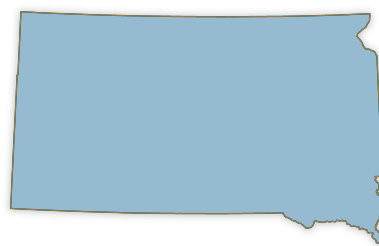




Department of Energy

Recovery Act State Memos

South Dakota



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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American Recovery and Reinvestment Act



U.S. DEPARTMENT OF ENERGY • SOUTH DAKOTA RECOVERY ACT SNAPSHOT

Funding for selected DOE projects: **\$74.8** million

DOE Recovery Act projects in South Dakota: **31**

Clean energy tax credits and grants: **1**

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

South Dakota has substantial natural resources, including biomass, wind, geothermal, and hydroelectric 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 South Dakota are supporting a broad range of clean energy projects, from energy efficiency to smart grid and geothermal power. Through these investments, South Dakota's businesses, the University of South Dakota, non-profits, and local governments are creating quality jobs today and positioning South Dakota to play an important role in the new energy economy of the future.

EXAMPLES OF SOUTH DAKOTA FORMULA GRANTS

Program	State Energy Program	Weatherization Assistance Program	Energy Efficiency Conservation Block Grants	Energy Efficiency Appliance Rebate Program
Award (in millions)	\$23.7	\$24.5	\$14.8	\$0.8
	The South Dakota Department of Tourism and State Development has received \$23.7 million to invest in state-level energy efficiency and renewable energy priorities.	The State of South Dakota has received \$24.5 million to scale-up existing weatherization efforts in the state, creating jobs, reducing carbon emissions and saving money for South Dakota's low-income families. Over the course of the Recovery Act, South Dakota expects to weatherize more than 2,300 homes.	Twenty-five communities in South Dakota received a total of \$14.8 million to develop, promote, implement, and manage local energy efficiency programs.	The South Dakota Department of Tourism and State Development has received \$772,000 to offer consumer rebates for purchasing certain ENERGY STAR® appliances, which reduce energy use and save money for families, while helping the environment and supporting the local economy.

EXAMPLES OF SOUTH DAKOTA COMPETITIVE GRANTS AND TAX CREDITS

Award	\$6.1 million	\$4 million
	The Black Hills Corporation in Rapid City was awarded a \$6.1 million Smart Grid Investment Grant to install over 69,000 smart meters and communications infrastructure that will help consumers reduce their energy use and save money.	Sioux Valley Energy in Coleman received a \$4 million grant to install a smart grid network for all of the company's consumers that will improve the efficiency and reliability of the system while helping consumers save money.

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	<i>Weatherization Assistance Program (F)</i>	1	\$24.5
	<i>State Energy Program (F)</i>	1	\$23.7
	<i>Energy Efficiency and Conservation Block Grant (F)</i>	25	\$14.8
	<i>Energy Efficient Appliance Rebate (F)</i>	1	\$0.8
	TOTAL Energy Efficiency	28	\$63.8
Electric Grid	<i>Smart Grid Investment and Demonstrations Project (CM)³</i>	2	\$10.2
	<i>State and Local Energy Assurance and Regulatory Assistance (F)</i>	1	\$0.8
	TOTAL Electric Grid	3	\$11.0
TOTAL - DOE Programs⁴		31	\$74.8
Tax Credits/ Payments ⁵	<i>Payments for Renewable Energy Generation in Lieu of Tax Credits (1603)</i>	1	\$0.03
	TOTAL Tax Incentives	1	\$0.03
TOTAL - DOE/Treasury + DOE		32	\$74.9
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.			
⁵ Jointly administered by DOE and the U.S. Department of Treasury.			

ENERGY EFFICIENCY – 28 projects totaling \$63.8 million

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

Award(s): \$24.5 million, Weatherization Assistance Program (WAP)

Location: Statewide

The State of South Dakota received \$24.5 million to scale-up existing weatherization efforts in the state, creating jobs, reducing carbon emissions and saving money for South Dakota's low-income families. Over the course of the Recovery Act, South Dakota expects to weatherize more than 2,300 homes.

Award(s): \$23.7 million, State Energy Program (SEP)

Location: Statewide

The South Dakota Department of Tourism and State Development received \$23.7 million to invest in state-level energy efficiency and renewable energy priorities. South Dakota Recovery Act SEP funding supports the Energy Efficient Government program as well as a program that provides revolving energy loans to state institutions. The programs promote energy efficiency efforts while reducing energy costs in state-owned buildings, directly benefitting state residents. The state's energy office administers the funds, provides technical guidance and insures accountability and transparency for state institutions that apply to the two programs. These programs coordinate with South Dakota's energy goals to promote and encourage energy conservation, energy efficiency, renewable energy and alternative fuels.

Award(s): 25 totaling \$15.1 million, Energy Efficiency and Conservation Block Grant Program (EECBG)

Locations: Statewide

Recipients: South Dakota State Energy Office, Brown County, Huron, Vermillion, Lake County, Todd County, Yankton, Pierre, Union County, Mitchell, Lower Brule Sioux Tribe of the Lower Brule Reservation, Flandreau Santee Sioux Tribe, Brookings, Watertown, Crow Creek Sioux Tribe of the Crow Creek Reservation, Aberdeen, Lincoln County, Yankton Sioux Tribe, Pennington County, Minnehaha County, Sisseton-Wahpeton Oyate of the Lake Traverse Reservation, Cheyenne River Sioux Tribe of the Cheyenne River Reservation, Rosebud Sioux Tribe of the Rosebud Indian Reservation, Rapid City, Ogalala Sioux Tribe of the Pine Ridge Reservation, Sioux Falls

This project assists states, U.S. territories, Indian tribes, counties, and cities to develop, promote, implement and manage localized energy efficiency programs through individual program grants.

Twenty-five communities in South Dakota received a total of \$15.1 million to develop, promote, implement and manage local energy efficiency programs. The project funds programs which reduce fossil fuel emissions in a manner that is environmentally sustainable, maximizes cost savings, reduces the total energy use of eligible entities and improves energy efficiency in the transportation, building and other appropriate sectors.

Award(s): \$772,000, Energy Efficient Appliance Rebate Programs

Location: Statewide

The South Dakota Department of Tourism and State Development received \$772,000 to offer consumer rebates for purchasing certain ENERGY STAR® appliances, which reduce energy use and save money for families, while 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, typically those include clothes washers, dishwashers, refrigerators, freezers, room air conditioners and water heaters.

RENEWABLE ENERGY – 1 project totaling \$32,000

Developing the clean renewable resources in order to double our supply of renewable energy and boost domestic renewable manufacturing capacity. For more information, visit <http://www.energy.gov/recovery/renewableenergy.htm>.

Award(s): \$32,000 from DOE / Treasury, 1603 Payments for Renewable Energy Generation

Location: Whitewood

* For current number of 1603 awards, see the weekly update at <http://www.treas.gov/recovery/1603.shtml>

Impervious Energy Systems, LLC, in Whitewood received \$32,000 for a wind project.

MODERNIZING THE ELECTRIC GRID – 3 projects totaling \$11 million

Harnessing clean energy sources and integrating them onto a modernized electric grid, while 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 \$10.2 million, Smart Grid Investment Grant Program (EISA 1306)

Location: Rapid City, Coleman

- **Black Hills Corporation, Rapid City - \$6.1 million**

The Black Hills Corporation in Rapid City received \$6.1 million Smart Grid Investment Grant to install over 69,000 smart meters and upgrade the communications infrastructure. These upgrades help consumers reduce energy use and save money.

- **Sioux Valley Energy, Coleman - \$4 million**

Sioux Valley Energy in Coleman received \$4 million to install a Smart Grid network that reaches all of the company's consumers. This updated grid improves the efficiency and reliability of the system while helping consumers save money

Award(s): \$770,000, State Assistance on Electricity Policies

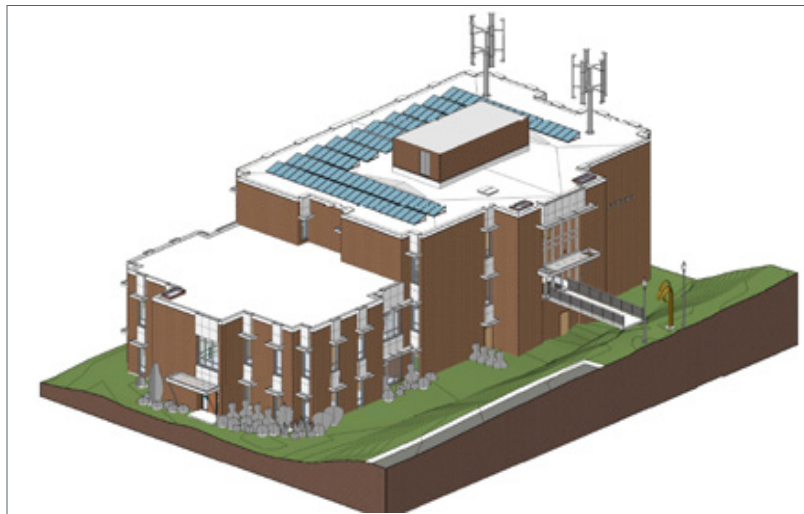
Location: Pierre

The South Dakota Public Utilities Commission in Pierre received \$770,000 for state assistance on electricity policies. This project funds states and their Public Utility Commissions (PUCs) to hire staff trained to facilitate the review of time-sensitive requests approving electric utility expenditures undertaken as part of the Recovery Act.

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/SouthDakota



Pierre's Capitol Lake Plaza will receive solar panels and wind turbines on the roof.

PIERRE

Capitol Lake Plaza becomes Pierre's prototype for wind and solar

Capitol Lake Plaza sits centrally on Pierre, S.D.'s government plaza. Originally built in 1974, the building has been undergoing major energy renovations since being purchased by the state two years ago. Two major components of the renovation are about to appear at the building's highest point: solar panels and wind turbines are being installed on the roof.

The 80 photovoltaic (PV) solar energy system and two vertical wind turbines will produce up to 40 percent of the building's total energy usage, says Rich Ivey, project engineer at South Dakota's office of the state engineer.

"The combination of vertical wind turbines and solar panels will maximize the on-site generation and meet structural and space limitations," says Ivey. "The decision to use both solar and wind was to diversify the on-site generation opportunities."

Preliminary estimates show that by producing a portion of its own power, Capitol Lake Plaza will save nearly \$37,000 a year on energy costs—an amount that will pay back the investment in only 15 years.

"It's going to serve as a prototype building," says Ivey. "It's the first commercial building in the city that has on-site power generation."

At a Glance

- How Pierre is getting wind and solar energy from the Capitol Lake Plaza.
- South Dakota state policy: Major renovations to government-owned buildings must meet the United States Green Building Council "silver" LEED standard
- Building renovation funding: South Dakota
- Renewable energy system funding: Recovery Act Grant from DOE's State Energy Program

It's really a showcase project for other buildings looking to do projects like this."

Putting the pieces together

While the renovation itself is coming from South Dakota's state budget, all of the energy components of the project are being funded by a grant from the American Reinvestment and Recovery Act's State Energy Program.

Two years ago, South Dakota passed legislation that all new and major renovations to government owned buildings had to meet the "silver" standard set forth by the United States Green Building Council (USGBC)'s LEED certification system.

As a result of the LEED certification, the building will not only receive solar panels and wind turbines; it will install many environmentally-friendly measures in the new building including high-efficiency lighting and low-flow bathroom fixtures.

Real-time monitoring

Another one of the building's new features will be a real-time monitor in the building's entry way displaying how much energy is being produced on site.

Ivey hopes this kiosk—which will also show information about LEED certification—will serve as an observation point for anyone coming into the building.

When the building is complete, it will house 120 employees from two offices: the South Dakota Lottery Office and the Department of Tourism and State Development.

"The building occupants are excited about being a part of this project, knowing that the improvements will favorably impact the energy use while provide a much healthier working environment. The community is watching with anticipation," says Ivey.

South Dakota appliance rebates: The program that sold itself

The South Dakota appliance incentive program spends no money on marketing, yet is still wildly successful.

After six weeks of operation, the rebate program for energy-efficient appliances has met its goals of spurring economic activity and reducing home energy consumption, according to Mike Mueller of the South Dakota Bureau of Administration. The program has closed although the state is still processing rebate applications.

"South Dakota's program was attractive to consumers, and for retailers, it generated traffic and sales in their stores," Mueller reports. "One of the keys was that the program was simple for both consumers and retailers, which eliminated a lot of potential problems. Plus, the media took an interest in the program from the beginning. The media and retailers helped push the program. We've spent no money on marketing, and instead were able to use those funds for

consumer rebates.”

The stimulus-funded rebate program to encourage replacement of old appliances with ENERGY STAR qualified models began March 1, 2010, with an estimated \$738,391 available for consumer rebates. As of April 12, rebate applications for 6,486 appliances had been received.

Clothes washers top the list with nearly 33 percent of the appliance rebate applications. Dishwashers and refrigerators comprise 27 percent and 26 percent of the applications, respectively. Freezers are 9 percent of the total, with water heaters the final 5 percent.

“I already have other plants calling me and saying they really want to install a CHP,” he says.

COLTON CITY

Hybrid solar-wind generates savings for S.D. city

The city of Colton, S.D. is a small, agriculturally-based community. So small that Mayor Erik Miller says if his two Labrador retrievers ever got lost, local residents would have no trouble finding them.

“Colton is like taking a trip to the past,” says Miller.

Still, the Mayor is looking to create a new energy future for Colton, deploying one small-scale solar and two solar-wind hybrid systems, and conducting energy retrofits.

The tight-knit community of only 700 people is using a \$55,000 Energy Efficiency and Conservation Block Grant (EECBG) funded through the American Recovery and Reinvestment Act to implement a comprehensive Energy Independence Community (EIC) Initiative. A majority of the grant funds will go toward a solar energy system at City Hall and energy efficient retrofits at the East and West City Shops, the location of Colton’s public works operations.

“I just know this project will have a huge impact,” says Miller. “The city is taking the lead in pushing renewable energy and hopefully the enthusiasm spills into the greater community.”

At Colton City Hall, city officials will install a six-panel solar

energy system on the building’s roof that will allow the facility to function solely on solar power production. Miller says the City Hall project will represent the “flagship” of Colton’s EIC Initiative.

The East and West City Shops will receive new electric service panels, energy efficient furnaces and lighting retrofits. The two facilities will also each install wind and solar ‘hybrid’ systems, which will use a combination of the two energy producing components with 1.2 kW wind turbines supplementing the electricity produced by 1 kW solar energy system.

The projects, which will begin this fall, are estimated to reduce the city’s natural gas and electric bills by \$2,700. The total project payoff is 19 years. Miller says he is not yet sure how the savings will be used in Colton.

In addition to saving energy, the city is expected to benefit from job creation – though an exact number of jobs have not yet been determined.

“The initiative will be the basis for more folks to get involved,” Miller says. “Electricians, technicians and construction workers are all needed for the projects. We think a little niche market can be created.”

“It may seem small, but you don’t have to have a 10 kW system to make a huge difference,” says Miller. “A lot of people think that, but you never consume all your electricity needs in a moment of time.”

In addition, entry doors, overhead garage doors and windows will be replaced with insulated and more efficient models at the West City Shop. The changes will effectively double the city’s public works space to 5,000 sq. ft while at the same time reduce overall energy costs of city operations.

“We want to showcase this energy efficient technology and be a model for other communities to see,” says Miller. “After the projects are completed, we will be the only city in South Dakota to have its entire city operations utilizing this technology.”