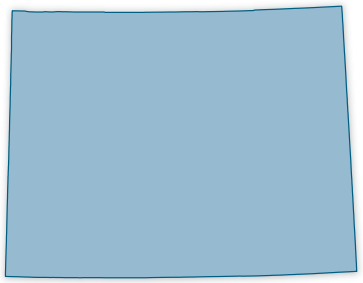
Department of Energy

Recovery Act State Memos

Wyoming



For questions about DOE's Recovery Act activities, please contact the DOE Recovery Act Clearinghouse:
1-888-DOE-RCVY (888-363-7289), Monday through Friday, 9 a.m. to 7 p.m. Eastern Time

https://recoveryclearinghouse.energy.gov/contactUs.htm.

All numbers and projects listed as of June 1, 2010

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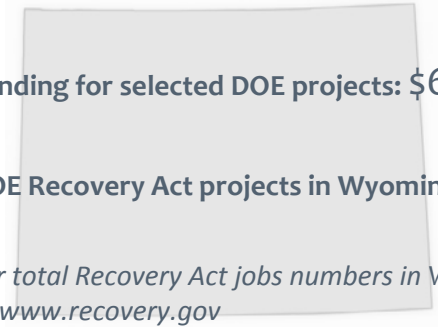
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American Recovery and Reinvestment Act

U.S. DEPARTMENT OF ENERGY • WYOMING RECOVERY ACT SNAPSHOT



Funding for selected DOE projects: $63.7 million

DOE Recovery Act projects in Wyoming: 36

For total Recovery Act jobs numbers in Wyoming go to www.recovery.gov

Wyoming has substantial natural resources including coal, natural gas, oil, and wind power. **The American Recovery & Reinvestment Act (ARRA)** is making a meaningful down payment on the nation's energy and environmental future. The Recovery Act investments in Wyoming are supporting a broad range of clean energy projects from energy efficiency and the smart grid to carbon capture and storage. Through these investments, Wyoming's businesses, the University of Wyoming, non-profits, and local governments are creating quality jobs today and positioning Wyoming to play an important role in the new energy economy of the future.

EXAMPLES OF WYOMING FORMULA GRANTS

Program	State Energy Program	Weatherization Assistance Program	Energy Efficiency Conservation Block Grants	Energy Efficiency Appliance Rebate Program
Award (in millions)	$24.9	$11.2	$12.1	$0.5
	The Wyoming Business Council has been granted $24.9 million in State Energy Program funds to invest in state-level energy efficiency and renewable energy priorities.	The State of Wyoming has been granted $11.2 million in Weatherization Assistance Program funds to scale-up existing weatherization efforts in the state, creating jobs, reducing carbon emissions, and saving money for Wyoming's low-income families. Over the course of the Recovery Act, Wyoming expects to weatherize nearly 950 homes. The program also includes workforce training and education as part of the state's efforts to develop a green workforce. Additionally, the Northern Arapaho Tribe was granted $1 million in Weatherization Assistance Program funds to perform similar tasks, and expects to weatherize approximately 125 homes.	Twenty-two communities in Wyoming were granted a total of $12.1 million for Energy Efficiency and Conservation Block Grants (EECBG) to develop, promote, implement, and manage local energy efficiency programs.	The Wyoming Business Council has been granted $511,000 for the Energy Efficient Appliance Rebate Program, which offers consumer rebates for purchasing certain ENERGY STAR® appliances. These energy efficient appliances reduce energy use and save money for families, while helping the environment and supporting the local economy.

EXAMPLES OF WYOMING COMPETITIVE GRANTS AND TAX CREDITS

Award	$5 million	$5 million	$2.6 million
	Cheyenne Light, Fuel, and Power Company has been awarded a **Smart Grid Investment Grant** for **$5 million**. The funds will support grid communications infrastructure and over 38,000 smart meters across the state to empower consumers with additional information about their energy use.	**The University of Wyoming** in Laramie has received **$5 million** to undertake the work necessary to move from preliminary characterization to commercial development of two carbon dioxide storage sites (the Rock Springs Uplift and the Moxa Arch) in the Rocky Mountain region.	**Powder River Energy Corporation** has been awarded a **$2.6 million Smart Grid Investment Grant** to develop a new secure communications and data network throughout the company's 16,200-square mile service area. The project will provide additional monitoring and control of grid substations and allow for the broader integration of renewable energy resources.

Funding Allocation Table (Figure 1)

Total dollar amounts in this document are accurate as of June 1, 2010. Please note that Recovery Act Programs are ongoing and the dollar amounts are subject to change. Recipient locations are based on project sites rather than recipients' headquarters locations.

Recovery Act Pillar	Flagship Program Names & Funding Type[1]	Number of Selections	Selected Amount (in millions)[2]
Energy Efficiency	*Weatherization Assistance Program (F)*	2	$11.2
	State Energy Program (F)	1	$24.9
	Energy Efficiency and Conservation Block Grant (F)	22	$12.1
	Energy Efficient Appliance Rebate (F)	1	$0.5
	TOTAL Energy Efficiency	26	$48.7
Electric Grid	*Smart Grid Investment and Demonstrations Project (CM)[3]*	2	$7.6
	State and Local Energy Assurance and Regulatory Assistance (F)	3	$1.1
	TOTAL Electric Grid	5	$8.7
Carbon Capture and Storage	*Geologic Characterization Projects (CM)*	1	$5.0
	Research and Training (CM)	2	$1.3
	TOTAL Carbon Capture and Storage	3	$6.3
Environmental Cleanup	*Environmental Management Contracts (C)*	2	$0.04
	TOTAL Environmental Cleanup	2	$0.04
TOTAL - DOE Programs[4]		**36**	**$63.7**

[1]F=Formula Grant, CM=Competitive Grant, C=Contract

[2]"Selected" indicates DOE has selected a potential funding recipient, which begins the process of negotiating an agreement. This does not necessarily indicate that a final agreement has been reached.

[3]Projects may cross state boundaries, signifies HQ location.

[4]Total does not include administrative funds.

ENERGY EFFICIENCY – 26 projects totaling $48.7 million

Helping millions of American families cut utility bills by making homes and appliances more energy efficient and expanding the home efficiency industry in sales and manufacturing. For more information, visit http://www.energy.gov/recovery/energyefficiency.htm.

Award(s): 2 totaling $11.2 million, Weatherization Assistance Program (WAP)
Location: Statewide
The State of Wyoming received $11.2 million in Weatherization Assistance Program funds to scale-up existing weatherization efforts in the state, creating jobs, reducing carbon emissions and saving money for Wyoming's low-income families. Over the course of the American Recovery and Reinvestment Act, Wyoming expects to weatherize nearly 950 homes. The program also includes workforce training and education as part of the state's efforts to develop a green workforce. Additionally, the Northern Arapaho Tribe received $956,000 in Weatherization Assistance Program funds to perform similar tasks and estimates to weatherize approximately 125 homes.

- **State of Wyoming - $10.2 million**
  Wyoming received $10.2 million in funding.

- **Northern Arapaho Tribe - $956,000**
  The Northern Arapaho Tribe received $956,000 in funding.

Award(s): $24.9 million, State Energy Program (SEP)
Location: Statewide
The Wyoming Business Council received $24.9 million in State Energy Program funds to invest in state-level energy efficiency and renewable energy priorities.

Wyoming is using its Recovery Act SEP funding to promote energy efficiency in buildings and homes across the state, including an expansion of Wyoming's weatherization program for low-income families. The state will make grants to governmental and tribal entities, non-profit organizations and others for the purpose of retrofitting existing facilities to improve their energy efficiency 25 percent or more. The program will provide sufficient funding for nearly every community and county in Wyoming to fund an energy efficiency project. Wyoming is also using Recovery Act SEP funds to help middle-income homeowners that are not eligible for low-income weatherization assistance to increase the energy efficiency of their homes. Wyoming is providing rebates to homeowners for installing residential and renewable energy systems, including solar photovoltaic, wind and geothermal systems.

Award(s): 22 totaling $12.1 million, Energy Efficiency and Conservation Block Grant Program (EECBG)
Recipients: Carbon County, Casper, Cheyenne, Converse County, Goshen Country, Park County, Evanston, Fremont County, Gillette, Green River, Jackson, Laramie County, Laramie, Lincoln County, Natrona County, Riverton, Rock Springs, Sheridan, Sheridan County, Shoshone & Arapaho Tribe, Inc., Wyoming Business Council

Twenty-two communities in Wyoming received a total of $12.1 million for the Energy Efficiency and Conservation Block Grants Program (EECBG) to develop, promote, implement and manage local energy efficiency programs.

Wyoming is using its Recovery Act EECBG funding to increase energy conservation and efficiency at the local level. A primary focus of this funding is to retrofit existing buildings to the current efficiency standards of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).

Award(s): $511,000 from DOE, Energy Efficient Appliance Rebate Programs
Location: Statewide
The Wyoming Business Council received $511,000 for the Energy Efficient Appliance Rebate Program, which offers consumer rebates for purchasing certain ENERGY STAR® appliances. These energy efficient appliances reduce energy use and save money for families, while helping the environment and supporting the local economy. This funding assists state-level rebate programs by paying up to 50 percent of the administrative costs of establishing and executing these types of programs. Though states and territories determine the appliances which apply, these typically include clothes washers, dishwashers, refrigerators, freezers, room air conditioners and water heaters.

MODERNIZING THE ELECTRIC GRID – 5 projects totaling $8.7 million

Harnessing clean energy sources and integrating them onto a modernized electric grid, giving consumers better choices and more control over their energy use. For more information, visit http://www.energy.gov/recovery/smartgrid.htm.

Award(s): 2 totaling $379,000, Enhancing State and Local Governments' Energy Assurance
Location: Cheyenne, Casper
This project is focusing on building regional energy assurance capabilities by enhancing inter- and intra-state coordination and cooperation during energy emergencies. The project funds Wyoming to update or develop State Energy Assurance Plans incorporating new energy sources such as wind, renewables, biofuels, etc., while it funds cities to update or develop Energy Assurance Plans within local areas. The two sets of funding will be used to hire or retrain staff, building in-house expertise in Smart Grid technologies, critical energy infrastructure interdependencies and cyber-security.

- **Wyoming Business Council, Cheyenne - $249,000**
  The Wyoming Business Council in Cheyenne received $249,000 for State Energy Assurance Planning.

- **City of Casper, Casper - $130,000**
  The City of Casper received $130,000 for State Energy Assurance Planning.

Award(s): 2 totaling $7.6 million, Smart Grid Investment Grant Program (EISA 1306)
Location: Statewide

- **Cheyenne Light, Fuel and Power Company, Multiple Locations Statewide - $5 million**
  The Cheyenne Light, Fuel and Power Company in Cheyenne received $5 million for the Smart Grid Investment Grant Program (EISA 1306). This project includes the installation of approximately 38,500 advanced metering infrastructure (AMI) smart meters, communications infrastructure and IT software. It will also include implementation of a meter data management system (MDMS) for storing, archiving and retrieving meter data.

- **Powder River Energy Corporation, Multiple Locations Statewide - $2.6 million**
  The Powder River Energy Corporation in Sundance received $2.6 million for the Smart Grid Investment Grant Program (EISA 1306). This project involves the development of a new secure supervisory control and data acquisition (SCADA) and communications network throughout a 16,200-square mile service territory. This network will provide two-way communications between the command & control center and seventeen critical SCADA-enabled substations.

Award(s): $764,000, State Assistance on Electricity Policies
Location: Cheyenne
The Wyoming Public Service Commission received $764,000 for State Assistance on Electricity Policies. This project provides funds to be used by states and their Public Utility Commissions (PUCs) to hire staff responsible for facilitating the review of time-sensitive requests approving electric utility expenditures.

CARBON CAPTURE & STORAGE – 3 projects totaling $6.3 million

Developing clean coal technologies so we can utilize America's coal resources sustainably. For more information, visit http://www.energy.gov/recovery/ccs.htm.

Award(s): $5 million, Geologic Sequestration Site Characterization
Location: Laramie
The University of Wyoming in Laramie received $5 million for Geologic Sequestration Site Characterization. The project is transitioning from preliminary characterization to commercial development of two carbon dioxide storage sites (the Rock Springs Uplift and the Moxa Arch) in the Rocky Mountain region. The project objectives are to design and establish 3-D / 3-C seismic data and other geophysical surveys of the Rock Springs Uplift, design and complete a stratigraphic test well on the Rock Springs Uplift, as well as complete detailed risk assessments and design commercial-scale storage projects for both sites.

Award(s): $1.3 million, Geologic Sequestration Training and Research Grant Program
Location: Laramie
The University of Wyoming in Laramie received $1.3 million for two Geologic Sequestration Training and Research Grant Programs. The first project is determining whether quantitative measurement techniques for Rn activity and carbon dioxide flux, already established for natural volcanic systems, can be applied to natural and laboratory carbon dioxide analogues as a means of assessing caprock integrity. This project will provide training opportunities for two graduate students and one undergraduate student to become proficient in the geologic and geochemical skills required for implementing and deploying this technology. The three students will perform fundamental research to advance the science of Monitoring, Verification and Accounting (MVA). The second project is funding the establishment of the Wyoming CCS Technology Institute to develop and promote CCS technology training in Wyoming and the Rocky Mountain region.

ENVIRONMENTAL CLEANUP – 1 project at $43,000

Creating jobs and reducing the legacy Cold War footprint of the Department of Energy and clean up the polluted land and water resources in communities. For more information, visit http://www.energy.gov/recovery/cleanup.htm.

Award(s): $43,000, Title X Uranium / Thorium Reimbursement Program
Location: Mills, Cheyenne
The Wyoming Department of Environmental Quality and Pathfinder Mines Corporation received $43,000 for the Title X Uranium / Thorium Reimbursement Program. This project will eliminate the government's liability for environmental cleanup at sites that produced uranium (U) and thorium (Th) during the Cold War era for DOE and its predecessors. American Recovery and Reinvestment Act funding may enable the licensees of these sites to accelerate the completion of cleanup programs and to eliminate environmental risks.

ENERGYEMPOWERS.GOV

Recovery Act Success Stories

Energy Empowers is a U.S. Department of Energy clean energy information service. Our team produces stories featuring the people and businesses that are fueling the energy transformation and economic recovery in America.
For more stories from your state, go to energyempowers.gov/Wyoming



Castle Geyser at Yellowstone National Park | File photo

Yellowstone agencies plan to reduce emissions

The 10 federal land organizations — including two national parks, six national forests and two national wildlife refuges — in the Greater Yellowstone Area comprise an entire ecosystem of their own. Straddling Wyoming's borders with Montana and Idaho, the region draws millions of visitors a year, attracted by the dramatic landscapes, geothermal activity and chances to spot wildlife like bison, elk and grizzly bear.

Thanks to funding from the U.S. Department of Energy's Federal Energy Management Program, the Greater Yellowstone Coordinating Committee will make that ecosystem the subject of a major emissions reduction project, which will pave the way for other federal land organizations to reduce their own emissions.

Through the National Renewable Energy Laboratory in Colorado, FEMP has provided $250,000 in technical assistance to the GYCC, helping it reduce greenhouse gas emissions in the GYA. With this money, NREL has already started evaluating where the 10 sites can reduce their emissions. This will help the GYCC meet its goal of reducing emissions by a minimum of 20 percent by 2020 (with higher savings expected). The laboratory's staff is also planning a training session for later this spring, where they will teach federal employees in the GYA how to identify opportunities for greenhouse gas reduction. The employees will also create plans to reduce emissions in their own lands and in the entire ecosystem.

Alicen Kandt, project lead for the Yellowstone-area project at NREL, said it's too soon to accurately say where the emissions reductions will come from. "[It's a] combination of everything — efficiency, renewables, behavior changes like driving less," she says. The area's abundant natural resources allow the team to consider several types of renewable energy sources, including solar, wind power and biomass.

This is the first effort Alicen's aware of where federal parks, forests and wildlife refuges have worked across agency boundaries to make and execute emissions reduction plans. That's part of why her team will document everything it learns — so other agencies can use the experience as a blueprint for their own emissions reductions. It may also be unique that the effort focuses on an entire ecosystem because most previous U.S. emissions reduction projects have focused on municipalities, agencies or businesses.

"The agencies were looking for an appropriate boundary," Alicen says. "Using city or agency boundaries are a bit awkward because the effects of greenhouse gas emissions are likely going to be felt beyond those bounds, and probably at an ecosystem level."

The region includes Yellowstone National Park, Grand Teton National Park, Red Rocks Lakes National Wildlife Refuge and the National Elk Refuge, as well as the Custer, Shoshone, Gallatin, Bridger-Teton, Caribou-Targhee and Beaverhead National Forests.

WHEATLAND

Solar and wind powering Wyoming home

Terry Sandstrom never thought he would run his house entirely on renewable energy, but when faced with a $100,000 price tag to get connected to the grid, he had to look at alternative options. The man who spent his entire life in houses pulling energy from the grid now has 12 solar panels on his front lawn and a wind turbine in the backyard.

"I had no involvement in the renewable energy process until I got up here," says Terry, who moved from Nebraska to Wheatland, Wyo. in 2006. "People think it's such a technical process, but it isn't."

A $3,000 grant from the Wyoming State Energy office helped Terry pay for a four-panel system when he first moved in, but it was money from the American Recovery and Reinvestment Act that made it

possible for him to upgrade the power systems for his 3,400-square-foot home.

"It was a blessing that came out of the stimulus package," says Terry. "I knew I had to increase the input to make a self-sufficient system."

Terry was able to apply for a $10,000 grant to help pay for six 195-watt and six 230-watt solar panels on his property and another $10,000 grant for a new wind turbine, which Terry hopes will be running by August.

The solar panels and the wind turbine charge 24 battery packs that power Terry's home.

In 2009, the state energy office received over $34 million in stimulus funds to promote energy efficiency in buildings and homes. About $25 million of that was awarded through the State Energy Program (SEP); the rest came from an Energy Efficiency and Conservation Block Grant.

Terry took advantage of the state's residential photovoltaic program, which received about $2.2 million from the SEP. When his projects are approved by the state energy office, Terry will be reimbursed for his upgrades.



Solar panels at Terry Sandstrom's home in Wheatland, Wyo. | Photo courtesy of Terry Sandstrom

"It's a wonderfully popular program in Wyoming, and it's very encouraging to see the residents interested in pursuing these projects," says Shannon Stanfill, manager of the Wyoming State Energy Office. "I hope the momentum continues."

Terry says his average electric production after he installs the Sky Stream turbine will be 24.5 kilowatt hours daily—more than enough power to run his house.

He's also become the go-to guy in his neighborhood.

"The grant was a learning process for me," Terry says. "I have a lot of people from the area come to my house to get ideas on how they want to do their own renewable projects."