



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 9, 2010

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. I am submitting this testimony on behalf of President Elsa Nuñez. I am submitting 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 Raised Bill 5465: AN ACT CONCERNING THE DEVELOPMENT OF GREEN JOBS.

I would like to take this opportunity to thank you for addressing workforce development 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. I am currently a member of the Connecticut Energy Sector Workforce Development Partnership, the Energy Sector Workforce Coalition with CBIA and the Speaker Donavon's Green Jobs Panel. I also serve on the CT Community College SOAR Advisory and Green-up Bridgeport's design team with Workplace, Inc. There are many good ideas and initiatives being considered and developed which could be supported by the legislation that you are considering in this session.

Connecticut has already 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. Your bill could enhance Connecticut's position further.

Connecticut Energy Sector Workforce Development 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 the "Green-Up Bridgeport" initiative, 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 Raised Bill 5465

***Section 1** recommends the DPUC, in consultation with a newly formed Green Jobs Advisory, develop a Green Jobs Website for Connecticut.*

Response: ISE currently maintains five websites with information on energy related programs and issues in Connecticut, including www.CTEnergyInfo.com which was developed with the DPUC. This highly successful site received over 20,000 unique visitors in January 2010 alone, and has proven to be one of the best sources of information on efficiency and renewable programs, competitive suppliers and energy related resources for Connecticut residents.

ISE also currently works with high school through out the state providing workshops for teachers and students, lesson plans and activities related to energy, climate change and efficiency through www.CTEnergyEducation.com and the "Keep Connecticut Cool! Climate Challenge" contest for middle school and high school students working on community sustainability projects. Our experience in Green Jobs combined with our work with the public schools and websites makes us a natural for developing and maintaining the Green Jobs Website.

Section 4 recommends the formation of a new Green Jobs Advisory by the DPUC.

Response: The Energy Sector Workforce Development Partnership currently has the responsibility to serve as a conduit for federal ARRA funding, grant writing and assessing green job training opportunities. It currently includes members from the utilities, higher education, DECD, the unions, and many other departments with interest in stimulating green job development. Their mission could be clarified further to encourage the evaluation of best practices nationally and supported with dedicated grant writers who could work with the members to develop competitive grant proposals.

Section 5 suggests the municipalities offer sustainable energy loan programs tied to bonds and local property taxes.

Response: ISE supports this concept, but has considerable experience working with communities that may not be able or willing to raise the needed capital for private investments by their residents and businesses through municipal bonds. A more acceptable loan mechanism for residential and business energy consumers might be one that utilizes a PAYS type program through the utilities with the loan payment collected through the monthly utility bill. This mechanism is also used in a number of states and could also provide loans for efficiency and renewable investments with a positive cash flow from savings, but would be available to both property owners and renters.

Section 6 (subsection d) recommends that the Renewable Energy Investment Fund include transportation projects such as supporting "plug-in hybrids."

Response: The Electric Vehicle Infrastructure Council appointed by the Governor's Executive Order 32 is currently studying the need for Connecticut to support the next generation of alternate fuel vehicle by providing the laws, public policies and infrastructure which encourages the world's auto manufacturers to introduce these efficient, environmentally friendly vehicles here in Connecticut. This section should include fully electric vehicles (such as the GM Volt and Nissan Leaf) as well as plug-in hybrids. The recommendation should also encourage these vehicles to be charged through a "Time-of-Use" meter with rates and pricing that reflect the true cost of off-peak and on-peak energy. This price signal will encourage purchasers of electric vehicles to gain the economic and environmental benefit of efficient, low cost off-peak power and discourage charging during the already taxed on-peak system by an appropriate higher price for power in the on-peak period.

Sectional 11 & 14 recommend an annual publication of the Green Job training programs available in Connecticut.

Response: An annual list of green job training programs would not be an effective way of getting this information into the hands of students and workers seeking to receive training in the Green Job fields. The information should be web-based and connected to the traditional career assessment tools, like O-net and the Occupational Outlook Handbook, which are used by guidance counselors, teachers, students and the staff of the employment industry. In addition, workshops for career counselors and vocational instructors should be offered regionally, on a regular basis, to ensure that those people who can help direct students and incumbent workers into this training are aware of what is available in Connecticut.

Section 12 recommends a strong relationship be formed between CTHSS and Higher Education.

Response: In the past 12 months, CTHSS, CCC and the CSUS have 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 community college 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. CTHSS is currently hosting the Weatherization training being conducted by the community colleges for workers and supervisors in the DSS Weatherization program. 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.

Section 13 recommends the public institutions of higher education shall work with the Regional workforce Development Boards to develop Career Ladders.

Response: Eastern Connecticut State University, through the initiative of ISE, 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," an 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.

Section 15 recommends ISE and UConn Center for Clean Energy Engineering hold quarterly meetings with other institutions of higher learning to collaborate on Green Jobs training initiatives.

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 always 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 the Act Concerning the Development of Green Jobs.

Thank you for this opportunity to support this important legislation.

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”

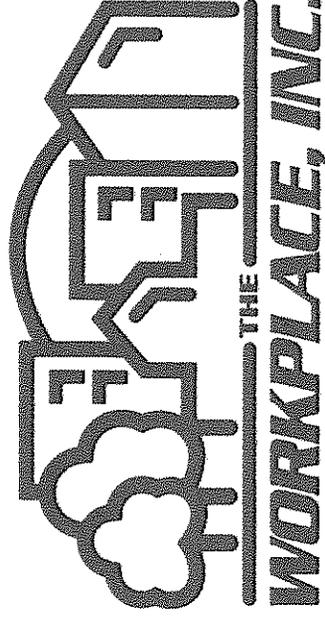
Pathways to Green Collar Jobs

“... 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**

www.sustainableenergy.org



Southwestern Connecticut's Regional Workforce Development Board

Why Green-Collar Jobs?



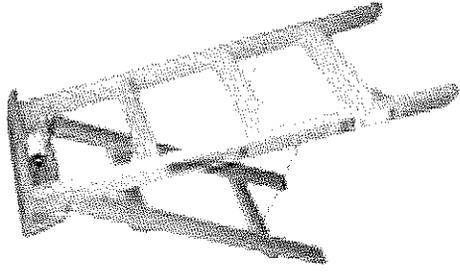
- Creating new jobs or retraining the unemployed in a time of economic downturn.
- Providing opportunities for career advancement in the sustainability fields.
- Lower energy costs and reduce our dependence on foreign oil, and strengthening national security.
- Promoting the use of domestic renewable 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?



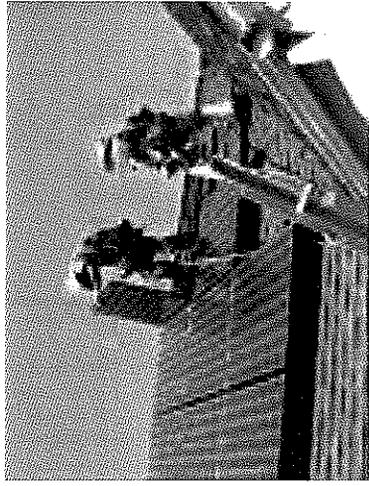
- Multiple exploratory experience and options.
- Matches jobs to the participants' interests and abilities.
- Advancement depends on aptitude and development.
- Provides a clear path toward upward mobility.
- Motivates participant to advance to next level.
- Offers starting job with minimal experience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

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

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

Resource Management Career Ladder



Urban Landscape and Garden Contractor

Water and Waste Water Technician*

Brownfield Restoration Technician*

Rainwater Runoff Mitigation Technician

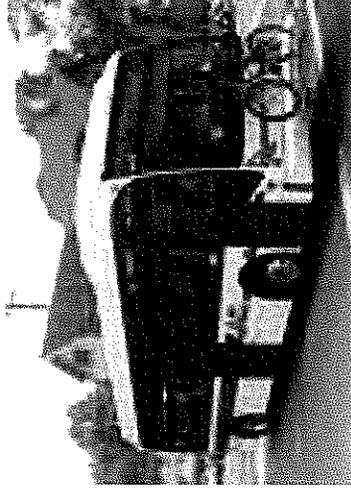
Sustainable Landscape Technician

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

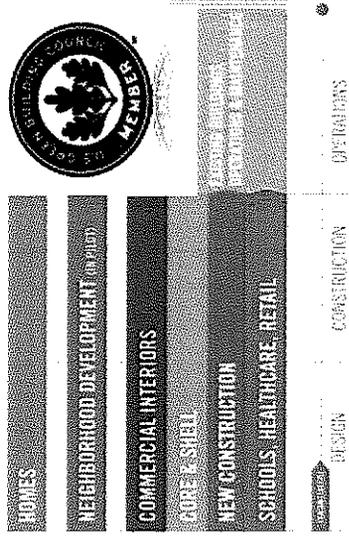
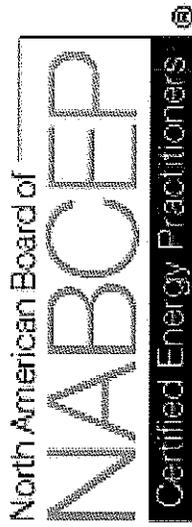
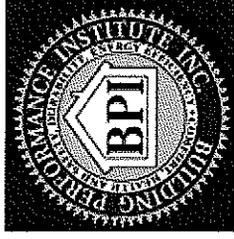
Diesel Retrofit Installer

Mechanics Helper

Vehicle Servicer

Recognized Credentials

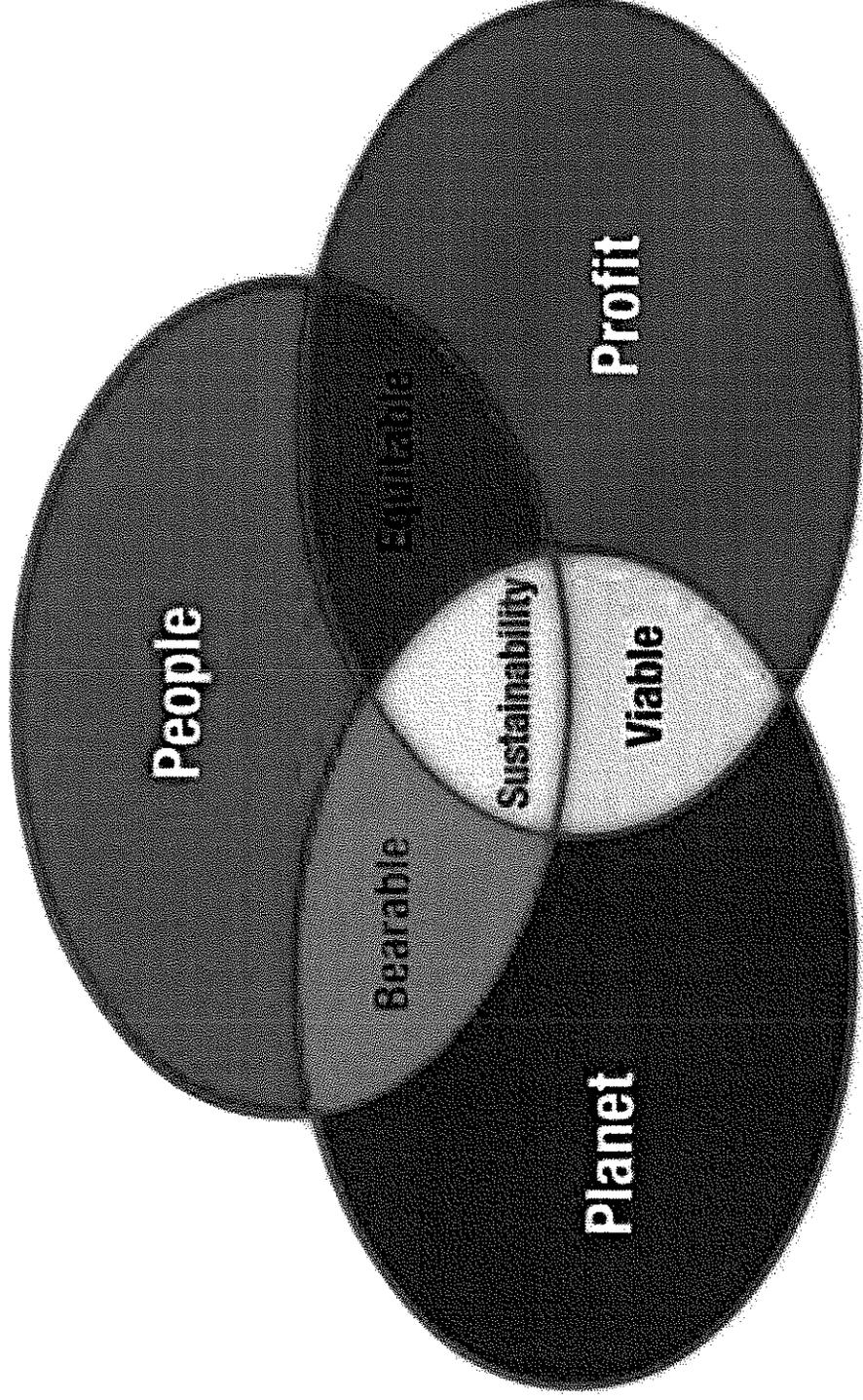
- **Building Performance Institute (BPI)**
- **North American Board of Certified Energy Practitioners**



- **US Green Building Council**
- **Association of Energy Engineers**
- **Environmental Protection Agency**



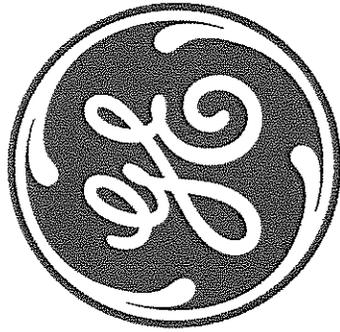
People, Planet, Profit The Intersection of Interests



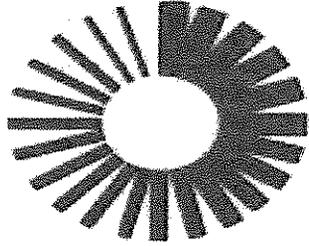
Components of the Triple Bottom Line

- **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



<http://www.ieee.ca/cccce08/images/GE.jpg>



United Technologies

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<http://industry.bnet.com/food/images/logo-green-mountain-coffee-web.jpg>

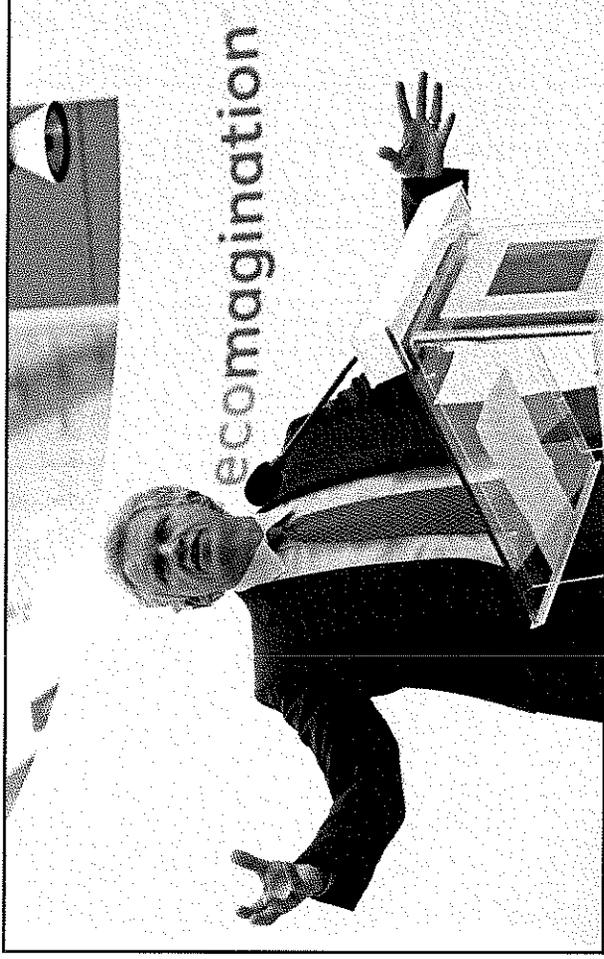
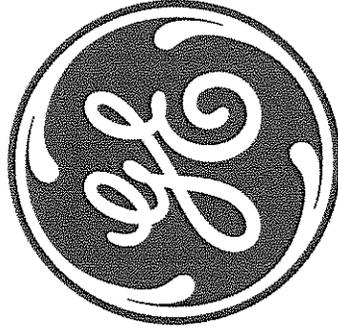


<http://www.thecomputerrecycler.com/>

General Electric - Ecomagination

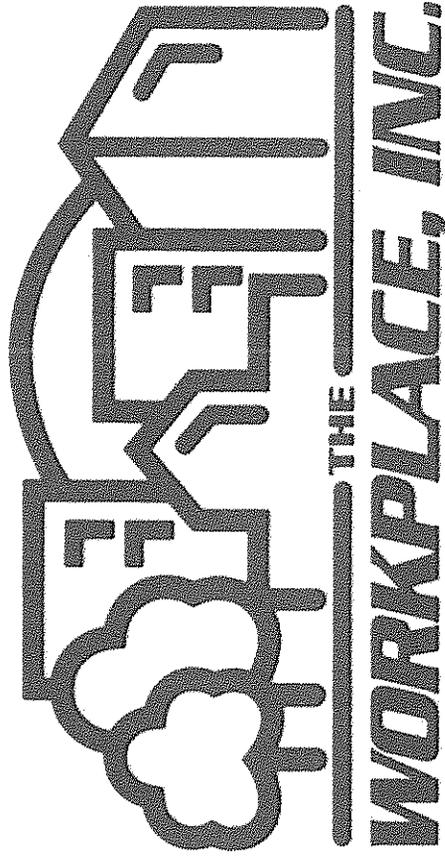
***“This is not just good for society, it’s good for
GE inventors – we can solve tough global
problems and make money doing it.”***

Jeffrey R. Immelt, CEO of General Electric



http://www.ethicalcorp.com/resources/images/content/large/20065454131_11737661341120045503Speech_Jeff_Immelt.jpg

Green – UP Bridgeport



Southwestern Connecticut's Regional Workforce Development Board



At Eastern Connecticut
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