Brownfield recovery technicians, deconstruction specialists, solar energy system installers, green builders, and more informed local code officials.

The Workplace, Inc. through a \$4 million "Pathways from Poverty" grant, has created "Green-Up Bridgeport" which creates a virtual academy in the community, connecting the resources of community organizations and the local office of the Department of Labor with training partnerships at Bullard Havens Technical High School, Housatonic Community College, the CSU system, University of Bridgeport, and EPA New England. This competitive grant was one of 30 awards from over 500 applications, and will become a national model for inner city green job training. It will provide individual counseling, assessment, family support, and placement, linked to classroom and hands-on training in four green job career ladders. These ladders provide opportunities to progress to a "family supporting, career directed, sustainable job" including:

- Green builders, home improvement contractors and deconstruction technicians,
- Building energy systems operators and maintenance technicians,
- Resource management specialist including sustainable landscapers, recyclers, water and waste water technicians; and
- Transportation specialists working on mass transit operations and maintenance.

These exceptional programs focus primarily on the unemployed and under-employed. The CSUS is developing programs that are aimed at management level careers, including; certified energy managers; civil, mechanical and construction technology engineers; specialists in sustainable energy systems, lean and green manufacturing; economists for analysis for financing energy efficiency projects and renewable energy systems; carbon trading, and other energy industry and public policy jobs with more emphasis on business development and encouraging entrepreneurs.

### **Comments on Sections 3 through 6**

*Sec. 3. Each regional vocational-technical school and public institution of higher education shall develop, in such manner as the Commissioners of Education and Higher Education prescribe, agreements to share equipment required for students participating in green jobs certificate or degree programs or enrolled in a course of study concerning green jobs, including, but not limited to, solar photovoltaic installation.*

**Response:** CTHSS, CCC and the CSUS have already forged a strong relationship between Connecticut's technical high schools and community colleges focused on making underutilized technical classrooms available after normal high school hours for continuing education students. The ARRA funding does not always provide necessary equipment to adequately offer certification training in some of the emerging technologies. Providing funding for equipping regional centers would be both helpful and cost effective.

CCC and CSUS have clear articulation agreements in place linking their educational programs so that students who want to progress from a community college to a state university upon earning an associate's degree, can move on in a seamless fashion. The faculty at both levels share course content and educational objectives so that students transferring for their junior year blend with students that have been at the universities from the start of their programs.

*Sec. 4. Public institutions of higher education, in consultation with the regional work force development boards, shall support efforts to develop career ladders and lattices in the green collar*

*fields, particularly for those workers who gained entry into such fields as a result of funds made available pursuant to the American Recovery and Reinvestment Act of 2009.*

**Response:** Eastern Connecticut State University, through the initiative of the Institute for Sustainable Energy, partnered with the Workplace, Inc., the Workforce Development Board for Southwest Connecticut, has developed four Green Job Career Ladders being utilized in "Green-Up Bridgeport," a ARRA – Department of Labor grant sponsored model program. The materials being developed include: client assessment criteria, exploratory course curriculum and support material, and the mapping of existing local training programs for national credentialing. The materials developed in this project will be widely circulated at the completion of the pilot phase. Attached is a power point describing the career ladders.

*Sec. 5. The Department of Higher Education, in consultation with the Department of Education, shall annually prepare a list of every green jobs course and green jobs certificate and degree program offered by regional vocational-technical schools and public institutions of higher education and an inventory of green jobs related equipment used by such schools and institutions of higher education.*

**Response:** This database will be extremely helpful if it is structured and accessible as a web-based career search tool. Once completed, it will be used by the Workforce Development Boards, career counselors in our community organizations, schools and universities and also accessible by the public. If it is displayed on a website in a manner that makes it easy to search, it can be used to identify courses and certification that meet the client's interests and abilities. The website should also have links to traditional job search tools like O-net and the on-line Occupational Outlook Handbook. ISE currently maintains five websites, including [www.ctenergyinfo.com](http://www.ctenergyinfo.com), and would be interested in working with the Department of Education and Department of Higher Education to develop and maintain this database and provide regional instructional workshops on its use.

*Sec. 6. Staff of the Center for Clean Energy Engineering at The University of Connecticut and the Institute of Sustainable Energy at Eastern Connecticut State University shall meet at least quarterly to discuss possible ways to collaborate on green initiatives. Staff of other public institutions of higher education and centers affiliated with such institutions of higher education that focus on clean or sustainable energy and that are located within the same geographic regions shall meet to develop collaborative efforts with regard to the green industry.*

**Response:** As can be verified by the administrators at the CTHSS and the CT Community Colleges, and the many municipal and school officials we have assisted since our formation in 2001, the staff of the Institute for Sustainable Energy is available to plan and form collaborative relationships that are in the best interest of the citizens of the State of Connecticut. Our mission has always been **"to identify, develop and become an objective energy and educational resource regarding the means for achieving a sustainable energy future for Connecticut."**

ISE has experience in Green Collar Job task analysis, program identification, and development including our recent experience as an active member of the State Energy Sector Partnership, the Connecticut Energy Workforce Development Consortium, and the Green Jobs Panel convened by House Speaker Donovan, and the Green-Up Bridgeport Pathways from Poverty design team. ISE could facilitate the collaboration effort needed to promote better communication between all the Green Jobs training stakeholders recommended in Section 6. .

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Thank you for this opportunity to support your assessment of this important legislation. I would be happy to answer any questions that you may have at this time.

Respectfully Submitted;



William M. Leahy,  
Chief Operating Officer

### **Background on The Institute for Sustainable Energy Eastern Connecticut State University**

**The Institute for Sustainable Energy at Eastern Connecticut State University** was established in 2001 by the Board of Trustees of the Connecticut State University System 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 educational programs, benchmarking and energy planning services, relative to energy efficiency, the use of renewable energy sources and the application of high performance building standards, to Connecticut's state agencies, legislature, municipal governments, school systems and not-for-profit organizations. 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. The Institute is currently assisting the CT Technical High Schools, community colleges and the cities of Bridgeport in developing Green Collar Job training initiatives.

**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 Energy Auditor (CEA) 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.

## "Green-up Bridgeport" Pathways to Green Collar Jobs

March 1, 2010

*"...a major shift to renewable energy and efficiency is expected to produce 2 million new Green Jobs during the next decade."*  
US Conference of Mayors

William Leahy, Director  
Institute for Sustainable Energy  
Eastern Connecticut State University  
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## What are Green Collar Jobs?



*"Green jobs...help conserve energy, preserve the environment, promote the deployment of new technologies, and contribute to the mission of becoming a more sustainable nation."*

## Why Green-Collar Jobs?



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

## Revitalize Bridgeport



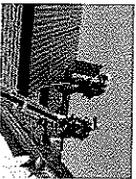
- Weatherization, energy efficient retrofits and energy management for existing buildings, green building standards;
- Clean "Green" energy; renewable energy systems (solar photovoltaic, solar thermal, geothermal, small wind, landfill gas, anaerobic digesters), biofuel production, and cogeneration;
- Community farming and urban forestry, sustainable landscaping, waterfront restoration, rainwater run-off management and green roofs;
- Recycling, waste reduction, and single stream separation;
- Deconstruction; recycling of building construction waste, and reuse of building materials;
- Brownfield Remediation; Clean-up abandoned, idle or under used sites, restore value and use or return to tax rolls.
- Pedestrian and bike friendly, mass transit options, auto and bus retrofits for reduced emissions and use of alternative fuels;

## Why Train using Green Collar Job Career Ladders?



- Multiple exploratory experience and options.
- Matches jobs to the participants' interests and abilities.
- Advancement depends on aptitude and development.
- Provides a clear path toward upward mobility.
- Motivates participant to advance to next level.
- Offers starting job with minimal experience & training.
- Provides multiple possibilities for work setting.
- Provides nationally recognized credentials.
- Leads from minimum wage job to "Family Supporting, Career Directed Sustainable Career."

## Building Energy Systems Career Ladder



Certified Energy Manager*
Renewable Energy Systems Installer*
Energy Improvement Contractor*
Analyst* and Crew Supervisor
HVAC Technician*
Weatherization and Envelope Specialist*
Building Maintenance
Custodian

## Green Construction Career Ladder



Deconstruction Contractor*
Green Home Improvement Contractor*
Green Carpenter or Deconstruction Tech
LEED Associate*
Analyst* or Crew Supervisor
Weatherization and Envelope Specialist*
Helper or Apprentice*
Laborer

## Resource Management Career Ladder



Urban Landscape and Garden Contractor
Water and Waste Water Technician*
Brownfield Restoration Technician*
Rainwater Runoff Mitigation Technician
Sustainable Landscape Technician
Community Garden Worker
Recycling Technician
Grounds Maintenance Worker

## Transportation Career Ladders

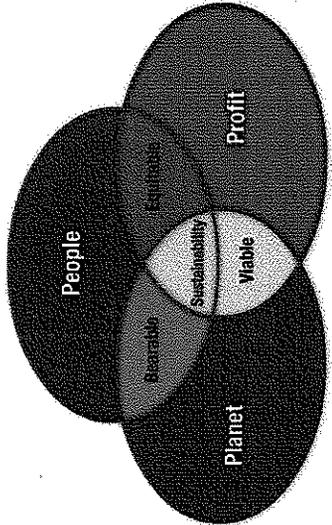


Transit Operations Supervisor
Bikeway and Greenway Planner
Auto, Truck and Bus Mechanic*
Biofuel Production Worker
Rail Maintenance Tech
Diesel Retrofit Installer
Mechanics Helper
Vehicle Servicer

## Recognized Credentials

- Building Performance Institute (BPI) 
- North American Board of Certified Energy Practitioners 
- US Green Building Council 
- Association of Energy Engineers 
- Environmental Protection Agency 

## People, Planet, Profit The Intersection of Interests



## Components of the Triple Bottom Line

- **Economic Prosperity** – The profit that businesses and individuals accrues for themselves and shares with the community
- **Environmental Quality** – The practices that we employ to support sustainability
- **Social Justice** – The practices that we employ to limit negative impacts upon society and improve the quality of life of residents of the local and global community

**Businesses can be Successful  
AND Sustainable**



**United  
Technologies**

<http://www.ge.com>

<http://www.uct.com>



<http://www.greenmountaincoffee.com>



<http://www.thegreencenter.com>

**General Electric - Ecomagination**  
*"This is not just good for society, it's good for  
GE inventors – we can solve tough global  
problems and make money doing it."*

Jeffrey R. Immelt, CEO of General Electric



<http://www.ge.com>

**Green – UP Bridgeport**



**WORKPLACE, INC.**  
Southern Connecticut Regional Workforce Development Board



At Eastern Connecticut  
State University