

Department of EnergyRecovery Act State Memos

Iowa





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.

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 Weatherization to fuel Iowa job opportunities



American Recovery and Reinvestment Act



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

Funding for selected DOE projects: \$159.4 million

DOE Recovery Act projects in Iowa: 37

Clean energy tax credits and grants: 13

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

lowa has substantial natural resources, including wind power and is the largest ethanol producer in the United States. 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 lowa are supporting a broad range of clean energy projects, from energy efficiency and the smart grid to the Ames Laboratory. Through these investments, lowa's businesses, universities, national labs, non-profits, and local governments are creating quality jobs today and positioning lowa to play an important role in the new energy economy of the future.

EXAMPLES OF IOWA FORMULA GRANTS

Program

State Energy Program Weatherization Assistance Program Energy Efficiency Conservation Block Grants Energy Efficiency Appliance Rebate Program

Award (in millions)

\$40.5

Iowa's Office of Energy Independence has received \$40.5 million to invest in state-level energy efficiency and renewable energy priorities. \$80.8

The State of Iowa has received \$80.8 million to scale-up existing weatherization efforts in the state, creating jobs, reducing carbon emissions and saving money for Iowa's Iowincome families. Over the course of the Recovery Act, Iowa expects to weatherize nearly 7,200 homes.

\$21

Twenty-five communities in lowa received a total of \$19.7 million to develop, promote, implement, and manage local energy efficiency programs.

\$2.9

lowa has received \$2.9 million to offer consumer rebates for purchasing certain ENERGY STAR® appliances. These energy efficient appliances reduce energy use and save money for families, while helping the environment and supporting the local economy.

EXAMPLES OF IOWA COMPETITIVE GRANTS AND TAX CREDITS

Award

\$268.8 million

Four lowa companies received substantial 1603 payments for renewable energy generation for wind facilities: Barton Windpower (\$93.4 million), Garden Wind LLC (\$83.6 million), Lost Lakes Wind Farm (\$55.5 million), and Crystal Lake Wind (\$36.3 million).

\$5.3 million

American Railcar
Industries in Fort Dodge
was awarded a clean
energy manufacturing
tax credit of \$5.3 million
to re-equip a railcar plant
for the production of
steel towers for wind
turbines.

\$5 million

lowa Association of
Municipal Utilities, located in
Ankeny, was awarded a \$5
million Smart Grid
Investment Grant to
implement a load control and
dynamic pricing program for
the energy grid of 75
consumer-owned utilities,
serving over 96,000
customers in three states.

\$4.4 million

Iowa State University in Ames was awarded Advanced Research Projects Agency – Energy (ARPA-E) funding of \$4.4 million to develop the use of algae in the production of biofuels directly from sunlight and carbon dioxide.

Funding Allocation Table (Figure 1)

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

Recovery Act Pillar	Flagship Program Names & Funding Type ¹	Number of Selections	Selected Amount (in millions) ²			
Energy Efficiency	Weatherization Assistance Program (F)	1	\$80.8			
	State Energy Program (F)	1	\$40.5			
	Energy Efficiency and Conservation Block Grant (F)	25	\$21.0			
	Energy Efficient Appliance Rebate (F)	1	\$2.9			
	TOTAL Energy Efficiency	28	\$145.2			
	Smart Grid Investment and Demonstrations Project (CM) ³	1	\$5.0			
	State and Local Energy Assurance and Regulatory Assistance (F)	3	\$1.5			
	Smart Grid Workforce Training (CM)	1	\$0.6			
	TOTAL Electric Grid	5	\$7.1			
	Advanced Research Projects Agency - Energy (ARPA-E) (CM)	1	\$4.4			
Innovation	Small Business Research (SBIR/STTR) (CM)	1	\$0.2			
	National Laboratory Facilities (C)	1	\$1.7			
	Additional Programs	1	\$0.8			
	TOTAL Science and Innovation	4	\$7.1			
TOTAL - DOE Programs ⁴		37	\$159.4			
Tax Credits/ Grants ⁵	Payments for Renewable Energy Generation in Lieu of Tax Credits (1603)	9	\$270.1			
	Clean Energy Manufacturing Tax Credits (48C)	4	\$13.6			
	TOTAL Tax Incentives	13	\$283.7			
TOTAL - DOE/Treasu	ıry + DOE	50	\$443.1			
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.						
Jointly administered by DOE and the U.S. Department of Treasury.						

www.energy.gov/recovery

ENERGY EFFICIENCY – 28 projects totaling \$145.2 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): \$80.8 million, Weatherization Assistance Program (WAP) Location: Statewide

lowa received \$80.8 million to scale-up existing weatherization efforts in the state, creating jobs, reducing carbon emissions and saving money for lowa's low-income families. Over the course of the Recovery Act, lowa expects to weatherize nearly 7,200 homes. lowa's weatherization program, which seeks to help low-income residents reduce home energy consumption and lower utility bills, typically receives \$15 million in annual funding. That money, for in equal parts by the DOE, state-regulated utilities and federal energy efficiency grants, can be counted on to weatherize about 2,000 of the nearly 85,000 homes per year that qualify for help. The Recovery Act added an additional \$80.8 million to the state's program such that an additional 10,000 lowa homes can benefit from the program.

Award(s): \$40.5 million, State Energy Program (SEP) Location: Statewide

lowa's Office of Energy Independence received \$40.5 million to invest in state-level energy efficiency and renewable energy priorities. Iowa is using its Recovery Act SEP to establish revolving loan funds to finance energy efficiency and renewable energy improvements by private sector and non-profit entities. These loans cover activities that include energy efficiency retrofits, as well as the development, implementation and installation of onsite renewable energy technology. The state is also using this funding for energy efficiency and renewable energy improvements that are commercially available but not yet widely used in lowa.

Award(s): 25 totaling \$21 million, Energy Efficiency and Conservation Block Grant Program (EECBG) Location: Statewide

Recipients: Ames, Ankeny, Cedar Falls, Cedar Rapids, Iowa City, Clinton, Council Bluffs, Dallas County, Davenport, Des Moines, Des Moines County, Dubuque, Iowa Office of Energy Independence, Johnson County, Linn County, Muscatine County, Polk County, Sac & Fox tribe of the Mississippi in Iowa, Scott County, Sioux City, Urbandale, Warren County, Waterloo, West Des Moines

Twenty-five communities in Iowa received a total of \$21 million to develop, promote, implement and manage local energy efficiency programs.

This program seeks to assist state and local governments in implementing strategies to reduce fossil fuel emissions, cut total energy use and improve energy efficiency. Examples of EECBGs include:

• City of Des Moines - \$2 million

The City of Des Moines is using EECBG funds to undertake a number of projects that enhance energy efficiency across the city, including a new revolving loan fund that will create or retain 80 jobs. City agencies are using this fund to borrow and subsequently finance two types of energy efficiency efforts: energy-efficient building retrofits and purchasing fuel-efficient hybrid vehicles. As money is borrowed and returned, the fund will continue to run and assist ongoing energy efficiency improvements in city operations. In another activity, the city is devoting \$1.1 million for

energy efficient window retrofits in two public buildings: the Des Moines City Hall and the Central Police Station. The increased insulation will result in significant energy cost savings, reduced energy use and an associated decrease in greenhouse gas emissions.

lowa City - \$692,000

lowa City will use these funds for public education of existing energy audits for residents and small businesses. The project is creating a local energy office within the existing Public Works Department. This office will institutionalize energy efficiency and renewable energy as a priority and coordinate efforts throughout the local government and the community. It will also create a revolving loan program for eligible businesses to implement energy efficiency upgrades and improved technologies, as well as retrofit existing municipal buildings to achieve cost-effective energy efficiency improvements.

Award(s): \$2.9 million, Energy Efficient Appliance Rebate Programs Location: Statewide

lowa received \$2.9 million to offer 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.

RENEWABLE ENERGY – 13 projects totaling \$283.7 million

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

Award(s): 9 payments totaling \$270.1 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

Iowa received nine 1603 Payment for Renewable Energy Generation totaling \$270.1 million, which include wind and geothermal heat pump projects.

- Barton Windpower, LLC, Kensett \$93.4 million
 Barton Windpower, LLC, in Kensett received \$93.4 million for a wind project.
- Garden Wind, LLC, Zearing \$83.6 million
 Garden Wind, LLC, in Zearing received \$83.6 million for a wind project.
- Lost Lakes Wind Farm, LLC, Milford \$55.5 million
 Lost Lakes Wind Farm, LLC, in Milford received \$55.5 million for a wind project.
- Crystal Lake Wind III, LLC, Britt \$36.3 million
 Crystal Lake Wind III, LLC, in Britt received \$36.3 million for a wind project.
- Zachary Ridge LLC, Allendorf \$1.1 million
 Zachary Ridge, LLC, in Allendorf received \$1.1 million for a wind project.

• Steven A Boevers Farm, Tripoli - \$57,000

The Boevers Wind Project in Tripoli received \$57,000 for a wind project.

• Jeff Schutte Farm, Readlyn - \$47,000

The Schutte Wind Project in Readlyn received \$47,000 for a wind project.

• Brian Boevers Farm, Sumner - \$47,000

The Boevers Wind Project in Sumner received \$47,000 for a wind project.

• DEPC Properties, LLC, Cedar Rapids - \$36,000

DEPC Properties, LLC, in Cedar Rapids received \$36,000 for a geothermal project.

Award(s): 4 totaling \$13.6 million from DOE / Treasury, Clean Energy Manufacturing Tax Credit (48C)

Location: Statewide

Three of the four Iowa companies which received Clean Energy Manufacturing Tax Credits (48C) are manufacturing wind energy systems. Iowa Governor Chet Culver and the Iowa Department of Economic Development made a strong, targeted effort to attract wind power component manufacturing businesses to the state. This effort is paying off as these firms create jobs in Iowa and deliver positive economic benefits to the region. The next step in Iowa's wind manufacturing success is to align these businesses with other manufacturers in the state that can provide components along the supply chain.

• American Railcar Industries, Fort Dodge - \$5.3 million

American Railcar Industries in Fort Dodge received \$5.3 million to re-equip a railcar plant for the production of steel towers for wind turbines.

• TPI Composites, Inc., Newton - \$3.9 million

TPI Composites, Inc., in Newton received \$3.9 million to build a 300,000 square foot blade fabrication plant in Newton, which will primarily fill orders from a long-term agreement with GE Wind. This TPI plant will eventually employ 500 workers in a town that used to be one of the nation's appliance manufacturing centers. With the Recovery Act funds they will be able to expand its Newton facility, open a new blade manufacturing factory in Nebraska and hire more than 200 people.

Siemens Energy, Inc., Fort Madison - \$3.4 million

Siemens Energy, Inc., in Fort Madison received \$3.4 million to build a new manufacturing plant for assembly of wind turbine nacelles and hubs for wind turbines. The resulting products will aid the domestic wind power industry.

• Guardian Industries Corp., DeWitt - \$900,000

Guardian Industries Corp., in DeWitt received \$900,000 to re-equip an existing manufacturing facility for the production of bent solar mirrors. The project is modifying and enhancing the existing mirror line to enable the facility to mirror glass in a single throughput on the production line, while at the same time achieving a multi-layer specialized paint coating to protect and preserve the reflective layers of copper and silver. Preservation of these reflective layers is critical to the achievement of long service lives of highly reflective solar mirrors.

MODERNIZING THE ELECTRIC GRID - 5 projects totaling \$7.1 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 \$675,000, Enhancing State and Local Governments' Energy Assurance Location: Des Moines, Davenport

The Iowa Development Authority received \$675,000 to focus on building regional energy assurance capabilities by enhancing inter- and intra-state coordination and cooperation during energy emergencies. This project funds states to update and develop State Energy Assurance Plans that incorporate new energy portfolios such as wind, renewables, biofuels, etc. This program also funds cities updating and developing Energy Assurance Plans within local areas. The two sets of funding are being used to hire or retrain staff in, building in-house expertise in the areas of Smart Grids, critical energy infrastructure interdependencies and cyber-security.

• Iowa Office of Energy Independence, Des Moines - \$475,000

The Iowa Office of Energy Independence in Des Moines received \$475,000 for Enhancing State and Local Governments' Energy Assurance.

City of Davenport - \$200,000

The City of Davenport received \$200,000 for Enhancing State and Local Governments' Energy Assurance.

Award(s): \$5 million, Smart Grid Investment Grant Program (EISA 1306) Location: Ankeny

Iowa Association of Municipal Utilities in Ankeny received a \$5 million Smart Grid Investment Grant to implement a load control and dynamic pricing program for the energy grid of 75 consumer-owned utilities, serving over 96,000 customers in three states.

Award(s): \$827,000, State Assistance on Electricity Policies Location: Des Moines

This project funds states and their Public Utility Commissions (PUCs) to hire staff trained to facilitate the review of time-sensitive requests approving electric utility expenditures undertaken as part of the Recovery Act.

Award(s): \$634,000, Workforce Development Program Location: Marshalltown

Iowa Valley Community College District received \$634,000 for the Workforce Development Program. The Iowa Valley Collaborative Line worker Training and Awareness Project builds awareness of the line worker career among displaced workers from other sectors, underemployed individuals seeking better jobs and high school students to recruit them into a pre-employment diploma program, placing 80 perfect of its graduates in electric power sector jobs.

SCIENCE AND INNOVATION – 4 projects totaling \$7.1 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): \$4.4 million, Advanced Research Projects Agency - Energy (ARPA-E) Location: Ames

Iowa State University in Ames received Advanced Research Projects Agency – Energy (ARPA-E) funding of \$4.4 million to develop the use of algae in the production of biofuels directly from sunlight and carbon dioxide.

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

Iowa State University in Ames received \$750,000 for the Energy Sciences Fellowships and Early Career Research Program. This project aims to create graduate, post-doctoral and early career fellowship awards to stimulate research careers in energy, environmental and climate change sciences.

Award(s): \$1.7 million, General Plant Project Funding Location: Ames

Iowa State University in Ames received \$1.7 million for General Plant Project Funding. This project will help revitalize the DOE's Ames Laboratory 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): \$150,000, Small Business Innovation Research (SBIR) / Small Business Technology Transfer (STTR) Round 1

Location: Newton

Springboard Engineering, Inc., in Newton received \$150,000 for the SBIR / STTR program to finance research into a Smart Grid Controller for Non-Smart Household Electricity-Consuming Appliances. These new Smart Grid devices will enable millions of existing appliances to connect with the Smart Grid. The device will reduce the need to expand the power generation infrastructure and reduce energy costs.

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/lowa

Eldrige

Weatherization to fuel lowa job opportunities

When Cascade Manufacturing in Eldrige, Iowa, laid Gary Anderson off in December 2008, Gary spent seven long months on unemployment. He started searching for any sort of job that fit in with the job skills he picked up at Cascade, a truss manufacturer. Without a steady paycheck, Gary says it was tough to stretch his money in order to keep up with bills and feed his family at the same time.

The feeling of uneasiness Gary had when he thought about not having a steady income constantly reminded him to stay focused on the job hunt. Fortunately, Community Action of Eastern Iowa was one of the first agencies in the country to take weatherization stimulus funds and start filling positions for its residential energy efficiency program.

Gary was hired as a crew laborer in July by CAEI, based in Davenport. The community action agency usually weatherizes 91 homes each year in four counties. This year, the organization expects that number to rise to about 650 with the help of federal stimulus money — \$80 million during the next three years in Recovery Act funding awarded to the state for weatherization projects from the U.S. Department of Energy.

"I've finally been able to set a budget each week because I now know I have an income coming in," Gary says, adding that it feels good for his family to start getting back to normal instead of dealing with a cloud of dread. The family's hope and faith that Gary would find a good job paid off, and he's not the only one who has benefited.

So far, CAEI has hired about 12 production staff members with stimulus funding, and the group additionally hires contractors for the projects, says Maureen Stoops, operations manager. The weatherization projects act not only as a way to improve energy efficiency and save on costs for families in the region, but also they provide a catalyst for jobs in Iowa.

The average cost for weatherizing a home in Iowa — where weatherization techs like Gary do jobs such as plugging air leaks, insulating walls and attics, and replacing heating systems — is about \$6,500, but the Iowa Utilities Board estimates that every dollar spent in the short-term will yield about \$2 in savings down the road.

Gary says he enjoys the attitude of the people he now works with at CAEI and that transitioning his previous skills in the manufacturing industry to his new position has been easy because of similarities in taking efficiency measurements, using specialized tools and

- Iowa City combines State Energy Program grant and rebate from utility
- City to save \$66,000 annually with energy efficient LED lights in parking garages
- Reduce energy usage by 1.4 million kWh annually

communicating with other workers to find and fix problems.

"I like the type of work I am doing on homes and really appreciate the opportunity to help other people," he says.

DECORAH

A college, a church and a nonprofit encourage energy efficiency in northeast lowa

Decorah, a small town of about 8,000 people in the northeast corner of Iowa, recently received a little more than \$880,000 through an Energy Efficiency and Conservation Block Grant that will be used to fund energy efficiency projects for three different organizations in the town: a college, a church and a start-up nonprofit.

The funding will be utilized by three entities in Decorah: Luther College, First Lutheran Church and Winneshiek Energy District.

Each organization will match the amount provided by the grant. "For us to help by sponsoring these projects opens the way for significant, tangible energy-saving improvements," says Decorah City Manager Jerry Freund. "This grant can double their budget, and they can get more done as a result."

The first recipient, Luther College, is a small liberal arts college in Decorah. Luther is currently in the midst of a five-year plan that would reduce its carbon emissions by 50 percent.

Luther will use the EECBG money to pursue different energy efficiency and conservation projects, including campus retrofits and installing energy usage meters, which would allow the college to track how much energy is being consuming in real-time. The college hopes to have the projects completed by the end of 2010.

In addition to being the largest employer in the city of Decorah, Luther College brings a lot of activities and programs on energy efficiency to the community, Jerry says. "There's a high level of interest in energy efficiency and sustainability, largely because of the college spreading that awareness."

First Lutheran Church is the second entity in Decorah receiving EECBG funds. The church is one of the largest and oldest in the community and houses the Decorah Area Free Clinic and the Food Pantry at First Lutheran Church.

The church will be doing a little more than \$200,000 of work on the building, and it will spend the majority of that money changing out an old steam boiler for a 96 percent efficient hot water condensing boiler system. The new system is more efficiently sized and will be controlled by an energy management system that keeps occupied spaces comfortable while not wasting energy. The church will also be installing insulation in areas where there is currently little or none.

"The congregation provides space and utilities for important civic activities and service ministries that are vital to Decorah and surrounding communities," says Robert Fitton, a member of First Lutheran Church's greening committee and a Luther College employee. "Reducing energy consumption in this socially active church will allow us to better use funds for service endeavors

and also to do educational outreach to clients and congregational members who visit our facility."

The third grantee is a new nonprofit organization called Winneshiek Energy District, which will leverage money for residential and commercial buildings.

WED works to create excitement and enthusiasm about energy efficiency among community members. The group will use its funding to develop an energy efficiency cost-share program for both local residents and businesses. The program will take locals through the energy-auditing process and help guide them when selecting contactors for audit-identified improvements.

Andy Johnson, director of the WED, stresses the importance of making energy efficiency practical for all communities, saying that many people don't have a fondness for things like electrons or gas piping. However, "it's the cold beer and hot showers we want. The less purchased energy we need to provide those services and the more of our purchased energy we can provide locally, the better shape we'll be in."

Jerry hopes the projects stemming from the EECBG funding will help raise awareness about energy efficiency for Decorah citizens.

"There's a good deal of interest in this," he says. "We're quite confident in the resources that are available, and we're really hoping the community will take advantage of this."

Solar panels to help lowa students learn about renewable energy

New solar panels to be installed on the rooftops of five Iowa middle schools will give students hands-on experience with the technology and help offset some energy costs.

"We really want this be an educational component to the schools' science curriculum," says Rich Dana, an energy specialist for the National Center for Appropriate Technology (NCAT).

Students will discover the power and inner workings of solar panels starting this fall, thanks to NCAT and federal dollars. NCAT's Sun4Schools program will supply 2.1-kilowatt solar panel arrays for Decorah, Grinnell, New Hampton and Spencer middle schools, and Scattergood Friends School in West Branch. The schools are spread throughout the state.

The photovoltaic solar arrays will act as an educational tool for students and the community. Web-based software to monitor the energy output and savings will be integrated with the array.

"The Sun4Schools program is particularly attractive because the schools had to show a commitment to renewable energy education and broad-based community support," says Steve Fugate, education director at the Iowa Renewable Energy Association (I-Renew).

The projects are being funded in part by the Recovery Act, with the schools, utility companies and other investors chipping in to cover the remaining cost of the \$36,000 systems.

Each school is expected to save about \$275 a year on energy bills. Starting in July, local electricians will begin installing the equipment. "It's the beginning of market creation in these areas," says Rich.

The Sun4Schools program started in Montana in 2000, when 27 schools received similar solar panels. They produce about 3,000 kilowatt hours a year, which is about 25 percent of a home's energy use.

"The elementary school that my children go to has a PV system



Five lowa schools will receive rooftop solar panels this summer to help teach students about the technology. I File Photo

on an active tracker and every day that it is not tracking properly, they rush home to tell me," says I-Renew's Steve. "When a 6-year-old not only notices those little details, but also speaks up and works to correct the problem, our world becomes a better place."

IOWA CITY

Parking savings through LED project for Iowa City

Iowa City's \$1.2 million LED project is expected to save the city about \$5,000 each month from changing out old, metal halide light fixtures for LED lights. The cost of the project was partially covered by a \$419,000 grant from the U.S. Department of Energy's State Energy Program and a \$45,000 rebate from MidAmerican Energy, the local utility company.

Brightening the future

The LEDs being installed in Iowa City use less energy than normal light bulbs and last about four times as long, which adds up to significant energy savings for the city. The lighting will be installed in four of the city's parking garages by city staff.

Director of Transportation Services Chris O'Brien says his department saw the city's parking garages as one of its biggest energy users at 55,000 to 70,000 kWh per month at some facilities.

"By replacing the lights in all four facilities, we expect to see a significant drop in the amount of energy used," he says. "Our goal was to reduce our usage by a minimum of 40 percent."

The reason the city chose an LED lighting project because it was one of the few areas that a substantial energy savings was possible for the Transportation Services Department. All of the information available pointed toward an energy reduction of 30 to 50 percent, which, when applied to the parking facility lighting, equated to a substantial savings.

The city owns a fifth parking facility, which was retrofitted as part of a warranty repair in December of 2009. That retrofit has provided city officials with compelling evidence about the benefits of LEDs — a 49-percent savings on energy costs, averaging about \$1,100 per month for that one facility. Presuming similar savings for all of the facilities, O'Brien estimates the city can save 1.4 million kWh and \$66,000 annually.

The city is in the process of making a vendor selection, and the project is expected to be complete by June 2011.