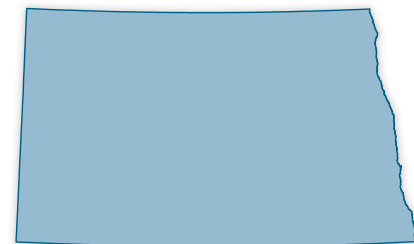




Department of Energy Recovery Act State Memos

North 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

TABLE OF CONTENTS

RECOVERY ACT SNAPSHOT..... 1

FUNDING ALLOCATION TABLE..... 2

ENERGY EFFICIENCY 3

RENEWABLE ENERGY 4

ELECTRIC GRID..... 5

CARBON CAPTURE & STORAGE..... 6

RECOVERY ACT SUCCESS STORIES – ENERGY EMPOWERS

- *New factory in capital to produce wind tower jobs 7*
- *North Dakota keeps its appliance rebate program simple 7*
- *Hired and helping with heating in North Dakota 8*



American Recovery and Reinvestment Act



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

Funding for selected DOE projects: \$69.5 million

DOE Recovery Act projects in North Dakota: 28

Clean energy tax credits and grants: 3

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

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

EXAMPLES OF NORTH DAKOTA FORMULA GRANTS

Program	State Energy Program	Weatherization Assistance Program	Energy Efficiency Conservation Block Grants	Energy Efficiency Appliance Rebate Program
Award (in millions)	\$24.6	\$25.3	\$13.3	\$0.6
	The North Dakota Department of Commerce has received \$24.6 million to invest in state-level energy efficiency and renewable energy priorities.	The North Dakota Department of Commerce has received \$25.3 million to scale-up existing weatherization efforts in the state, creating jobs, reducing carbon emissions, and saving money for North Dakota's low-income families. Over the course of the Recovery Act, North Dakota expects to weatherize nearly 3,300 homes. The program also includes workforce training and education as part of the state's efforts to develop a green workforce.	Eighteen communities in North Dakota received a total of \$13.3 million to develop, promote, implement, and manage local energy efficiency programs.	The North Dakota Department of Commerce has received \$615,000 to offer 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 NORTH DAKOTA COMPETITIVE GRANTS AND TAX CREDITS

Award	\$30.2 million	\$7.1 million	\$1.7 million
	Otter Tail Power Company was awarded two 1603 payments for renewable energy generation for \$30.2 million. The funds will be used to support a wind-powered electric generation project.	Schuff Steel Company in Bismarck was awarded a clean energy manufacturing tax credit for \$7.1 million. The funds will be used to construct a facility to manufacture wind turbine towers with a planned capacity of 300 wind towers per year.	The University of North Dakota was awarded \$1.7 million for geothermal demonstration projects. The University will utilize a low-temperature binary unit to produce power from oil and gas wells in Bowman County.

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	\$25.3
	<i>State Energy Program (F)</i>	1	\$24.6
	<i>Energy Efficiency and Conservation Block Grant (F)</i>	18	\$13.3
	<i>Energy Efficient Appliance Rebate (F)</i>	1	\$0.6
	TOTAL Energy Efficiency	21	\$63.8
Renewable Energy	<i>Geothermal (CM)</i>	2	\$3.4
	TOTAL Renewable Energy	2	\$3.4
Electric Grid	<i>State and Local Energy Assurance and Regulatory Assistance (F)</i>	2	\$1.0
	<i>Smart Grid Workforce Training (CM)</i>	1	\$0.7
	TOTAL Electric Grid	3	\$1.7
Carbon Capture and Storage	<i>Research and Training (CM)</i>	2	\$0.6
	TOTAL Carbon Capture and Storage	2	\$0.6
TOTAL - DOE Programs³		28	\$69.5
Tax Credits/ Payments ⁴	<i>Payments for Renewable Energy Generation in Lieu of Tax Credits (1603)</i>	2	\$30.2
	<i>Clean Energy Manufacturing Tax Credits (48C)</i>	1	\$7.1
	TOTAL Tax Incentives	3	\$37.3
TOTAL - DOE/Treasury + DOE		31	\$106.8
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 Total does not include administrative funds.			
⁴ Jointly administered by DOE and the U.S. Department of Treasury.			

ENERGY EFFICIENCY – 21 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): \$25.3 million, Weatherization Assistance Program (WAP)

Location: Statewide

The North Dakota Department of Commerce received \$25.3 million to increase existing weatherization efforts in the state, create jobs, reduce carbon emissions and save money for North Dakota's low-income families. Over the course of the Recovery Act, North Dakota aims to weatherize nearly 3,300 homes. The program includes funding for workforce training and education as part of the state's efforts to develop a green workforce.

Award(s): \$24.6 million, State Energy Program (SEP)

Location: Statewide

The North Dakota Department of Commerce received \$24.6 million to invest in state-level energy efficiency and renewable energy priorities. North Dakota is using its Recovery Act SEP funding to promote various energy efficiency and conservation efforts, including providing energy education resources for North Dakota's agricultural and industrial sectors to help farmers, ranchers, contractors and building tradesmen reduce energy use. North Dakota offers training, technical assistance, marketing and outreach support to promote the adoption of energy-efficient construction practices and agricultural technologies, conservation techniques and the use of clean renewable energy sources. The state is establishing an Emergency High Efficiency Furnace Rebate Program, which assists victims of the 2009 spring floods with the cost of installing high efficiency furnaces to replace standard furnaces and heating systems. Grants of up to \$300 are offered to individual homeowners who need to replace these systems as a result of flooding.

Award(s): 18 totaling \$13.3 million, Energy Efficiency and Conservation Block Grant Program (EECBG)

Location: Statewide

Recipients: North Dakota State Energy Office, Walsh County, Ramsey County, Wahpeton, Williston, Rolette County, Jamestown, Burleigh County, Dickinson, Mandan, West Fargo, Spirit Lake Tribe, Three Affiliated Tribes of the Fort Berthold Reservation, Turtle Mountain Band of Chippewa Indians, Grand Forks, Bismark, Fargo, Standing Rock Sioux Tribe of North and South Dakota

Eighteen communities in North Dakota received a total of \$13.3 million to develop, promote, implement and manage local energy efficiency programs.

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. 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. Examples of EECBGs include:

- **North Dakota State Energy Office - \$9.6 million**
The state's Office of Energy Resources in North Dakota administers the \$9.6 million in EECBG funds to improve energy efficiency, including launching a campaign to educate the public about being and becoming more energy efficient. These projects lead to substantial energy and cost savings and create or retain 107 jobs Statewide. The campaign lasts two years and involves the distribution of conservation tip sheets, advertising, an internet presence, a training component for schools, hosted events and business involvement. Sixty percent of the funds North Dakota received are sub-granted to cities and counties which were not eligible for direct EECBG formula funding from DOE. Those funds pay for energy efficiency retrofits to government buildings with priority given to projects with a faster payback period.
- **City of Fargo, Fargo - \$949, 000**
The City of Fargo received \$949,000 for nine project activities aimed at increasing widespread energy efficiencies.
- **City of Bismarck, Bismarck - \$594,000**
The City of Bismarck received \$594,000 for development of energy efficiency and conservation strategy and the implementation of specific projects.

Award(s): \$615,000, Energy Efficient Appliance Rebate Programs

Location: Statewide

The North Dakota Department of Commerce received \$615,000 for consumer rebates for purchasing certain ENERGY STAR® appliances. These energy efficient appliances 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, eligible appliances typically include clothes washers, dishwashers, refrigerators, freezers, air conditioners and water heaters.

RENEWABLE ENERGY – 5 projects at \$40.7 million

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): 2 payments totaling \$30.2 million from DOE / Treasury, 1603 Payments for Renewable Energy Generation

Location: Steele County, Cartwright

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

- **Otter Tail Power Company, Steele County - \$30.2 million**
Otter Tail Power Company in Steele County received \$30.2 million for a wind project.
- **Krieger Repair, Cartwright - \$9,000**
Krieger Repair in Cartwright received \$9,000 for a wind project.

Award(s): \$7.1 million from DOE / Treasury, Clean Energy Manufacturing Tax Credit (48C)

Location: Bismarck

Schuff Steel Company in Bismarck received \$7.1 million to construct a facility for the manufacturing of wind turbine towers. The planned capacity from this facility is 300 wind towers per year.

Award(s): 2 totaling \$3.4 million, Geothermal Demonstrations

Location: Grand Forks

- **The University of North Dakota, Grand Forks - \$1.7 million**
The University of North Dakota in Grand Forks received \$1.7 million for Geothermal Demonstration projects. The University is using a low-temperature binary unit to produce power from oil and gas wells in Bowman County.
- **The University of North Dakota in Grand Forks - \$1.7 million**
The University of North Dakota in Grand Forks received \$1.7 million to demonstrate the technologic and economic feasibility of generating continuous electricity from coproduced geothermal fluids using binary ORC technology with air as the condensing medium.

MODERNIZING THE ELECTRIC GRID – 3 projects totaling \$1.7 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): \$259,000, Enhancing State and Local Governments' Energy Assurance

Location: Bismarck

The North Dakota Department of Commerce received \$259,000 for Enhancing State and Local Governments' Energy Assurance. This project funds states to update and develop State Energy Assurance Plans that incorporate new energy portfolios such as wind, renewable and biofuels. This program also funds cities updating and developing Energy Assurance Plans within local areas. The two sets of funding are being used to hire or retrain staff, building in-house expertise in the areas of Smart Grids, critical energy infrastructure interdependencies and cyber-security.

Award(s): \$728,000, Smart Grid Workforce Training

Location: Bismarck

Bismarck State College in Bismarck received \$728,000 for Smart Grid Workforce training. This funding supports the implementation of a comprehensive, flexible and easily accessible Smart Grid laboratory, for both on-campus and online training. This Grid Lab is a unique platform for the demonstration of smart technology and is also a complete microcosmic Smart Grid including home and industrial loads, distributed and renewable generation, and advanced communication and control systems.

Award(s): \$766,000, State Assistance on Electricity Policies

Location: Bismarck

The North Dakota Public Service Commission in Bismarck received \$766,000 for State Assistance on Electricity Policies. Funds are helping address the Recovery Act electricity workload. 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.

CARBON CAPTURE & STORAGE – 2 projects totaling \$599,000

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): 2 totaling \$599,000, Geologic Sequestration Training and Research Grant

Location: Grand Forks, Fargo

- **University of North Dakota, Grand Forks - \$300,000**

The University of North Dakota in Grand Forks received \$300,000 for the Geologic Sequestration Training and Research Grant Program. This project evaluates the use of composite polymer membranes and porous membrane contactors for the recovery of carbon dioxide from carbon dioxide-rich solvent streams from coal gasification syngas. The goal is the development of materials and processes which reduce both capital and operating costs of the solvent regeneration process, particularly the energy expended in regeneration. This project supports at least two graduate students during the research effort.

- **North Dakota State University, Fargo - \$299,000**

North Dakota State University in Fargo received \$299,000 for the Geologic Sequestration Training and Research Grant Program. The goal of this project is to examine the possible development of protective coatings for the interior of process equipment and pipelines handling supercritical carbon dioxide. This project supports at least two graduate students during the research effort.

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/NorthDakota



Schuff Steel will manufacture large-scale wind towers at its North Dakota plant | File photo

BISMARCK

New factory in capital to produce wind tower jobs

A new wind tower factory in Bismarck, N.D., could help breathe economic life back into an area that lost a manufacturing plant and almost 475 jobs in December.

One month after Bobcat Co.'s machine manufacturing plant closed a majority of its operations in the Northern Plains Commerce Centre, Schuff Steel Co. announced it was exploring the construction of a new wind tower in the same industrial park. The facility would employ about 300 people and manufacture large-scale wind towers for 2- to 5-megawatt farms.

Sluggish sales and a weak economy forced Bobcat to close its doors late last year. It relocated a majority of the 475 jobs to its Gwinner plant in southeastern North Dakota. Laid-off workers were given the chance to relocate, but a majority of those workers stayed behind in Bismarck.

“This is outstanding opportunity for the workforce here,” says Russ Staiger, executive director of the Bismarck Mandan Development Association, the nonprofit working closely with the Arizona steel fabricator. “Schuff will be looking for a lot of the same skill sets: welders, machinists and other manufacturer-related jobs.”

No specific dates have been announced, but Russ says the plant is a “work of art that keeps moving forward,” with construction targeted for summer.

Schuff Steel, which received a \$7 million federal tax credit under the Recovery Act Section 48C Clean Energy Manufacturing Tax Credit, plans to manufacture about 300 wind towers a year at the 200,000-square-foot facility.

North Dakota's potential for generating wind power made it an attractive location for Schuff. The state generates enough wind energy to power 210,000 homes a year (700 megawatts), but according to the American Wind Association, it is capable of producing almost 140,000 MW.

“After researching the renewable energy business in general, and specifically wind energy, we are convinced that we are seeing the emergence of a new industry,” said Dennis Randall, executive vice president of Schuff's Midwest Division, in a news release. “We also feel that this new venture would require construction of a dedicated plant in close proximity to developing markets.”

North Dakota keeps its appliance rebate program simple

Since April 6, North Dakota has offered a \$150 rebate for ENERGY STAR® qualified refrigerators; it expects to award approximately 3,800 rebates worth about \$577,000 before funds run out. The program went to waitlist-only status in early May.

“Focusing on a single appliance and a single rebate amount made for easy communication, understanding, and administration,” says Jeff Rotenberger of the North Dakota Department of Commerce. “Consumers have been very pleased with the simplicity of the program.”

The Department of Commerce also decided to use state agency staff to process rebates and answer questions from consumers and retailers instead of hiring an implementation contractor. “Administering our rebate program in house allowed us to keep overhead costs low and maximize the amount of stimulus dollars going to consumers,” says Rotenberger. “We consider that a big win for the people here in North Dakota.”

Retailers such as Dakota TV and Appliance of Grand Forks reported an estimated 20% increase in refrigerator sales during the first few weeks of the rebate program, and customers were asking about the rebates a month before the launch date. Joey Soderfeld, a floor manager who helped customers fill out rebate forms, credits the simple program design as an important factor in the program's success.

GRAND FORKS

Hired and helping with heating in North Dakota

Father of two, Corey Pladson is one of the newest hires at Red River Valley Community Action, a nonprofit that provides weatherization services in Grand Forks, N.D.

Pladson is one of six new weatherization technicians - three of whom were previously unemployed - hired to help RRVCA's Recovery Act production goals.

After receiving \$2.8 million through the Recovery Act, RRVCA was able to increase the number of income-eligible homes it weatherizes each month from 10 to 20. RRVCA plans to hire two more technicians within the next month.

"The Recovery Act money has allowed us to add capable staff members and significantly increase our workload," says Chris Loveless, RRVCA's Co-Administrator of Housing and Programming

Juggling day and night

Prior to being hired by RRVCA in April 2009, Pladson juggled working nights as a cook in a hotel kitchen and staying at home with his children during the day. His background in mechanical engineering and aircraft construction made him a good candidate for the job, which requires applicants to have at least one year of construction experience.

"It can be a culture shock to see people who don't have a lot of money. But it's nice to be able to help them out," Pladson says. "Every day is a learning experience because every site has different challenges."

As a weatherization technician, Pladson works on a four-man crew that improves homes' energy efficiency through several processes. Technicians conduct diagnostic tests to identify structural problems that can contribute to heat loss and air infiltration. They make physical improvements, such as replacing leaky windows and doors

or installing more insulation and sealing air ducts. Technicians also test the efficiency of the homes' appliances and discuss best practices for energy use with residents.

Cold weather – lower heating costs

In the four counties RRVCA handles, the average winter temperatures rarely climb above freezing. For that reason, the nonprofit's work improving the energy efficiency of low-income families' homes helps them be more comfortable and decrease their heating bills.

"Heating costs in this area can be very expensive, and a lot of the

"A lot of the people whose houses we work on are very appreciative," says Corey Pladson, a Weatherization Technician at Red River Valley Community Action

people whose houses we work on are very appreciative," Pladson says. "One woman had tears in her eyes as we were leaving. I ran into her at a town picnic with my wife and kids later, and she thanked me again."

The entire weatherization process takes three to 10 days, depending on the size of the home. Loveless, RRVCA's co-administrator says weatherization improvements decrease homes' monthly heating bills by an average of 24 to 26 percent. Pladson can recall one instance where weatherization helped cut an individual's monthly heating bill in half.

To qualify for RRVCA's weatherization services, which are provided free of charge, families or individuals earning 200 percent or less of the federal poverty level or who qualify for fuel assistance under the federal Low Income Home Energy Assistance Program.