

DID YOU KNOW?

Washing dishes in Hayward now creates energy and saves the City money? That's one part of a complex process that has resulted in the Water Pollution Control Facility going way beyond simple energy self-sufficiency and, in effect, becoming an energy provider. It's emission free, totally renewable power. **Briefly, here's how it all works.**



THE NUMBERS ADD UP

The new cogenerator will pay for itself in about eight years—and the impact on the environment is priceless.

- **\$9 million** to install the new equipment
- **\$2.83 million** rebate from the State for distributed energy systems (Self-Generation Incentive Program)
- **\$2.27 million** incentive from the State for large solar projects
- **\$410,000** saved on Facility PG&E bills every year
- **\$175,000** saved on off-site pumps PG&E bills every year (Renewable Energy Self-Generation Bill Credit Transfer)
- **\$219,000** FOG collection revenue every year

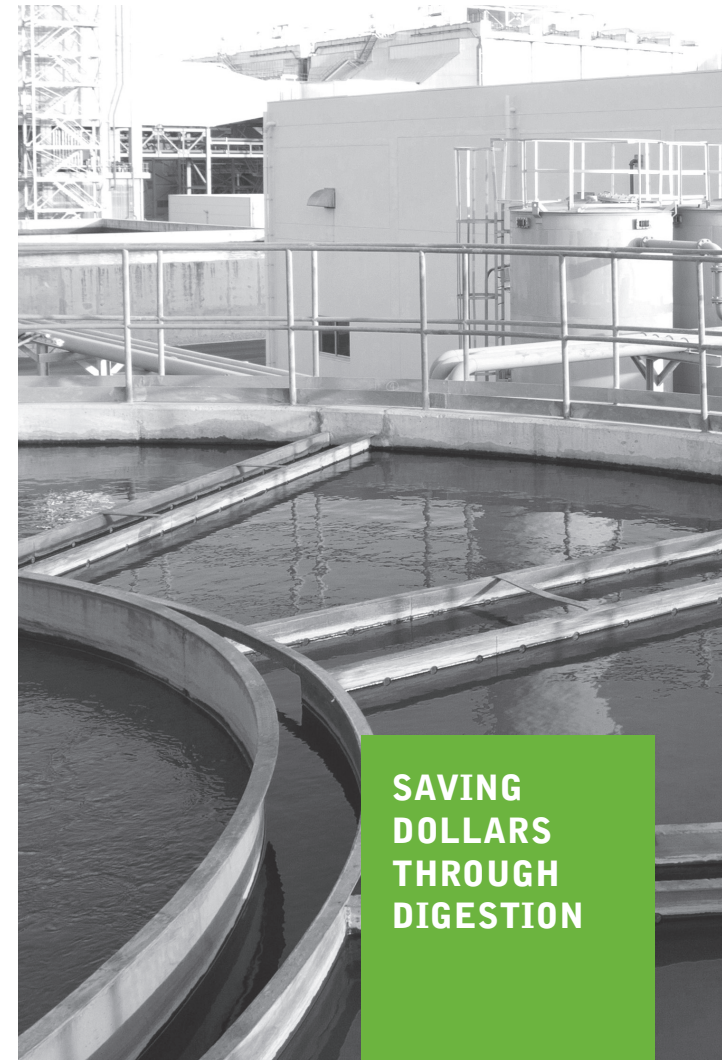
There's room for another future cogenerator and solar array.

**TWICE AS MUCH
POWER TO REDUCE
RATES, EMISSIONS AND
LANDFILL FOG!**

HAYWARD

WATER POLLUTION

CONTROL FACILITY



**SAVING
DOLLARS
THROUGH
DIGESTION**

BRING ON THE FOG

The Facility designed and built a new receiving station for fats, oils and grease (FOG). **A nearby plant produces biofuel from cooking oil and its byproduct is water** that is superrich in oil. It pays the Facility to take the mixture to the new FOG station, where it's held until needed by the digesters.

DIGESTING SLUDGE

Part of the treatment for wastewater is removing the sludge, which then goes into anaerobic digesters. It's heated up and helpful microorganisms get to work breaking down (digesting) that organic matter. **Digestion creates methane gas as a byproduct.**

FARMERS USE TREATED, DRIED SLUDGE TO ENRICH SOIL.

FROM GAS TO POWER

The Facility recently installed a new 1.13-megawatt combined generator (cogenerator) that **uses the methane gas to produce both heat for the digesters and electricity to run the entire plant.** But to run at maximum capacity 24/7, it needs more FOG, which it gets from the oil rich water. And FOG going to digesters is FOG not going to landfills or clogging up drains.

ENERGY SELF-SUFFICIENCY+

The Facility is now net energy neutral—and then some. It produces about 1.66 megawatt hours of excess energy (enough to power about 185 single family homes year round). The State allows governments to generate excess electricity at one account and credit another account. **The credit now offsets the electricity used at four drinking water reservoir pump stations and one sanitary sewer pump station, which reduces ratepayer bills.**

DON'T ENCOURAGE MORE FOG DOWN HOME DRAINS—IT CLOGS. BEST TO GET IT DIRECTLY FROM PRODUCERS.



PLUS THE SUN

The Facility also houses a 1-megawatt solar array with 5,152 solar panels. During peak daytime hours, **the solar array and cogenerator produce a total of over 2-megawatts of electricity**—and the Facility becomes an energy exporter.

AND THERE'S MORE!

The Facility now sends 2.5 to 4 million gallons a day of secondary treated water to the new, low-emission Calpine natural gas-fired power plant along the San Mateo Bridge. The water cools the steam generators and then just goes up in steam itself—**reducing the Facility's water disposal energy costs by 20%.**

