



Department of Energy Recovery Act State Memos

Ohio



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 | 6 |
| ELECTRIC GRID | 8 |
| TRANSPORTATION | 10 |
| CARBON CAPTURE & STORAGE..... | 11 |
| ENVIRONMENTAL CLEANUP..... | 12 |
| SCIENCE AND INNOVATION | 12 |

RECOVERY ACT SUCCESS STORIES – ENERGY EMPOWERS

- *Cincinnati canvassing spreads retrofitting message 13*
- *Grant helps efficiently rebuild Ohio infrastructure 14*
- *Ohio celebrates Recovery Act weatherization program performance 14*
- *Training center gets people work, teaches new skills 14*



American Recovery and Reinvestment Act



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

Funding for selected DOE projects: \$799.6 million

DOE Recovery Act projects in Ohio: 83

Clean energy tax credits and grants: 20

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

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 Ohio are supporting a broad range of clean energy projects from the smart grid and energy efficiency to advanced battery manufacturing, biofuels, carbon capture and storage, and cleanup of the state's Cold War legacy nuclear sites. Through these investments, Ohio's businesses, universities, non-profits, and local governments are creating quality jobs today and positioning Ohio to play an important role in the new energy economy of the future.

EXAMPLES OF OHIO FORMULA GRANTS

| Program | State Energy Program | Weatherization Assistance Program | Energy Efficiency Conservation Block Grants | Energy Efficiency Appliance Rebate Program |
|---------------------|---|---|---|---|
| Award (in millions) | \$96.1 | \$266.8 | \$82.3 | \$11 |
| | The Ohio Department of Communications Development has been granted \$96.1 million in State Energy Program funds to invest in state-level energy efficiency and renewable energy priorities. | The State of Ohio has been granted \$266.8 million in Weatherization Assistance Program funds to scale-up existing weatherization efforts in the state, creating jobs, reducing carbon emissions, and saving money for Ohio's low-income families. Over the course of the Recovery Act, Ohio expects to weatherize nearly 32,200 homes. The program also includes workforce training and education as part of the state's efforts to develop a green workforce. | Forty-three communities in Ohio were granted a total of \$82.3 million for Energy Efficiency and Conservation Block Grants (EECBG) to develop, promote, implement, and manage local energy efficiency programs. | The Ohio Department of Communications Development has been granted \$11 million 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 OHIO COMPETITIVE GRANTS, TAX CREDITS AND LOANS

| | | | | | |
|-------|---|---|---|---|--|
| Award | \$5.9 billion | \$118.2 million | \$73.7 million | \$50.7 million | \$4.1 million |
| | Ford Motor Company closed a \$5.9 billion loan arrangement under the Department of Energy's Advanced Technology Vehicles Manufacturing program to transform factories across Illinois, Kentucky, Michigan, Missouri, and Ohio to produce 13 more fuel efficient models. The company estimates the project will transform nearly 35,000 employees to green engineering and manufacturing jobs. | Lata/Parallax Portsmouth, LLC , in Piketon, has been awarded \$118.2 million to accelerate the demolition of three surplus building complexes at the Portsmouth Gaseous Diffusion Plant. | As part of the Smart Grid Demonstration Program , Columbus Southern Power Company has been awarded \$73.7 million to demonstrate a secure, interoperable, and integrated smart grid infrastructure for 110,000 consumers in the state that will maximize the efficiency and reliability of the grid and enable consumers to reduce their energy use and save money. | E.I. du Pont de Nemours and Co. in Circleville has been awarded a clean energy manufacturing tax credit for \$50.7 million to expand production of high-performance polyvinyl fluoride films. | Ohio received thirteen 1603 payments for renewable energy generation totaling \$4.1 million, which include solar, wind, landfill gas, and combined heat and power projects. For example, Smart Papers Holdings LLC received \$2.5 million for a combined heat and power project. |

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 | \$266.8 |
| | <i>State Energy Program (F)</i> | 1 | \$96.1 |
| | <i>Energy Efficiency and Conservation Block Grant (F)</i> | 43 | \$82.3 |
| | <i>BetterBuildings (CM)</i> | 1 | \$17.0 |
| | <i>Energy Efficient Appliance Rebate (F)</i> | 1 | \$11.0 |
| | <i>Building Energy Efficiency (CM)</i> | 2 | \$0.6 |
| | <i>Industrial Energy Efficiency (CM)</i> | 3 | \$3.9 |
| | <i>Additional Programs (CM & C)</i> | 1 | \$0.2 |
| | TOTAL Energy Efficiency | 53 | \$477.9 |
| Renewable Energy | <i>Wind (CM)</i> | 1 | \$0.3 |
| | TOTAL Renewable Energy | 1 | \$0.3 |
| Electric Grid | <i>Smart Grid Investment and Demonstrations Project (CM)³</i> | 4 | \$87.1 |
| | <i>State and Local Energy Assurance and Regulatory Assistance (F)</i> | 3 | \$2.4 |
| | <i>Smart Grid Workforce Training (CM)</i> | 3 | \$6.7 |
| | TOTAL Electric Grid | 10 | \$96.2 |
| Transportation | <i>Advanced Battery Manufacturing (CM)</i> | 2 | \$34.1 |
| | <i>Clean Cities Alternative Fuel and Vehicles Program (CM)</i> | 1 | \$11.0 |
| | <i>Advanced Fuels (CM)</i> | 1 | \$19.6 |
| | TOTAL Transportation | 4 | \$64.7 |
| Carbon Capture and Storage | <i>CCS Projects (CM)</i> | 1 | \$3.0 |
| | <i>Research and Training (CM)</i> | 3 | \$0.9 |
| | TOTAL Carbon Capture and Storage | 4 | \$3.9 |
| Environmental Cleanup | <i>Environmental Management Contracts (C)</i> | 2 | \$137.9 |
| | TOTAL Environmental Cleanup | 2 | \$137.9 |
| Science and Innovation | <i>Advanced Research Projects Agency - Energy (ARPA-E) (CM)</i> | 4 | \$17.3 |
| | <i>Small Business Research (SBIR/STTR) (CM)</i> | 3 | \$0.4 |
| | <i>National Laboratory Facilities (C)</i> | 1 | \$0.2 |
| | <i>Additional Programs</i> | 1 | \$0.8 |
| | TOTAL Science and Innovation | 9 | \$18.7 |
| TOTAL - DOE Programs⁴ | | 83 | \$799.6 |
| Tax Credits/ Payments ⁵ | <i>Payments for Renewable Energy Generation in Lieu of Tax Credits (1603)</i> | 13 | \$4.1 |
| | <i>Clean Energy Manufacturing Tax Credits (48C)</i> | 7 | \$125.0 |
| | TOTAL Tax Incentives | 20 | \$129.1 |
| TOTAL - DOE/Treasury + DOE | | 103 | \$928.7 |
| 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. | | | |
| ⁵ Jointly administered by DOE and the U.S. Department of Treasury. | | | |

ENERGY EFFICIENCY – 53 projects totaling \$477.9 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): \$266.8 million, Weatherization Assistance Program (WAP)

Location: Statewide

Ohio received \$266.8 million in Weatherization Assistance Program funds to scale-up existing weatherization efforts in the state, creating jobs, reducing carbon emissions and saving money for Ohio's low-income families. Over the course of the Recovery Act, Ohio expects to weatherize nearly 32,200 homes. The program also includes workforce training and education as part of the state's efforts to develop a green workforce. The Corporation for Ohio Appalachian Development (COAD) provides a variety of energy efficiency measures at no cost to low-income citizens. These programs help people in need keep their homes healthy, durable and comfortable. Weatherization services can help prevent homelessness by making homes more affordable. COAD has met the needs of its own network and is beginning to reach out and collaborate with training programs elsewhere to help others meet their needs.

Award(s): \$96.1 million, State Energy Program (SEP)

Location: Statewide

The Ohio Department of Communications Development received \$96.1 million in State Energy Program funds to invest in state-level energy efficiency and renewable energy priorities. The Recovery Act strengthens Ohio's economy by building upon its strategic investments in the advanced energy industries. The State Energy Program, one of many programs receiving funding through the Recovery Act, enables Ohio to stimulate the creation and retention of jobs, save energy, increase energy generation from renewable energy and reduce greenhouse gas emissions. The program collaborates between the Ohio Department of Development and the Ohio Air Quality Development Authority with input from additional state agencies.

Award(s): 43 totaling \$82.3 million, Energy Efficiency and Conservation Block Grant Program (EECBG)

Location: Statewide

Recipients: Akron, Beavercreek, Canton, Cincinnati, Cleveland, Dayton, Lima, Mansfield, Springfield, Youngstown, Clermont County, Cleveland Heights, Columbus, Hamilton County, Lake County, Cuyahoga County, Cuyahoga Falls, Ohio Department of Communications, Dublin, Elyria, Euclid, Fairfield, Findlay, Franklin County Board of Commissioners, Hamilton, Huber Heights, Kettering, Lakewood, Lancaster, Lorain, Marion, Mentor, Middletown, Montgomery County, Newark, Parma, Stark County, Strongsville, Summit County, Toledo, Warren, Warren County, Westerville

Forty-three communities in Ohio received a total of \$82.3 million for the Energy Efficiency and Conservation Block Grants Program (EECBG) to develop, promote, implement and manage local energy efficiency programs.

The Recovery Act includes funding to support investments in energy-related programs and projects that create jobs and stimulate the economy while meeting long-term energy goals. Examples of EECBGs include:

- **Columbus - \$7.4 million**

The City of Columbus received \$7.4 million and is using the funds provided through the EECBG program to retrofit 29 city buildings with energy efficient technologies as well as retrofit pedestrian traffic light signals to LED. The city is also establishing a GreenSwitch revolving loan fund, capitalized at \$1 million, to serve as an incentive for businesses to undertake energy efficiency retrofits at their current site or relocate into one of the targeted areas within the city. The city is constructing bike parking facilities in five downtown garages, four bike shelters along downtown intersections, two secure shelters and two sets of ten bike lockers along the downtown city core, with a capacity to store 260 bicycles.

- **Cleveland - \$4.5 million**

The City of Cleveland received \$4.5 million and is using its EECBG funds to undertake several projects to enhance energy efficiency and expand renewable energy use in the city, including a financial pilot program to enable homeowners to access low-interest, long-term financing for quick, easy and affordable investments in energy efficiency and renewable energy. The city expects these activities will create or retain a number of green jobs.

- **Akron - \$2 million**

The City of Akron received \$2 million and is directing \$1.4 million to private facilities and operations for an energy retrofit loan and grant program targeted at businesses, non-profits and residences. There is also an ultra-low, energy-use subsidy for new residential construction. City facilities and operations are receiving the remaining \$500,000 to support a hybrid vehicle city fleet enrichment program, Bicycle Transit Improvement Project, traffic signal LED retrofit program and city facility lighting retrofit.

- **Dayton - \$1.6 million**

The City of Dayton received \$1.6 million to undertake five projects. The city is increasing recycling participation, installing new cooling units and implementing an energy efficiency and conservation strategy. The city is also installing LED sidewalk light fixtures and installs energy-efficiency measures at a new street maintenance building.

Award(s): \$11 million, Energy Efficient Appliance Rebate Programs

Location: Statewide

The Ohio Department of Communications Development received \$11 million for the Energy Efficient Appliance Rebate Program, offering 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. Rebates are available on a first-come, first-served basis for the purchase of select, qualified ENERGY STAR appliances at Ohio retail locations.

Award(s): \$17 million, BetterBuildings

Location: Cincinnati

The Cincinnati Energy Alliance received \$17 million to conduct community and organizational outreach with energy advisory services focused on retrofits in the residential, commercial and public sectors. This project aims to reduce energy bills for thousands of home and business owners. The project is led by the Greater Cincinnati Energy Alliance, a collaborative program involving seven local government partners in the region. The project seeks to utilize a model of community collaboration,

including marketing, utility program integration, financing affordability and accessibility, customer participation and workforce development.

Award(s): \$1,500, Buildings and Appliance Market Transformation

Location: Groveport

Staber Industries, Inc., in Groveport received \$1,500 for Buildings and Appliance Market Transformation. The Buildings and Appliance Market Transformation project expands building codes, accelerates the pace of Appliance Standard test procedure development and improves the efficiency of commercial buildings' operations by training building operators and commissioning agents.

Award(s): \$233,000, Ground Source Heat Pumps

Location: Dayton

Wright State University in Dayton received \$233,000 for Ground Source Heat Pumps to create a modeling decision tool that provides more detailed loop sizing, performance and cost information to consumers.

Award(s): \$2.8 million, Improved Energy Efficiency for Information and Communication Technology

Location: Dayton

Edison Materials Technology Center in Dayton received \$2.8 million for Improved Energy Efficiency for Information and Communication Technology. This project is developing a prototype ultra high density computer platform with 100 percent liquid cooling using commodity components and high volume manufacturing techniques. The system will be powerful enough for High-Performance Computing (HPC) applications and cost effective enough for general enterprise applications. The ability to package highly dense server systems with liquid cooling reduces both floor space consumed as well as cooling density per computing operation. This technology's potential removal of 20 trillion BTUs in energy is equivalent to removing the annual carbon dioxide emissions of over 200,000 passenger vehicles.

Award(s): 2 payments totaling \$1 million, Industrial Assessment Centers and Plant Best Practices

Locations: Columbus and Dayton

- **Ohio Department of Communications, Columbus - \$892,000**

The Ohio Department of Communications in Columbus received \$892,000 for the Industrial Assessment Centers and Plant Best Practices program. Funds are being used to provide energy efficiency assistance to manufacturers across the state. Ohio is also developing the infrastructure needed to deliver Save Energy Now products and services in a cost effective manner to Ohio companies.

- **University of Dayton, Dayton - \$140,000**

The University of Dayton received \$140,000 for the Industrial Assessment Centers and Plant Best Practices program. Funds are being used to provide eligible small and medium-sized manufacturers with no-cost energy assessments and develop a training ground for the next generation of energy-savvy engineers.

Award(s): \$549,000, Solid State Lighting

Location: East Cleveland

Lumination, LLC, in East Cleveland received \$549,000 for Solid State Lighting. Funds are being used to apply slurry-based linear-fluorescent phosphor coating automation technology to the remote phosphor dome of GE Lumination's Vio LED.

RENEWABLE ENERGY – 21 projects totaling \$129.4 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): 13 payments totaling \$4.1 million from DOE / Treasury, 1603 Payments for Renewable Energy Generation

Location: Statewide

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

Ohio received thirteen 1603 payments for renewable energy generation totaling \$4.1 million, which include solar, wind, landfill gas and combined heat and power projects.

- **Smart Papers Holdings, LLC, Hamilton - \$2.5 million**
Smart Papers Holdings, LLC, in Hamilton received \$2.5 million for a combined heat and power project.
- **Renewable Energy Services of Ohio, LLC, Milan - \$823,000**
Renewable Energy Services of Ohio, LLC ("RESO"), in Milan received \$823,000 for a landfill gas project.
- **Scioto Valley Wind, LLC, McGuffey - \$253,000**
Scioto Valley Wind, LLC, in McGuffey received \$253,000 for a wind project.
- **Pearl Road Auto Wrecking and Salvage, Cleveland - \$100,000**
Pearl Road Auto Wrecking and Salvage in Cleveland received \$100,000 for a wind project.
- **Encore Industries, Inc., Sandusky - \$82,000**
Encore Industries, Inc., in Sandusky received \$82,000 for a wind project.
- **Recto Molded Products, Inc., Cincinnati - \$79,000**
Recto Molded Products, Inc., in Cincinnati received \$79,000 for a solar project.
- **Horizons Video & Film, Inc. (dba Horizons Companies), Columbus - \$77,000**
Horizons Video & Film, Inc., in Columbus received \$77,000 for a solar project.
- **Shepherd's Shoreline Construction, Inc., Sandusky - \$65,000**
Shepherd's Shoreline Construction, Inc., in Sandusky received \$65,000 for a wind project.
- **Eagle Creek Wholesale, Mantua - \$65,000**
Eagle Creek Wholesale in Mantua received \$65,000 for a wind project.

- **Peter S. Yoder / Mary Ette Kramer, London - \$25,000**
Peter S. Yoder and Mary Ette Kramer of London received \$25,000 for a solar project.
- **McCarthy Systems Co., Inc., Poland - \$24,000**
McCarthy Systems Co., Inc., in Poland received \$24,000 for a solar project.
- **Solaris Blackstone Energy, LLC, Kent - \$22,000**
Solaris Blackstone Energy, LLC, in Kent received \$22,000 for a solar project.
- **Bauders Farm, North Lewisburg - \$6,300**
Bauders Farm in North Lewisburg received \$6,300 for a wind project.

Award(s): 7 totaling \$125 million from DOE / Treasury, Clean Energy Manufacturing Tax Credits (48C)

Location: Statewide

- **E.I. du Pont de Nemours and Co., Circleville - \$50.7 million**
E.I. du Pont de Nemours and Co. in Circleville received \$50.7 million to expand production of high-performance polyvinyl fluoride films.
- **Xunlight Corporation, Toledo - \$34.5 million**
Xunlight Corporation in Toledo received \$34.5 million for a flexible and lightweight photovoltaic solar energy module, which uses thin film silicon-based solar cells and can be rolled for shipping.
- **General Electric Lighting, Inc., Bucyrus - \$19.8 million**
General Electric Lighting, Inc., in Bucyrus received \$19.8 million to re-equip a lamp plant to manufacture energy-conserving T8 and T5 linear fluorescent lamps. These lamps replace less efficient T12 linear fluorescent lamps and HID lamps.
- **First Solar, Inc., Perrysburg - \$16.3 million**
First Solar, Inc., in Perrysburg received \$16.3 million to expand its manufacturing facility to produce fully completed thin-film solar modules. The solar modules are manufactured using a thin film of cadmium telluride (CdTe) as a semi-conductor material, which converts sunlight to electricity more efficiently than traditional crystalline silicon semi-conductor material.
- **The Dow Chemical Co., Findlay - \$2.2 million**
The Dow Chemical Co., in Findlay received \$2.2 million to produce special coatings for use in solar cell manufacture. The films are used to laminate cell components together to form a rigid structure, offering significant benefits to solar cell manufacturers.
- **AcuTemp, Dayton - \$900,000**
AcuTemp in Dayton received \$900,000 to purchase equipment for a six-fold increase in manufacturing of high performance Vacuum Insulation Panels for residential refrigerators. The panels are used in high efficiency ENERGY STAR appliances.

- **Cardinal Fastener & Specialty Co., Bedford - \$480,000**
Cardinal Fastener & Specialty Co. in Bedford received \$480,000 to manufacture hot forged, critical fasteners used in wind turbines such as transportation bolts, tower bolts, nacelle bolts and blade studs.

Award(s): \$311,000, Wind Energy Technology R&D and Testing

Location: Columbus

The Ohio State University Research Foundation in Columbus received \$311,000 for Wind Energy Technology R&D and Testing. Researchers are conducting an experimental and theoretical investigation of micropitting in wind turbine gears and bearings to improve existing wind turbine technologies.

MODERNIZING THE ELECTRIC GRID – 10 projects totaling \$96.2 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 \$1.4 million, Enhancing State and Local Governments' Energy Assurance

Locations: Columbus, Hamilton

This project focuses on building regional energy assurance capability by enhancing inter- and intra-state coordination and cooperation during energy emergencies. This project funds states to update or develop State Energy Assurance Plans incorporating new energy portfolios such as wind, biofuels and other renewables and cities to update or develop Energy Assurance Plans within the local areas. The two sets of funding are being used to hire or retrain staff to build in-house expertise in dealing with Smart Grid technologies, critical energy infrastructure interdependencies and cyber-security.

- **Ohio Department of Communications Development, Columbus - \$1.3 million**
The Ohio Department of Communications Development in Columbus received \$1.3 million for Enhancing State and Local Governments' Energy Assurance. The funds aid State Energy Assurance Planning.
- **Hamilton - \$130,000**
Hamilton received \$130,000 for Enhancing State and Local Governments' Energy Assurance. The funds support the Local Energy Assurance Planning (LEAP) Initiative.

Award(s): 2 totaling \$9.7 million, Smart Grid Investment Grant Program (EISA 1306)

Locations: Wadsworth, Westerville

- **Wadsworth - \$5.4 million**
Wadsworth received \$5.4 million for the Smart Grid Investment Grant Program (EISA 1306). The goal of this project is 100 percent deployment of Advanced Metering Infrastructure (AMI), distribution automation and substation automation.
- **City of Westerville - \$4.3 million**
Westerville received \$4.3 million for the Smart Grid Investment Grant Program (EISA 1306). The goal of this project is the conversion of all electricity and water meters to two-way

communicating, intelligent meters that measure, store, send and receive consumption data including costs and prices, allowing for time of day electric pricing.

Award(s): 2 totaling \$77.4 million, Smart Grid Regional and Energy Storage Demonstration Project (EISA 1304)

Locations: Columbus, Painesville

- **Columbus Southern Power Company, Columbus - \$73.7 million**
As part of the Smart Grid Demonstration Program, Columbus Southern Power Company received \$73.7 million to demonstrate a secure, interoperable and integrated Smart Grid infrastructure for 110,000 consumers in the state. This infrastructure maximizes the efficiency and reliability of the grid and enables consumers to reduce their energy use and save money.
- **Painesville - \$3.7 million**
Painesville received \$3.7 million for a Smart Grid Regional and Energy Storage Demonstration Project (EISA 1304). The objective of this project is to demonstrate vanadium redox battery (VRB) storage at the 32 mega-watt coal fired power plant in Painesville. This demonstration program provides metrics and operating experience to enable the plant to more efficiently obtain its daily output requirement with the storage and demonstrate a reduced carbon footprint.

Award(s): 3 totaling \$6.7 million, Smart Grid Workforce Training

Location: Statewide

- **Duke Energy Business Services, LLC, multiple locations in Ohio - \$3.5 million**
Duke Energy Business Services, LLC, received \$3.5 million for Smart Grid Workforce Training. Funds are being used to train the Smart Grid workforce that will plan, design, build, operate and sustain Duke Energy's transformed Midwest electric system and related "beyond the meter" products and services. This project will increase the consumer's role in managing energy use and reducing carbon emissions. Over 3,100 employees in the States of Indiana, Ohio and Kentucky are receiving Smart Grid training.
- **The Ohio State University Research Foundation, Columbus - \$2.5 million**
The Ohio State University Research Foundation in Columbus received \$2.5 million for Workforce Training. The Integrated Curriculum for Smart Power Engineering is developing an interdisciplinary curriculum for electric power engineers (I-SMART curriculum). This curriculum includes a hardware-in-the-loop based Virtual Smart Grid Test Platform, which will simulate the functions of a real Smart Grid in an integrative environment and a comprehensive distance learning system. The project also trains high school teachers through hands-on summer workshops and provides materials for the classroom.
- **Cuyahoga Community College District, Cleveland - \$749,000**
The Cuyahoga Community College District in Cleveland received \$749,000 for Smart Grid Workforce Training. This program is developing (in collaboration with Cleveland Public Power) a curriculum to meet the electric sector workforce needs, specifically to build knowledge of Smart Grid, address skill shortages and fill workforce vacancies. The project develops and offers classroom, lab, work-site and online instruction methods to train about 200 individuals, including existing workers to maintain jobs and future workers for new jobs.

Award(s): \$1 million, State Assistance on Electricity Policies

Location: Columbus

The Public Utilities Commission of Ohio in Cleveland received \$1 million for State Assistance on Electricity Policies and is receiving funding for assistance for State Public Utility Commissions in addressing its Recovery Act electricity workload by hiring staff trained to facilitate the review of time-sensitive requests approving electric utility expenditures.

TRANSPORTATION – 4 projects totaling \$64.7 million

Investing in a new generation of advanced fuels and vehicles to reduce our dependence on foreign oil and revitalize domestic manufacturing. For more information, visit <http://www.energy.gov/recovery/vehicles.htm>.

Award(s): 2 totaling \$34.1 million, Advanced Battery Manufacturing

Location: Elyria, Lancaster

- **BASF Catalysts, LLC, Elyria - \$24.6 million**
BASF Catalysts, LLC, in Elyria received \$24.6 million to construct a large scale cathode production plant based on DOE licensed technology.
- **Ion Battery Recycling Facilities - TOXCO Incorporated, Lancaster - \$9.5 million**
Ion Battery Recycling Facilities in Elyria received \$9.5 million to construct a large scale lithium battery recycling plant.

Award(s): \$5.9 billion, Advanced Technology Vehicles Manufacturing Program

Location: Statewide

Ford Motor Company closed a \$5.9 billion loan arrangement under the Department of Energy's Advanced Technology Vehicles Manufacturing program to transform factories across Illinois, Kentucky, Michigan, Missouri and Ohio to produce thirteen more fuel efficient models. The company estimates the project will shift nearly 35,000 employees to green engineering and manufacturing jobs.

Award(s): \$11 million, Clean Cities Alternative Fuel and Vehicles (AFV) Grant Program

Location: Columbus

Clean Fuels Ohio in Columbus received \$11 million for the Clean Cities Alternative Fuel and Vehicles (AFV) Grant Program. This project provides funds to deploy 278 alternative fuel vehicles develop thirteen alternative fueling sites and install 37 electric chargers.

Award(s): \$19.6 million, Modify Integrated Biorefinery Solicitation Program for Pilot and Demonstration Scale Biorefineries

Location: Toledo

Renewable Energy Institute International in Toledo received \$19.6 million to upgrade validated unit processes into a fully integrated pilot biorefinery to demonstrate the efficient and economical conversion of 25 dry tons per day (dtpd) of agriculture and forest biomass residues into high quality, clean diesel fuel.

CARBON CAPTURE & STORAGE – 4 projects totaling \$3.9 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): 3 totaling \$900,000, Geologic Sequestration Training and Research Grant Program

Locations: Akron, Columbus, Cincinnati

- **The University of Akron - \$300,000**

The University of Akron received \$300,000 for the Geologic Sequestration Training and Research Grant Program. The objective of this project is to develop an efficient and low-cost carbon dioxide capture solid sorbent which is highly resistant to sulfur dioxide poisoning and thermal degradation. The proposed concept is built on integration of acid-base chemistry with a novel approach for manipulating basic site distributions. The proposed concept can be further extended to preparation of highly poison-resistant basic catalysts for organic synthesis. This project supports at least two graduate students during the research effort.

- **Ohio State University Research Foundation, Columbus - \$300,000**

The Ohio State University Research Foundation in Columbus received \$300,000 for the Geologic Sequestration Training and Research Grant Program. The project advances the state of the art of monitoring at sites by enhancing geophysical methods to better characterize geologic conditions and monitor the effects of carbon dioxide injection. Developed for use in petroleum exploration, subsurface seismic and electromagnetic techniques are the only remote detection methods that can provide an image. These methods are being tested and enhanced through numerical simulation and physical modeling. This project supports at least two graduate students during the research effort.

- **University of Cincinnati - \$300,000**

The University of Cincinnati received \$300,000 for the Geologic Sequestration Training and Research Grant Program. The objective of this project is to integrate the investigators' research on carbon dioxide separation from coal combustion flue gases using regenerable magnesium solutions with engineering education in the field of carbon capture and sequestration for chemical and environmental engineering undergraduate and graduate students. This project supports graduate and undergraduate students during the research effort.

Award(s): \$3 million, Industrial Carbon Capture and Storage Applications

Location: Highland Heights

Phycal, LLC, in Highland Heights, received \$3 million for Industrial Carbon Capture and Storage Applications. This project integrates technologies to capture carbon dioxide from Flue Gas using microalgae cultivated with Heteroboost technology for the production of algal oil using Olexal technology.

ENVIRONMENTAL CLEANUP – 2 projects totaling \$137.9 million

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): \$19.7 million, Mound Operable Unit 1 Recovery Act Project

Location: Miamisburg

The Accelerated Remediation Company (aRc) in Miamisburg received \$19.7 million for the Mound Operable Unit 1 project. The purpose of this award is to safely remove radioactive materials and contamination from the OU-1 Area on the Miamisburg Closure Project site to levels that will allow for institutional controls which are no more stringent than those applied to the remainder of the Mound site. The OU-1 selected response action is an excavation-based response action. aRc is completing the necessary waste removal, management and disposal of contaminated soils and debris, providing verification surveys and reports, backfilling all excavations and accomplishing site restoration of the OU-1 Area to acceptable standards.

Award(s): \$118.2 million, Portsmouth Recovery Act Project

Location: Piketon

Lata / Parallax Portsmouth, LLC, in Piketon received \$118.2 million to accelerate the demolition of three surplus building complexes at the Portsmouth Gaseous Diffusion Plant.

SCIENCE AND INNOVATION – 9 projects totaling \$18.7 million

Renewing our commitment to science and innovation to ensure global competitiveness in the future. For more information, visit <http://www.energy.gov/recovery/innovation.htm>.

Award(s): 4 totaling \$17.3 million, Advanced Research Projects Agency - Energy (ARPA-E)

Locations: Statewide

- **Univenture, Inc., Marysville - \$5.8 million**
Univenture / Algaeventure Systems in Marysville received \$5.8 million for Advanced Research Projects Agency- Energy (ARPA-E) research to develop a harvesting system that dramatically reduces the energy cost to harvest, dewater and dry algae by using a novel absorbent moving belt harvester.
- **Ohio State University, Columbus - \$5 million**
Ohio State University in Columbus received \$5 million for Advanced Research Projects Agency- Energy (ARPA-E) research to fund a novel process known as Syngas Chemical Looping (SCL), in which coal and biomass are converted to electricity and carbon dioxide is efficiently captured. In this project, the SCL process, which has been successfully demonstrated on a laboratory scale, is being scaled up.
- **Momentive Performance Materials, Strongsville - \$4.5 million**
Momentive Performance Materials in Strongsville, teamed with Advanced Photonic Crystals and Soraa, received \$4.5 million for Advanced Research Projects Agency- Energy (ARPA-E) research to develop a high-pressure ammonothermal process to produce affordable, high quality, single crystal gallium nitride substrates at high crystal growth rates.

- **Inorganic Specialists, Inc., Miamisburg - \$2 million**
Inorganic Specialists, Inc. in Miamisburg, in partnership with Ultramet, Inc., Eagle Picher, Southeast Nonwovens and the Edison Materials Technology Center, received \$ 2million for Advanced Research Projects Agency- Energy (ARPA-E) research to develop ultra-high capacity battery anodes for next generation lithium-ion batteries.

Award(s): \$750,000, Energy Sciences Fellowships and Early Career Research Program

Location: Oxford

Miami University of Ohio in Oxford received \$750,000 for the Energy Sciences Fellowships and Early Career Research Program to research thylakoid assembly and folded protein transport by the tat pathway.

Award(s): \$178,000, Research and Infrastructure Augmentation at Universities in the High Energy Physics (HEP) Program

Location: Columbus

The Ohio State University Research Foundation received \$178,000 for Research and Infrastructure Augmentation at Universities in the High Energy Physics (HEP) Program to provide world-class, peer-reviewed research results in HEP and related fields, including particle astrophysics and cosmology.

Award(s): 3 totaling \$450,000, Small Business Innovation Research (SBIR) / Small Business Technology Transfer (STTR) Round 1

Locations: Euclid, Highland Heights

- **Mesocoat, Inc., Euclid - \$150,000**
Mesocoat, Inc., in Euclid received \$150,000 for the Small Business Innovation Research (SBIR) / Small Business Technology Transfer (STTR) program. Funds are being used to research nanocomposite coatings for life extension in zinc pot rolls.
- **Mesocoat, Inc., Euclid - \$150,000**
Mesocoat, Inc., in Euclid received \$150,000 for the Small Business Innovation Research (SBIR) / Small Business Technology Transfer (STTR) program. Funds are being used to research microcomposite coatings for advanced heat exchangers.
- **Phycal, Inc., Highland Heights - \$150,000**
Phycal, Inc., in Highland Heights received \$150,000 for the Small Business Innovation Research (SBIR) / Small Business Technology Transfer (STTR) program. Funds are being used to research a novel method for dewatering using lateral displacement array.

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/Ohio

CINCINNATI

Cincinnati canvassing spreads retrofitting message

Stuart Schaefer's home sits on a quaint, tree-lined street in Wyoming, Ohio. Although he's always enjoyed the neighborhood and his house in the Hamilton County suburb, he now has reason to enjoy it even more: Schaefer recently had an energy audit done on his 80-year-old home and is saving money on energy bills by putting some of the auditor's recommendations to work.

With help from the Greater Cincinnati Energy Alliance (GCEA), resident Stuart Schaefer was able to get his home energy audited for only \$50, saving approximately \$300 from the average audit cost.

GCEA finances this residential energy audit program through a \$1.6 million Energy Efficiency and Conservation Block Grant (EECBG) awarded to the Alliance with support from Cincinnati and Hamilton County in Ohio, and the counties of Boone, Kenton and Campbell and cities of Covington and Florence in Kentucky.

Andy Holzhauser, GCEA's executive director, says that through a combination of partnerships with local contracting companies and EECBG funds, GCEA is able to offer these discounted energy audits to homeowners in the greater Cincinnati area.

Through the program, Holzhauser sees other opportunities.

"We're looking to bring contractors a significant amount of work," Holzhauser says.

"This market is very underdeveloped and has great potential to be scaled."

With nearby Cincinnati State offering retrofitting and weatherization programs, the area is developing a base of skilled professionals capable of working on these energy efficiency and retrofit projects.

Grassroots Energy

GCEA believes the message about energy efficiency benefits should be spread on a local level, through knocking on doors and facilitating discussions about energy efficiency in neighborhoods and communities.

The group recently started a canvassing initiative where

"The city wants to remain a leader [in solar energy]. 'We're all learning together about what it means to be green and save energy.'"

- Stuart Schaefer, resident

Retrofits Galore

GCEA recently received \$17 million from the U.S. Department of Energy's Retrofit Ramp-Up initiative, part of a \$450 million nationwide program that will help 25 communities across the country retrofit hundreds of buildings and homes. The Retrofit Ramp-Up program will allow communities to live and work in more energy-efficient buildings while creating a local workforce trained to retrofit these structures. GCEA will be using this money to further develop this program.

volunteers go door-to-door in neighborhoods to spread awareness and educate residents about energy audits and retrofitting homes. Before GCEA canvasses a neighborhood, they sponsor an energy audit of a home in that area. Volunteers are able to use this home as an example and talking point while meeting with interested neighbors.

"You have to demonstrate the value of an energy audit and show people the benefit of the retrofit," Holzhauser says. "We're really piloting this program in an aggressive way to show this to community members."

Thirty volunteers went canvassing earlier this month in the Mt. Washington neighborhood of Cincinnati and reached 930 homes.

Volunteers gave each home six free compact florescent light bulbs to more than 215 homes, and found that 66 homes were interested in a home energy audit.

Leading by Example

Mt. Washington homeowner Tim Aiken had his home audited earlier this year and served as an example in his community. "GCEA can provide the homeowner with approved contractors, manufacturing rebates and energy company rebates to reduce the costs of the work," he says.

By going through GCEA, Aiken will save \$1,250 on an estimated \$2,500 for additional insulation in his attic. The resulting energy savings will pay for that cost in only four years.

"We need to invest in education and enhancing support to get this market moving," Holzhauser says. "The message comes best from someone within the community, someone who doesn't have skin in the game other than the greater good. They're not selling a product, they're not getting a commission, and these volunteers understand the value and can speak from a personal standpoint about the benefits."

In July, GCEA will organize a canvass of Schaefer's Wyoming neighborhood. By auditing a house in a future-canvassing neighborhood, volunteers will have a point of reference.

"It makes it a very relevant, very real example," Holzhauser says. "It's not just someone in the region, or someone in the county.

It's someone they know in their community." Schaefer already seems to be spreading his satisfaction with the energy audit.

He says he'll definitely be talking to his neighbors about the project and hopes they'll consider having their homes assessed.

"We're all learning together about what it means to be green and save energy," he says. "You've got nothing to lose and everything to gain by doing this."

DAYTON

Grant helps efficiently rebuild Ohio infrastructure

In Dayton, Ohio, residents will see several projects starting up soon that will save them money and help them to conserve energy.

Dayton was awarded an Energy Efficiency and Conservation Block Grant for \$1.6 million toward five projects that will increase recycling participation, install new cooling units, implement an energy efficiency and conservation strategy, install LED sidewalk light fixtures and install energy-efficiency measures at a new street maintenance building.

The construction of the new maintenance building is expected to be complete by spring 2010, and it will replace five older facilities and consolidate operations, saving the city money. Employees at remaining city garages that won't be consolidated are going to reduce their energy use to try to stay on pace with the new building's energy-efficient heating and cooling systems' energy costs, which will ultimately save the city and taxpayers even more money.

"I certainly think the Recovery funding helps us better position ourselves to move forward with doing additional energy conservation and promoting renewables," Donna Winchester, environment manager for Dayton, says. "Our aging infrastructure makes it difficult to be progressive. This is a big leap that will help us save energy, money and jobs."

New projects such as this are much-needed. In 2007, an old maintenance building collapsed, and an office building was deemed unfeasible for repair in 2008. The long-term energy-efficiency savings being implemented with grant money in new city projects give its infrastructure investments an added boost. Additionally, the city estimates 17 jobs could be created. In Donna's words, "We're really excited to get started."

LICKING COUNTY

Ohio celebrates Recovery Act weatherization program performance

Ohio has reached a milestone in the clean energy economy — more than 10,000 homes in the state have been weatherized, making the state one of the national leaders in helping income-eligible families become more energy-efficient.

Ohio officials celebrated the success of weatherization work funded by the American Recovery and Reinvestment Act with about 100 attendees at a special event Monday in Newark at the home of James and Darlene Carr. The couple opened their home for a demonstration of state-of-the-art weatherization techniques and equipment.

Workers from LEADS, the community action agency serving Licking County, used an Ohio-made machine to blow insulation into the sidewalls of the Carr's 100-year-old home, demonstrating how the cellulose — made from recycled paper in Bucyrus, Ohio — is densely packed into wall cavities to provide a barrier from cold and wind. The crew also demonstrated how it uses building science to determine where leaks need to be sealed in a home by depressurizing the house with a blower door test and by checking insulation quality with an infrared camera. A careful balance is required when weatherizing so a house stays warm or cool when it should be, but also so that the seal isn't so tight that it leads to poor indoor air quality. The Carrs' furnace and hot water heater were

both replaced with safer, more energy-efficient models.

"They did an outstanding job, and I'm looking to save about 30 percent on my energy bills," says James Carr. "I saw an advertisement, and then I went down and filled out the application at LEADS — it was just an answered prayer when they approved us."

James is disabled, and his wife works at the local hospital. They are now raising three grand-nieces and a grand-nephew, ages 5 to 8. The improvements to their home will help them continue to care for the children in a safer and more comfortable environment.

"It got cold in the winters before, and we had to use propane heaters and a wood burner, but it should be a lot better now," James says.

Congressman Zack Space, D-Ohio, was on hand for the event, highlighting the significance of weatherization as a component to recovery in the U.S. He said work being done by community action agencies "is a spark which is going to ignite a very important part of the new economy."

LEADS itself has hired and trained 15 new crew members since receiving Recovery Act funding in April 2009, and more than 1,300 new jobs have been created across Ohio in that time.

"The last time we saw such a shift in the economy was when Henry Ford figured out how to produce vehicles that were easy to manufacture and affordable to buy," Space said. "Not only will we see millions of Americans put to work, but ... here in Ohio, we are positioning ourselves to be at the front of this wave of the new energy economy."

The Carrs' home was weatherized by LEADS Community Action of Licking County, one of 52 community actions agencies across Ohio that are helping residents save money and hiring citizens in green-collar jobs. More than 11,000 homes have been improved throughout Ohio since March 2009. Ohio received \$267 million in Recovery Act funding for weatherization.

SHAKER HEIGHTS

Training center gets people work, teaches new skills

Tracy Workley thought she had a pretty secure job when she worked as a city inspector for Shaker Heights, a city in the suburbs east of Cleveland, but in October 2008, she was laid off as the economy slumped and the city cut back.

"I was nervous that I was going to start losing things I owned," Tracy says about her period of unemployment. "I was eating my savings and trying to pay bills."

She drew unemployment until February when the Recovery Act passed and was soon hired as a part-time regional trainer by the Corporation for Ohio Appalachian Development. As a nonprofit organization comprising 17 community action agencies involved in weatherization, the group needed help meeting training demands brought on by increased funding for weatherization created by the stimulus.

Now, after excelling as a trainer, COAD has selected Tracy to manage a new training facility slated to open soon in Cleveland. Her new job will be full-time with benefits.

"It's been phenomenal, and I'm looking forward to the challenge and a chance to use my brain even more," she says. "It's important to have healthcare and retirement, and it's been a blessing to finally feel a little job security again after floating out there scared."

Tracy says she really enjoys shedding light on weatherization



Crew Member Garrett Feaster, one of 15 new crew members at LEADS funded by the Recovery Act, teaches Congressman Zack Space and Ohio Department of Development Director Lisa Patt-McDaniel how to insulate a sidewall on a 100-year-old home in Newark, Ohio. | Photo courtesy Ohio Association of Community Action Agencies

projects for her promising students. It makes her feel good that her students “aren’t just throwing insulation into an attic and walking away.”

“I appreciate that at the end of my trainings, people look at me in amazement instead of with blank looks on their faces,” she says.

COAD’s existing training center has been the primary provider of weatherization training in Ohio since 1981, and, according to the group, it’s been awarded \$3.5 million for a 24-month period to help train all weatherization providers in the state, something training center manager Nikki Morris is very proud of.

“It’s a fairly daunting task, but we’ve been able to get out in front of it very successfully because we had a lot of experience doing this already,” Nikki says. Fortunately, COAD had the networks and the organizational structure in place, and the Recovery money has allowed her to hire more trainers and an administrative assistant.

Ohio’s training program is so successful that other states are requesting COAD’s help in training their state’s trainers.

COAD has met the needs of its own network, Nikki says, and is beginning to reach out and collaborate with training programs elsewhere and help them meet their needs, she says. “That’s a feather in Ohio’s cap for sure. We can succeed as a state and still fail as a nation — but that’s not a word that’s on my radar.”

Last year, before the Recovery Act, COAD interacted with more than 730 students, according to the group. This year, it plans to quadruple that number.

Tracy says she’s excited to do what she loves and to share it with even more people now. “I’ve always come back to weatherization because I appreciate what we do, why we do it and how we do it,” she says. “We’re saving people money, and it lowers our bills too in the long run. I’ve always stood by this work, and I have a big loyalty to it. Now we have even more folks in the country who really understand it.”