



A Study In Energy Efficiency: Washington Suburban Sanitary Commission

H₂O Utility Takes a Green Approach to Using, Buying and Saving Energy.

Customer Profile

The Washington Suburban Sanitary Commission (WSSC) serves 1.8 million customers in the Maryland suburbs and Washington, DC. To meet this growing demand, WSSC operates and maintains two water filtration plants, 15 water pumping stations, seven wastewater treatment plants, and 53 wastewater pumping stations. In fact, WSSC is the eighth largest water and wastewater utility in the nation.

The Challenge

WSSC had a mandate to reduce its energy and operational costs. They also had aggressive conservation goals which required a forward-thinking approach to using energy, buying energy and incorporating green technology into the strategy.

The Solution

Constellation came up with a three-part solution that helped WSSC reach their conservation goals. The innovative approach included:

WIND POWER

As part of a 10-year power purchase agreement, Constellation selected Edison Mission Group to build a 29.4 megawatts (MW) wind plant in Somerset County, PA. In April 2008, WSSC began receiving 85% of the wind project's power output representing approximately 60,000 megawatt hours (MWh) annually—which is providing, on average, 28% of the overall electrical requirements



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for WSSC facilities. The arrangement provides long-term price stability and represents one of the nation's largest commitments to wind power—or any other renewable energy—by a local government entity.

DEMAND SIDE

To maximize energy and cost savings as well as achieve operational and maintenance savings, Constellation identified, designed, and installed many energy conservation measures and technological improvements to the WSSC wastewater treatment systems. New pumps were installed in a major pump station to improve reliability and reduce emissions.

WSSC also participates in one of Constellation's Load Response programs. As part of Constellation's Peak Response Program, Constellation manages WSSC's Peak Load Contributions at four of its major facilities.

SUPPLY SIDE

Constellation helped WSSC to stabilize its total energy expenditures by bypassing the retail market and purchasing competitively priced electricity wholesale. Constellation's expertise in providing competitive electric supply enabled WSSC to take full advantage of the competitive energy marketplace, by assisting WSSC in managing its annual energy budget and managing risk.



Demand Side Highlights

- **\$20 million capital improvement project covered five wastewater treatment facilities and headquarter buildings**
- **Over \$1.6 million in guaranteed energy and operating cost savings**
- More than 10 million kilowatt hours (kWh) in estimated annual electricity savings

Supply Side Highlights

- Managing the entire electric supply portfolio for WSSC's 31 sites
- More than 215,000 MWh in total annual sales
- Electric procurement exceeds an estimated \$75 million over a five-year period
- 15-year agreement

Green Energy Highlights

- Wind power providing, on average, 28% of total electrical needs

The Results

For the initial \$10 million phase, Constellation developed a performance contracting plan that called for the project to be self-funded through guaranteed energy and operational savings.

In fact, first phase operational savings exceeded the initial project funding payments. Constellation also helped WSSC obtain long-term, low-interest financing through a State of Maryland water quality program.

Call Us

To discover how we can put our expertise to work for you, call us today at **1.866.237.7693**.

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