

# **CESAS**

## **Consortium for Environmental Stewardship and Sustainability Annual Report for 2010**

**December 31, 2010**

## Introduction/Overview

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The Consortium for Environmental Stewardship and Sustainability (CESAS) is a network of partner organizations choosing to work cooperatively to advance sustainability and sustainable development. This Consortium brings together cooperative groups focused on sustainability that integrate and connect multidisciplinary research, education, and engagement efforts in the areas of science, engineering, economics, and social science.

In 2010, there were many major developments related to sustainability. Highlights include:

- Kansas Governor Mark Parkinson established a Kansas Interagency Working Group for Wind Energy to help advance wind energy in Kansas. The Kansas Board of Regents is represented.
- The University of Kansas has received a \$12.3 million federal award to build a 'green technologies' facility for interdisciplinary engineering research, including the development of biofuels.
- The University of Kansas has begun a strategic initiative to develop a comprehensive sustainability plan for the Lawrence campus. For more information, see [www.sustainability.ku.edu/](http://www.sustainability.ku.edu/)
- Riley County, Kansas, GBA Architects, and K-State have received funding from the U.S. Department of Energy for the Resourceful Kansas Program to advance renewable energy and energy efficiency in Kansas. See [www.resourcefulkansas.org](http://www.resourcefulkansas.org) for more information.
- Kansas State University and the University of Nebraska have received \$1 million from the National Science Foundation to identify and serve rural educational needs related to climate change. The Climate Change Educational Partnership Program has funded 14 programs; this one will focus on agriculture and rural communities. For more information, see [www.k-state.edu/cgp-ccep/](http://www.k-state.edu/cgp-ccep/)
- Nancy Jackson was honored by the Kansas Natural Resource Council as the Bill Ward Award recipient for her work as Director of the Climate and Energy Project for The Land Institute.
- Jerry Glover, an agroecologist with The Land Institute, was honored as an Emerging Explorer by National Geographic for his research, and Wes Jackson has authored a new book, *Consulting the Genius in the Place: An Ecological Approach to a New Agriculture*. See [www.landinstitute.org/](http://www.landinstitute.org/) for more information.
- A new KSU course, GEOG 833, Seminar in Sustainability Science, Thought, and Approaches, was approved. It is to be taught in Spring 2011.

- The Advanced Manufacturing Institute was named the nation's first Great Lakes WIND Center of Excellence. AMI will help Great Lakes WIND expand its wind industry supply chain across the state of Kansas. For more information, see [www.glwn.org](http://www.glwn.org) and [www.amisuccess.com](http://www.amisuccess.com).
- Climate Counts scores for the 90 top companies improved 14% from 2009 to 2010 with Nike receiving the highest score. See [www.climatecounts.org/](http://www.climatecounts.org/) for more information.
- A K-State team developed a greenhouse gas inventory for Kansas State University. The results were presented at the 2010 Dialog on Sustainability.
- K-State was included in Princeton Review's Guide to 286 Green Colleges because of environmentally responsible activities, including the new Leadership Studies building, gameday recycling, and sustainability courses.

## Activities

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### *Funded Projects*

CESAS partners and others worked cooperatively on several projects during 2010 to advance sustainability. Work has continued on the USDA "Biobased Products and Bioenergy Multi-University Graduate Program" with K-State, University of Arkansas, Oklahoma State University, and South Dakota State University. New courses have been developed and the approval process for the 15 credit graduate certificate program has been started at each of the universities.

More than 50 individuals are involved in the NSF EPSCoR project "Climate Change and Energy: Basic Science, Impacts, and Mitigation." Electronic advances allow faculty and students at KU, KSU, and WSU to participate in joint seminars related to their ongoing research. Joint conferences have enabled investigators and students to meet together to share new advances associated with their research.

This was the 2nd summer for the NSF REU program on sustainable energy. Several EPSCoR funded students also participated.

The IGERT program, with funding from NSF, is a multidisciplinary effort to educate graduate students and conduct research on areas of biofuels and biobased products from crop production through product development.

## *Education, Seminars and Conferences*

Bethany College hosted Dr. Larry L. Rasmussen, Reinhold Niebuhr Professor Emeritus of Social Ethics, Union Theological Seminary in February and March, 2010. The focus was on environmental ethics topics including water, green team concerns, and stewardship of the earth.

The January Intersession included CHE 670 Sustainability Seminar on "Greenhouse Gases, Carbon Taxes and Trading, and Carbon Sequestration." This offering is available through DCE electronically; see [www.k-state.edu/conf/sustainability-ghg/](http://www.k-state.edu/conf/sustainability-ghg/)

During 2010 there was significant dialog related to sustainability education at K-State, including developing a graduate certificate program for sustainability education. An undergraduate minor in sustainability has been discussed as well. Sustainability education has been included in the program of past sustainability conferences at K-State. Recently, the University of Oklahoma has approved a new undergraduate major in Environmental Sustainability. The "Agricultural Resources and Environmental Management Graduate Certificate" has been approved recently at K-State, and the new seminar course GEOG 833 has been developed.

The 2010 Sustainability Conference, "Kansas Advancing Sustainability in Higher Education" at K-State was selected to receive the University Continuing Education Association Community of Practice Exemplary Program Award.

The 2010 Dialog on Sustainability at K-State, "Green Jobs: Finding the Right Path Forward" focused on green jobs with emphasis on sustainable communities, green industry needs and sustainable agriculture. Leadership Studies hosted the event in their new building.

The Black Lantern Synergy Group presented their multi-media experience 'Cartesian Eco-Fem Darkanism' at K-State in September. The mix of media, spoken word, music and poetry enabled the audience to both re-think and re-feel our current environmental conundrum.

There were a number of seminars on sustainability topics, including a series of lectures on sustainable energy. Jarad Daniels spoke on "Energy, Climate, and Carbon Capture and Storage - A U.S. DOE Perspective". Coffeehouse events included a presentation by the REU students involved in sustainable energy research. John Harrington was the presenter for "A Conversation about the Science of Climate Change." Kansas Citizens for Science and Sigma Xi have organized these coffeehouse events.

Movies on the Grass included "Bag It."

The AIChE Sustainable Engineering Forum convened a Webinar on "Credentials for Sustainability Professionals," with an emphasis on the professional qualifications and education needed to be a sustainability professional.

The University of Kansas Continuing Education Program is one of the sponsors for the First International Conference on Sustainable Design and Construction, which is to be held in Kansas City in 2011. For more information, see [www.continued.ku.edu/programs/sustainability/](http://www.continued.ku.edu/programs/sustainability/)

### *Technical Assistance for a Sustainable Kansas (TASK)*

There is a continuing need to advance sustainability in Kansas through public education and engagement. Partner organizations are working to advance sustainability in Kansas and elsewhere.

Merriam and Quinter won the Climate and Energy Project Take Charge Challenge, in which six communities worked competitively to save energy by changing to CFL light bulbs, installing programmable thermostats, conducting energy audits, making home improvements, and promoting energy efficiency and conservation. Kinsley, Mount Hope with Haven, Salina, and Wellington also participated. The Climate and Energy Project has organized a new competition for 2011 that will involve Manhattan and K-State in competition with Lawrence and KU.

In 2011, the Resourceful Kansas program will host seminars on January 26 and April 27 on energy efficiency. Participants will be able to tour the Riley County facility to observe wind turbines, solar-powered LED lighting, solar hot water heating, and geothermal heat pumps. For more information see [www.resourcefulkansas.org/](http://www.resourcefulkansas.org/)

The Ecoliteracy Book Club began meeting in 2010, and two books *The Green Economy* by Van Jones and *Farming in the Dark* by Rhonda Janke were selected, read and discussed. To join the club and receive invites to the meetings, contact Sheree Walsh at [smw@ksu.edu](mailto:smw@ksu.edu) or 785-532-6519. For more information see <http://www.engg.ksu.edu/CHSR/sustainability/EcoLiteracyReadingGroup/index.html>

The K-State Pollution Prevention Intern Program concluded its 5th year with savings to Kansas business and industrial companies of more than 3.6 million kWh of electricity, 500,000 therms of natural gas, 18 million gallons of water, and \$740,000 in operating and disposal costs. The interns gain experience in an industrial setting working with a technical adviser and industrial professionals.

The Prairie Village Environmental Forum featured a panel on water quality with an emphasis on the nutrients phosphorus and nitrogen. Many environmental organizations brought exhibits and shared information on their environmental activities. Nancy Jackson received the Bill Ward Award from the Kansas Natural Resource Council at this meeting.

The Kansas Rural Center provided leadership for the 2010 Sustainable Agriculture Conference that was held in Emporia on Saturday, November 20.

The new wind initiative in Colby includes a small wind test center.

## Membership Update

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Table 1. CESAS membership in 2010.

| <b>Membership Category</b>                 | <b>Group Name</b>   |
|--|---|
| <b><i>University</i></b>                   | <p>Bethany College</p> <p>Kansas State University</p> <p>4-H Youth Development, K-State Research &amp; Extension, AIChE Institute for Sustainability, Agricultural Economics, Apparel and Textile Sustainability Research Lab, All-University Geographic Information Science Steering Committee, Department of Aviation, KSU-Salina, Bioprocessing and Industrial Value Added Program (BIVAP), Center for Hazardous Substance Research, Center for Science Education, College of Architecture Planning and Design, Department of Biological and Agricultural Engineering, Department of Chemical Engineering , Department of Geography, Department of Geology , Department of Grain Science and Industry, Department of Horticulture, Forestry &amp; Recreation Resources, Department of Landscape Architecture/Regional and Community Planning, Department of Management, Engineering Extension, Food Science Institute, GRoWe, Hale Library, Institute for Civic Discourse and Democracy , Institute of Green Professionals, K-State Sustainability, Kansas Agricultural Mediation Services (KAMS), Kansas Center for Agricultural Resources and the Environment (KCARE), National Institute for Land Management and Training, Natural Resources and Environmental Sciences Secondary Major, School of Leadership Studies, Stewardship Committee, Students for Environmental Action, Student Sustainability Coalition, Women's Studies Program</p> <p>Gorno Altaisk State University (Altai Republic, Russian Federation)</p> <p>King Mongkut's University of Technology Thonburi, (Bangkok, Thailand), Faculty of Science, Joint Graduate School of Energy and Environment</p> <p>University of Kansas</p> <p>Center for Sustainability</p> <p>University of Nebraska, Omaha</p> <p>Pollution Prevention Regional Information Center</p> |
| <b><i>Consortia and Collaboratives</i></b> | <p>Blue Skyways Collaborative</p>   |
| <b><i>Industry and Companies</i></b>       | <p>Agriment Services</p> <p>American Institute of Baking (AIB) International</p> <p>Advanced Manufacturing Institute</p> <p>Blue Sky Green Earth, LLC</p> <p>Brightergy (formerly the Energy Savings Store)</p> <p>CABEM Technologies</p>   |

Decent Energy, Inc.  
Diamond Solar Solutions, LLC  
Harmony Environmental, LLC  
M2 Technologies  
mensch-und region, GbR  
Oak Grove Fabrication  
Terracon, Inc.  
Wind Energy Consulting and Contracting, Inc.

***Membership Organizations***

Friends of the Kaw  
Kansas Natural Resource Council  
ICF International  
New Earth

***Non-Profit Organizations***

ClimateCounts.org  
Focus the Nation  
The Land Institute  
National Institute for Strategic Technology Acquisition and  
Commercialization (NISTAC)

***Units of Government***

Kansas Corporation Commission  
Kansas Department of Wildlife and Parks  
Flint Hills Discovery Center

***Other Organizations***

Center for Sustainable Development and Ecological Education,  
Kiev, Ukraine

## **Financial Update**

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Membership dues are voluntary. An account with the KSU Foundation is open to accept and manage financial contributions. The account number is I24260 and the name of the account is Environmental Stewardship and Sustainability. The 2010 beginning balance was \$4,222.52. Receipts for 2010 totaled \$1000 and expenditures were \$610, leaving a balance on December 31, 2010 of \$4,612.52. Expenditures were primarily for cosponsored sustainability events.

In addition CESAS consortium partners have provided financial support for specific events and activities in 2010 including the annual sustainability conference, the Black Lantern Synergy Group presentation, and the Dialog.

Voluntary dues may be sent to the KSU foundation, 2323 Anderson Avenue, Manhattan, KS 66506. Indicate that the contribution is for account I24260, Environmental Stewardship and Sustainability.

## Summary

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In 2010 CESAS continued to provide support for education, interaction, and activities related to advancing sustainability in Kansas. With leadership from Governor Mark Parkinson, Ruth Miller, and others wind energy has continued to expand. The Resourceful Kansas Program includes wind and solar energy. With help from the Advance Manufacturing Institute, Kansas business and industry are expanding into renewable energy. The University of Kansas has received a \$12.3 million federal award to build a 'green technologies' facility. Wes Jackson has authored a new book, Consulting the Genius in the Place: An Ecological Approach to a New Agriculture. Kansas State University and the University of Nebraska have received \$1 million from the National Science Foundation to identify and serve rural educational needs related to climate change.

## Resources

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### Events

- Dialogs on Sustainability (DOS) at KSU, Manhattan, Kansas
  - 2010 DOS focused on current efforts to integrate concepts of sustainability, the green economy and green jobs into industrial, agricultural and community efforts in Kansas and beyond.  
<http://www.engg.ksu.edu/CHSR/sustainability/Dialogs/2010DOS/index.html>
  - 2009 DOS focused on sustainable energy, LEED buildings, community development, and K-State initiatives.  
<http://www.engg.ksu.edu/chsr/sustainability/Dialogs/2009DOS/>
  - 2008 DOS focused on Students, Classes and Curriculum, Operations, Research, and Engagement (SCORE).  
<http://www.engg.ksu.edu/chsr/sustainability/Dialogs/2008DOS/>
  - 2007 DOS purpose was to disseminate information on current sustainability related activities, groups and resources; and to explore opportunities for further collaboration and future funding.  
<http://www.engg.ksu.edu/chsr/sustainability/Dialogs/2007DOS/>
- Seminars and Intersession Classes
  - October 26, Water and the Future of Kansas. Maner Conference Center, Topeka, Kansas.  
<http://www.dce.k-state.edu/conf/waterfuture>
  - Special Seminar on Greenhouse Gases, Carbon Taxes and Trading, and Carbon Sequestration, January 6-8, 2010 - Kansas State University.  
<http://www.engg.ksu.edu/CHSR/events/che670/201001/index.html>
  - ICDD Public Issues Facilitation Workshop, January 12-14, 2009 - Kansas State University.  
<http://www.k-state.edu/icdd/>



- Renewable Energy, Food, and Sustainability, January 8-10, 2008 - Kansas State University.  
<http://www.engg.ksu.edu/CHSR/events/che670/200801/index.html>
- Energy and Environmental Impacts Related to Sustainability, January 4-6, 2006 - Kansas State University.  
<http://www.engg.ksu.edu/CHSR/events/che650/200601/index.html>
- Conferences
  - 2010 Sustainability Conference: Kansas Advancing Sustainability in Higher Education, January 29-30, 2010 - Kansas State University.  
<http://sustainability.k-state.edu/conferences/2010>
  - 2009 Sustainability Conference: Leading Kansas in Sustainability, January 23, 2009 - Kansas State University.  
<http://sustainability.k-state.edu/conferences/2009>
  - The Future of Agriculture - Science, Stewardship, and Sustainability, August 7-9, 2006 - Sacramento, California.  
<http://www.engg.ksu.edu/chsr/events/ag/200608>

## Past Annual Reports

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- 2009 CESAS Annual Report  
<http://www.engg.ksu.edu/CHSR/sustainability/cesas/docs/2009CESASReport.pdf>
- 2008 CESAS Annual Report  
<http://www.engg.ksu.edu/CHSR/sustainability/cesas/docs/CESAS2008Report.pdf>
- 2007 CESAS Annual Report  
<http://www.engg.ksu.edu/CHSR/sustainability/cesas/docs/CESAS2007Report.pdf>