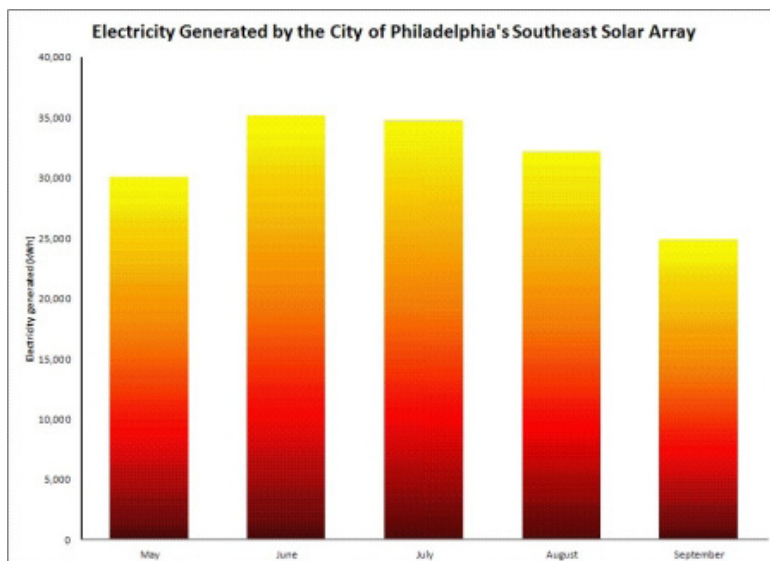


PWD Energy Efficiency



PWD has implemented two major initiatives to reduce the cost of energy consumed at its wastewater treatment facilities.

SOLAR ENERGY



In April 2011, the City unveiled its first solar photovoltaic electricity generating system, located at PWD's Southeast Water Pollution Control Plant.

- The 250-kilowatt solar array consists of more than 1,000 panels covering 60,000 square feet, and its electricity will help power the energy-intensive task of water treatment.
- The project's total cost of \$1.7 million—funded jointly by a Recovery Act Energy Efficiency and Conservation Block Grant and PWD—is expected to have a 9-year payback period
- The Project helps to achieve Mayor Michael Nutter's Greenworks goal of generating 20 percent of Philadelphia's electricity from alternative energy sources by 2015

BIOGAS CO-GENERATION

Another alternative energy source is biogas. During wastewater treatment, organic matter naturally decays, producing biogas. PWD uses heat from engines along with the biogas generated as fuel to heat buildings and keep the plants digesters at constant temperatures.

- PWD is building a \$45 million, 5.6 megawatt biogas cogeneration facility for construction at the Northeast Water Pollution Control Plant.
- Energy produced through biogas co-generation will cover 85% of the Northeast Water Pollution Control Plant's annual electricity needs
- Biogas production could save \$2.5 million in energy costs.
- Across PWD, biogas co-generation supplies 15% of the utilities total electricity consumption.

LOOKING AHEAD: LONG-TERM ENERGY SAVING INITIATIVES AT PWD

- The Philadelphia International Airport produces large quantities of toxic deicing fluid that must be disposed of safely. A pilot project tested the possibility of sending the airport's deicing fluid to PWD's Southwest Water Pollution Control Plant, where cogeneration facilities used anaerobic processes to convert the fluid into energy.
- Green building measures to meet LEED certification requirements in new construction will incorporate geothermal energy production, among other conservation and alternative energy generation methods.
- PWD is exploring the possibility of hydroelectric power generation.
- PWD is also researching opportunities to use wastewater to grow algae that will not only help clean the water, but can produce valuable nutraceuticals and biofuels as well.