



## Case Study

### Smart Grid for Gas & Electric Company



#### Company Overview:

The largest electric utility in the state, this 100 year old gas and electric company serves approximately 754,000 customers in two states and a number of wholesale customers throughout the region. With nine power plants capable of producing about 6,100 megawatts, it generates about 70% of its electricity from low-sulfur coal and 30 percent from natural gas. The company delivers all of its electricity across an interconnected transmission and distribution system spanning 30,000 square miles.

#### Situation:

The company is seeking to improve the efficiency of its energy infrastructure in several key ways. First, to provide reliable electric service at a reasonable cost. Second, to avoid building any fossil fuel-fired power stations before the year 2020. Lastly, to inform customers when they are reaching a peak and allow them to trim their demand and shift the power load to an off-peak period, allowing customers to obtain the most affordable and reliable electric power for their needs.

#### Challenge:

To manage population growth rates, generation capacity and higher usage rates without expecting the customer to carry cost increases. Ideally, the company would like to be able to collect information from customers to help the company manage their energy needs. While at the same time, customers should have their usage information available so that they can take advantage of lower rates at different periods of the day or have the option to install more energy efficient improvements to their home or business.

**Solution:**

Create a smart grid, enabled by a communications infrastructure that will have multiple benefits. For the company, adding a wireless solution providing the ability to read meters remotely, performing remote connects and disconnects creates immediate savings by reducing outages and, in turn, truck rolls. For customers, the company's ability to track how much/when electricity is utilized in individual homes or businesses allows customers to switch their daily energy usage times to save on their electrical bill. Since the company required a solution that met the highest requirements for reliability, performance and cost-effectiveness, Solis Energy was chosen to complete the solution.

Solis Energy's Outdoor Uninterruptible Power Supplies (UPS4802508) provide reliably power the wireless communications network, and are designed to ensure continuous power with up to 8 hours of battery backup for the radios deployed in this solution.