CASE STUDY

City of Santa Rosa Powers a Unique Climate

City's public projects get boost from PG&E's solar incentives

Solar Savings Results

PG&E Incentivized Projects*
- Installations completed: 4
- Electricity generated: 361,393 kWh
- Annual energy cost savings: $48,000
- PG&E incentives paid: $424,000

Additional Solar Projects**
- Installations completed: 5
- Electricity generated: 304,190 kWh
- Annual energy cost savings: $34,000

The City of Santa Rosa enjoys a unique community. Its proximity to wineries and farms contributes to an environmentally conscious community that recognizes the beauty and the vulnerability of where they live. Local business owners, residents and elected leaders share a commitment to reducing the city's carbon footprint, lowering energy consumption and cost, and serving as a model for environmental stewardship. Santa Rosa's history of environmental leadership goes back more than 20 years, and it undertook its first solar projects in 2004.

Multiple Tactics for Change

Climate Action Plan

The Santa Rosa City Council adopted a resolution in 2005 to reduce greenhouse gas (GHG) emissions from city operations and to assist the community at large in reducing their GHG emissions. Santa Rosa, along with the nine other cities and the county that make up Sonoma County, committed to the goal of reducing GHG levels to 25 percent of 1990 levels by the year 2020. Keeping with the city's long-standing commitment to implementing environmental programs, the city adopted their Climate Action Plan (CAP) in 2012. The CAP calls for the city to encourage energy and water efficiency, reduce fossil fuel consumption in transportation and to invest in renewables. It also recommends forest and farmland conservation, carbon sequestering, general waste reduction and plans to convert waste into energy.

Solar Sonoma County

In 2007, Santa Rosa joined a regional coalition that also included the cities of Windsor, Sonoma and Sebastopol. Together, that coalition applied for and won grants from the Department of Energy under its Solar America Cities program. Santa Rosa was the only city with a population large enough to meet the grant program's eligibility requirements, so it agreed to take the lead. Among 25 cities that received the grants, Santa Rosa's was the only regional model. The result of this collaboration was Solar Sonoma County, a nonprofit organization that promotes renewables and energy efficiency through projects such as:

- The Clean Energy Advocate program, which provides unbiased assistance to help homeowners evaluate upgrades to improve their energy and water efficiency, and the installation of renewable systems like solar. The program also guides homeowners through the process of getting bids from contractors, lining up project financing and implementing their projects.
- A robust website (**www.solarsonomacounty.org**), which offers resources for homeowners and shares information about green jobs, training opportunities and sustainability-focused higher education programs.

PG&E signed on as a grant partner in 2008. Wright appreciates PG&E's deep engagement in the complex work of educating the community and building grassroots support. She says, "PG&E has been really active and involved, and that's strengthened our efforts. Its level of engagement with public projects like ours is the exception, not the rule, for utilities around the country. Few others in the country are so engaged."

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– **TASHA WRIGHT,** ADMINISTRATIVE ANALYST—UTILITIES,
CITY OF SANTA ROSA PROJECT DEVELOPMENT

The City Sets the Example

In addition to encouraging residents and businesses to conserve energy, Santa Rosa has demonstrated a commitment to using a comprehensive array of energy efficiency programs and to strategizing new ways to use renewable energy in its municipal operations.

The Santa Rosa Utilities Department supplies Santa Rosa residents with water and handles wastewater treatment for residents of Santa Rosa, Cotati, Rohnert Park, Sebastopol and other surrounding areas. Its Laguna Wastewater Treatment Plant is located on an 85-acre site where energy efficiency measures include variable frequency drives (VFDs), daylighting, water recycling and high-efficiency heating and cooling units. The site also has produced energy since 1976 by capturing methane from biosolid digesters.,

In 2004, the city's first photovoltaic (PV) system was installed at the wastewater treatment plant. This 21-kilowatt (kW), ground-mounted system featured 156 panels and qualified for PG&E's solar rebate program, which offset almost 50 percent of the cost for the city.

An additional PV system, added in 2011 at the Laguna Treatment Plant, included the installation of a "cool roof." This type of roof delivers a high level of solar reflectance, helping to lower the building's energy demand for heating and cooling. A roof-mounted (non-penetrating) PV system, which features 345 tubular panels, was also installed. Today, the combination of the PV system and the cool roof provide enough energy to meet most of the building's electricity demands.

The solar projects and cool roof qualified for PG&E incentives and together, these systems generate over 144,000 kWh of electricity for the treatment plant each year.

Results

Since 2004, the Santa Rosa Utilities and Recreation and Parks Departments have invested over $1.5 million in 4 PG&E-incentivized solar installations* throughout the city. These installations have lowered Santa Rosa's electricity consumption by 361,393 kWh. The city estimates that this saves over $48,000 annually and keeps 90 metric tons of carbon emissions out of the atmosphere each year. PG&E paid the City of Santa Rosa more than $424,000 in incentives and rebates, which helped cover the cost of these projects.

Five additional solar installations** undertaken by the city have lowered their electricity consumption by a further 304,190 kWh and are saving them over $34,000 annually.

Added to that, the city's energy efficiency projects have yielded savings of more than 2.1 million kWh (including nearly 500 in peak kW savings) and 24,989 therms, and earned Santa Rosa close to $420,000 in incentives from PG&E.

Determined to reach its ambitious city- and county-wide goals, Santa Rosa has other energy efficiency projects in the works, including lighting retrofits in fire stations and downtown parking garages, lighting projects in several municipal parks and a micro-turbine generator at Finley Aquatic Center.

Your Next Steps

To find out more about PG&E programs to help your government agency manage energy consumption and reduce costs, contact your local PG&E Account Representative or call our Business Customer Service Center at 1-800 468-4743. More information is available at www.pge.com/solar.

The California Solar Initiative helps businesses complete solar electricity and solar water heating projects. To learn more about the incentives offered through CSI, visit www.pge.com/CSI.

*These figures represent the customer's savings results between 2004 and 2011 and have been verified by PG&E. Energy and cost savings derived from solar installations vary depending on weather conditions. These figures assume full output but can be lower if sunlight levels are low. Cost savings assume a range of $0.135 to $0.138 per kWh, depending on the year.

**"Additional Solar Projects" represents savings results from projects that have been verified by the City of Santa Rosa.

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