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Install a Solar Array on the Fleet Facility Roof

■ **Plan:** When the City of Columbus, Ohio, Mayor Michael Coleman's office sought potential host sites for a solar array, staff at fleet services volunteered. The no-cost solar array would allow the fleet to lower its utility costs while helping the mayor move forward with the City's greening goals.

■ **Execution:** The Mayor's office had issued a request for qualifications (RFQ) for the solar array, and Tipping Point Energy COC PPA SPE-1, LLC, a renewable energy company, won the bid. Following a lengthy engineering review of the roof structure and an assessment of the fleet's electricity use, the company had the 2,650 solar panels installed on the fleet facility roof. The facility has 151,000 sq. ft. of roof space. The contract is structured as a power purchase agreement — the fleet division buys the power generated by the system, and the company owns and maintains the solar array, merely leasing space from the City.

■ **Challenges:** Bill Burns, fleet operations manager, said the only inconvenience was during installation. The utility company came in to shut down the power for about five hours on a Saturday to make adjustments to the utility lines. The fleet division simply switched to its back-up generator for those five hours in order to continue working. Burns added that the fleet's 2008 facility is new and can handle the added weight of the array, whereas older facilities may not be able to do so. He also said the fleet had to dedicate 120 sq. ft. of space in the facility for the installation of two electrical inverters.

■ **Results:** Kelly Reagan, fleet administrator, said as long as the sky is clear, the solar array is collecting energy. Even at



The City of Columbus, Ohio, fleet facility had 2,650 solar panels put on its roof. Using energy from the collected solar power, the fleet division reduced its energy costs by 60% in June compared to the prior year.

night, it can gather energy from the sun's rays bouncing off the moon. The fleet division projected an annualized 40% reduction in its energy costs, which totaled \$184,000 in 2012. However, in June, the first full month of implementation, the City realized savings of 60% (\$8,770 savings) off its electricity costs compared to June 2012.

■ **Advice:** For fleet managers considering their own solar array, Reagan said it's best to start by talking to the mayor or sustainability specialist within the agency. If continuing ahead, Burns advised: "Hire a good consultant." He explained that fleet professionals usually have little experience with solar energy, so a specialized consultant is ideal. In Columbus' case, the partnering company hired one.

SOURCES:

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