

## **Biomass appeal: Stockton plant focused on clean way to turn wood waste into power**

By Alex Breitler

Stockton Record, Friday, March 14, 2014

The first thing John Reis does, as he turns a corner and his new power plant comes into view, is clear up any misunderstanding about the great clouds of gas billowing from its 75-foot stack.

"It's not smoke," he says.

Closed to public

Right now, the public is not allowed to come to the new DTE plant and drop off wood waste.

However, project manager John Reis said another DTE plant near Sacramento has experimented with a residential drop-off program, and said such a program might be offered at the Stockton plant in the future.

It's steam. Indeed, as you gaze up toward the plume, tiny drops of water wet your face on this otherwise clear, 77-degree day.

Resting on the footprint of what was once the county's grossest-polluting business, this new \$100 million biomass plant went online just a few weeks ago.

Perhaps you've seen the steam, a noticeable addition to the Port of Stockton skyline west of downtown.

But despite appearances, the new plant should burn much cleaner than its predecessor, the old POSDEF power plant that closed in 2009. Instead of coal, the biomass plant will burn wood waste collected from across the region - perhaps trimmings from a farmer's orchard that otherwise would have been burned, or perhaps construction waste that otherwise would have been buried in a landfill.

In the meantime, the plant will produce 45 megawatts of electricity, enough in theory to keep the lights on for half the homes in Stockton.

"This is one of the cleanest plants you're going to see," said Reis, project manager for the plant's owner, Michigan-based DTE Energy. "This plant is setting standards that the rest of the country is going to have to adhere to."

This is the company's third biomass plant in California, and one of the largest in the state.

Why is a Michigan energy company so interested in California? The answer is our state's push for renewable sources.

Biomass is considered a form of renewable energy, just like solar or wind. But in California, biomass has remained a very small slice of our energy pie. As of 2010, just 2 percent of Pacific Gas and Electric Co.'s renewable energy came from biomass, while tens of millions of tons of material that could be burned to create power were otherwise discarded in less useful ways.

That's slowly changing.

Historically, San Joaquin Valley farmers got rid of orchard waste by burning it. But in recent years, air-quality regulators have banned 80 percent of all agricultural burning, despite concerns that there are not enough biomass plants to provide any other affordable method of disposal.

In other words, with ever-stricter environmental rules coming into play, California offers plenty of fuel to feed DTE's biomass plants.

"We expect DTE to burn ag waste, so, yes, they will help satisfy the demand brought about by the no-burn regulations for agriculture," Dave Warner, director of permit services for the San Joaquin Valley Air Pollution Control District, said in an email.

Thirty-five people work at the new plant, which is staffed around the clock and - unlike wind or solar facilities - can produce power all the time, regardless of weather conditions.

From an open deck on the fourth floor of the plant Thursday, you got a pretty good idea how the operation works.

Big rigs rumbled into a loading area on the far side of Washington Street. They pulled onto ramps which then tilted the large trucks up to almost a 90-degree angle, allowing their contents to spill into a conveyance shaft. The shaft leads to a storage area, and then crosses the street to the plant itself.

The woody material meets its demise in the boiler, where flames shoot temperatures up to 1,800 degrees.

"Just a big barbecue," one plant employee said, watching the glowing fire through a small viewing glass.

Steam from the combustion turns a turbine, which creates energy that is sold to PG&E and distributed into the grid.

In all, the plant can handle between 1,100 and 1,200 tons of fuel per day, collected mostly from sources within a 50-mile radius of Stockton. Those sources include chippers and recycling businesses.

While cleaner than coal, biomass plants can still emit harmful pollutants. In 2011, two plants in the south Valley were fined a total of \$800,000 by the air district and the federal government for failing to comply with their permits.

DTE was delayed in its efforts to open the Stockton plant because of difficulty obtaining its own permit, but Reis and air-quality officials said those issues have largely been resolved.

Reis said the Stockton plant benefits from a new kind of technology that uses a large wet scrubber at the base of the stack to remove pollutants before the steam spews up into the air. That makes it cleaner even than most other biomass plants, he said.

It's a far cry from the POSDEF days, though portions of the old plant remain.

DTE officials kept and refurbished the coal plant's turbine generator, along with existing pumps, motors and conveyance systems. The stack and boiler are new.

"Unlike other areas of the country, you actually have growing demand for power out here," Reis said. "It's great. A big draw for us was the decommissioning of the coal plants because that's a perfect repurposing for us. You had the structures here that we needed."

## **Growing number of Californians choose transit, walking and biking**

By Juan Villa

Visalia Times-Delta, Thursday, March 13, 2014

Instead of driving a car for work and play, Californians are increasingly choosing to walk, bike or use public transportation, a 2012 study found.

The recently-released California Household Travel Survey shows that nearly 23 percent of California household trips were taken without their car, that's more than double since 2000.

"We think it's going to be similar for Tulare County," said Ted Smalley, executive director of the Tulare County Association of Government. "...and certainly the economy probably had a play into that. When things are cut people tend to be more willing to ride the bus more. Also, our culture is changing somewhat. We're just starting to see that change them."

Walking trips nearly doubled from 8.4 percent to 16.6 percent, public transportation trips went from 2.2 percent to 4.4 percent and bicycle trips went from .8 percent to 1.5 percent.

Specific figures for the 58 California counties haven't been released, but Smalley said they expect to have them soon.

The study "provides a snapshot of the travel behavior" of more than 42,000 households statewide, that's about 109,000 people. It was conducted from 2010 to 2012.

The survey contains important information TCAG will use for their travel forecast model, Smalley said.

"A lot of people don't realize we're required as a metropolitan planning organization, our federal designation, to have a travel forecast model to predict traffic out to 2040," he said. "There's a lot of key

data that comes from this that we can put into our model. For instance, how many daily trips per person and how many daily trips per household. These things are the same everywhere in California.”

The survey found that the average number of trips per person was 3.6 and the average number of trips for a household was 9.2.

Comparing the 2010-2012 CHTS with the 2000 CHTS, the most frequent mode of travel continued to be auto driver (49.3 percent of all reported trips) followed by auto passenger (25.9 percent).

“Based on this research, we can make good decisions about transportation that will improve mobility, air quality and travel choices for all Californians and make our state a better place to live and work,” Caltrans Director Malcolm Dougherty said in a press release.

The Tulare County Association of Governments contributed \$49,500 to the study, which was jointly funded by Caltrans, Strategic Growth Council, San Joaquin Valley Air Pollution Control District, California Energy Commission and six transportation planning agencies.

Caltrans contributed of more than \$4.2 million was the most by any organization.

It isn't the first time TCAG has contributed to the survey. TCAG was formed in 1971 and became a designated Metropolitan Planning Organization for Tulare County in 1982, Smalley said.

“It takes a while to get all this data and put together. It will be used to update our travel forecast model,” he said. “...this is pretty important to organizations like ourselves that have to do travel forecast modeling.”

Last September, Gov. Jerry Brown signed legislation creating the \$129 million Active Transportation Program, whose purpose is to encourage increased use of active mode of transportation. It distributes funding for human-powered transportation programs.

“Californians are increasingly determined to get places on their own power and Caltrans is determined to help them do that,” Dougherty said. “Active transportation projects, such as bicycle and pedestrian paths, are an important part of achieving mobility, safety, and sustainability goals for California's transportation system.”