

Local Government Case Study:

City of Azusa

Background

- Location: Los Angeles County
- Population: 43,800
- Size: 260 full-time employees, 80 in Azusa Light and Water
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Summary

While most cities saw rate increases in 2001, City of Azusa residents enjoyed the same rates they had in 1993 due to an extensive energy management program. The city responded to the energy crisis in 2001 with a three-pronged approach: (1) public outreach via a large business load reduction program and a residential customer conservation program, (2) employee outreach and (3) a city facilities load reduction program. The three programs were designed to produce an initial 5 MW reduction from 11 a.m. to 7 p.m. between May 1 and Sept. 31, and load reduction maintenance thereafter. In total, city employees saved \$12,700 in energy costs. The city made 5.25-7.15 MW available for energy reductions should it be called upon to reduce load. For its efforts, Azusa Light and Water received an award from the California Municipal Utility Association. The city also began work on a long-term energy efficiency program that includes upgrades to city buildings.

Referenced in Local Government Guides:

- #1, "Reduce Energy Use in Local Government Facilities Through Conservation Measures"
- #2, "Reduce Energy Use in Local Government Facilities Through Efficiency Improvements"
- #3, "Promote Energy Conservation and Efficiency Through a Public Outreach Campaign"

Plan

City Facilities: Load Reduction Program: An energy audit was conducted on city buildings: City Hall, City Hall West Wing, City Auditorium, City Maintenance Yard, Senior

Center, Water Yard buildings, Police Department, Light & Water building. An external leading industry consultant collected usage information and compiled and analyzed an inventory of light fixtures. The consultant then performed a cost/benefit analysis of various retrofit projects.

Based on the results of the data collection, the City of Azusa developed a Load Reduction Program for city facilities with the goal of reducing energy costs. The program involved lighting and HVAC retrofits. The work was supervised by a city supervisor and subcontracted to an outside contractor. The city began the reduction program in January 2002 and expected to complete the installation of lighting and HVAC retrofits by October 2002.

Public Outreach: Azusa Light & Water received weekly and monthly reports of energy demand by customer groups, enabling the utility to track any changes in energy usage. The utility used the information to develop the large business load reduction program and incentive program to entice businesses to reduce power. The Light & Water's public benefits program coordinator met with big business customers to negotiate load reduction schedules and a communication plan. The city planned to educate businesses through websites, telephone messages, handouts and utility representatives at Chambers of Commerce meetings. Incentives were paid for out of the Power Resources budget.

The city spread the energy conservation message to residents through public events and free audits and by providing energy-efficient equipment for homes. An energy consulting group helped to conduct an educational program for 5th graders and Azusa planned a contest to engage 6th graders in energy conservation.

Employee Outreach Program: The city held a meeting with representatives from the various city departments to get them on board for the city employee conservation program. The city manager wanted each city department to reduce its electrical load during Stage 1 and 2 alerts to help prevent rolling blackouts. As an incentive, the city manager promised to return the amount of money each department saved from energy reduction to the department for improvements, hopefully for efficiency and conservation.

Programs: Conservation

✓ **Mandate to city facilities:** The city manager issued an Executive Order – Electrical Load Reduction Programs – to call city facilities to action. The program required that each department develop a set of actions to reduce electrical load during Stage 2 or 3 Alerts. Each department also had to assign an employee to lead in implementing the department’s plan. The designated employees were notified of Stage alerts by e-mail. Employees were tentative at first, but then “got into it” when they realized they were contributing to keeping the lights on in Azusa. City departments were able to reduce 1 MW on-call. In total, departments reduced energy by 14 percent and saved \$12,700 in energy costs when compared with the same time frame in 2000.

Programs: Efficiency

✓ **HVAC**

- Installed override timers in 25 energy-efficient HVAC systems in the City Hall Auditorium, West Wing, Senior Center and City Corporate Yard.
- Installed timers to turn heating or air conditioning on at certain times of the day when buildings were expected to be occupied and off during non-business hours.

✓ **Lighting**

- Installed 60 compact fluorescent (CFL) bulbs in place of mercury halide or mercury vapor.
- Replaced T12s with 400 T8 lamps.
- Replaced incandescent fixtures in 17 exit signs with LED lamps.
- Installed motion and sound detectors in all buildings.

Programs: Public Outreach

✓ **Free energy audits:** Azusa Light & Water provided residents with free home energy audits and a bonus giveaway of a CFL. Interns conducted 100 home energy audits during the summer.

✓ **Loaned equipment:** Loaned Watts Up meters to customers to help them determine the amount of energy a specific appliance used.

✓ **Coordinated with schools:** In the spring of 2001, 5th graders participated in a nationally recognized conservation education program and received a kit that included a CFL, low-flow showerhead and a checklist for conducting their own home audit. The program was funded by Azusa Light & Water’s public benefits program and administered by classroom teachers of the Azusa Unified School Dis-

trict and three parochial schools. A teacher’s guide assisted teachers in teaching the curriculum. Pre- and post-knowledge surveys showed students’ subject knowledge improved from 43 percent to 71 percent. Students filled out household report cards that summarized the resource-saving measures they took in their homes. Some highlights include: 73 percent had a leak in their toilet, 82 percent installed the energy-efficient shower head and 56 percent replaced or cleaned a dirty air filter. An annual projection of energy, gas and water savings were 387,030 kWh saved, 50,076 therms of gas saved, 9,500,476 gallons of water saved and 9,500,476 gallons of wastewater saved.

✓ **Residential/Community Program:** The following programs were designed to increase community awareness of ways to save energy and create a “call to action” for residents.

- **Shorts Day:** Designated Aug. 7 “Shorts Day in Azusa – The Coolest City in California” to celebrate the community-wide 14 percent energy savings since the May 1. The celebration began at 7 a.m. with refreshments, live music and other entertainers. There was live radio and TV coverage.
- **Concert in the Park:** Three Tuesday evenings in August the City of Azusa and Azusa Light & Water sponsored Concerts in the Park. Residents were encouraged to give their appliances the evening off. Volunteers distributed hand fans, balloons and energy-saving tips. On the fourth Tuesday, a local acting guild performed “Rapunzel’s Energy Crisis,” a satire on the childhood story Rapunzel, designed to emphasize the energy crisis.

Programs: Incentives

✓ **Large Business Consumer Program:** The program had two options to encourage business customers to reduce energy usage during peak hours:

- **Fixed schedule:** If a customer shifted operations to off-peak hours on a fixed weekly schedule for part or all operations for at least one summer month (May through September), the City of Azusa paid the customer a monthly payment of \$0.50 per kilowatt-hour shed during a one-week period. Example: A company decides to shift 1 MW, or 1,000 kW, for eight hours, five days per week (for each week of the month). The city would pay the company \$20,000 per month (1,000 kW x 8 hours X 5 days x \$0.50).
- **On-call provision:** A customer has two hours to cut a certain number of kW after notification by the city. The reservation payment was similar to

payment under the fixed schedule option – in addition to \$0.50 per kilowatt-hour reduced after notification by the city. Azusa’s goal was 4 MW of savings. Azusa Light & Water faxed and e-mailed updates on Stages of alerts to businesses as well as updated its website and phone messages daily.

✓ **Small business:** To reach smaller businesses specifically, utility representatives spoke to business groups about conservation at local Chambers of Commerce, provided handouts of energy-saving tips and answered questions specific to their businesses.

✓ **Contest for students:** From May to June 2001, 6th grade classes participated in a contest to create and produce conservation videos. The three winning classes received prizes contributed by local businesses. The videos were shown on Azusa’s community TV station during the summer. This program was created and organized jointly by the City of Azusa and Azusa Light & Water. Students enjoyed the contest and the creative part of developing a video. Students were able to build on their knowledge from the prior year’s conservation education program.

Budget and Finance

Funding for the employee outreach program came from the Power Resources budget. Funds were allocated based on net energy reductions.

The City of Azusa and/or Azusa Light & Water did not receive any incentives (PUC reimbursements, rebates, etc.) for implementing the programs.

Power Resources budget provided \$304,173 in incentives for the business incentive program.

Results

City departments were able to reduce 1 MW on-call, reduced energy consumption in total by 14 percent and saved \$12,700 in energy costs when compared with the same months in 2000. The City of Azusa expected 48 kW of demand savings and 875,000 kWh savings from the lighting and HVAC retrofits.

The City of Azusa exceeded its goal for businesses, with 4.25-6.15 peak MW curtailed. A scheduling spreadsheet was updated and distributed daily. Nineteen of the city’s 34 largest commercial/industrial customers committed to the program.

Outreach programs in schools cost \$53,000. An annual projection of energy, gas and water savings from the school projects are as follows: 387,030 kWh electricity; 50,076 therms of gas; 9,500,476 gallons of water; and 9,500,476 gallons of wastewater.

Winner: Flex Your Power Energy Conservation Award (2002).