



Chris Brady, City Manager, City of Mesa

SRP REBATES WIN BIG IN MESA

Cities provide vital services. They supply residents with utilities, sanitation and transportation services. So what sets the City of Mesa apart? It also considers providing Mesa residents with an environmentally conscious community to be a vital service.

Having an environmentally conscious community means practicing energy efficiency and water conservation. These efforts help the city control costs, which in turn improves the quality of life for Mesa residents.

With the help of SRP rebates, grants from the American Recovery and Reinvestment Act and city-funded projects, Mesa has made tremendous strides to go green.

“By improving energy efficiency in our city facilities, Mesa demonstrates its leadership as a sustainable and an environmentally responsible city. Plus, it saves us a tremendous amount of money,” Mesa City Manager Chris Brady said. “These savings can then be reinvested for more energy-efficiency projects — ultimately helping us keep costs down for our residents.”

So far, Mesa has received over \$250,000 in rebates from SRP to make improvements.

“Our Environmental and Sustainability group works with every department on citywide energy-efficiency and water-conservation efforts,” Brady said.



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“Collectively, we look at upcoming city projects to improve energy efficiency and also plan projects with the best bang for the buck in terms of energy savings.”

But he emphasizes that one of the best things the City of Mesa does is engage SRP as a partner in its energy-saving projects from the start. “SRP and Nexant engineers often attend meetings to educate our engineers, project teams and contractors on SRP program requirements and energy standards and provide technical and commissioning support,” he said.

Together, the teams have completed a number of energy-efficiency projects at various facilities, including a wastewater treatment plant, libraries, parks, and public safety and fleet facilities. From turbo blowers to lighting occupancy sensors, the City of Mesa proves it leaves no stone unturned when it comes to energy efficiency.

SOUTHEAST WASTEWATER TREATMENT PLANT

It takes a lot of energy to distribute, disinfect, treat and pump water for the City of Mesa’s residential and commercial customers.



New 200-horsepower turbo blowers that adjust power consumption during the aeration process were installed at the Southeast Wastewater Treatment Plant.

The city’s plants, pumps, lift stations and processes consume more than 40% of its annual energy use. With such a large portion of the city’s energy consumption going to wastewater treatment, it was time to look at what improvements could be made.

The project replaced older 400-horsepower blowers with new 200-horsepower turbo blowers. The new blowers have a “turndown” feature that adjusts power consumption so only the appropriate amount is used during the aeration process. As part of the project, the plant also installed fine bubble membranes that allow for better oxygenation and less airflow. This not only helps reduce energy use but also improves plant efficiency.

These improvements qualified for \$190,000 in total rebates under SRP’s Business Solutions program.

Collectively, the turbo blowers and fine bubblers will save the city more than 2 million kilowatt-hours (kWh) annually. That’s a more than 60% savings in energy use. It also represents an annual savings of more than \$166,000. That’s money Mesa can use to help contain costs for its operations and customers.

Mesa couldn’t be happier with the results.



Brian Bednar, Key Account Manager, SRP, and Janet Bunchman, Conservation Specialist, City of Mesa

“A wastewater treatment plant and a library obviously use energy very differently, yet improvements in both of these facilities qualified for rebates from SRP. It’s a great example to show that regardless of your business, SRP has a rebate that can help you save energy and money.”

— Brian Bednar,
City of Mesa’s SRP Account Manager

RED MOUNTAIN LIBRARY

Mesa's Red Mountain Library underwent an extensive lighting retrofit with help from SRP's Business Solutions program. As part of the project, more than 2,300 inefficient lamps were removed or replaced. The facility installed energy-saving occupancy sensors indoors and light controls in the parking lot.

Inside the library, 250-watt lamps were replaced with 100-watt induction lamps, which save energy and cut down on glare in computer areas. Special controllers schedule the lamps, and the library's staff can control how many lights are in use for special events. These measures will help double the life of the lamps.

What's more, the new induction lamps produce less heat. This means the library's air-conditioning systems don't have to work as hard to keep the facility cool.

Library restrooms, staff offices and conference rooms also received an upgrade with the addition of occupancy sensors. These sensors automatically turn off lights when no one is present, helping to save energy and money.

Outside the library, sensors and timers were installed on lights in the parking lot. Prior to this, lighting was left on all night to light the book drop. Now more than half the lights can be turned off and patrons can still safely access the book drop.

With these improvements, the library can expect an annual energy reduction of more than 535,000 kWh.



More than 2,300 inefficient lamps were removed or replaced at Mesa's Red Mountain Library.

In dollars and cents, that's more than \$40,000 a year the city will save on its energy bill.

"Saving money on our energy bill will allow Red Mountain Library to [offer] more library programs, speakers and community-service offerings," Brady said.

THE BIGGER PICTURE

Here are just a few of the other Mesa projects that SRP rebates helped fund:

- › The East Mesa Service Center (EMSC) retrofitted lighting in the fleet parking lot with new control and scheduling technology, which dims more than 60 high-pole 1,000-watt lamps to half their power at dusk when evening crews complete their shifts. Dimming also reduces the impact on astronomical observations, helping Mesa's dark-sky initiatives. The EMSC warehouse and utilities buildings also underwent lighting retrofits. The projects save the city more than \$18,000 each year.
- › The Gene Autry Tennis Center and Clubhouse, which houses the East Valley Tennis and the Arizona Rattlers teams, converted to compact fluorescent light bulbs (CFLs) and occupancy sensors. The conversion saves the city nearly \$4,000 each year.
- › Mesa's new LEED-certified fire stations 219 and 220 received rebates for energy-efficient heating, ventilation and air conditioning (HVAC) systems.
- › The Public Safety Training Facility and fire stations 205, 213 and 214 underwent total building lighting retrofits. Occupancy sensors were added for energy savings when classrooms, dorm rooms and restrooms are not in use, saving the city more than \$17,000 each year.
- › The Fiesta District Police Department installed energy-efficient lighting with an added savings of more than \$11,000 per year.

THE RESULTS

Annual Electricity Savings: 3,313,230 kWh

Annual Electricity Cost Savings: More than \$400,000

SRP Rebates: \$255,493

Simple Payback: Just over four years

SRP BUSINESS SOLUTIONS

SRP Business Solutions offers a portfolio of rebate programs that provide a wide range of energy-efficiency opportunities, including rebates for technical assistance and equipment installation. SRP developed these programs to help commercial customers better manage energy usage, increase energy efficiency and employ the latest technologies. There's a program for every kind and size of business and industry.

Our Standard Business Solutions program provides rebates for the purchase and installation of common high-efficiency equipment used in lighting, HVAC, compressed air and refrigeration systems, while our Custom Business Solutions program is more flexible and allows customers to suggest projects that are unique to their facilities and operations. If a project's energy savings are measurable, chances are the project qualifies for a rebate.

SRP rebate programs are operated on a first-come, first-served basis until all funding has been committed. Customers are eligible for as much as \$300,000 in rebates per program year.

Most measures and projects require preapproval before new equipment is ordered, purchased or installed. Specific details and applications for SRP Business Solutions programs and services are available through SRP account managers, at savewithsrpbiz.com or by calling the program administrator at (602) 236-3054.

With SRP's help, the City of Mesa adopted the 2009 International Energy Conservation Code. This code establishes energy-efficient construction techniques and requires all future homes to be built to be 15% more energy efficient than past construction. Adopting the code further demonstrates the city's commitment to saving energy, making it a leader among Valley cities.

CUSTOMER PROFILE: CITY OF MESA

With a population of nearly 450,000, Mesa, part of the Greater Phoenix metropolitan area, is the 38th-largest city in the United States. With more people than Miami, Minneapolis and Atlanta, Mesa covers 133 square miles and is the second most populous city in the region. Mesa is home to more than a dozen colleges and universities and has the biggest public school district in Arizona. Major employers include Boeing, Banner Health Systems, Mesa Public Schools and Maricopa Community Colleges. It is the spring training home of the Chicago Cubs and the Oakland Athletics.

Mesa's facilities include airports, computer centers, convention centers, entertainment venues, office buildings, libraries, parks and recreation facilities, public safety buildings, water plants and more. With more than 3 million square feet of building space, Mesa is motivated to save on energy costs. Mesa's strategic initiatives also include a responsibility to be a leader and an active participant in working with regional partners, such as SRP, to find innovative and sustainable solutions.

For more information about the City of Mesa, visit mesaaz.gov.

