

The First 10 Years

The Institute for Sustainable Energy



EASTERN
CONNECTICUT
STATE UNIVERSITY

Institute for Sustainable Energy

2001-11 • The First Ten Years



Table of Contents

| | |
|--|----|
| Institute for Sustainable Energy | 1 |
| Educational Outreach | 2 |
| Energy Solutions..... | 5 |
| Public Policy | 8 |
| Information Resources | 9 |
| Green Jobs Initiative..... | 10 |
| Affiliations | 11 |
| Recognition | 12 |
| Current and Past Board Members | 13 |
| Current and Past ISE Personnel | 14 |
| Special Thanks | 16 |
| Links & Contact Information..... | 17 |

The Institute for Sustainable Energy

We are pleased to present you with this progress report on the activities and achievements of the Institute for Sustainable Energy at Eastern Connecticut State University. The report features examples of the projects both completed and some still underway within Connecticut for which ISE has played a strategic role. Each reflects our commitment and contribution towards helping Connecticut fulfill its goals to be the most energy efficient state in the US, while safeguarding the environment, growing the economy and developing a competent, job ready Green Collar workforce. A major reason for our success can be attributed to the foresight to locate ISE within Eastern's Center for Sustainable Energy Studies, an initiative with a clear commitment to an economically, socially and ecologically sound Connecticut. I also must comment that the supporters and partners we have worked with over the past decade, and our Board of Advisors have helped us to focus on a mission that engages our staff and students in issues critical to promoting a more sustainable future for our school, communities and our state.

Sincerely,



William M. Leahy
Director



At Eastern Connecticut
State University

The Board of Trustees of the Connecticut State University System established a Center for Sustainable Energy Studies at Eastern Connecticut State University and designated it as a Connecticut Higher Education Center for Excellence on July 14, 2001. In support of the center, the Board of Trustees created the Institute for Sustainable Energy and advised ISE to commence programs which promote and improve the awareness and understanding of energy issues throughout the region. ISE is an application center advancing the deployment of commercially available, cost-effective technologies and proven strategies. ISE was established as an administrative department of Eastern, funded through grants, contracts and funds collected from participants in its programs.

ISE's mission... to identify, develop and become an objective energy and educational resource regarding the means for achieving a sustainable energy future for Connecticut.

The primary focus of the activities undertaken by the staff of ISE fall into four areas: conducting educational outreach, developing energy solutions, supporting the development of Public Policy and dispensing Information Resources. In addition, the institute is involved in supporting job creation and conducting training in support of Connecticut's Green Job Initiative.

Educational Outreach

Education is one of the fundamental ingredients for building a sustainable future. ISE provides energy-related educational curriculum and programs in two main areas. The first, K-12 Curriculum Development, addresses energy and sustainability issues. The second area, Professional Training, relates to building construction and operation, building code compliance and green collar job workforce development.

K-12 Curriculum Development

Connecticut Energy Education (www.ctenergyeducation.com) is a curriculum resource for Connecticut educators. ISE created lessons and resources that are funded by the Connecticut Energy Efficiency Fund. Although initially designed for use by Connecticut high school teachers, many lessons are applicable to middle school through college classes. The materials are web-based and have wide use by both Connecticut educators and others. Lessons focus on the fundamentals of energy, energy efficiency, climate change, green schools and green jobs.

To develop the Connecticut Energy Education programs, ISE manages a stakeholder process. ISE staff and members of the educational community developed the grade 9-12 energy and environmental education curriculum in support of the current Connecticut Department of Education's Science Framework. This process brings together representatives of key constituencies, including educators, science supervisors and energy experts. Connecticut Energy Education provides teachers with lessons and resources which encourage students across the state to learn how energy use impacts us all.



Teacher training includes summer field trips to key energy sites around New England, including Millstone Point generating station, ISO New England, and the wind turbine at Jiminy Peak (as shown above) in 2008.

Since 2001, ISE has held more than 50 workshops engaging over 2,000 teachers in energy education topics for use in their classrooms throughout Connecticut.

In 2005, educators from across the country attended the National Science Teachers Conference at the Hartford Convention Center. The three-day event included more than 259 workshops, speakers and field trips. The National Science Teacher's conference returned to Hartford in 2011. ISE's Laurel Kohl was a key member of the organizing committee for both conferences.

In 2008, the institute held a professional development conference for the science, transportation and building trade instructors of the Connecticut Technical High School System. This conference provided support for integrating energy efficiency and green job information into course materials in the fields of drafting, electricity, plumbing and HVAC throughout Connecticut.

United Nations Children's Conference

In 2004, ISE coordinated educational programs for the United Nations Children's Conference on the Environment. Also referred to as Tunza, the program assembled more than 450 children and 250 adults from 50 nations (some pictured to



the right). The ISE staff and faculty from Eastern Connecticut State University provided the framework for the educational programming, including 82 workshops, 31 field trips, and 8 seminars over the five-day event. Through small group activities, the children came together to share their thoughts on biodiversity, indigenous peoples, and conserving water and energy. ISE's Laurel Kohl served as the conference program coordinator and Eastern students acted as group facilitators, counselors and assistants.

Keep Connecticut Cool

For the past five years, ISE has administered Keep Connecticut Cool (KCC), a climate challenge contest for students in grades 4-12. Initially funded by the Emily Tremaine Foundation, and now by the Connecticut Energy Efficiency Fund, KCC encourages students to create climate change solutions for their schools and communities. Prizes are awarded for the student teams who demonstrate best innovation, energy savings, collaboration and overall achievement.

KCC has engaged more than 90 student teams and 700 students. Projects have included recycling, transportation initiatives, use of renewable energy and energy efficiency actions. By raising climate awareness, students learn valuable skills and promote a greener future for their schools and communities. Team mentors and members attend workshops, held at locations such as Mystic Aquarium, Connecticut's Beardsly Zoo and the Connecticut Science Center, to learn how to organize their projects, develop support in their schools and communities and leadership skills.



KCC winners: (Left) 2010- John Lyman Elementary School, Middlefield, CT. (Below) 2009- Nathan Hale Elementary School, New London CT public schools.





Geothermal instructor Peter Governale leads a site visit of the well field at Forestville Elementary School in Bristol, CT, during ISE's code training on renewable energy systems for local building officials. Funding provided by the American Recovery and Reinvestment Act.

Professional Training

Providing professional training to the energy business environment is essential for Connecticut's growth. Since 2002, ISE has hosted hundreds of professional seminars, workshops and symposiums on sustainable energy topics, energy efficient products, the evaluation of distributed generation applications and creating environmentally sound "Green Schools and Campuses." ISE focuses on training for energy professionals on building codes, building operations, energy auditing, renewable energy technology and green jobs.

In 2003, ISE held "On the Path to Sustainability". This was Connecticut's first major conference on energy sustainability planning and climate change issues.

Conference attendees learned how to develop and manage an action plan to create a sustainable energy future for their organizations. They also attended workshops which provided participants with guidelines, planning, resources and benchmarking tools.

Since 2005, ISE has provided training for building code officials under the authority of the Connecticut Department of Public Safety. ISE partnered with NEEP to hold 20 Rescheck/Comcheck training sessions for Connecticut's local code inspectors and officials to clarify energy code compliance. ISE and the Department of Public Safety conducted workshops on "IECC 2009 vs. High Performance Building Standards" for 300 local code officials and inspectors.

In 2008, ISE partnered with UConn's Center for Biofuel to develop the New England Biodiesel Workshop. Biodiesel produces cleaner emissions than fossil-fuel based diesel. The regional workshop offered a forum to discuss issues surrounding the collection and conversion of waste fats, oils and greases into marketable biodiesel fuel for transportation and home heating fuel in Connecticut.

In 2011, ISE provided technology training for more than 200 local code officials and building inspectors on Geothermal Exchange Heating and Cooling, Solar Photovoltaic and Solar Thermal Systems. Funding for this initiative came from the American Recovery and Reinvestment Act for training incumbent workers.

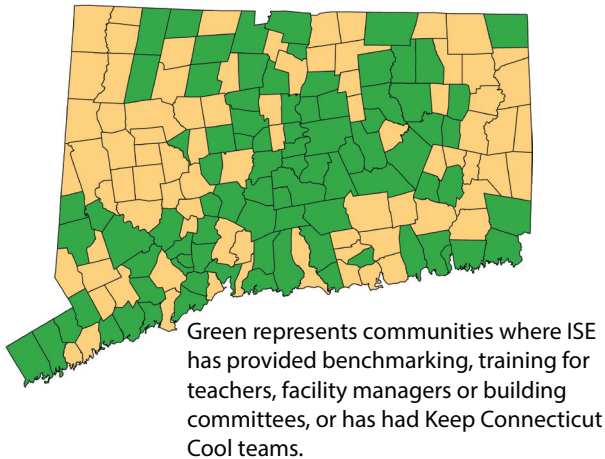


More than 80 Eastern students have gained valuable green collar job career experiences serving as interns at ISE.

The Institute for Sustainable Energy provides assistance in developing Energy Solutions for state agencies, municipal governments and school systems. By assisting in the development of a sustainable energy infrastructure, ISE hopes to spread knowledge and improved building efficiency throughout Connecticut.

Assisting Communities

ISE recognizes the importance of providing communities with the tools to become more sustainable and energy efficient. Below is a map highlighting Connecticut towns that ISE has worked with.



In 2002, ISE became an Energy Star Partner with Region 1 of the U.S. Environmental Protection Agency in recognition of ISE's role in training, benchmarking and outreach to schools and communities in the state.

In 2005, ISE initiated a multi-family energy efficiency study which identified barriers to improve the efficiency of multi-family housing. ISE also held Building Operator Certification training for multi-family facility staff.

ISE assisted CHFA to improve the building standards required for loans for affordable housing. CHFA now mandates Energy Star standards for all new buildings.

ISE also assists Windham residents in the "Neighbor-to-Neighbor" energy challenge, a community approach to energy savings. The program is designed to engage community members and groups to work together to reduce energy waste, save money and create cleaner, more livable communities.

Benchmarking Connecticut Schools and Buildings

When inefficiency in many Connecticut schools was observed, ISE conducted research which included completing Energy Star Portfolio Manager benchmarking on 119 public schools. In 2006, The Energy Efficiency Study of Connecticut Schools was distributed. This report discussed why Connecticut's schools ranked so poorly when compared to schools nationally and offered ways to reverse this trend. One major cause of poor scores is that over 90 percent of Connecticut schools were built before 1978. Energy costs were cheap and building thermal standards were not as stringent. Consequently, most Connecticut schools are inefficient users of energy with an average benchmarking score of 26 on a scale of 0 to 100. The state's communities, including taxpayers and students, have a great deal to gain from the adoption of energy efficiency building standards as a requirement in school construction projects. Communities should not only focus on energy saving in new schools, but address the over 1,000 existing schools also in need of improvement. ISE continues to offer benchmarking for Connecticut schools and municipal buildings to assist communities in evaluating their energy use. This will help communities achieve Connecticut's climate change action plan goals and provide help in identifying facilities in need of capital, operations and maintenance improvements. To date, ISE has benchmarked more than 400 schools, 100 municipal buildings and 120 state buildings.



Developing a Model for Green Campuses

The Green Campus Initiative is an ongoing project to promote an effective approach to sustainability on campus grounds for colleges and universities. Universities are institutions dedicated to research and education to promote a healthy, prosperous and sustainable future for all society. By encouraging institutions to implement solutions to climate change, ISE seeks to expand the role of universities at every level of the climate change discourse, to reduce greenhouse gas emissions and establish a network of university communities working together toward a common goal. In order to help schools meet their energy and environmental goals, ISE developed “12 Steps to a Green Campus”, a guide for colleges and universities to lower their environmental impact. This guide is the backbone of ISE’s Connecticut Green Schools website (www.ctgreenschools.org).

In 2002, the university’s former President David Carter committed Eastern Connecticut State University to the concept of sustainability by signing the Talloires Declaration. This committed the University to take action by developing policies and practices that promote environmental stewardship. In 2007, Eastern’s President Elsa Nuñez signed the American College and University Presidents’ Climate Commitment, pledging Eastern to become a model green campus and achieve carbon neutrality by 2050.

Eastern is taking a comprehensive approach to evolve into a sustainable, energy efficient campus. Eastern’s Facility Management Department and the Center for Sustainable Energy Studies have been instrumental in creating specific initiatives to promote sustainability on campus. Initiatives include: the development of a sustainable energy studies program; retrofitting existing buildings with new efficient technology; installing a geothermal system in the High Rise residential hall; completing four new buildings designed to LEED standards (shown above); installing renewable energy systems; and creating a plan to reach zero carbon by 2050. ISE has also assisted Southern and Western Connecticut State Universities in preparing similar plans.



The bioswale located at the entrance of Eastern’s LEED Silver Science Building



The Interdistrict Discovery Magnet School in Bridgeport, CT is a LEED Silver Building.

High Performance Schools

High performance (HP) schools provide multiple benefits to students and communities. For students and teachers, these buildings provide a healthier atmosphere and an enhanced learning environment. Communities benefit through lowered lifetime operating costs and improved environmental stewardship. However, many barriers prevent schools from meeting HP standards, including a lack of understanding of HP building principles. In 2005, the Connecticut Clean Energy Fund, working with the Connecticut Green Building Council, and ISE developed a strategy for promoting HP schools standards. The four-part strategy included utilizing a stakeholder

process, changes in school building standards, educational outreach to communities, and an inventory to continually monitor all public school building projects. ISE was designated to facilitate and manage these four activities. The stakeholder process, funded by a grant to the Connecticut Green Building Council (CTGBC) by the Kendall Foundation, allowed for discussion of a wide range of ideas regarding the benefits and barriers to both constructing high-performance, energy-efficient, healthy schools, and to the integration of renewable energy systems in new school projects. This discussion helped form the building standards found in PA 07-242 requiring all Connecticut schools to be built to LEED Silver or equivalent standards. Currently, ISE is tracking more than 100 green school construction projects in Connecticut. ISE also serves also as the Connecticut green school advocate to the USGBC.

Special Projects



ISE and aquarium staff and interns conducted an energy audit at Mystic Aquarium and Institute for Exploration.

In 2009, the management at the Mystic Aquarium Institute for Exploration requested that ISE help their Energy Conservation Committee to develop a plan to “green the aquarium.” The process included facilitating a workshop for Mystic’s green team, collaborating to evaluate a sustainability plan, and conducting an energy study. Mystic’s green team has since made significant progress in improving energy efficiency and recycling. The combined Mystic Aquarium and ISE audit team is pictured to the left.

In 2009, ISE was asked to conduct an energy audit of the Hole in the Wall Gang Camp in Ashford, CT. The camp is a non-profit, year-round center serving children and families coping with serious illnesses. ISE inspected the camp’s 40 buildings, and developed recommendations for energy conservation and efficiency improvements. ISE used its “12 Steps to a Green Campus” tool to create a process for making Hole in the Wall a model sustainable green camp. Hole in the Wall hopes to become one of the first “Green Certified” camps in the United States, and wants to apply these principles to their 10 camps throughout the world.

“The Institute for Sustainable Energy at Eastern Connecticut State University has helped our Camp raise awareness, increase involvement, and instill practices and policies throughout the organization that are environmentally conscious and responsible. Their students contributed their time and good will to complete an audit of our facilities, helping us limit our impact on the environment and helping in the process become more efficient. We are grateful for their support in helping us pave an environmentally responsible path moving forward.”

James “Jimmy” Canton
Chief Executive Officer
Hole in the Wall Gang Camp Organization



Public Policy

The Institute for Sustainable Energy is dedicated to supporting public discussion on energy and sustainability issues before public acts are established. ISE also provides impartial information and resources to support the exchange of information on state and regional energy issues. ISE typically contributes testimony when policy is being developed on topics such as building standards, energy conservation and load management, distributed generation, renewable energy sources, climate change, alternative fueled vehicles and green jobs creation.

Regional Energy Sustainability Studies

ISE actively supports studies on regional energy sustainability issues and applications. In 2001, ISE was asked by the Connecticut legislature to evaluate the power supply and conservation opportunities in southwest Connecticut to study transmission congestion issues facing the region. This study resulted in a Comprehensive Assessment Report. ISE was selected to lead a task force in preparing an environmental assessment and plan of Long Island Sound's natural resources. Since then, ISE has facilitated the development of two state energy plans in 2006 and 2007, and provided testimony on many new energy related laws.

Currently ISE serves on the Governor's Electric Vehicle Infrastructure Council. ISE reported on demand response impact of electric vehicle charging and the design of public outreach and implementation pilots supporting the sale and use of electric vehicles.

ISE contributed to the development of several public acts concerning energy efficiency in Connecticut.

- **PA 05-01. An Act Concerning Energy Independence.** The act removed barriers to the installation of combined heating and power energy plants. Projects approved since the passing of the act have provided significant energy resources for Connecticut.
- **PA 06-187. An Act Concerning General Budget and Revenue Implementation Provisions,** requires that all new construction of any state facility costing more than \$5 million must comply with LEED Silver construction standards.
- **PA 07-242. An Act Concerning Electricity and Energy Efficiency.** This act requires the use of High Performance Building Standards for the design of all public school construction projects including new buildings, additions and older buildings being "rebuilt as new".
- **PA 071, 04-4, & 07-5.** ISE co-chaired the Fuel Diversity Committee, which recommended State support for biodiesel production from waste vegetable oil in Connecticut for diesel vehicles and home heating.
- **PA 10-156. An Act Implementing the Recommendation of the Alignment of Postsecondary Education and Employment in the Green Industry.** ISE meets regularly with UCONN and the Connecticut community colleges to discuss ways to collaborate on green technology and green job initiatives.
- **PA 11-80. An Act Concerning the Establishment of the Department of Energy and Environmental Protection and Planning for Connecticut's Energy Future.** ISE testified in support of the use of performance contracts for funding public energy important projects, and serves on the "Lead by Example" technical review committee.

Public Acts

Information Resources

ISE serves as a clearinghouse and resource for energy sustainability information. By maintaining six websites and utilizing student interns for research, ISE makes energy and sustainability related information available to state residents. Through websites spanning from general energy information to specifics in education, green schools and biofuel, ISE has become a trusted source of information related to energy and sustainability for the state of Connecticut and beyond.

Statewide Resources



At Eastern Connecticut State University

ISE's site is the central hub of all the information that ISE has to offer. This includes information on energy and sustainability topics, information about ISE, and downloadable resources and links to many other organizations. (www.SustainEnergy.org)



CT Energy Information was developed by the Connecticut Department of Public Utility Control, the Energy Conservation Management Board and ISE with input from the utilities. It is designed to help consumers navigate energy related resources and more than 100 available sites and programs. (www.CTEnergyInfo.com)



Connecticut Energy Education
www.ctenergyeducation.com

Connecticut Energy Education is a resource for Connecticut educators. The website provides curriculum, lessons and other resources for the classroom. Materials are aligned with the Connecticut Science Framework and feature lessons on the fundamentals of energy, energy efficiency, climate change, green schools and green jobs. (www.CTEnergyEducation.com)



CT Green Schools is an ongoing initiative to promote an effective approach to building green schools and operating more sustainable schools for K-12 schools, college and campuses across the state. (www.CTGreenSchools.org)



Keep Connecticut Cool (KCC) supports ISE's contest for students and teachers to learn more about climate change and how they can participate in The Climate Change Challenge. KCC "institutionalizes" awareness and solutions to energy efficiency and climate change in the lives of participating students. (www.KeepConnecticutCool.org)



Connecticut Biofuel is designed to provide basic information related to the production and use of biofuel, and to promote biodiesel production and usage in the state of Connecticut. (www.CTBiofuelInfo.org)



ISE is an EPA EnergyStar Partner and provides information on efficiency and sustainability throughout Connecticut by utilizing the tools available on www.EnergyStar.gov website.

ISE Speaks

Over the past 10 years, ISE staff have given hundreds of public presentations ranging from technical to education, and energy policy to solutions. ISE speakers have presented to community groups, schools and professional organizations, including presenting at several national conferences.



Green Jobs Initiative

Green jobs restore and improve the environment and support economic recovery. The “Pathways from Poverty” program sponsored by the U.S. Department of Labor and the American Recovery and Reinvestment Act (ARRA) was designed to create more jobs throughout the nation. Connecticut has a number of opportunities to create employment through the creation of a “Green Collar” workforce. ISE actively supports Green Collar Job enterprises recommended by State Government and by the ARRA.



Green-Up-Bridgeport is a workforce development program funded by a competitive, U.S. Department of Labor grant for \$4.4 million awarded to The Workforce Inc. The program’s goal is to train unemployed residents of Bridgeport’s 12 most impoverished neighborhoods in green collar jobs. U.S. Secretary of Labor Hilda L. Solis addresses the first class participants in May of 2010. ISE designed the green jobs curriculum for **Green-up-Bridgeport**, including week-long modules on green building construction, alternative fuel and fleet transportation, sustainable landscaping, brownfield-site recovery, building operations and deconstruction.

Green Job Certification

Energy efficiency, clean energy and sustainability are key components for economic independence. By providing training programs that lead to nationally recognized credentials and certification for those who are unemployed, under-employed or seeking advancement, ISE has expanded its mission to support workforce development in Connecticut.

- ISE has made it a priority to strengthen the background of workers in Connecticut’s green job market. The task forces provide support for all levels of infrastructure from job creation and monitoring of needs, to training workers in energy related fields.
- ISE works with the Regional Workforce Investment Boards, the Connecticut Technical High School system, Connecticut Community College System, and CBIA to support green collar job certification programs to prepare students for future green collar jobs.
- Through the American Recovery and Reinvestment Act, ISE is able to deliver training on IECC 2009 and ASHRAE 90.1 2007 to educate municipal code officials in the application of renewable energy technologies.
- ISE has employed more than 80 student interns since 2002, coordinating this experience with the Sustainable Energy Studies program and other majors at Eastern. ISE has helped prepare them for careers in the energy industry as well as other professional careers including graphic design, data management and communication.

Contributing Membership

ISE is a contributing member of a number of profession groups both nationally and within the State of Connecticut that encourage education of energy efficiency, renewable energy technology, green building standards, sustainability, and green jobs and workforce development.

- William Leahy serves on the **Connecticut Energy Advisory Board** as a representative from academia and on the “Lead by Example” technical advisory committee of the **Connecticut Department of Energy and Environmental Protection**.
- He also serves on the board of the **Connecticut Association of Energy Engineers** and is chair of their Education Committee; the **Connecticut Green Building Council (CGBC)** and chairs the Green School Committee; and is Connecticut’s Green School Advocate to the **U.S. Green Building Council**.
- ISE serves as committee Chair for energy and green building standards for **B-Green 2020**, the urban sustainability model program being developed by Mayor Bill Finch of the city of Bridgeport, CT.
- ISE is a stakeholder group member for U.S. Department of Energy **Clean Cities Program** for the Norwich, CT, program supporting alternative fuels and transportation.
- ISE supports the state’s Workforce Investment Boards (WIBs), including serving on Green Job councils for the **Eastern WIB** and **The Workplace**. These councils oversee the implementation of the U.S. Department of Labor grants for the development of green job training.
- ISE serves as co-chair of the Higher Education Committee of the **American Council on Renewable Energy (ACORE)** and the advisory board of the Connecticut Community Colleges’ **Sustainable Operations, Alternative & Renewable Energy Initiative (SOAR)**.
- ISE served on the **Green Jobs Council/State Energy Sector Partnership**, the **Connecticut Energy Workforce Development Consortium**, and the legislature’s **Green Jobs Coordination and Policy Committee** to actively propagate green job creation.
- Laurel Kohl served on the board of the **Connecticut Science Teacher’s Association**, including as the president in 2006-08. Laurel is a board member of the **Connecticut Outdoor and Environmental Educators Association**. She served as program chair of the 2005 **National Science Teachers Association** Hartford Regional Conference, and as leader for its 2011 Hartford Regional Meeting.
- ISE staff has served as a member of multiple committees for the **Connecticut Climate Change Action Plan Stakeholder** process. Laurel Kohl co-chairs the Education Committee, focused on networking organizations and collaborating on various strategies to broaden public awareness on Climate Change impacts.

Participating Membership

ISE staff members have participated in membership in the following organizations:

Association for the Advancement of Sustainability in Higher Education, Association of Energy Engineers, Connecticut Academy for Education in Mathematics, Science and Technology, Connecticut Partnership for Sustainable Education, National Science Teachers Association, Northeast University Coalition for a Sustainable Future, U.S. Department of Energy’s Northeast Regional Combined Heat and Power Initiative, U.S. Green Building Council.

Recognition

The Institute for Sustainable Energy has received various awards and recognitions over the past ten years including:

2003 Green Circle Award from the Connecticut Department of Environmental Protection. The Green Circle Award honored ISE's work in support of the development of the Connecticut Climate Change Action Plan.

2004 Energy Star Leadership Award. The Institute for Sustainable Energy received the national Energy Star Partner of the Year Award for excellence in energy education.

2004 EPA Region 1- Environmental Merit Award for ISE's outreach for the Environmental Protection Agency's regional training initiative.

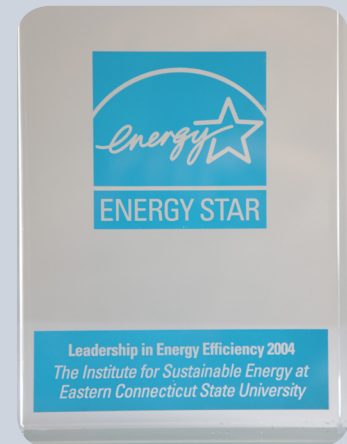
2005 EPA Region 1- Environmental Merit Award for benchmarking schools and state buildings in Connecticut.

2006 Connecticut Quality Innovation Gold Award for "The Greening of Eastern," a team effort involving Eastern's Green Campus Committee, led by the Facility Management Department, the Sustainable Energy Studies Department and ISE.

2007 Green Circle Award from the Connecticut Department of Environmental Protection, for the Green Campus Initiative in partnership with Eastern's facility management department and the Sustainable Energy Studies program and ISE.

2007 Connecticut Quality Innovation Silver Award for a collaborative approach which engaged Eastern faculty and input from public school teachers to develop the Connecticut Energy Education program.

2009 EPA Regional Merit Award was presented to William Leahy for his contributions to protect and improve the environment in New England.



ISE was recognized as the **Energy Star Partner of the Year** at the Annual Energy Star Participant event held in Washington, D.C., by the U.S. Department of Energy and the US Environmental Protection Agency. The award recognized ISE for excellence in energy education related to instruction and application of Portfolio Manager Benchmarking in the Northeast region.



Laurel Kohl, ISE Education Specialist, with Eastern faculty and staff, displays the Connecticut Quality Improvement Award received for the innovative and collaborative approach used to develop the Connecticut Energy Education program. Laurel coordinated the project team that included Karen Schroeder, Dr. Catherine Tannahill, Dr. Patricia Klein, Dr. Jeanelle Day, also pictured Dr. Elsa Nuñez and William Leahy.

Current and Past ISE Board Members

The Institute for Sustainable Energy was initially funded through the Connecticut Conservation and Load Management Fund in November 2001, and organized as a department at Eastern Connecticut State University. It has a Director of Operations, appointed by the President of Eastern Connecticut State University, and a Board of Advisors from business, state government and the community. The Board of Advisors' meetings are held bi-monthly.

Current ISE Board

Arthur H. Diedrick, Jr. – ISE Board
Chair appointed by the President of
Eastern Connecticut State University

Shirley Bergert
Public Benefits Task Force
Connecticut Legal Services, Inc.
Appointed by the President of
Eastern Connecticut State University

Kevin DelGobbo
Chairman, Connecticut Department of
Public Utility Control

Richard Steeves
Chairman, Energy Efficiency Board
Office of Consumer Counsel

Bob Wall
Energy Market Initiatives
Connecticut Clean Energy Fund

Sean West
Environmental Safety
United Technologies Corp.

Richard Barredo 2002-04
Past Chief Operating Officer
Connecticut Clean Energy Fund

Donald Downes 2002-09
Past Chairman
Department of Public Utility Control

Bryan Garcia 2006-07
Past Director
Energy Market Initiatives
Connecticut Clean Energy Fund

Dana Kubachka 2009-11
Department of Public Utility Control

John A. Mengacci 2002-10
Past Undersecretary
Division of Strategic Management
Office of Policy and Management

Emily Smith 2004-06
Government and Corporate Relations
Connecticut Innovations

Past Board Members

Current and Past ISE Staff



William M. Leahy - Chief Operating Officer

Bill holds a B.S. and M.S. in Industrial Education from Central Connecticut State University, and a M.S. in Business from Rensselaer. He earned a Certified Energy Manager (CEM), Certified Energy Auditor (CEA), and Certified Sustainable Development Manager (CSDM) from the Association of Energy Engineers and is a LEED Accredited Professional from the U.S. Green Building Council. Leahy has 40 years of experience in public education and/or energy management. In 2002, he was appointed director at the Institute for Sustainable Energy at Eastern Connecticut State University.

Laurel L. Kohl - Energy Technical Specialist for Education & Training

Laurel is responsible for energy education-related projects at ISE, including curriculum development and delivery, coordination of workshops, conferences and education outreach. Laurel holds an A.S. in Nursing, a B.G.S. in Environmental Earth Science from Eastern Connecticut State University, and a M.A. in Teaching from Sacred Heart University. She is a LEED Green Associate. In 2002, she was appointed to the institute's staff.



Laura S. Worthington - Energy Technical Specialist for Education & Training

Laura holds a B.S. in Physical Geography from the University of Liverpool, a P.G.C.E. in Secondary Education from Edge Hill University and a M.S. in Secondary Education from Eastern Connecticut State University. She is responsible for energy education and workforce development related projects at ISE, including curriculum development and delivery, and coordination of workshops, conferences and education outreach. Laura was appointed to the institute's staff in 2009.

Charles A. Stoloff - University Assistant

Charles holds a B.S. in Environmental Earth Science from Eastern Connecticut State University. He was awarded Sustainable Energy Studies Student of the Year in 2009 and 2010 by Eastern's Environmental Earth Science Department. Stoloff served as a student intern at ISE from 2008-10 and assumed the position of University Assistant following graduation in 2010.



Past Staff

Paul Aresta - Information Officer; 2002-04

Adam Brzozowski - University Assistant; 2008

Andria Fraser - University Assistant; 2009

Sarah Galbraith - University Assistant; 2004

Bette Giordano - University Assistant; 2004

Christy Hedstrom - CSU Secretary; 2002-04

Candace Barnes - University Assistant; 2007-10

Chet Morgan - Consultant; 2002

Joel Rinebold - Executive Director; 2001-04

Rebekah Rushford - University Assistant; 2006

Brendan Sayers - Energy Tech Specialist, IT; 2002-03

Karen Schroeder - University Assistant; 2005-08

William Stillinger - Consultant; 2002



Current ISE student interns, October 2011

2011 Interns and Student Workers

Lindsey Belliveau - Environmental Science; Digital Art
Brett Boissonneault - Business & Economics
Kristina Cedrone - Environmental Science
Gerad Fredericks - Visual Arts
Haley Garman - Business Administration
Nick Jones - Environmental Science
Ian McGlynn - Communication

Dan McIsaac - Communication
Courtney Ojard - Communication
Christopher Lorentson - Environmental Science
Laura Panno - Environmental Science
Corey Pelletier - Environmental Science
Erica Tefft - Environmental Science

Past Interns and Student Workers

Alicia Anania, Bajar Ansari, Kristie Beaulieu, Michael Bilheimer, Adam Boice, Darryl Bordeleau, Adam Brzozowski, Bethany Busch, John Colbridge, Cayenne Curtis, Jeremy Drosdeck, Steven Dumas, Jillian Dumoco, Russell Ferreira, Haley Fongemie, Gabriella Fox, Sarah Galbraith, Robert Gates Jr., Maria Generis, James Gibson, Michael Harvey, Chris Heneghan, Justin Henderson, Veronica Hooker, Sham Husain, Andrew Hutcheon, Jennifer Keyes, Paul Kim, Heather Kohl, Keith Kuckert, Ben Kuye, Allen Lungren, Andrew Macomber, Jennings Mansfield, Frances Massy, Azard Mahamoon, Emily May, Candace Maynard, Lynn McAleer, Brian McCann, Amzar Mohd, Matthew Mucci, Nauman Nafees, Dan Nicolia, Kathy Orloski, Ginger Osinuga, Josh Parda, Andrew Pekhnik, Jacqueline Platt, Stephanie Plude, Nicholas Policastro, Benjamin Rach, Michael Radford, Rizan Rafi, Sarah Reed, Katrina Reynolds, Rebekah Rushford, Danielle Ryan, Victoria Saulnier, Stacie Smythe, Jason Staples, Charles Stoloff, Jason Taraskiewicz, Evan Thomas, Ryan True, Norma Vivar-Orum, Lauren Watkins, Aaron Zambarano

Special Thanks

We would like to thank the staff and faculty of Eastern Connecticut State University for their support and encouragement of the Institute for Sustainable Energy over the past 10 years. We especially would like to thank the following:

Dr. David Carter for his vision to create ISE and his leadership in our initial years of operation.

Dr. Elsa Nuñez for her efforts to integrate ISE into the University community and support for career exploration and service learning to Eastern's students.

Dr. Michael Pernal for actively representing the University on ISE's Board of Advisors.

Mr. Kenneth DeLisa and the staff of the Office of Institutional Advancement and Community Relations and the staff of the Office of Fiscal Affairs for providing assistance in managing ISE's finances.

The present and past members of the ISE Board of Advisors for the unselfish giving of their time, knowledge, and wisdom to help guide the mission and activities of ISE.

The Department of Public Utility Control (now the Department of Energy and Environmental Protection), and the members of the Energy Conservation Management Board (now the Energy Efficiency Board), for their confidence in the work and capabilities of the ISE's staff and Eastern's students, and for their financial support over the years.

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Cover photo of the solar panel belongs to Rob Baxter, the others belong to Eastern Connecticut State University.

Links & Contact Information

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| American College & University Presidents Climate Commitment | www.presidentsclimatecommitment.org |
| Be Green 2020, Bridgeport, CT | www.rpa.org/bgreen/BGreen-2020.pdf |
| Clean Energy Investment & Finance Authority | www.ctcleanenergy.com |
| Connecticut Climate Change | www.ctclimatechange.com/ |
| Connecticut Department of Energy and Environmental Protection | www.ct.gov/deep |
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| Hole in the Wall Gang Camp | www.holeinthewallgang.org |
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| The WorkPlace | www.workplace.org |
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The Institute for Sustainable Energy



At Eastern Connecticut
State University

Office Address

182 High Street
Willimantic, CT 06226

Mailing Address

83 Windham Street
Willimantic, CT 06226

Office Phone

(860) 465-0253

Fax

(860) 465-0261

Email

ise@easternct.edu

Websites

www.sustainenergy.org
www.ctenergyinfo.com
www.ctgreenschools.org
www.ctenergyeducation.com
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