

## **Western Bioenergy and Renewable Energy Activities February, 2009**

The following pages contain a snapshot of state and university activities in bioenergy, renewable energy and related topics for the Western Region. Included are links to state incentives, agencies, and initiatives as well as links to university reports and initiatives. In many states there are third party efforts which are also included. We have also included the latest CRIS information on bioenergy and related projects.

Also included is information on activities and initiatives of the Western Governors' Association. There are several groups that have been working on bioenergy and renewable energy for some time.

As might be expected this area has a great of interest, thus the status in each state can and will frequently change. However, the websites that are listed will often capture many of the changing dynamics.

The document is bookmarked with links to each state's information and is best navigated with the Adobe Acrobat bookmark link function open.

Please send any comments or questions to: [waaesd@lamar.colostate.edu](mailto:waaesd@lamar.colostate.edu)

**Alaska Renewable Energy/Bioenergy  
Activities & Initiatives  
February, 2009**

**State Initiatives**

- [Incentives for Renewable Energy](#)
- [Pacific Regional Biomass Energy Partnership](#)

**State Department of Agriculture** <http://www.dnr.state.ak.us/ag/>

- No activity listed

**State Energy Office** (Division of Geological and Geophysical Surveys):

[http://www.dggs.dnr.state.ak.us/index.php?menu\\_link=energy&link=energy\\_overview](http://www.dggs.dnr.state.ak.us/index.php?menu_link=energy&link=energy_overview)

- [Alaska Coal Database – National Coal Resource Database System](#)
- [Alaska Energy Inventory: Cataloging Alaska's Renewable Energy Resources](#)
- [Bristol Bay–Alaska Peninsula Frontier Basin Studies: Characterization of Hydrocarbon Source Rock and Reservoir Potential](#)
- [Brooks Range Foothills & North Slope Program](#)
- [Cook Inlet Geology Program](#)
- [Gas Hydrates: Evaluation of Alaska North Slope Geothermal Gradients](#)
- [Geologic Mapping in the Sagavanirktok River Area](#)

**U.S. DOE**

- [EERE State Activities and Partnerships](#)

**University Initiatives**

**UAA**

- Office of Sustainability: <http://www.uaa.alaska.edu/sustainability/>

**UAF**

- [Alaska Energy and Housing](#)
- PNW Extension Energy Initiative

**Third Party Activities/Reports**

- Alaska Energy Authority: <http://www.aidea.org/aea/index.html>
- First Alaskans Institute: <http://www.firstalaskans.org/links/index.cfm?fa=overview-subcats&cid=157>

**Private Sector Activities**

- Renewable Energy Alaska Project: <http://www.alaskarenewableenergy.org/>
- Alternative & Renewable Energy - ABS Alaskan: <http://www.absak.com/>
- AlaskaSun.org Home of Solar: <http://www.alaskasun.org/>
- Alaska Youth for Environmental Action: <http://www.ayea.org/aboutus.html>

**American Samoa Renewable Energy/Bioenergy  
Activities & Initiatives  
February, 2009**

**State Initiatives**

- [Pacific Energy Partnership Initiative](#)

**State Department of Agriculture:**

<http://americansamoa.gov/departments/depts/agriculture.htm>

- No activity listed

**State Energy Office:** <http://americansamoa.gov/departments/offices/energy.htm>

- No activity listed

**University Initiatives**

- No activity listed

**Third Party Activities/Reports**

- [Renewable Energy Action Plan for American Samoa](#)
- [Small Island Developing States Network](#)
- [Global Trends in Sustainable Energy Investment 2007](#)
- [Potential and Future Prospects for Ocean Thermal Energy Conversion \(OTEC\) In Small Islands Developing States \(SIDS\)](#)

**Arizona Renewable Energy/Bioenergy  
Activities & Initiatives  
February, 2009**

**State Initiatives**

[Incentives for Renewable Energy](#)

**State Department of Agriculture:** <http://www.azda.gov/>

- No activity listed

**State Energy Office** (Department of Commerce): <http://www.azcommerce.com/Energy/>

- [Renewable Energy Program](#)
- [Tribal Energy Program](#)
- [K-12 Benchmarking Effort](#)
- [Community Energy Program](#)
- [Energy Savings Performance Contracting \(ESPC\)](#)
- [Residential Building Science](#)
- [AZ Home Performance with Energy Star](#)
- [Weatherization Assistance Program](#)
- [Energy Conservation Standards for Public Buildings](#)
- [2007 State Agency Annual Energy Usage Report](#)

**U.S. DOE**

- [EERE State Activities and Partnerships](#)

**University Initiatives**

**U AZ**

- [House Energy Doctor](#)
- [Water Wise and Energy Smart](#)

**ASU**

- [Arizona Institute for Renewable Energy](#)
- [Center for Bioenergy and Photosynthesis](#)
- [PhotoVoltaic Testing Laboratory](#)
- [Advanced Photovoltaics Center](#)
- [Center for Renewable Energy Electrochemistry](#)
- [The Biodesign Institute](#)
- [ASU, BP, SFAz Biofuel Research Initiative](#)

**NAU**

- [Arizona Wind Energy Assessment](#)

**Third Party Activities/Reports**

- [The Arizona Renewable Energy Assessment](#)
- [The Arizona Renewable Energy Assessment: An Investor's Perspective](#)
- [Arizona Renewable Energy Resources](#)

**Private Sector Activities**

- [ArizonaEnergy.org](#)
- [Arizona Solar Energy Industries Association](#)

- [Arizona Energy Star Homes](#)
- [Arizona Solar Center](#)
- [Arizona Utilities Renewable Energy Education](#)

**California Renewable Energy/Bioenergy  
Activities & Initiatives  
February, 2009**

**State Initiatives**

- [Incentives for Renewable Energy](#)
- [Governors Bioenergy Interagency Working Group](#)
- [Bioenergy Action Plan for California](#)
- [California Biomass Collaborative](#)
- [Cool California](#)
- [California Carbon Calculator](#) – Carbon Footprint Calculator
- [California Air Resources Board](#)

**State Department of Agriculture:** <http://www.cdfa.ca.gov/>

- No activity listed

**State Energy Office:** (California Energy Commission):

<http://www.energy.ca.gov/index.html>

- [Efficiency and Renewable Energy Division](#)
- [Energy in Agriculture](#)
- [Energy Action Plan](#)
- [California biomass Resource Assessment](#)
- [Go Solar](#)
- [Consumer Energy Center](#)
- [Energy Quest: Kids website](#)

**U.S. DOE**

- [EERE State Activities and Partnerships](#)

**University Initiatives**

- [California Biomass Collaborative](#)

**Berkeley**

- [Renewable and Appropriate Energy Laboratory](#)
- [University of California Energy Institute](#)
- [Berkeley Institute of the Environment](#)

**Davis**

- [Biomass Collaborative](#)
- [Energy Institute](#)
- [Bioenergy Research Group](#)
- [Californian Wind Energy Collaborative](#)
- [Californian Wind Energy Consortium](#)
- [Energy Efficiency Center](#)

**Riverside**

- [Center for Environmental Research & Technology](#)
- [Sustainable Energy Systems](#)

**Third Party Activities/Reports**

- [California Renewable Energy Resources](#)
- [Renewable Energy for California](#)
- [California Solar Center](#)
- [Home Energy Saver](#)

**Private Sector Activities**

- [CleanPower](#)
- [California Biomass Energy Alliance](#) - an association representing 36 biomass-fueled power plants in California
- [Biomass Power Plants](#)
- [Next 10](#) - independent, nonpartisan organization that educates, engages and empowers Californians to improve the State's future

**Colorado Renewable Energy/Bioenergy  
Activities & Initiatives  
February, 2009**

**State Initiatives**

- [Incentives for Renewable Energy](#)
- [Colorado Biomass Market Transformation](#)

**State Department of Agriculture:** <http://www.colorado.gov/ag>

- [Advancing Colorado's Renewable Energy \(ACRE\) Program](#)

**State Energy Office**

- [Governor's Energy Office](#)
- [Governor's Biofuels Coalition](#)
- [Renewable Energy Projects](#)
- [Colorado Biomass Information Clearinghouse](#)

**U.S. DOE**

- [EERE State Activities and Partnerships](#)

**University Initiatives**

- [Colorado Renewable Energy Collaboratory](#) – partnership CSU, CU, CO School of Mines and NREL

**CSU**

- [Clean Energy Supercluster](#) includes biofuels, solar, efficiency, emerging technologies
- [Natural Resource Ecology Laboratory](#)
- [Wind Energy In Colorado](#)

**CU**

- [Energy Initiative](#)

**School of Mines**

- [Colorado Energy Research Institute](#)

**Third Party Activities**

- [National Renewable Energy Laboratory \(NREL\)](#)
- [ColoradoEnergy.org](#)
- [Colorado Renewable Energy Society](#)
- [Northern Colorado Energy Society](#)
- [Solar Energy International \(SEI\)](#)
- [Boulder Energy Conservation Center](#)
- [Aspen, Community Office for Resource Efficiency](#)
- [Colorado Environmental Business Alliance](#)
- [Colorado Energy Science Center](#)
- [Smart Energy Living Alliance](#)
- [Colorado Renewable Energy Resources](#)
- [Colorado Harvesting Energy Network](#)



**Guam Renewable Energy/Bioenergy  
Activities & Initiatives  
February, 2009**

**State Initiatives**

- [Incentives for Renewable Energy](#)
- [Solar-Ready Residential Building Requirement](#)
- [Guam - Net Metering](#)
- [Renewable Energy Portfolio Goal](#)
- [Guam Energy Building Code](#)

**State Department of Agriculture:** <http://www.agriculture.guam.gov/>

- No activity listed

**State Energy Office:** <http://www.guamenergy.com/main/index.php>

- [Energy Lighting Audits](#)
- [GovGuam Energy Compliance](#)
- [Green Schools Program](#)
- [Building Code](#)
- [Guam Energy Update](#)

**University Initiatives**

- None listed

**Third Party Activities/Reports**

- [Shell Renewables](#)

**Hawaii Renewable Energy/Bioenergy  
Activities & Initiatives  
February, 2009**

**State Initiatives**

- [Incentives for Renewable Energy](#)
- [Hawaii - DOE Clean Energy Initiative](#)
- [Hawaii - DOE Clean Energy Initiative Summary](#)
- [Pacific Regional Biomass Energy Partnership](#)

**State Department of Agriculture:** <http://hawaii.gov/hdoa>

- [Energy Feedstock Report](#)
- [Biodiesel Study](#)

**State Energy Office** (Business, Economic Development and Tourism):

<http://hawaii.gov/dbedt/info/energy/>

- [Hawaii Energy Policy](#)
- [State energy reports and publications](#)
- [Biomass and Bioenergy Resource Assessment](#)
- [Analysis of Hawaii Biomass Energy Resources for Distributed Energy Applications](#)
- [Bioenergy Master Plan](#)

**U.S. DOE**

- [EERE State Activities and Partnerships](#)

**University Initiatives**

- [Hawaii Natural Energy Institute](#)
- [Renewable Resources Research Laboratory](#)
- [Renewable Energy Assessments and Process Simulations](#)
- [Thermochemical Biomass Energy Conversion](#)
- [UH Office of Sustainability](#)- university system wide initiative

**Third Party Activities/Reports**

- [Hawaii BioEnergy LLC](#)
- [Hawaii's Energy Future](#)

**Idaho  
Renewable Energy/Bioenergy  
Activities & Initiatives  
February, 2009**

**State initiatives**

- [Incentives for Renewable Energy](#)

**State Department of Agriculture:** <http://www.agri.idaho.gov/>

- No activities listed

**State Energy Office:** <http://www.energy.idaho.gov/>

- [Bioenergy Program](#)
- [Geothermal Energy Resources](#)
- [Solar Program](#)
- [Wind Power](#)
- [Agricultural Efficiency Program](#)
- [Building Efficiency](#)
- [Community and Commercial Efficiency](#)
- [Idaho Strategic Energy Alliance](#)

**U.S. DOE**

- [EERE State Activities and Partnerships](#)

**University Initiatives**

- [Sustainability Symposium](#)
- [Biodiesel Education](#)
- [Electronic Green Journal](#)

**Third Party Activities/Reports**

- [Idaho National Laboratory](#) Renewable Energy Research
- [Renewable Energy Resources](#)
- [Idaho Energy Complex](#)
- [Idaho Renewable Energy Resources](#)

**Montana  
Renewable Energy/Bioenergy  
Activities & Initiatives  
February, 2009**

**State Initiatives**

- [Incentives](#)
- 20x10 Initiative (<http://governor.mt.gov/20x10/>)

**State Department of Agriculture:** <http://agr.mt.gov/>

- [Bioproduct Innovation Program](#)

**State Energy Office:** <http://deq.mt.gov/Energy/Renewable/index.asp>

[Energize Montana](#)

[Renewable Energy](#)

[Biomass Energy Program](#)

[Solar/Geothermal](#)

[Wind](#)

**U.S. DOE**

- [EERE State Activities and Partnerships](#)

**University Initiatives**

- [Biobased Products Institute](#)
- [Ethanol Plant Analyzer](#)
- [Agriculture Marketing Policy Center - Energy Information](#)
- [Extension Wind Energy Program](#)
- [Montana Renewable Energy Resources](#)
- Wind Energy Cluster (website?)
- Bachelor of Science degree program in Sustainable Food and Bioenergy Systems (<http://sfbs.montana.edu>)
- Montana Green Campus (<http://mtgreen.mus.edu>)
- Energy Research Institute (<http://www.montana.edu/energy/>)
- Barley breeding program (<http://plantsciences.montana.edu/facultyorstaff/faculty/blake/blake.html>)
- Safflower breeding program (<http://fs-sdy2.sidney.ars.usda.gov/state/>)
- Oilseed crop research (<http://plantsciences.montana.edu/facultyorstaff/faculty/lu/lu.html>)

**Third Party Activities/Reports**

- [Montana Green Power](#)
- [Sustainable Systems LLC](#)
- [Biodiesel Montana.org](#)
- [Montana Renewable Energy Resources](#)

**Nevada  
Renewable Energy/Bioenergy  
Activities & Initiatives  
February, 2009**

**State Initiatives**

- [Incentives](#)
- [Nevada Energy Connection](#)
- [Renewable Energy & Energy Conservation Task Force](#)

**State Department of Agriculture:** <http://agri.nv.gov/>

- No activities listed

**State Energy Office:** <http://energy.state.nv.us/>

- [General Renewable Energy Resources](#)
- [Biomass Resources](#)
- [Geothermal Resources](#)
- [Hydrogen Resources](#)
- [Hydropower Resources](#)
- [Solar Resources](#)
- [Wind Resources](#)
- [NSOE Renewable Energy Work Groups](#)

**U.S. DOE**

- [EERE State Activities and Partnerships](#)

**University Initiatives**

[UNR Renewable Energy Center \(UNR-REC\)](#)

[Great Basin Center for Geothermal Energy](#)

Desert Research Institute Renewable Energy Center (REC) <http://rec.dri.edu/>

**Third Party Activities/Reports**

[Energy Nevada](#)

[Nevada Southwest Energy Partnership](#)

[Nevada Renewable Energy Resources](#)

[Nevada Solar Living](#)

[Nevada Institute for Renewable Energy Commercialization \(NIREC\)](#)

Other State of Nevada Energy Activities

- Nevada Renewable Energy Transmission Access Advisory Committee  
<http://gov.nv.gov/RETAAC-II/>
- [Public Utilities Commission of Nevada](#)
- [Nevada Renewable Energy and Energy Conservation Task Force](#)
- Nevada Energy <http://www.nvenergy.com/renewablesenvironment/renewables/>

Listed below are the energy related programs of the University of Nevada, Reno through the 2009-11 Biennium.

<u>Key:</u>	
ARI	Applied Research Initiative
ASME	American Society of Mechanical Engineers
DOD	US Department of Defense
DOE	US Department of Energy
DRI	Desert Research Institute, NSHE
EERE	US Department of Energy Energy Efficiency and Renewable Energy
HUD	US Department of Housing and Urban Development
MAP	Management Assistance Partnership, NSHE
NASA	National Aeronautics and Space Administration
NREL	National Renewable Energy Laboratory
NSF	National Science Foundation
NSHE	Nevada System of Higher Education
NSOE	Nevada State Office of Energy
UNLV	University of Nevada, Las Vegas, NSHE
UNR	University of Nevada, Reno, NSHE
USDA	US Department of Agriculture

<u>Institution</u>	<u>Title</u>	<u>Description</u>	<u>Industry Partner</u>	<u>Source</u>	<u>Time Period of Project</u>
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**SOLAR**

UNR	Porous Silicon Fuel Cells for Micropower Generation (MPG)	Identification of the possible reactions that are capable of delivering high yields of hydrogen in the microscale for portable device applications		DOD – ARPA/ U of Illinois Urbana	10/2006- 08/2008
UNR	Participation in Go Green With Nevada Blue festival	The University Academy for the Environment coordinated the dedication of the Joe Crowley Student Union solar panels and hosted a public lecture by Tom Price, Exec. Director, Black Rock Solar Program.			2008

**WIND**

UNR	Installation of Wind Turbine and Solar Voltaic panel at Fleischmann Planetarium	A \$100,000 solar voltaic panel and wind turbine installation project is planned for Fleishmann Planetarium. Installation is contingent upon receipt of donor funding.			2009
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<u>Institution</u>	<u>Title</u>	<u>Description</u>	<u>Industry Partner</u>	<u>Source</u>	<u>Time Period of Project</u>
UNR	Wind Energy Survey for Nevada	A novel permanent-magnet multi-pole generator has been developed for use in low-power residential wind-turbine systems.		DOE – NREL	11/2002-02/2007
UNR	Installation of Wind Turbine for Redfield Campus	An \$80,000 wind turbine is planned for installation at the Redfield campus. Installation is contingent upon receipt of donor funding.			2009
<b>HYDROGEN</b>					
UNR	Effect of Trace Elements on Long-term Cycling and Aging Properties of Complex Hydrides for Hydrogen	This program is funded through the DOE Metal Hydride Center of Excellence to develop new light weight solid-state hydrogen storage materials for use in vehicular applications by understanding crystal structure and thermal behavior of the "Complex Hydrides" by using Sievert's/thermal-pressure cycling instrumentation, and in-situ synchrotron x-ray scattering methods.		DOE	03/2005-10/2010
UNR	Thermal Compression of Hydrogen Utilizing Geothermal Energy	The overall scope of work is the development of a small scale thermally driven compression system designed to be incorporated into a geothermal power plant for the compression of hydrogen.		DOE – NREL	06/2006-09/2008
UNR	Demonstration Project for the Production, Storage, Distribution, and Use of Hydrogen Fuel by Transit System	The objective of the project is to study the feasibility of using Northern Nevada natural resources to construct a facility in Northern Nevada for the production, storage, and distribution of Hydrogen Fuel as an alternate fuel to power motor vehicles including transit buses and private vehicles.		Washoe County	05/2003-12/2007
<b>GEOTHERMAL</b>					
UNR	Collecting Geochemical Data at Nevada Geothermal Resources	Work is conducted on maintenance and population of an Internet web-based information system that is making geothermal data and information available to industry, government, and academic stakeholders for exploration and development of geothermal resources. Project management and the organization of workshops is part of this project. Funds also support researcher's interaction with the GRC through support of GRC membership dues, and covering costs to attend GRC meetings and DOE program review meetings.		DOE	03/2002-12/2008

<u>Institution</u>	<u>Title</u>	<u>Description</u>	<u>Industry Partner</u>	<u>Source</u>	<u>Time Period of Project</u>
UNR	Desert Peak-Brady Geothermal Study	This project defines surface identifiers of geothermal resources through analysis of remote sensing imagery to characterize mineral, vegetation, and thermal properties at known source regions to establish markers of potential in other areas.		DOE	03/2002-12/2008
UNR	Phase I Development of the Geothermal and Renewable Energy Laboratory of Nevada	The Great Basin Center for Geothermal Energy at the University of Nevada, Reno is developing and deploying a world-class research, education, and outreach infrastructure in geothermal and renewable energy technologies through a diverse public/private partnership of several University, College, and NSHE components (University of Nevada, Reno (UNR), Truckee Meadows Community College (TMCC), Western Nevada Community College (WNCC), Desert Research Institute (DRI), and industry partners, including ORMAT (a leading geothermal energy company), Sierra Pacific Power (SPP) and the Regional Transportation Commission (RTC).		DOE – NREL	07/2005-12/2007
UNR	Expanding Geothermal Resource Utilization in Nevada Management Funds	Work is conducted on maintenance and population of an Internet web-based information system that is making geothermal data and information available to industry, government, and academic stakeholders for exploration and development of geothermal resources. Project management and the organization of workshops is part of this project. Funds also support researcher's interaction with the GRC through support of GRC membership dues, and covering costs to attend GRC meetings and DOE program review meetings.		DOE	03/2002-12/2008



<u>Institution</u>	<u>Title</u>	<u>Description</u>	<u>Industry Partner</u>	<u>Source</u>	<u>Time Period of Project</u>
UNR	Geothermal Assessment of Pyramid Lake/Paiute Reservation Lands; GIS Database Construction and Remote Sensing	This project involves a multi-phased approach that goes from lower cost activities (analysis of existing historical and recent data), to ultimately doing specific field work collecting new data using state of the art measurement techniques, including seismic surveys, magnetic surveys, GPS strain, InSAR, airborne gravity, and geochemistry. These various data gathering activities and surveys will be conducted to assist with identifying favorable drill hole locations.		Pyramid Lake Paiute Tribe	10/2004-12/2006
UNR	Geodetic Strain – Geothermal GPS	This project is assessing a new method to target potential geothermal resources on the regional scale by seeking relationships between geologic structures and GPS-geodetic observations of regional tectonic strain.		DOE	03/2002-12/2008
UNR	Geothermal GIS	This project expands an existing GIS of geothermal systems in the Great Basin to include several key new features: 1) improved predictive maps of geothermal favorability based on new digital data on crustal strain, fault displacements, heat flux, and other data, 2) maps predicting which portions of the Great Basin are most likely to conceal geothermal systems, and 3) maps showing where undiscovered resources are most likely to be found, which would be created by combining the information in steps 1 and 2 above.		DOE	03/2002-12/2008
UNR	Geothermal Resources Development	Work is conducted on maintenance and population of an Internet web-based information system that is making geothermal data and information available to industry, government, and academic stakeholders for exploration and development of geothermal resources. Project management and the organization of workshops is part of this project. Funds also support researcher's interaction with the GRC through support of GRC membership dues, and covering costs to attend GRC meetings and DOE.		DOE	03/2002-12/2008

<u>Institution</u>	<u>Title</u>	<u>Description</u>	<u>Industry Partner</u>	<u>Source</u>	<u>Time Period of Project</u>
UNR	Geothermal Spring Sampling	Under the auspices of the Geothermal Center, this laboratory will provide sampling and analytical services for a variety of geothermal stakeholders. Targets identified by GIS, GPS and other funded projects have focused fluid sampling in those areas (e.g., Buffalo Valley) in the past, and it is anticipated that there will be a need for such focused fluid sampling, analysis and evaluation in the future.		DOE	03/2002-12/2008
UNR	Geothermal Exploration Using Mercury Soil Gas Detectors	This project is intended to expand on the success of using a mercury soil gas survey to identify concealed geologic structures at Desert Peak, Nevada in 2003-4. A suite of additional gases will be used to characterize and fingerprint geothermal systems, map geologic structures conducting geothermal fluids, and define resource boundaries.		DOE	03/2002-12/2008
UNR	Remote Sensing for Geothermal Exploration	Remote sensing imagery is used to map mineralogy, lithology and thermal anomalies in order to assist development of new geothermal energy resources and expansion of existing fields.		DOE	03/2002-12/2008
UNR	Targeting of Potential Geothermal Resources	Work is conducted on maintenance and population of an Internet web-based information system that is making geothermal data and information available to industry, government, and academic stakeholders for exploration and development of geothermal resources. Project management and the organization of workshops is part of this project. Funds also support researcher's interaction with the GRC through support of GRC membership dues, and covering costs to attend GRC meetings and DOE program review meetings.		DOE	03/2002-12/2008
UNR	Testing Unique Surface Identifiers for Geothermal Site Characterization	Remote sensing imagery is used to map mineralogy, lithology and thermal anomalies in order to assist development of new geothermal energy resources and expansion of existing fields.		DOE	03/2002-12/2008

<u>Institution</u>	<u>Title</u>	<u>Description</u>	<u>Industry Partner</u>	<u>Source</u>	<u>Time Period of Project</u>
UNR	Structural, Petrologic, Geochemical and Hydrothermal Characteristics of Concealed Geothermal Systems	Structural, Petrologic, Geochemical and Hydrothermal Characteristics of Concealed Geothermal Systems, along selected range fronts, mainly the west side of the Humboldt Range, we collected structural, petrologic, geochemical and hydrothermal data along faults to identify concealed geothermal systems.		DOE	12/2003-02/2007
UNR	Thermal Compression of Hydrogen Utilizing Geothermal Energy	The overall scope of work is the development of a small scale thermally driven compression system designed to be incorporated into a geothermal power plant for the compression of hydrogen.		DOE – NREL	06/2006-09/2008
UNR	Expanding Geothermal Resource Utilization in Nevada Through Directed Research	Administration, Oversight, Communication and Outreach – Work is conducted on maintenance and population of an Internet web-based information system that is making geothermal data and information available to industry, government, and academic stakeholders for exploration and development of geothermal resources. Project management and the organization of workshops is part of this project. Funds also support researcher's interaction with the GRC through support of GRC membership dues, and covering costs to attend GRC meetings and DOE program review meetings. Funds are used to purchase laboratory and field equipment in support of the GBCGE.		NSHE – CO	07/2005-12/2008
UNR	Florida Canyon Geothermal System, Pershing County	This project includes a drilling program in partnership with industry adjacent to the Florida Canyon Mine, near the Rye Patch geothermal power plant. Two master's these have been completed on the petrologic and chemical evolution of the core obtained from the drilled wells.		DOE – NREL	04/2003-03/2007
UNR	Regional Assessment Exploration Potential Geothermal Systems	This project defines surface identifiers of geothermal resources through analysis of remote sensing imagery to characterize mineral, vegetation, and thermal properties at known source regions to establish markers of potential in other areas.		DOE	03/2002-12/2008

**MISCELLANEOUS**

<u>Institution</u>	<u>Title</u>	<u>Description</u>	<u>Industry Partner</u>	<u>Source</u>	<u>Time Period of Project</u>
UNR	Advanced Fuels Technology Research	The objective of this consortium project is to develop emulsified fuels for industrial and automotive applications. The other objective is to develop and improve a process to remove sulfur from crude oil.		Multiple Agencies	04/2003-04/2008
UNR	High Pressure Research on Complex Hydrides and Energy Storage Materials	This project involves understanding the high pressure behavior of the orientationally disordered "Plastic crystals," and "metal hydrides" involving use of diamond anvil cells to perform synchrotron x-ray diffraction and Raman spectroscopy.		DOE	10/2006-09/2008
UNR	Pressurized Oxidative Recovery of Energy from Biomass	The objective of this project is to recover energy from biomass without emission of environmental contaminants.		DOE / ARI	04/2005-05/2007
UNR	Fuel Cell Mine Loader Project – Phase 3	To monitor and compare the workplace air quality in an underground mine when a hydrogen fuel cell powered loading machine is operating compared with a similar diesel powered machine.		DOE / Vehicle Projects LLC	03/2004-12/2007
UNR	Supramolecular Proton Exchange Membranes for Fuel Cells	This project involves the synthesis of novel proton exchange membranes, which are nanostructured membranes designed to provide facilitated transport of protons and are used in fuel cell devices.		NSF / Advanced Materials & Devices	06/2005-01/2008
UNR	ARI - Supramolecular Proton Exchange Membranes for Fuel Cells	This project relates to the characterization of novel proton exchange membranes using electrochemical impedance spectroscopy (EIS) for determination of the proton conductivity of the membranes.		NSHE – CO	06/2005-01/2008
UNR	Advanced Fuels Technology Research – ARI	This project involves the synthesis and characterization of Biodiesel from different feed materials.		NSHE - CO	07/2005-06/2007
UNR	Renewable Energy Interdisciplinary Minor	Minor program with two tracks for any UNR student. Designed to ensure that students are exposed to the technical, economic, and social issues relevant to renewable energy.			Present
UNR	Academy for the Environment Service Program Support	The UNAE supports various events that encourage environmental awareness, including renewable energy alternatives. These include the City of Reno Green Summit; EnAcT (a student-run organic farm); Green-Up!; and Nevada Econet's Earth Day Celebration.	Various		2007-08

<u>Institution</u>	<u>Title</u>	<u>Description</u>	<u>Industry Partner</u>	<u>Source</u>	<u>Time Period of Project</u>
UNR	President's Climate Commitment of the American Society of Colleges and Universities	In Spring 2007, President Glick enrolled UNR as one of the charter signatories of this coalition committed to reducing the amount of greenhouse gases created on college campuses as well as supporting more sustainable, climate neutral practices.	Various higher education institutions.		2007-Present
UNR	SolEd Conference Funding	The Academy for the Environment provided travel funding for 2 Environmental Studies majors and one faculty member to attend this conference to develop sustainable communities around the world.			
UNR	4-H After School Programs and Science of Energy Education	University of Nevada Cooperative Extension's 4-H After School Programs focus on increasing public education about energy, particularly renewable energy. Programs provide learning experiences to youth in the science and technology of energy systems. The main themes are renewable energy efficiency, doing more with less, and the need to understand the principles of energy science.	County School Districts; local schools; Reno Housing Authority	NASULGC & DOE	Present
UNR	Biofuels from Salt Basin Algae: A Renewable Energy Crop of Carbon Sequestration	The goal of this project is to optimize and implement the use of halophytic microalgae as a biofuel crop.	DOT		7/2007-10/2009
UNR	Poplar Trees as a Potential Biofuel Source in Western Nevada	This partnership project began in 2006 to establish a small scale poplar tree variety trial to evaluate 58 poplar clones for their potential as a biofuel source in Western Nevada.	Greenwood Resources & Natural Resource Conservation Services	Greenwood Resources	2006-Present
UNR	Warm and Cool Season Grasses as a Potential Biofuel Source in Western Nevada	This project began in 2007 to plan four cool-season and five warm-season grasses in 3 locations in Western Nevada to evaluate the potential of these species as a biofuel source under varying amounts of irrigation.	College of Agriculture, Biotechnology & Natural Resources; 2 private landowners; NV Department of Wildlife	Bureau of Reclamation (In conjunction w/ the Walker Basin Project)	2007-Present

<u>Institution</u>	<u>Title</u>	<u>Description</u>	<u>Industry Partner</u>	<u>Source</u>	<u>Time Period of Project</u>
UNR	Joe Crowley Student Union project	The JCSU was designed for a LEED Silver equivalent project. The project included a full program of day lighting practices including light level, occupancy/motion, and time clock controls and sensors. Sunlight shading and light reflective architectural elements were included in the project as well as internal light sharing and glare reduction measures. An energy usage analysis model was performed with a projected decrease of \$90 K per year. Several water conservation systems and a modified storm drainage system were also installed.			Present
UNR	State 4-H Camp Green Building	The two-story, environmentally friendly cabin at Lake Tahoe, completed in 2006, meets national standards for high-performance and sustainability as a "green" building. Its construction utilizes both energy saving construction materials as well as renewable energy generation through a 2000 watt photovoltaic system set up for "net zero consumption." The building is used to create environmental awareness during orientations at camp and is available for tours regarding sustainable building practices. Facilities Services has applied for LEED Silver Certification for this building.	Western NV Supply; Odyssey Business Services; Carson City Iron Works; Peak Engineering; Kit Carson Construction; NV Division of Forestry; Deans Future Scholars; Yerington Turf Farm; Bay Area Electric; Barbara & Dale Byington; Sierra Pacific Power; Meeks Lumber; Buckner Windows		Present

<u>Institution</u>	<u>Title</u>	<u>Description</u>	<u>Industry Partner</u>	<u>Source</u>	<u>Time Period of Project</u>
UNR	University of Nevada Cooperative Extension Lifelong Learning Center	The UNCE's Clark County Lifelong Learning Center has 42,000 square feet of offices and classrooms. With the assistance of the Nevada Power Company, the center utilizes cost- and energy-efficient solar energy. There is a 35 Kilowatt photovoltaic system and high diffusion skylights. Energy generated and green house gas savings can be found at: <a href="http://www.nvenergy.com/renewablesenvironment/renewablegenerations/solargen/solarminute.cfm">http://www.nvenergy.com/renewablesenvironment/renewablegenerations/solargen/solarminute.cfm</a>	NV Energy; International Brotherhood of Electrical Engineers; Bombard Electric and Solar Generations		2006-Present
UNR	UNR Renewable Energy Center	A 3,000 square foot laboratory housed at the Redfield Campus will be home to engineering research projects on hydrogen storage, hydrogen generation, heat exchangers, biofuel processes, fuel cells, wind and solar generation and geothermal energy resources.	Various		Fall 2008 to Present
UNR	Davidson Mathematics and Science Center; Center for Molecular Medicine	These University construction projects have been designed for a LEED Silver equivalent rating.			2008-2010
UNR	Athletic Academic Center LEED Certification	The Facilities Services Department has submitted for LEED Silver Certification of the Marguerite Wattis Petersen Athletic Academic Center.			
UNR	Renewable Energy Courses	Degree programs in mechanical engineering, civil and environmental engineering, electrical engineering, and computer engineering have specific renewable energy related courses of study in areas such as solar energy, water resources engineering, and environmental control systems.			Present
UNR	Interdisciplinary Environmental Studies Major	This major, offered through the Academy for the Environment, focuses on topics such as sustainability and conservation practices. This major is in its 2nd year with 15 declared majors.			2006-present

**New Mexico  
Renewable Energy/Bioenergy  
Activities & Initiatives  
February, 2009**

**State Initiatives**

- [Incentives](#)
- [New Mexico Renewable Energy Transmission Authority](#)
- New Mexico Partnership: [Renewable Energy](#)

**State Department of Agriculture:** <http://nmdaweb.nmsu.edu/>

- No activities listed

**State Energy Office:** <http://www.emnrd.state.nm.us/ECMD/index.htm>

- [Solar Energy](#)
- [Wind Energy](#)
- [Geothermal Energy](#)
- [Biomass Energy](#)

**U.S. DOE**

- [EERE State Activities and Partnerships](#)

**University Initiatives**

- [New Mexico Technology Research Collaborative](#) (includes 11 of the state's universities, national laboratories and research institutions.)

**NMSU**

- [Institute for Energy and the Environment](#)
- [The Southwest Technology Development Institute](#)

**UNM**

- [Center for Advanced Studies](#)

**San Juan College**

- [Renewable Energy Program](#)

**Third Party Activities/Reports**

- [Sandia National Laboratory](#)
- [New Mexico Renewable Energy Resources](#)
- [Renewable Energy Partners of New Mexico](#)
- [New Mexico Public Regulation Commission and Renewable Energy in New Mexico](#)
- [New Mexico Renewable Energy Conference - 2008](#)



**Oregon  
Renewable Energy/Bioenergy  
Activities & Initiatives  
February, 2009**

**State Initiatives**

- [Incentives](#)
- [Renewable Energy Acton Plan](#)
- [Energy Plan 2005-07](#)
- [Energy Incentives Programs](#)
- [Tax Credits and Loans](#)
- [Renewable Energy Working Group](#)
- [Oregon Renewable Energy Clusters.org](#)

**State Department of Agriculture**

- Energy and Agriculture: <http://egov.oregon.gov/ODA/energy.shtml>

**State Department of Energy:** <http://oregon.gov/ENERGY/>

- [Biomass/Bioenergy Homepage](#)
- [Biomass Coordinating Group](#)
- [Renewable Energy Working Group](#)
- [Renewable Energy Resources](#)
- [Oregon Energy Planning Council](#)

**U.S. DOE**

- [EERE State Activities and Partnerships](#)

**University Initiatives:**

- [Biofuels Biomass Report](#)
- [Woody Biomass Report](#)
- [Biodiesel Initiative](#)
- [Sun Grant Initiative](#)

**Private Sector Activities/Reports**

- [Energy Trust of Oregon](#)
- [Energy Trust of Oregon-Renewables](#)
- [Northwest Energy Efficiency Alliance](#)
- [Oregon Renewable Energy Resources](#)

**Utah  
Renewable Energy/Bioenergy  
Activities & Initiatives  
February, 2009**

**State Initiatives**

- [Incentives](#)
- [Energy Priorities](#)
- [Governor's Energy Policy](#)

**State Department of Agriculture:** <http://ag.utah.gov/>

- No activities listed

**Division of Forestry Fire and State Lands:** <http://www.ffsl.utah.gov/ffsl.htm>

- [Woody Biomass](#)

**State Energy Program:** <http://geology.utah.gov/sep/>

**U.S. DOE**

- [EERE State Activities and Partnerships](#)

**University Initiatives**

**USU**

- [Center for Integrated BioSystems](#)
- [USU Biofuels Initiative](#)
- [Renewable Energy for Economic Development](#)

**UU**

- [Energy and Geosciences Institute](#)

**Third Party Activities/Reports**

- [Utah Clean Energy](#)
- [Utah Clean Energy – Renewables](#)
- [Utah Clean Energy – Energy Efficiency](#)
- [UTSolar.org](#)
- [UT Clean Air Alliance](#)
- [Utah Renewable Energy Resources](#)

**Washington  
Renewable Energy/Bioenergy  
Activities & Initiatives  
February, 2009**

**State Initiatives**

- [Incentives](#)
- [Bioenergy Washington](#)
- [Current biofuels projects](#)

**State Department of Agriculture:** <http://agr.wa.gov/>

- [Bioenergy Crops website](#)

**State Energy Office:**  
**[Extension Energy Program](#)**

- [Renewable Energy](#)

**U.S. DOE**

- [EERE State Activities and Partnerships](#)

**University Initiatives:**

**WSU**

- [Center for Bioproducts and Bioenergy](#)
- [WSU Renewable Energy Program](#)
- [WSU Tri Cities Bioproducts, Sciences, and Engineering Laboratory](#)
- [Triple Bio<sup>TM</sup>](#)
- [Renewable Energy for Economic Development](#)

**Reports:**

- [On the Road to a Bioeconomy](#)
- [Bioenergy Inventory and Assessment for Eastern Washington – 2003](#)
- [Biomass Inventory and Bioenergy Assessment -2005](#)
- [Characteristics of Biomass - 2007](#)
- [Biodiesel in Washington: A Snapshot](#)

**UW**

- [Energy and Geosciences Institute](#)

**Third Party Activities/Reports**

[Pacific Northwest National Laboratory \(PNNL\)](#)

- [PNNL Bioproducts, Sciences, and Engineering Laboratory \(BSEL\)](#)

**Wyoming  
Renewable Energy/Bioenergy  
Activities & Initiatives  
February, 2009**

**State Initiatives**

- [Incentives](#)
- [Energy Efficiency Resources](#)
- [Wyoming Wind Activities](#)

**Wyoming Business Council** <http://www.wyomingbusiness.org/index.aspx>

- Roping the Wind
- [Wyoming Energy Conservation Improvement Program](#)

**State Energy Program:** <http://www.wyomingbusiness.org/business/energy.aspx>

**State Department of Agriculture:** <http://wyagric.state.wy.us>

- [Strategic Plan, includes "Roping the Wind"](#)

**Division of Natural Resources:** <http://wyagric.state.wy.us/divisions/natres.htm>  
[Carbon Sequestration](#)

**U.S. DOE**

- [EERE State Activities and Partnerships](#)

**University Initiatives**

**[School of Energy Resources](#)**

- [Energy Summer Institute](#)
- [Energy Education](#)

**[Energy Resources Council](#)**

**[Western Research Institute](#)**

- [Bioenergy and Biomass Gasification](#)

Wind Energy Research Center under development

**Third Party Activities/Reports**

**[Wyoming Energy Council](#)**

**[Energy Atlas Report](#)**

**[Biomass Resources Assessment](#)**

**[Wyoming Renewable Energy Resources](#)**

**Western Governors' Association**  
**Bioenergy Renewable Energy Initiatives**  
**February, 2009**

**Website:** <http://www.westgov.org/>

**Reports:**

[Western Renewable Energy Zones](#) (open for comment until March 2)

[Transportation Fuels for the Future](#)

[Building an Energy-Efficient Future](#)

[Clean Energy, a Strong Economy and a Healthy Environment](#)

[Clean Energy, a Strong Economy and a Healthy Environment -- A Progress Report 2005-2007](#)

[Energy Efficiency in the Border Region: A Market Approach](#)

[Western Renewable Energy Generation Information System: Progress Report Overview](#)

**Working Groups:**

[Western Regional Biomass Energy Program](#)

- [Clean and Diversified Energy Initiative](#)
- [Biomass Report](#)

**Position Statements:**

[Resolutions](#)

- [Energy Resolutions](#)

[Letters and Testimony](#)

## Current Research Information System

### Biofuels/Bioenergy Projects Western Region – February 3, 2009

Title	Investigator	Institution	View
<b>ALASKA</b>			
RURAL COASTAL ALASKA FISH WASTE UTILIZATION	Simpson, P. K.	SCIENTIFIC FISHERY SYSTEMS, INC. ANCHORAGE, AK	<a href="#">Brief</a> <a href="#">Full</a>
UNIVERSITY OF ALASKA FAIRBANKS FOREST PRODUCTS PROGRAM YEAR 8	Barber, V. A.	UNIVERSITY OF ALASKA FAIRBANKS, AK	<a href="#">Brief</a> <a href="#">Full</a>
SELECTING ALTERNATIVE AGRONOMIC CROPS FOR ALASKA	Zhang, M.	UNIVERSITY OF ALASKA FAIRBANKS, AK	<a href="#">Brief</a> <a href="#">Full</a>
POTENTIAL PERENNIAL LIGNOCELLULOSIC ENERGY CROPS FOR ALASKA	Sparrow, S. D.	UNIVERSITY OF ALASKA FAIRBANKS, ALASKA	<a href="#">Brief</a> <a href="#">Full</a>
<b>ARIZONA</b>			
ECONOMIC FEASIBILITY OF TAMARISK UTILIZATION IN THE HOPI TRIBAL LAND PRINCIPAL INVESTIGATOR	Kim, Y. S.	NORTHERN ARIZONA UNIVERSITY FLAGSTAFF, AZ	<a href="#">Brief</a> <a href="#">Full</a>
CLIMATE, FIRE, AND FOREST STRUCTURE INTERACTIONS IN NORTHERN ARIZONA	Fule,, P.	NORTHERN ARIZONA UNIVERSITY FLAGSTAFF, AZ	<a href="#">Brief</a> <a href="#">Full</a>
WATER SYSTEMS MONITORING AND MODELING IN ARID REGIONS	Waller, P. M.	UNIVERSITY OF ARIZONA TUCSON, AZ	<a href="#">Brief</a> <a href="#">Full</a>
CONFERENCE GRANT TO SUPPORT THE INTERNATIONAL WORKSHOP ON GREENHOUSE ENVIRONMENTAL CONTROL AND CROP PRODUCTION IN SEMI-ARID REGIONS	Kubota, C.	UNIVERSITY OF ARIZONA TUCSON, AZ	<a href="#">Brief</a> <a href="#">Full</a>
<b>CALIFORNIA</b>			
PRODUCTION AND EVALUATION OF BIOFUEL FROM CANOLA IRRIGATED WITH AGRICULTURAL DRAINAGE WATER ON THE WESTSIDE OF CENTRAL CALIFORNIA	BANUELOS G S	AGRICULTURAL RESEARCH SERVICE PARLIER, CA	<a href="#">Brief</a> <a href="#">Full</a>
A NOVEL, LOW-ENERGY STRIPPER-MEMBRANE HYBRID PROCESS FOR	Huang, Y.	MEMBRANE TECHNOLOGY & RESEARCH, INC	<a href="#">Brief</a> <a href="#">Full</a>

BIOETHANOL PRODUCTION, PHASE II		MENLO PARK, CA	
THE SCIENCE AND ENGINEERING FOR A BIOBASED INDUSTRY AND ECONOMY	Fan, Z.	UNIV OF CALIFORNIA DAVIS, CA	<a href="#">Brief Full</a>
DEVELOPMENT OF GRASS GENOMIC RESOURCES FOR CROP IMPROVEMENT AND BIOFUEL RESEARCH	GU Y Q	UNIV OF CALIFORNIA DAVIS, CA	<a href="#">Brief Full</a>
IMPROVING THE SUSTAINABILITY OF LIVESTOCK AND POULTRY PRODUCTION IN THE UNITED STATES	ZHANG, R. H.	UNIV OF CALIFORNIA DAVIS, CA	<a href="#">Brief Full</a>
BIOINFORMATICS AND COMPARATIVE GENOMIC ANALYSES F L. BUCHNERI NRRL B-30929	LIU S	UNIV OF CALIFORNIA DAVIS, CA	<a href="#">Brief Full</a>
DEVELOPMENT OF RESOURCES FOR IMPROVEMENT IN AND COORDINATION OF GRASS CROP SPECIES RESEARCH	ANDERSON O D	UNIV OF CALIFORNIA DAVIS, CA	<a href="#">Brief Full</a>
SCIENCE, TECHNOLOGY & ENVIRONMENT IN CALIFORNIA	Iles, A.	UNIV OF CALIFORNIA BERKELEY, CA	<a href="#">Brief Full</a>
CONTROL OF PLANT CELL WALL COMPOSITION	Somerville, C.	UNIV OF CALIFORNIA BERKELEY, CA	<a href="#">Brief Full</a>
ENVIRONMENTAL AND GENETIC DETERMINANTS OF SEED QUALITY AND PERFORMANCE	BRADFORD, K. J.	UNIV OF CALIFORNIA DAVIS, CA	<a href="#">Brief Full</a>
CLIMATE CHANGE AND AIR POLLUTION: SECOND ORDER OZONE IMPACTS, MITIGATION OF FUGITIVE DUST, AND NOVEL BIOFUELS TO REDUCE GREENHOUSE GASES	Grantz, D.	UNIVERSITY OF CALIFORNIA RIVERSIDE, CA	<a href="#">Brief Full</a>
CHARACTERIZATION AND MECHANISMS OF PLANT RESPONSES TO OZONE IN THE US	Grantz, D.	UNIVERSITY OF CALIFORNIA RIVERSIDE, CA	<a href="#">Brief Full</a>
CALIFORNIA STATE UNIVERSITY AGRICULTURAL RESEARCH INITIATIVE-FFI 2008	Bezerra, J. A.	CALIFORNIA STATE UNIV., FRESNO FOUNDATION FRESNO, CALIFORNIA	<a href="#">Brief Full</a>
AGRONOMIC PRACTICES AFFECTING YIELD, FORAGE QUALITY, AND SUSTAINABILITY OF IRRIGATED FORAGE AND BIOFUEL CROPS	Putnam, D. H.	UNIV OF CALIFORNIA DAVIS, CALIFORNIA	<a href="#">Brief Full</a>
FORWARD PREMIA AND PRICE VOLATILITY IN COMMODITY MARKETS	Smith, A. D.	UNIV OF CALIFORNIA DAVIS, CALIFORNIA	<a href="#">Brief Full</a>
THERMOCHEMICAL BIOMASS CONVERSION FOR FUELS AND POWER	Jenkins, B. M.	UNIV OF CALIFORNIA DAVIS, CALIFORNIA	<a href="#">Brief Full</a>
NATURAL RESOURCE MANAGEMENT, ENVIRONMENTAL REGULATION AND POLICY: IMPLICATIONS FOR SUSTAINABILITY AND CALIFORNIA	Farzin, Y. H.	UNIV OF CALIFORNIA DAVIS, CALIFORNIA	<a href="#">Brief Full</a>

AGRICULTURE, INDUSTRY AND ENERGY			
BIODIVERSITY SURVEYS IN INDONESIA AND DISCOVERY OF HEALTH AND ENERGY SOLUTIONS	Potter, D.	UNIV OF CALIFORNIA DAVIS, CALIFORNIA	<a href="#">Brief Full</a>
THE 19TH INTERNATIONAL CONFERENCE ON ARABIDOPSIS RESEARCH	Schroeder, J.	UNIV OF CALIFORNIA-SAN DIEGO LA JOLLA, CALIFORNIA	<a href="#">Brief Full</a>
O-METHYLATION OF SUGAR RESIDUES IN THE FORMATION OF PLANT CELL WALL POLYMERS WITH RELEVANCE TO BIOFUELS AND INDUSTRIAL EMULSIFIERS	Nothnagel, E. A.	UNIVERSITY OF CALIFORNIA RIVERSIDE, CALIFORNIA	<a href="#">Brief Full</a>
ADVANCED CONTINUOUS BIOMASS HYDROLYSIS AND FERMENTATION	wyman, C. E.	University of California - Riverside Riverside, CALIFORNIA	<a href="#">Brief Full</a>
MAINTENANCE OF POLARITY IN THE MAIZE LEAF	Hake, S.	USDA-ARS-WRRC ALBANY, CALIFORNIA	<a href="#">Brief Full</a>
<b>COLORADO</b>			
NEW CROP OPPORTUNITY FOR SEMIARID DRYLAND PRODUCTION SYSTEMS	Rife, C.	BLUE SUN BIODIESEL GOLDEN, CO	<a href="#">Brief Full</a>
LOW-COST CONVERSION OF HIGH FREE FATTY ACID OILS AND FATS INTO METHYL ESTERS (BIODIESEL)	Elliott, B.	TDA RESEARCH, INC. WHEAT RIDGE, CO	<a href="#">Brief Full</a>
EMISSIONS OF BIOGENIC AEROSOL AND OZONE PRECURSORS BY BIOFUEL CROPS	Fall, R. R.	UNIVERSITY OF COLORADO BOULDER, CO	<a href="#">Brief Full</a>
21ST CENTURY FRONTIERS IN SOIL SCIENCE: SOLUTIONS TO CRITICAL PROBLEMS	Peterson, G. A.	COLORADO STATE UNIVERSITY FORT COLLINS, COLORADO	<a href="#">Brief Full</a>
CYCLOFORMING OF CRUDE GLYCEROL	Rolfe, S. L.	ELTRON RESEARCH, INC. BOULDER, COLORADO	<a href="#">Brief Full</a>
<b>HAWAII</b>			
AN INTEGRATED BIOGAS-SOLAR DEHYDRATION SYSTEM: INCREASING SUSTAINABILITY THROUGH VALUED-ADDED AGRICULTURE	Akiona, W. K.	OMNIGREEN RENEWABLES, LLC WAIANAE, HAWAII	<a href="#">Brief Full</a>
WOOD UTILIZATION RESEARCH ON US BIOFUELS, BIOPRODUCTS, HYBRID BIOMATERIALS COMPOSITES PRODUCTION, AND TRADITIONAL FOREST PRODUCTS	Khanal, S. K.	UNIV OF HAWAII HONOLULU, HAWAII	<a href="#">Brief Full</a>



WOOD UTILIZATION RESEARCH ON US BIOFUELS, BIOPRODUCTS, HYBRID BIOMATERIALS COMPOSITES PRODUCTION, AND TRADITIONAL FOREST PRODUCTS	Schara, G.	UNIV OF HAWAII HONOLULU, HAWAII	<a href="#">Brief</a> <a href="#">Full</a>
SUSTAINABLE CROPPING SYSTEMS FOR TROPICAL ROOT CROPS	Miyasaka, S. C.	UNIV OF HAWAII HONOLULU, HI	<a href="#">Brief</a> <a href="#">Full</a>
<b>MONTANA</b>			
BARLEY FOR RURAL DEVELOPMENT	Blake, T. K.	MONTANA STATE UNIVERSITY BOZEMAN, MONTANA	<a href="#">Brief</a> <a href="#">Full</a>
SEEDSTER TECHNOLOGY FOR MORE SEED RECOVERY, LESS IMPURITIES, AND FASTER GROUND SPEED HARVESTING CAMELINA AND CANOLA FOR BIODIESEL FEEDSTOCK	Arbuckle, L.	NATIVE SEEDSTERS, INC. BILLINGS, MONTANA	<a href="#">Brief</a> <a href="#">Full</a>
THE SCIENCE AND ENGINEERING FOR A BIOBASED INDUSTRY AND ECONOMY	Chen, C.	MONTANA STATE UNIVERSITY BOZEMAN, MT	<a href="#">Brief</a> <a href="#">Full</a>
DEVELOPMENT, INTEGRATION AND ASSESSMENT OF FOOD AND AGRICULTURAL SYSTEMS EDUCATION	Harmon, A. H.	MONTANA STATE UNIVERSITY BOZEMAN, MT	<a href="#">Brief</a> <a href="#">Full</a>
<b>OREGON</b>			
IMPROVEMENT OF SEED AND END-USE QUALITY OF COOL SEASON GRASSES	BANOWETZ G M	AGRICULTURAL RESEARCH SERVICE CORVALLIS, OR	<a href="#">Brief</a> <a href="#">Full</a>
EFFECTS OF NET PRIMARY PRODUCTIVITY AND RESIDUE REMOVAL ON SOIL CARBON AND NITROGEN TRANSFORMATION	LONG D S	AGRICULTURAL RESEARCH SERVICE PENDLETON, OR	<a href="#">Brief</a> <a href="#">Full</a>
MULTICULTURAL SCHOLARS PROGRAM IN BIORESOURCES RESEARCH TO ENHANCE DIVERSITY & COMPETITIVENESS OF STUDENTS IN AGRICULTURAL & FOOD SCIENCES	Curtis, L.	OREGON STATE UNIVERSITY CORVALLIS, OR	<a href="#">Brief</a> <a href="#">Full</a>
THE SCIENCE AND ENGINEERING FOR A BIOBASED INDUSTRY AND ECONOMY	Penner, M. H.	OREGON STATE UNIVERSITY CORVALLIS, OR	<a href="#">Brief</a> <a href="#">Full</a>
GENE FLOW MATTERS: BRASSICA VEGETABLE SEED CROP PRODUCTION AND TRANSGENIC CANOLA	Mallory-Smith, C.	OREGON STATE UNIVERSITY CORVALLIS, OR	<a href="#">Brief</a> <a href="#">Full</a>
IMPROVEMENT OF THE YIELD AND QUALITY OF POPLAR BIOMASS FOR THE UNITED STATES BIO FUELS INDUSTRY	Stanton, B. J.	GREENWOOD RESOURCES PORTLAND, OREGON	<a href="#">Brief</a> <a href="#">Full</a>
<b>UTAH</b>			

ROOT-TO-SHOOT SIGNALING: USING A TOMATO MODEL TO IDENTIFY THE NOVEL BYPASS1 LONG-DISTANCE SIGNAL AND CONDITIONS EVOKING SIGNAL SYNTHESIS	Sieburth, L. E.	University of Utah Salt Lake City, UT	<a href="#">Brief</a> <a href="#">Full</a>
PLANT GENETIC DIVERSITY AND GENE DISCOVERY RESEARCH	LARSON S R	UTAH STATE UNIVERSITY LOGAN, UT	<a href="#">Brief</a> <a href="#">Full</a>
<b>WASHINGTON</b>			
QUANTIFYING AND PREDICTING EMISSION OF PM10 AND GREENHOUSE GASES FROM AGRICULTURAL SOILS	SHARRATT B S	AGRICULTURAL RESEARCH SERVICE PULLMAN, WA	<a href="#">Brief</a> <a href="#">Full</a>
63-5189 WASHINGTON BOILERS	Gustafson, R. R.	UNIVERSITY OF WASHINGTON SEATTLE, WA	<a href="#">Brief</a> <a href="#">Full</a>
61-7577 LANDSCAPE MGT SYSTEM (LMS) - COMPUTER SOFTWARE TRAINING FOR FOREST HEALTH AND CONSERVATION	Mason, C. L.	UNIVERSITY OF WASHINGTON SEATTLE, WA	<a href="#">Brief</a> <a href="#">Full</a>
INTEGRATED EDUCATION AND RESEARCH FOR SUSTAINABLE DEVELOPMENT: LINKING ENGINEERING AND ECONOMIC SCIENCES	Flury, M.	WASHINGTON STATE UNIVERSITY PULLMAN, WA	<a href="#">Brief</a> <a href="#">Full</a>
AEGILOPS CYLINDRICA (JOINTED GOATGRASS)	Kahn, M. L.	WASHINGTON STATE UNIVERSITY PULLMAN, WA	<a href="#">Brief</a> <a href="#">Full</a>
BENEFICIATION OF CHIPPED AND SHREDDED WOODY BIOMASS	Dooley, J. H.	FOREST CONCEPTS, LLC AUBURN, WASHINGTON	<a href="#">Brief</a> <a href="#">Full</a>
65-1783 ANALYSIS OF NOVEL YEAST STRAINS FOR IMPROVED BIOFUEL PRODUCTION	Doty, S. L.	UNIVERSITY OF WASHINGTON SEATTLE, WASHINGTON	<a href="#">Brief</a> <a href="#">Full</a>
65-1846 BIOCONVERSION OF SOLID WASTE TO BIOETHANOL SOURCED FROM UNIV OF WASHINGTON - A LOCAL PROJECT WITH GLOBAL CONSEQUENCES	Bura, R.	UNIVERSITY OF WASHINGTON SEATTLE, WASHINGTON	<a href="#">Brief</a> <a href="#">Full</a>
ENHANCING BIOENERGY EDUCATION AND BUSINESS DEVELOPMENT CAPABILITIES VIA ACCESS TO INTERNATIONAL RESOURCES AND TECHNOLOGIES	chen, S.	WASHINGTON STATE UNIVERSITY PULLMAN, WASHINGTON	<a href="#">Brief</a> <a href="#">Full</a>
PYROLYSIS OF BIOMASS TO PRODUCE SECOND GENERATION BIO-FUELS AND CHEMICALS	Garcia-Perez, M.	WASHINGTON STATE UNIVERSITY PULLMAN, WASHINGTON	<a href="#">Brief</a> <a href="#">Full</a>
WOOD UTILIZATION RESEARCH ON US BIOFUELS, BIOPRODUCTS, HYBRID BIOMATERIALS COMPOSITES PRODUCTION, AND TRADITIONAL FOREST PRODUCTS	Bender, D.	WASHINGTON STATE UNIVERSITY PULLMAN, WASHINGTON	<a href="#">Brief</a> <a href="#">Full</a>

AN INTEGRATED, MULTIFUNCTION AMMONIA REMOVAL AND NUTRIENT RECOVERY SYSTEM FOR MITIGATING AIR AND WATER QUALITY IMPACTS OF ANIMAL OPERATIONS	Chen, S.	WASHINGTON STATE UNIVERSITY PULLMAN, WASHINGTON	<a href="#">Brief</a> <a href="#">Full</a>
THE EFFECTS OF SUSTAINABLE AGRICULTURE PRACTICES AND BIOFUELS MANAGEMENT ON NUTRIENT CYCLING, MICROBIAL ECOLOGY AND CARBON SEQUESTRATION IN SOIL	Fortuna, A.	WASHINGTON STATE UNIVERSITY PULLMAN, WASHINGTON	<a href="#">Brief</a> <a href="#">Full</a>
<b>WYOMING</b>			
EFFECTS OF CROPPING-SYSTEM-RELATED SOIL MOISTURE AND NUTRIENT DYNAMICS ON THE SUSTAINABILITY OF SEMIARID DRYLAND AGRICULTURE	Norton, J. B.	UNIVERSITY OF WYOMING LARAMIE, WYOMING	<a href="#">Brief</a> <a href="#">Full</a>