



# NBII Supports Renewable Energy Project (RENEW)

RENEW focuses on scientific information related to renewable energy sources and their interaction with wildlife and the environment.

## Renewable Vs. Conventional Energy

Renewable energy sources such as biofuels, geothermal energy, hydropower, solar energy, and wind energy are derived from natural resources that are able to be replenished at or near the rate they are harnessed and consumed. They provide alternatives to conventional energy resources (for instance, coal, natural gas, and oil). Successful and responsible development of the nation's renewable energy resources requires the availability and accessibility of objective, accurate renewable energy information and data.

## Project Focus

RENEW focuses on scientific information related to renewable energy sources and their interaction with wildlife and the environment. RENEW was proposed in 2009 under direction from the National Biological Information Infrastructure (NBII) and completed in 2010 as a joint venture of Montana State University's Big Sky Institute (BSI) and the NBII. The mission of RENEW is to integrate and provide access to objective, accurate information about renewable energy and the environment for a broad user community of resource managers, scientists, educators, and the general public. This mission is accomplished by providing online access to information resources through the RENEW Web site [www.nbii.gov/renew](http://www.nbii.gov/renew).

The NBII [www.nbii.gov](http://www.nbii.gov) is a broad, collaborative program to provide increased access to data and information on the nation's biological resources. Coordinated by the U.S. Geological Survey, the NBII links diverse, high quality biological databases, information products, and analytical tools maintained by NBII partners and other contributors in government agencies, academic institutions, non government organizations, and private industry.

## RENEW Products

Information about renewable energy sources and their interaction



Geothermal power plant, CA

with wildlife and the environment is accessible through the RENEW Web site. The site contains information organized into the following sections:

- **Live Maps and Data** provides access to NBII partner projects relating to renewable energy information, maps, and data, as well as access to other featured renewable energy resources. The NBII partner projects highlighted in this section are 1) the Biogeographic Information & Observation System (BIOS) Renewable Energy Viewer <http://bios.dfg.ca.gov>, an interactive mapping application in which users can explore renewable energy development in California's Mojave and Colorado Desert regions, and 2) the Oak Ridge National Laboratory (ORNL) Wind Energy Data and Information Gateway <http://windenergy.ornl.gov>, which provides wind energy metadata, data access, and a Web-based mapping application.
- **Renewable Energy and the Environment** is a



Solar panels, Alamosa Photovoltaic Plant

Photo credit: National Renewable Energy Lab

Photo credit: US Geological Survey



Switchgrass, a type of biofuel crop

comprehensive resource about renewable energy sources and their potential interactions with ecological topics such as bird conservation, climate change, fisheries and aquatic resources, genetic diversity, habitat impacts, invasive species, and pollinators. The section provides general information, highlights of specific issues, and links to external Web resources organized by topic.

- **Renewable Energy by Region** describes the distribution of renewable energy potential and sources throughout

the United States and provides access to additional resources for exploring renewable energy by geographic region.

- **Renewable Energy News** gives users access to cutting edge news about renewable energy research, development, issues, trends, and policy.
- **Renewable Energy Sources** provides general information and access to additional resources about the main types of renewable energy, including biofuels, geothermal energy, hydropower, solar energy, and wind energy.

### Partner

As the lead partner of the Renewable Energy Project, the BSI has researched and created renewable energy content, coordinated content review and input from NBII staff, and developed and maintained the Project Web site. The BSI at Montana State University is an interdisciplinary center dedicated to creating, applying, and communicating science-based knowledge. The BSI Ecological Informatics Lab brings together natural sciences, geographic information systems (GIS), statistics, modeling, information technology, and computational programming with

a comprehensive goal of making ecological data more useful to society. BSI partners with the NBII to disseminate information and to create value-added tools for interacting with data.

### For More Information

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[www.nbii.gov/renew](http://www.nbii.gov/renew).