

15-Year Report

Wisconsin K-12 Energy Education Program

www.uwsp.edu/keep

KEEP Partners

Alliant Energy
CESA 10
Cool Choices
Earth Passengers
Energy Center of Wisconsin
Energy Federation, Inc.
Focus on Energy
Friends of the Mead
LEAF, K-12 Forestry Education Program
Global Environmental Teachings
Madison Gas & Electric
Midwest Renewable Energy Association
Office of Energy Independence
University of Wisconsin-Stevens Point -
College of Natural Resources
We Energies
Wisconsin Energy Conservation
Corporation
Wisconsin Center for
Environmental Education
Wisconsin Department of
Public Instruction
Wisconsin Public Service
WPPI Energy
Xcel Energy



Supporting Energy Literacy through KEEP: It All Adds Up

The Wisconsin Center for Environmental Education is proud to present you with this 15-year report of the Wisconsin K-12 Energy Education Program (KEEP). The main feature of this report is a timeline that highlights how KEEP helps teachers increase and improve energy education in Wisconsin. Also included is a list of partners who have worked with KEEP over the past 15 years to make these accomplishments possible.

KEEP is successful because we have a strong infrastructure and established networks that have been built and strengthened over the past 15 years. We exist because of our partnerships with utilities and the support of the energy community. A dedicated and talented staff works together as a team to ensure program goals are met and our partnership with stakeholders is productive and meaningful. Active communication with K-12 educators and partners identifies students' learning needs and helps create educational strategies that addresses those needs. This collaboration is key to ensuring KEEP's effectiveness: Each year KEEP introduces teachers to new projects and activities that help them become more competent energy educators.

Among the highlights in the timeline is a tally of teachers and students reached. Around 400 teachers attend university-credited KEEP courses each year. After 15 years of offering courses, there are over 5,000 K-12 teachers from a variety of subject areas who have taken at least one KEEP course. This translates into 2,520,000 students who have had the opportunity to be educated about energy. How did we get this number? Each teacher on average reaches 60 students per year (considering the majority of teachers in Wisconsin are elementary educators who have self-contained classrooms averaged with secondary level educators who teach multiple classes). In one year alone, 400 teachers may reach over 24,000 students. As additional teachers take classes, teachers from previous years continue to incorporate KEEP experiences into classroom lessons. As a result, more teachers are reaching more students, until potentially millions of students are becoming better educated about energy.

To further illustrate KEEP's accomplishments, the table "KEEP by the Numbers" enumerates ways teachers and students have learned about energy and have become active in energy conservation. The support services and materials provided to teachers fall into five program areas: professional development, resources, networking and outreach, student involvement, and funding opportunities. By ensuring that there are services in each area, teachers know they can turn to KEEP for support in all their energy education endeavors. Through ongoing collaborations among Wisconsin utilities, Focus on Energy, University of Wisconsin-Stevens Point, and other partners, teachers can continue to count on KEEP to help them improve and increase energy education in Wisconsin for years to come.



College
of Natural Resources



Partner Quotes

“More than ever, energy and environmental issues continue to grab headlines and impact our everyday lives. Energy education is the key to sound energy policy decisions, helping guide new and emerging technologies, maintaining a high level of environmental protection and creating a strong economy.”

KEEP is a leader in energy education and has played a significant role in educating teachers, administrators and students throughout Wisconsin. KEEP is the best bang for our resource buck. KEEP up the great work!”

Jim Jenson, Madison Gas & Electric

“KEEP is a long-standing leader in energy education, and Focus on Energy is proud of our 10 year partnership with such an important organization. KEEP has engaged thousands of teachers and students in the topic of energy awareness, and continues to be a valuable resource for energy education in Wisconsin. KEEP’s resources and course curriculum are designed to empower teachers to develop lesson plans that are fun, interactive, and connect students to their community through the knowledge of energy efficiency and renewable energy.”

Rhonda Pittman, Focus on Energy

“WPPI Energy and its members are committed to building a better energy future for our communities, and one of the most important ways we can do so is through outreach to teachers and students. KEEP’s energy initiatives play a central role in our efforts to reach the next generation of energy users. We congratulate KEEP on 15 years of excellent education in Wisconsin schools.”

Cheri Tessmann, WPPI Energy

“Over the past 15 years KEEP has implemented a systematic approach to helping increase energy literacy of Wisconsin students and citizens. This awareness and understanding is key to helping people to make good energy related decisions for both economic and environmental reasons well into the future.”

Kelly Zagrzebski, Community Relations Leader,
Wisconsin Public Service

“Happy 15th Anniversary, KEEP! KEEP’s fifteenth anniversary is an important milestone for Wisconsin and our approach to energy education. Instead of investing in short-term projects that are quickly tabled and forgotten, public and private entities in Wisconsin invested in KEEP and created an enduring and effective resource for our state’s educators. As a result thousands of Wisconsin educators use KEEP resources every year to prepare students for the energy challenges of the 21st century.”

Kathy Kuntz, Cool Choices

“Teaching for KEEP has permitted me the privilege of bringing excellence and quality energy education to teachers all over Northeast Wisconsin. Through KEEP, those teachers have learned how to effectively bring energy concepts to life in their classrooms for hundreds of students. Many KEEP graduates have become energy conservation leaders in their schools—saving money for their district, and (not to be overlooked) saving energy resources from being used and pollution from reaching the air in their communities.”

Scott Liddicoat, KEEP Adjunct Faculty
and Science Teacher at
Green Bay Southwest High School

“KEEP has been an incredibly strong resource for energy education in the State of Wisconsin. KEEP’s outreach to teachers and students has created an educational foundation to encourage and support students in the pursuit of careers in the energy sector. KEEP has attracted admiration from several other states, and increasingly is viewed nationwide as an exemplary model of effective K-12 energy education.”

Ken Walz, KEEP Adjunct Faculty
and Chemistry and Engineering Instructor
at Madison Area Technical College

“Teachers come to us not knowing what to expect. They leave with a heightened level of confidence and they have assured me that they do, indeed, go back and teach about energy.”

Jeanine Gelhaus, KEEP Adjunct Faculty
and Science Teacher
at Medford Middle School



Comprehensive Energy Education Services for Teachers

Professional Development: KEEP courses and educational experiences motivate teachers to integrate important energy concepts into their curriculum.

Resources: From the comprehensive activity guides to KEEP's resource lending-library, teachers have many strategies to build students' awareness of energy topics and to provide experiences in energy management.

Networking and Outreach: Teachers are updated on energy events and activities through KEEP's electronic news bulletin, website (www.uwsp.edu/keep), and conference presentations.

Student Involvement: Video contests, electric-powered cars, and CFL fundraisers – these are just a few of the ways KEEP helps teachers make energy engaging and exciting for students.

Funding Opportunities: KEEP partners with stakeholders to help teachers identify and secure funds they need to increase and improve energy education in their classroom.

KEEP by the Numbers

5	Energy Education Certificates Awarded in 2011 (certificates recognize completion of at least three KEEP courses and participation in three energy education activities)
9	Bookmark contest winners each year since 2001 for a total of 99 winners over the past 11 years (KEEP receives between 150 and 200 entries annually)
33	Schools recycled old energy-inefficient refrigerators and replaced them with new ENERGY STAR® qualified refrigerators or washing machines
~24	School districts built homes with plans to certify as Wisconsin ENERGY STAR Home or to Wisconsin New Homes Program standards
99	Mini-grants awarded to help teachers implement school-based energy action plans between 2007 and 2010
1,000	The dollar amount Energy Educator of the Year recipients receive
2,000	People visited the Educator Resources Tent and Educator Workshop Tent at the Energy Fair annually
5,000	Teachers participated in KEEP inservice courses between 1997 and 2011
8,000	People visited KEEP exhibits at conferences over the past 15 years
90,000	Energy education grant funding awarded over the past four years
7,768,214	kWh saved by the <i>Bright Idea</i> Fundraiser between 2002 and 2011
too many to count!	Visits to the KEEP website (tracking began in 2006)

15 Years of Energy Education



Conceptual Framework developed

Activity Guide developed

Utilities provide Scholarships for KEEP Graduate Credit Courses

First Newsletter distributed

Promising Practices- showcasing exemplary energy education practices

MREA Recognizes KEEP for Outstanding Leadership in Renewable Energy Education

Focus

1995

1997

1999

1996

1998

2000

Steering Committee

Energy Center of Wisconsin funds KEEP

First Adjunct Faculty Meeting

First KEEP Course offered:
Energy Education in the Classroom

First Electronic Bulletin

First Advisory Committee Meeting

Program areas identified
statewide nominal assessment

Teachers in KEEP Courses

Students Reached
(see cover story)



1,000
125

tion

Focus on Energy funding

Elementary Education Supplement developed

Begin coordination of the Energy Education Bookmark Contest

2001



Educator Tent at the Energy Fair

Technology Education Focus Group

Online high school energy education supplement developed

2003



School Energy Efficiency Education Course piloted

Doable Renewables: Renewable Energy Education in the Classroom Course and Supplement developed

2005

Meeting

ed through a
essment



2002

Wisconsin Public Service holds Solar Olympics at UW-Stevens Point

Energy Education: Concepts and Practices Online Course developed

Bright Idea Fundraiser launched

2004

WEEB Energy Grants Program

KEEP begins to support Student Built Homes



Renewable Energy Education Course developed

KEEP receives IREC's Energy Recognition Award

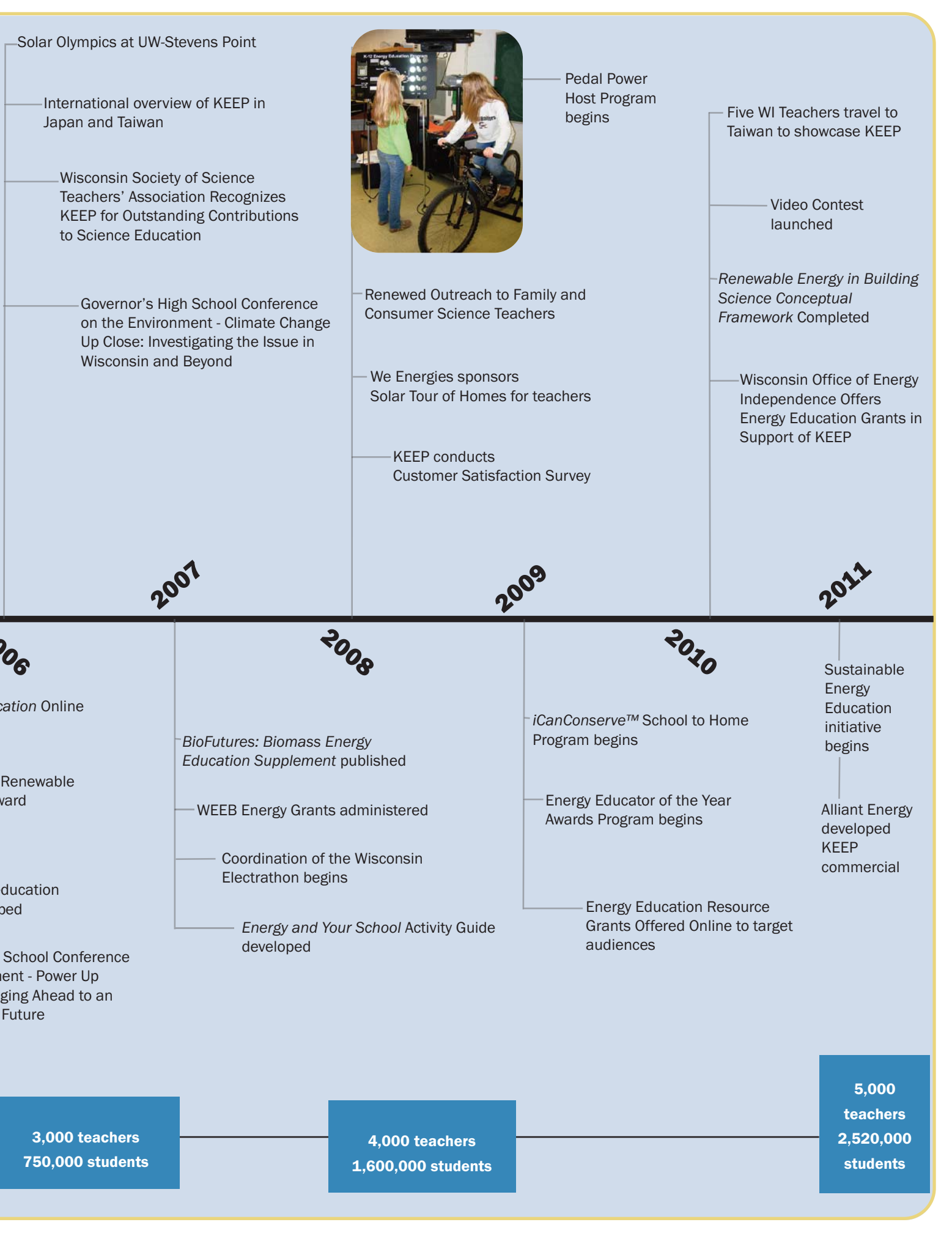
Online agriculture education supplement developed

Governor's High on the Environment Wisconsin: Charge Energy Efficient

20

1,000 teachers
25,000 students

2,000 teachers
440,000 students



Solar Olympics at UW-Stevens Point

International overview of KEEP in Japan and Taiwan

Wisconsin Society of Science Teachers' Association Recognizes KEEP for Outstanding Contributions to Science Education

Governor's High School Conference on the Environment - Climate Change Up Close: Investigating the Issue in Wisconsin and Beyond



Pedal Power Host Program begins

Five WI Teachers travel to Taiwan to showcase KEEP

Video Contest launched

Renewable Energy in Building Science Conceptual Framework Completed

Wisconsin Office of Energy Independence Offers Energy Education Grants in Support of KEEP

Renewed Outreach to Family and Consumer Science Teachers

We Energies sponsors Solar Tour of Homes for teachers

KEEP conducts Customer Satisfaction Survey

2007

2009

2011

2006

Education Online

Renewable Award

Education Award

School Conference
 Present - Power Up
 Looking Ahead to an
 Future

2008

BioFutures: Biomass Energy Education Supplement published

WEEB Energy Grants administered

Coordination of the Wisconsin Electrathon begins

Energy and Your School Activity Guide developed

2010

iCanConserve™ School to Home Program begins

Energy Educator of the Year Awards Program begins

Energy Education Resource Grants Offered Online to target audiences

Sustainable Energy Education initiative begins

Alliant Energy developed KEEP commercial

3,000 teachers
750,000 students

4,000 teachers
1,600,000 students

5,000 teachers
2,520,000 students