Department of Energy

Recovery Act State Memos

Illinois

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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ENERGY EFFICIENCY – 79 projects totaling $513.9 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): $242.5 million, Weatherization Assistance Program (WAP)
Location: Statewide
Illinois received $242.5 million in Weatherization Assistance Program funds to increase existing weatherization efforts in the state, create jobs, reduce carbon emissions and save money for Illinois' low-income families. Over the course of the Recovery Act, Illinois' goal is to weatherize nearly 27,000 homes. The program also includes workforce training and education as part of the state's efforts to develop a green workforce.

Award(s): $101.3 million, State Energy Program (SEP)
Location: Statewide
The Illinois Department of Commerce and Economic Opportunity received $101.3 million in State Energy Program funds to invest in state-level energy efficiency and renewable energy priorities. The state is using Recovery Act SEP funding to provide grants to various entities including schools, public buildings and industrial facilities to improve energy efficiency in new and existing buildings, facilities, equipment and processes. Grants are funding multiple initiatives, like investments in energy efficient lighting, cooling, traffic signals, boilers and furnaces. Programs look to leverage funding with outside sources and specifically target large-scale energy users in order to identify and prioritize energy efficiency measures resulting in the greatest return on investment. The state also provides grants to support new biomass manufacturing capacity or retrofits to existing facilities which help reduce operating expenses and environmental impacts.

Award(s): 63 totaling $112.2 million, Energy Efficiency and Conservation Block Grant Program (EECBG)
Location: Statewide
Recipients: Chicago, Illinois State Energy Office, Cook County, Lake County, DuPage County, Will County, Madison County, McHenry County, Kane County, St. Clair County, Rockford, Aurora, Naperville, Joliet, Springfield, Peoria, Elgin, Waukegan, Schaumburg, Decatur, Champaign, Evanston, Bloomington, Cicero, Arlington Heights, Skokie, Bolingbrook, Palatine, Des Plaines, Winnebago County, Tazewell County, Tinley Park, Orland Park, Hoffman Estates, Wheaton, Oak Lawn, Mount Prospect, Normal, Berwyn, Downers Grove, Glenview, Elmhurst, Oak Park, Moline, Lombard, DeKalb, Crystal Lake, Urbana, Quincy, Buffalo Grove, Belleville, Carol Stream, Rock Island, Addison, Wheeling, Park Ridge, Bartlett, Romeoville, Calumet, Carpentersville, Plainfield, Streamwood, Hanover Park

Sixty-three communities in Illinois received a total of $112.2 million for the Energy Efficiency and Conservation Block Grants (EECBG) to develop, promote, implement and manage local energy efficiency programs.

Illinois is using Recovery Act EECBG funding to improve state buildings through energy efficiency upgrades and renewable energy projects and provide financial assistance toward the purchase of hybrid, electric or alternative-fueled vehicles in state fleets. These projects are leading to substantial energy and cost savings and creating or retaining hundreds of jobs statewide. The state is using the Illinois Association of Regional Councils (ILARC) and their member regional planning agencies to

administer EECBG grants to smaller communities. ILARC funds approximately twenty-five regional planning agencies who in turn request proposals from the local communities in their regions for projects that meet the goals of the EECBG program. Examples of EECBGs include:

- **Will County - $3 million**
  Will County received $3 million to work on various projects on county facilities to improve energy efficiency, including daylighting, occupancy sensors, LED parking lot lighting, skylights, solar walls, LED jail cell fixtures, solar photovoltaics, retro-commissioning, green screen kiosk and development of an energy efficiency and conservation strategy. Will County is also utilizing a local 200-acre landfill on land that used to be the Joliet Arsenal for a power generation project.

- **McHenry County - $2.4 million**
  McHenry County received $2.4 million to work on various projects on county facilities to improve energy efficiency, including daylighting, occupancy sensors, LED parking lot lighting, skylights, solar walls, LED jail cell fixtures, solar photovoltaics, retro-commissioning, green screen kiosk and development of an energy efficiency and conservation strategy.

- **City of Aurora - $1.6 million**
  The City of Aurora received $1.6 million in EECBG funds for a local weatherization program and home energy audits aimed at middle-class families. The city is installing wind turbines at two traffic signals, upgrading a major street with LED traffic lights and adding wind turbines on police headquarters, which already has a LEED Gold rating. They are also conducting a toilet-water savings rebate program to encourage water conservation.

- **City of Bloomington - $750 ,000**
  The City of Bloomington received $750,000 to conduct an HVAC replacement on their city hall building, which was built in 1962. They are estimating a 40 percent improvement in energy efficiency and a 20 percent reduction in energy costs.

- **City of Evanston - $750 ,000**
  The City of Evanston received $750,000 to support a local weatherization effort for middle-class families. It is also adding a solar thermal system at two fire stations, purchasing and placing new recycling containers in its central business district, implementing other findings from a city-wide greenhouse gas emission audit and establishing new public education programs to promote "car-free" days and tap-water reduction.

- **City of Berwyn - $440 ,000**
  The City of Berwyn received $440,000 to install a new HVAC system for its library facility. The structure serves as an emergency cooling center, so a more efficient system is a necessity given the age of the building.

Award(s): $12.4 million, Energy Efficient Appliance Rebate Programs
Location: Statewide
Illinois's Department of Commerce and Economic Opportunity received $12.4 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 supporting the local economy.

The Illinois Department of Commerce and Economic Opportunity is using these funds to implement a two-phase instant rebate program to help residents replace older, inefficient appliances with ENERGY STAR qualified models. The first phase is for water heaters and heating and ventilation products. The second phase allows consumers to receive rebates on ENERGY STAR qualified appliances at participating retail locations. Eligible products include refrigerators, freezers, clothes washers, dishwashers, air conditioners, gas storage water heaters, gas tankless water heaters, heat pump water heaters, gas and propane furnaces, gas boilers, central air conditioners and air source heat pumps.

Award(s): $25 million, BetterBuildings
Location: Chicago
Chicago Metropolitan Agency for Planning received $25 million for BetterBuildings. The Chicago Region BetterBuildings (CR3) Program is establishing a set of comprehensive initiatives to facilitate the transition to an efficient building retrofit market in both the residential and commercial sectors. The program includes retrofits for commercial buildings in downtown Chicago, along with providing a range of financing and loan options for residential retrofits, including new market tax credits for multifamily housing units. The focus is on reducing the costs of customer acquisition for contractors, expanding the available trained retrofit workforce providing information and financing to building owners to drive demand creation. Chicago's plan includes a one-stop-shop information center where homeowners and building owners can arrange and finance projects that will identify rebate opportunities and qualified contractors to perform the work.

Award(s): 3 totaling $5.8 million, Advanced Materials RD&D in Support of EERE Needs to Advance Clean Energy Technologies & Energy-Intensive Process R&D
Location: Argonne, Des Plaines

- **U Chicago Argonne, LLC, Argonne - $3.5 million**
  U Chicago Argonne, LLC, received $3.5 million for Advanced Materials RD&D in Support of EERE Needs to Advance Clean Energy Technologies & Energy-Intensive Process R&D. Funds are being used for process development for nanostructured photovoltaics, filled carbon nanotubes for superior latent heat storage enhancers, and ultra-high-efficiency aluminum production.

- **Institute of Gas Technology, Des Plaines - $1.3 million**
  The Institute of Gas Technology in Des Plaines received $1.3 million for Advanced Materials RD&D in Support of EERE Needs to Advance Clean Energy Technologies & Energy-Intensive Process R&D. Funds are being used for an integrated advanced reciprocating internal combustion engine system for increased utilization of gaseous opportunity fuels.

- **Institute Of Gas Technology, Des Plaines - $1 million**
  The Institute of Gas Technology in Des Plaines received $1 million for Advanced Materials RD&D in Support of EERE Needs to Advance Clean Energy Technologies & Energy-Intensive Process R&D. Funds are being used for development and testing of an advanced combined heat and power (CHP) system utilizing off-gas from the innovative green coke calcining process in a fluidized bed.

Award(s): 4 totaling $10,000, Buildings and Appliance Market Transformation
Location: Statewide
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.

- **Central States Manufacturing & Sales Corporation - $5,000**
- **Ecomfort Holdings, Inc., Arlington Heights - $2,000**
- **Alpine Home Air, Rockford - $1,000**
- **Alpine Home Air, Rockford - $1,000**

Award(s): 3 totaling $4 million, Ground Source Heat Pumps
Location: Evanston, Springfield, Oak Park

- **Indie Energy Systems Company, LLC, Evanston - $2.5 million**
  Indie Energy Systems Company, LLC, in Evanston received $2.5 million for Ground Source Heat Pumps. Funds are being used to retrofit the Local 150 International Union of Operating Engineers' campus with a GHP heating / cooling system. This project is innovative for its demonstration of Indie's third-party leveraged financing approach.

- **Department of Military Affairs, Springfield - $1.2 million**
  The Department of Military Affairs in Springfield received $1.2 million for Ground Source Heat Pumps. The Illinois Department of Military Affairs is installing a ground source heat pump heating / cooling system at the National Guard Headquarters Building and will use water contained in abandoned subsurface mines as the heat exchange medium.

- **Skychaser Energy, Inc., Oak Park - $325,000**
  Skychaser Energy, Inc., in Oak Park received $325,000 for Ground Source Heat Pumps. Funds are being used to demonstrate the viability of an innovative GHP business and financing model, a Micro-Utility, that utilizes a PPA arrangement applied to space conditioning.

Award(s): 2 totaling $636,000, Industrial Assessment Centers and Plant Best Practices
Location: Springfield, Peoria

- **Illinois Department of Commerce and Community Opportunity, Springfield - $500,000**
  Illinois Department of Commerce and Community Opportunity in Springfield received $500,000 for Industrial Assessment Centers and Plant Best Practices. The project creates dynamic energy efficiency partnerships between DOE, participating states, utilities, the Midwest Energy Efficiency Alliance, Energy Service Companies (ESCOs), industrial trade groups and others in order to increase the number of Midwest industrial companies implementing energy assessment activities at their facilities and committing to energy-related capital investments.

- **Bradley University, Peoria - $136,000**
  Bradley University in Peoria received $136,000 for Industrial Assessment Centers and Plant Best Practices. The funds provide eligible small- and medium-sized manufacturers with no-cost energy assessments and serve as a training ground for the next generation of energy-savvy engineers.

RENEWABLE ENERGY – 20 projects totaling $455.9 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): 12 payments totaling $394.3 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

Illinois received twelve 1603 payments for renewable energy generation totaling $394.3 million, which include solar projects, fuel cell projects and wind facilities.

- **FPL Energy Illinois Wind, LLC, Lee - $138.9 million**
  FPL Energy Illinois Wind, LLC, in Lee received $138.9 million for a wind energy project.

- **EcoGrove Wind, LLC, Lena - $67.9 million**
  EcoGrove Wind, LLC, in Lena received $67.9 million for a wind energy project.

- **Grand Ridge Energy III, LLC, Ransom - $64.4 million**
  Grand Ridge Energy III, LLC, in Ransom received two awards totaling $64.4 million for wind energy projects.

- **Rail Splitter Wind Farm, LLC, Hopedale - $61.4 million**
  Rail Splitter Wind Farm, LLC, in Hopedale received $61.4 million for a wind energy project.

- **Blackstone Wind Farm, LLC, Ransom - $55.2 million**
  Blackstone Wind Farm, LLC, in Ransom received $55.2 million for a wind energy project.

- **Plug Power, Inc, Joliet - $723,000**
  Plug Power, Inc., in Joliet received $723,000 for a fuel cell energy project.

- **Altorfer, Inc., Bartonville - $32,000**
  Altorfer Inc., in Bartonville received $32,000 for a solar electricity project.

- **PKP Associates Ltd, Chicago - $24,000**
  PKP Associates Ltd in Chicago received $24,000 for a solar electricity project.

- **Chart House Energy, LLC, Chicago - $18,000**
  Chart House Energy, LLC, in Chicago received $18,000 for a solar electricity project.

- **Chart House Energy, LLC, Schiller Park - $10,000**
  Chart House Energy, LLC, in Chicago received $10,000 for a solar electricity project.

Award(s): 4 totaling $46.8 million from DOE / Treasury, Clean Energy Manufacturing Tax Credit (48C)
Location: Elgin, Chicago

- **Siemens Industry, Inc., Elgin - $28.3 million**
  Siemens Industry, Inc., in Elgin received $28.3 million to manufacture the mechanical drives, gears, pinions and other components for wind turbine gear boxes. The resulting product aids the domestic wind power industry.

- **Winergy Drive Systems Corp., Elgin - $12.8 million**
  Winergy in Elgin received $12.8 million to build a new facility to manufacture power transmission equipment and gearboxes for wind turbines. The facility enables Winergy to produce 100 percent of its gear units domestically.

- **S&C Electric Company, Chicago - $5.1 million**
  S&C Electric Company in Chicago received $5.1 million to re-equip a facility to produce a variety of products, including a fault-interrupting device for an overhead distribution system with Smart Grid applications and switchgear for an underground distribution system with Smart Grid applications. These technologies help integrate distributed renewable energy sources into electric distribution systems, close to the residential, commercial and industrial loads which consume the electric power.

- **Serious Materials, Inc., Chicago - $548 ,000**
  Serious Materials, Inc., in Chicago received $548,000 to manufacture highly insulating high-performance fiberglass windows. The resulting product is cost-efficient and promotes energy efficiency.

Award(s): $4.5 million, High-Penetration Solar Deployment
Location: Chicago
Commonwealth Edison Company in Chicago received $4.5 million for High-Penetration Solar Deployment. This one-year project evaluates consumer reactions when a utility provides advanced metering and price signals for electric power without photovoltaic (PV) solar energy, with PV and with both PV and energy storage. The impact demonstrates a utility-based understanding of market response for PV power.

Award(s): $1.7 million, Photovoltaic (PV) Systems Development
Location: Argonne
U Chicago Argonne, LLC, received $1.7 million to develop new transparent conducting coatings and methods for depositing them onto photovoltaic cells using atomic layer deposition.

Award(s): $7.9 million, Wind Energy Consortia, Institutions of Higher Learning and Industry
Location: Chicago
The Illinois Institute of Technology in Chicago received $7.9 million for the Wind Energy Consortia, Institutions of Higher Learning and Industry. Funds are used to collaborate with industry leaders on wind energy research, education and workforce development.

Award(s): $700,000, Wind Energy Technology R&D and Testing
Location: Chicago
The Illinois Institute of Technology in Chicago received $700,000 for Wind Energy Technology R&D and Testing. Funds are used to model, design and implement a Wind Integration Simulator (WINS) for facilitating wind energy integration.

MODERNIZING THE ELECTRIC GRID – 9 projects totaling $27 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): 4 totaling $2 million, Enhancing State and Local Governments' Energy Assurance
Location: Statewide

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

- **Illinois Department of Commerce and Economic Opportunity, Springfield - $1.4 million**
  Illinois Department of Commerce and Economic Opportunity in Springfield received $1.4 million for State Energy Assurance Planning.

- **City of Chicago - $300,000**
  The City of Chicago received $300,000 for State Energy Assurance Planning.

- **City of Peoria - $200,000**
  The City of Peoria received $200,000 for State Energy Assurance Planning.

- **Village of Hoffman Estates - $98,000**
  The Village of Hoffman Estates received $98,000 for State Energy Assurance Planning.

Award(s): $11 million, Smart Grid Investment Grant Program (EISA 1306)
Location: Naperville
The City of Naperville received $11 million for the Smart Grid Investment Grant Program (EISA 1306). Funds are used to expand the communications network, install an advanced metering infrastructure (AMI) and smart meters, automate the distribution grid, implement a Volt / VAR optimization, prepare the grid to support plug-in hybrid electric vehicles (PHEVs), dynamic home energy consumption reduction and customer feed.

Award(s): $5.4 million, Smart Grid Regional and Energy Storage Demonstration Project (EISA 1304)
Location: Chicago
The Illinois Institute of Technology received $5.4 million for a Smart Grid Regional and Energy Storage Demonstration Project (EISA 1304). Funds are being used for a large-scale Smart Grid

demonstration project that verifies technology viability, quantifies costs and validates Smart Grid business models at scale so it may be replicated.

Award(s): 2 totaling $7.5 million, Smart Grid Workforce Training
Location: Chicago

- **Illinois Institute of Technology, Chicago - $5 million**
  Illinois Institute of Technology in Chicago received $5 million for Smart Grid Workforce Training. A world-class Smart Grid Education and Workforce Training Center is being established to develop and deploy Smart Grid technology courses and certificate programs via instructor-led and distance-learning methodologies. The Center expects to train about 49,000 power industry employees, union workers, teachers and students in a three-year period.

- **Council for Adult and Experiential Learning, Chicago - $2.5 million**
  Council for Adult and Experiential Learning in Chicago received $2.5 million for Smart Grid Workforce Training. This project creates a new online curriculum to train current and future electric power industry workers to support clean energy solutions and Smart Grid deployment. The project provides critical workforce preparedness training for more than 1,800 current and future employees of six electric power entities: Arizona Public Service, Com Ed, JEA, Northeast Utilities, PECO and PJM Interconnection.

Award(s): $1.1 million, State Assistance on Electricity Policies
Location: Springfield
The Illinois Commerce Commission received $1.1 million for State Assistance on Electricity Policies to assist in addressing its Recovery Act electricity workload by hiring staff trained to facilitate the review of time-sensitive requests approving electric utility expenditures.

TRANSPORTATION – 44 projects totaling $67.3 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): $15 million, Clean Cities Alternative Fuel and Vehicles (AFV) Grant Program
Location: Chicago
The City of Chicago, Department of Environment, received $15 million for the Clean Cities Alternative Fuel and Vehicles (AFV) Grant Program. Funds are being used to deploy 554 alternative fuel and advanced technology vehicles and 153 alternative fuel fueling stations.

Award(s): 3 totaling $52.3 million, Modify Integrated Biorefinery Solicitation Program for Pilot and Demonstration Scale Biorefineries
Location: Des Plaines, Decatur

- **Haldor Topsoe, Inc., Des Plaines - $25 million**
  Haldor Topsoe, Inc., in Des Plaines received $25 million for the Modify Integrated Biorefinery Solicitation Program for Pilot and Demonstration Scale Biorefineries. This project converts wood to green gasoline by fully integrating and optimizing a multi-step gasification process. The pilot plant has the capacity to process 21 metric tons of feedstock per day.

- **Archer Daniels Midland, Decatur - $24.8 million**
  Archer Daniels Midland in Decatur received $24.8 million for the Modify Integrated Biorefinery Solicitation Program for Pilot and Demonstration Scale Biorefineries. This project uses acid to break down biomass to be converted to liquid fuels or energy. The ADM facility produces ethanol and ethyl acrylate, a compound used to make a variety of materials and also recovers minerals and salts from the biomass that are then able to be returned to the soil.

- **Institute of Gas Technology, Des Plaines - $2.4 million**
  The Institute of Gas Technology in Des Plaines received $2.4 million for the Modify Integrated Biorefinery Solicitation Program for Pilot and Demonstration Scale Biorefineries. This project is completing a preliminary engineering design for a novel process to produce green gasoline and diesel from woody biomass, agricultural residues and algae.

Award(s): $5.9 billion from DOE / Treasury, 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 transform nearly 35,000 employees to green engineering and manufacturing jobs.

CARBON CAPTURE & STORAGE – 8 projects totaling $109.4 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): $4.8 million, Geologic Sequestration Site Characterization
Location: Urbana
The University of Illinois in Urbana received $4.8 million for Geologic Sequestration Site Characterization. Funds are being used to evaluate the carbon storage potential of the Cambro-Ordovician Strata of the Illinois and Michigan Basins which encompass most of Illinois, Indiana, Kentucky and Michigan. A best practices manual for site characterization is being developed during the project and will help reduce storage risk by documenting the uncertainties related to fracturing, injection and geochemical interactions for these specific formations.

Award(s): 3 totaling $1.6 million, Geologic Sequestration Training and Research Grant Program
Location: Champaign, Carbondale

- **University of Illinois, Champaign - $995,000**
  University of Illinois in Champaign received $995,000 for the Geologic Sequestration Training and Research Grant Program. With this funding, the board is working with professional organizations and regional experts to leverage existing training opportunities, while providing additional stand-alone training events benefitting the Illinois Basin region.

- **Southern Illinois University, Carbondale - $300,000**
  Southern Illinois University in Carbondale received $300,000 for the Geologic Sequestration Training and Research Grant Program. This project combines a research and teaching strategy to provide cross-disciplinary training opportunities in geology and geomicrobiology in the Department of Geology and the Institute of Genomic Biology at the University of Illinois Urbana-Champaign. The project takes advantage of the unique opportunities provided by the drilling of CCS injection and monitoring wells, in conjunction with a Phase III large-scale CCS demonstration project operating at the Illinois Basin - Decatur Site in the Illinois Basin to collect samples both before and after injection of carbon dioxide. The project observes how carbon dioxide injection impacts the genetic composition of the subsurface microbial community.

- **University of Illinois, Champaign - $299,000**
  University of Illinois in Champaign received $299,000 for the Geologic Sequestration Training and Research Grant Program. This project undertakes novel experiments to evaluate the structural behavior of the Illinois Basin's organic rocks under extreme transient conditions in order to ascertain whether the dynamic stresses will overcome the adsorption forces holding carbon dioxide in place. Six specific tasks are occurring to evaluate the structural and mechanical behavior of organic rocks under static, hydrostatic and extreme dynamic stresses. Graduate and undergraduate students are participating and being trained throughout the duration of this project.

Award(s): 4 totaling $103 million, Industrial Carbon Capture and Storage Applications
Location: Decatur, Des Plaines

- **Archer Daniels Midland Corporation, Decatur - $99 million**
  Archer Daniels Midland Corporation in Decatur received $99 million for Industrial Carbon Capture and Storage Applications. The project captures and sequesters one million tons of carbon dioxide per year from an existing ethanol plant in Illinois, beginning in August 2012. The carbon dioxide will be sequestered in the Mt. Simon Sandstone, a well-characterized saline reservoir located about one mile from the plant.

- **UOP, LLC , Des Plaines - $1.6 million**
  UOP, LLC, in Des Plaines received $1.6 million for Industrial Carbon Capture and Storage Applications. This project captures exhaust stack carbon dioxide using a Vaperma membrane which is used to grow microalgae for eventual processing into biofuel and fertilizer. Once harvested, the algae can provide green diesel, jet fuel, bio-oil and a bio-char fertilizer (agricultural).

- **Archer Daniels Midland Corporation, Decatur - $1.5 million**
  Archer Daniels Midland Corporation in Decatur received $1.5 million for Industrial Carbon Capture and Storage Applications. This project demonstrates Dow ALSTOM's advanced amine process to capture carbon dioxide from industrial flue gases and sequester the carbon dioxide in the Mt. Simon Sandstone reservoir.

- **Gas Technology Institute (GTI), Des Plaines - $933,000**
  Gas Technology Institute (GTI) in Des Plaines received $933,000 for Industrial Carbon Capture and Storage Applications. This project captures power plant flue gas carbon dioxide using

macroalgae cultivated in non-submerged greenhouses, harvested and processed via anaerobic digestion into methane for fuel to the power plant.

ENVIRONMENTAL CLEANUP – 1 project totaling $79 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): $79 million, ANL Recovery Act Project
Location: Argonne
The Argonne National Lab received $79 million under the Argonne National Lab Recovery Act Project to accelerate the remediation of radioactively contaminated facilities.

SCIENCE AND INNOVATION – 29 projects totaling $225.4 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): 2 totaling $4 million, Advanced Research Projects Agency - Energy (ARPA-E)
Location: Naperville, Urbana

- **Nalco Company, Naperville - $2.3 million**
  Nalco and Argonne National Laboratory received $2.3 million for ARPA-E. They have partnered to develop an electrochemical process for carbon dioxide capture.

- **Board of Trustees of the University of Illinois, Urbana - $1.7 million**
  The University of Illinois at Urbana-Champaign, in collaboration with MC10, Inc., received $1.7 million for ARPA-E. They are developing an economic and highly scalable non-lithographic approach to fabricate large-area arrays of 1-D concentric silicon nanotubes for low-cost thermoelectric devices

Award(s): 2 totaling $10.1 million, Advanced Technology R&D Augmentation
Location: Argonne, Batavia

- **U Chicago Argonne, LLC, Argonne - $7.3 million**
  U Chicago Argonne, LLC, received $7.3 million in funding. The Argonne National Laboratory is focusing on three areas of new accelerator and detector tools: high-field superconducting magnets made from newly discovered superconductors to raise the magnetic field intensity in accelerators and MRI devices; superconducting radio frequency (SRF) accelerator cavities which use less electrical power to operate but are able to support high current operation; and large area photo-detectors with a sensitive area of several square feet.

- **Fermi Research Alliance, LLC, Batavia - $2.8 million**
  Fermi Research Alliance, LLC, received $2.8 million in funding for research and development on technologies used for particle accelerators and detectors.

Award(s): 2 totaling $4.2 million, Computational Partnerships (SciDAC-e)
Location: Argonne, Champaign
U Chicago Argonne, LLC, received $3.1 million and the University of Illinois in Champaign received $1 million for Computational Partnerships (SciDAC-e). This project is providing funds for a one-time stimulus of research efforts in applied mathematics and computer science to establish the computational foundation and the insight needed to advance the Department's mission across a wide range of areas, including developing novel, renewable and / or ecologically friendly energy sources and developing Smart Grids.

Award(s): $1 million, Concentrating Solar Power
Location: Argonne
U Chicago Argonne, LLC, received $1 million for Concentrating Solar Power. This project is developing advanced heat transfer fluids (HTFs) by incorporating multifunctional engineered nanoparticles into an HTF. This advanced single-medium HTF improves both heat transfer and thermal energy storage, significantly reducing the cost of electricity generated from Concentrating Solar Power systems.

Award(s): 2 totaling $20.6 million, Energy Frontier Research Centers
Location: Evanston, Argonne

- **Northwestern University, Evanston - $19 million**
  Northwestern University in Evanston received $19 million in funding to synthesize, characterize and understand new classes of materials under conditions far from equilibrium relevant to solar energy conversion, catalysis and storage of electricity and hydrogen.

- **U Chicago Argonne, LLC, Argonne - $1.6 million**
  U Chicago Argonne, LLC, received $1.6 million in funding to discover, understand and control efficient chemical pathways for the conversion of coal and biomass into chemicals and fuels.

Award(s): 2 totaling $3.3 million, Energy Sciences Fellowships and Early Career Research Program
Location: Argonne, Evanston

- **U Chicago Argonne, LLC, Argonne - $2.5 million**
  U Chicago Argonne, LLC, received $2.5 million for the Energy Sciences Fellowships and Early Career Research Program. These funds are being used for high resolution spectroscopic x-ray detectors using superconducting sensors.

- **Northwestern University, Evanston - $750,000**
  Northwestern University in Evanston received $750,000 for the Energy Sciences Fellowships and Early Career Research Program. These funds are being used for chemical control of charge trapping and charge transfer processes at the organic-inorganic interface within quantum dot-organic complexes.

Award(s): $9.9 million, Enhanced AIP Funding at NIP User Facilities
Location: Lemont
Argonne National Laboratory received $9.9 million for Enhanced AIP Funding at NIP User Facilities. Accelerator Improvement Projects (AIP) at NP facilities enhance operations of the facilities and contribute to the support of scientific research, as well as the training of the next generation of nuclear scientists.

Award(s): 3 totaling $2.7 million, Enhanced Geothermal Systems (EGS) Technology R&D
Location: Argonne
The Argonne National Laboratory received three awards totaling $2.7 million for Enhanced Geothermal Systems (EGS) Technology Research and Development.

- **Argonne National Laboratory, Argonne - $1.3 million**
  Argonne National Laboratory received $1.3 million to investigate in enhanced geothermal systems (EGS) pumping supercritical carbon dioxide through fractured hot dry rock (HDR) reservoirs. This process may have higher thermal efficiencies, better well-bore hydraulics and reduced rock-fluid interactions compared to water-pumping EGS.

- **Argonne National Laboratory, Argonne - $850,000**
  Argonne National Laboratory received $850,000 for the Geothermal Technologies Program (GTP). The program seeks to develop new and innovative technologies to advance the utilization of geothermal energy. The proposed process meets GTP's goals because it potentially doubles the power output of EGS power generation plants. The CEC process is a novel EGS heat storage and transport approach that makes heat available for power generation at higher temperatures. Because it is a closed-loop process, it also avoids sulfur dioxide and carbon dioxide emissions and conserves water. The process provides the power industry with a tool for reducing their emissions while cultivating the domestic EGS clean energy which is underutilized because of the lack of economical technology.

- **Argonne National Laboratory, Argonne - $550,000**
  Argonne National Laboratory received $550,000 for sensor designs. Funds are being used to focus on the ruggedness and capability of tolerating extreme reservoir environments, including high temperature and pressure. The current down-hole logging tools are mainly those developed for gas and oil exploration, but the high-temperature environment in a geothermal well has limited their application, which often requires heat shielding and lasts only a brief period. This project intendeds to develop advanced sensors which can sustain the high-temperature and high-pressure environment and provide the required logging measurements.

Award(s): $25 million, Fermilab GPP Augmentation
Location: Batavia
Fermi Research Alliance, LLC, in Batavia received $25 million for Fermilab GPP Augmentation. Recovery Act funding is being used to complete the six highest priority General Plant Projects (GPP) at Fermi National Accelerator Laboratory (Fermilab). These projects enhance the scientific infrastructure at Fermilab and support U.S. scientists in leadership roles in various scientific endeavors, including the Large Hadron Collider (LHC) and Superconducting Radio Frequency (RF) research programs.

Award(s): 2 totaling $16.3 million, General Plant Project Funding
Location: Argonne, Lamont
U Chicago Argonne, LLC, in Argonne received $15.1 million for General Plant Project Funding; SEC Federal Services Corporation in Lamont received $1.2 million. This project will help revitalize the Argonne National Laboratory (ANL) and the New Brunswick Laboratory (NBL) by accelerating funding for non-line item capital improvements to facilities and infrastructure, including electrical upgrades, roofing, fire safety, space renovation, and transformer replacements. These

improvements will reduce the laboratory's backlog of general infrastructure needs, ensuring improved readiness to perform mission work.

Award(s): $8.8 million, Lab Call for Facilities and Equipment
Location: Argonne
The Argonne National Laboratory received $8.8 million for Lab Call for Facilities and Equipment. This project supports three new facilities: Battery Cell Fabrication Facility, a Materials Production Scale-Up Facility and a Post-Test Analysis Facility.

Award(s): $7.9 million, Light Source Improvements
Location: Argonne
The Argonne National Laboratory received $7.9 million for Light Source Improvements. These funds support the replacement of outdated original accelerator instruments and components to best realize the scientific research capabilities of SC Synchrotron Radiation Light Sources for the benefit of the scientific user community. These capital equipment resources enable Light Sources to provide new advanced capabilities to characterize complex materials and structures with broad applicability to the advancement of the energy, economic and national security of the United States.

Award(s): $9 million, Long Baseline Neutrino Experiment
Location: Batavia
Fermi Research Alliance, LLC, in Batavia received $9 million for the Long Baseline Neutrino Experiment. This project funds pre-conceptual R&D and conceptual design activities for an experiment composed of a large detector and a neutrino beamline.

Award(s): $16.4 million, Magellan Distributed Computing and Data Initiative
Location: Argonne
U Chicago Argonne, LLC, received $16.4 million for the Magellan Distributed Computing and Data Initiative. Midrange computing plays a vital and growing role in advancing science in disciplines where capacity is as important as capability. Magellan is a research and development effort establishing a nationwide scientific mid-range distributed computing and data analysis test-bed.

Award(s): $4.4 million, Nanoscale Science Research Centers
Location: Argonne
U Chicago Argonne, LLC, received $4.4 million for Nanoscale Science Research Centers. These funds are being used to procure new equipment at the Center for Nanoscale Materials in order to ensure the availability of state-of-the-art capabilities for scientific users and staff. These capital equipment resources enable the NSRCs to provide capabilities to fabricate, characterize, assemble and integrate complex materials and structures with dimensions and control on the scale of nanometers. These investments assist researchers at the NSRCs increase their understanding of nature to advance fundamental understanding of the fundamentals underlying energy processes with broad applicability to the advancement of the energy, economic and national security of the United States.
Award(s): $24.4 million, NOvA MIE
Location: Batavia
Fermi Research Alliance, LLC, in Batavia received $24.4 million for NOvA MIE. The NOvA experiment is constructing a detector, optimized for the detection of electron neutrinos, in the path of the existing NuMI neutrino beamline from Fermilab. This Recovery Act project advances the NOvA experiment by completing the construction of the building in northern Minnesota that houses the far detector and advancing procurements for the detector.

Award(s): $244, 000, Nuclear Data Program Initiative
Location: Argonne
U Chicago Argonne, LLC, received $244,000 for the Nuclear Data Program (NDP) Initiative. This Program requires a highly specialized workforce which has declined over the past decade while the demands on the NDP remains high. The goal of this initiative is to recruit and train new nuclear data evaluators and compilers with the expectation of developing stable careers in this specialized field. As of July 1, LBNL has converted a part-time to a full-time position, ANL has advertised for a post-doctoral position and LLNL has identified two candidates and conducted one interview for a post-doc position.

Award(s): $4.3 million, Nuclear Science Workforce
Location: Argonne
U Chicago Argonne, LLC, received $4.3 million for Nuclear Science Workforce. This project supports proposals for initiatives in Applications of Nuclear Science and Technology, aimed at research and development activities in nuclear science that are relevant to applications important to the Nation.

Award(s): 2 totaling $296,000, Small Business Innovation Research (SBIR) / Small Business Technology Transfer (STTR) Round 1
Location: Evanston

- **Applied Thin Films, Inc., Evanston - $150,000**
  Applied Thin Films, Inc., in Evanston received $150,000 for Small Business Innovation Research (SBIR) / Small Business Technology Transfer (STTR). Fouling and corrosion of heat exchangers is a major source of energy consumption and efficiency loss in many industries. Under this effort, a revolutionary and unique coating material is being to mitigate these effects.

- **Questek Innovations LLC, Evanston - $146,000**
  Questek Innovations, LLC, in Evanston received $146,000 for Small Business Innovation Research (SBIR) / Small Business Technology Transfer (STTR). QuesTek Innovations is using its *Materials by Design* technology to develop a novel oxide-dispersion-strengthened steel composition that can withstand the extremely high temperatures and service conditions relevant to next-generation nuclear power generation applications. Specifically, it is a computational design of advanced oxide-dispersion-strengthened steels for high-temperature nuclear power generation applications.

Award(s): $52.7 million, Superconducting Radio Frequency R&D
Location: Batavia
Fermi Research Alliance, LLC, in Batavia received $52.7 million for Superconducting Radio Frequency R&D. Recovery Act funds are being used to build equipment, test beds and beamlines that accelerate the development of superconducting radio frequency (SRF) infrastructure at Fermilab and help industrialize production of accelerator cavities and associated components in the United States.