

## **Putting that veggie oil to work — Pacifica's biodiesel plant powers ahead**

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Pacifica City Council approved an innovative biodiesel plant for Pacifica, the first of its kind to be built in the United States that shares facilities with a wastewater treatment plant.

On Monday, Jan. 14, the City Council voted 4-1, with Councilmember Cal Hinton opposed, to approve the environmental impact report and enter into a ground lease agreement with Whole Energy Fuels Corporation for the construction, operation and maintenance of a biodiesel facility at the Calera Creek Wastewater Treatment Plant (CCWTP).

The facility will take excess vegetable oil collected in the grease traps of restaurants throughout Pacifica and beyond and convert it into something useful biodiesel, a clean, renewable fuel. Restaurants will get a free pick-up for their waste oil. Barrels will be provided if they do not already have the proper containers.

By collecting the waste oil, less grease will flow into the wastewater stream, reduce CCWRP's maintenance costs and reduce the potential for discharges into the atmosphere, according to the city staff report prepared for the City Council meeting of Jan. 14.

"It's crucial to get waste oil out of the wastewater stream. Eighty percent of wastewater failure is due to grease and oil in the wastewater stream. It is an expensive problem for Pacifica," said Nancy Hall, sustainability advocate through the local Livability Project.

The Livability Project is the non-profit partner in this biodiesel project. The public partner is the city of Pacifica. Whole Energy is the private company collaborator. Whole Energy will staff the new plant.

"This will become the showpiece for Whole Energy. It's a model for collaboration and sharing energy production," said Martin Wahl, director of business development for Whole Energy in Northern California. "Right now, I'd say it's unique. Others have talked about building biodiesel plants in conjunction with wastewater treatment plants. There are a lot that have researched it, but we are the first one in the country to implement it. It's a marriage of facilities that share infrastructure, share energy, heat and water usage. We help remove oil and grease from the wastewater system."

The project represents a \$2 million commercial investment in Pacifica, Wahl said.

Whole Energy will pay the city 30,000 kilowatts of energy in monthly rent, or a cash equivalent if necessary.

The facility will use a co-generation engine that would provide sustainable electrical energy used to power the CCWRP. That is projected to save the city 30,000 kilowatts hours or 5.6 percent of the total power used to operate the CCWRP, which can help pay the city's PG&E bill. The city will pay for the engine, but it will be installed and maintained by Whole Energy, according to the agreement.

The biodiesel project collaborators earned a \$620,000 grant this summer for this project from the California Air Resources Board through its Alternative Fuel Incentive Program. Whole Energy will pay the remaining \$1.73 million required. Whole Energy will reimburse the city \$75,000 out of the \$135,000 it spent on designing and constructing the co-generation engine, preparing the lease agreement, the CEQA addendum to the environmental impact report and the cost of the consultants the city engaged to answer questions about the plant's environmental impact.

"We did a lot of work," said Stephen Rhodes, Pacifica city manager. "I started out as a disbeliever in the project. We did an outside engineering study that had a look at the plant. A number of changes were made that made it a much more viable project. The study gave us the guidance on how to accomplish the goals without compromising our plant."

Biodiesel that is produced could be used to power some of the city's fleet. The excess fuel produced will be taken to a distribution facility in Richmond, said Mayor Pro Tem Julie Lancelle. The coordinators are negotiating with a Pacifica gas station owner, someone already permitted for that use, to sell some of the excess biodiesel locally.

"We look forward to having biodiesel available in Pacifica made from waste cooking oil collecting from San Mateo County," Wahl said.

Rhodes said the biodiesel project is indeed taking a big step toward improving the environment.

"I think it's a very exciting project for the city. We all need to do more to help reduce the carbon impact. This plant is a step in that direction. More people can be using biodiesel. It's also a win for the city. Once we pay off our investment, we will be reducing our energy need to the tune of \$60,000 a year. We are going to keep our rates low because we won't have to pay for energy costs in running the sewage treatment facility. It also gives us the access to biodiesel if we want to convert our vehicles. We are all going to have to do more to reduce the impact of global warming. These are some of the things we can do. It's nice to be able to do it with a minimal investment of the public's money," he said.

The ASTM certified biodiesel produced is the only alternative fuel to have fully competed the health effects testing requirement of the 1990 Clean Air Act, the addendum to the EIR states.

While the plant will use chemicals in the process of creating the fuel, members of the public who addressed the City Council at the meeting expressed concern about the safety of those chemicals through the many stages the plant will go through, transportation of goods, construction and operation.

The city's staff report says the facility will pose no health hazards.

"The biodiesel facility would pose no health hazards to the plant's employees and future employees of the biodiesel facility since all emissions from the proposed building would be vented through a new underground exhaust duct that would discharge into the existing soil scrubber at the CCWRP. The biodiesel facility would not result in any significant impacts to the environment," the staff report reads.

The chemicals that will be used in the biodiesel process are chemicals that are already permitted for use at the wastewater treatment plant, Hall said. They will be stored in double-hulled tanks inside a fully contained environment with a spill alarm on a paved surface designed to manage spillage and divert it back into the containment, just like the chemicals that are already there and inspected by air quality board and the water board every year, Hall said.

"Methanol is used in wastewater treatment plants across the nation. The U.S. Fish and Wildlife Department and the Coastal Commission have permitted the use of methanol on that site already. That site is already permitted to use the chemicals that are used in a process called transesterification. When you add this catalyst to vegetable oil, it breaks the fat molecules apart and it takes the glycerin out of the mix. That makes for a less viscous material and makes it burn well as a fuel. In the proper use, containment and delivery, these chemicals are used all the time. The gas station is far most hazardous than anything going on at the wastewater treatment plant. The biggest hazard already going on is the delivery of volatile diesel and gasoline for the on-site pump station at the wastewater treatment plant," Hall said.

Chemicals will not be removed from the site.

"We do not dispose' of the only hazardous chemical used in the process, because it is very expensive. Instead, we retrieve it out of the finished fuel and reuse it. Tiny traces might remain in the finished product, but again, it is expensive and reusable so retrieval and reuse is the method we intend to employ," Hall said.

The scale of the biodiesel operation is much smaller than the operation of the wastewater treatment plant.

"What we are doing is on a minuscule scale. The wastewater treatment plant processes 3.5 million gallons of wastewater every day. When we will be recycling at our peak, we will process 3 million gallons of waste oil in an entire year," Hall said.

Critics at the City Council meeting said the project shouldn't be allowed to go forward because a full EIR had not been prepared.

"This is designed to skirt CEQA," said Mark Stechbart, "The safest place to put this is out of town. This is a sham. This grease refinery doesn't belong on the Coast. This is an energy-generating plant for the wastewater treatment plant."

Jeffrey Russell of Luce, Forward, Hamilton and Scripps, an attorney for the owners of the Quarry site, objected to the plant and wrote a letter to the City Council stating the objections. The letter states a new EIR is required because of concerns about the height of the building, exhaust, use of chemicals and hazardous materials, odors, impacts during construction, biology, noise and land use issues.

"Biodiesel is an exciting process but it does have its impacts. Living next to large amounts of chemicals you can't pronounce is not good. A full EIR is necessary so we can see what the impact is," he told the City Council. The objections he stated in his letter were addressed one by one by the city environmental consultants at the public meeting.

"They have been addressed and rebutted," said City Attorney Cecelia Quick.

Quick told council the lengthy addendum to the original EIR of 1994, also amended in 1998, was the proper procedure to follow under CEQA guidelines. Together, they make a full EIR.

"The addendum was the appropriate vehicle. City Council is welcome to go forward tonight," she said.

Councilmember Hinton voted against the project because he felt it needed a full EIR.

"The original EIR refers to a warehouse. I can't imagine these incoming chemicals coming into a warehouse. We need to address these items. The city is obligated to be compliant," he said.

Others who spoke against the project also brought up concerns about air quality, harmful emissions during the construction process, the potential to hurt endangered wildlife and the use of hazardous materials. Again, the city's team of environmental consultants addressed all the concerns.

"It bothers me what this stuff is," said Jim Wagner, "The experts are trying to alleviate fears, but they haven't alleviated my fears. This EIR is quite old."

"I think it's an awesome project," said Dave Blackman. "We just need to slow down a bit."

A few speakers at the meeting objected to the potential additional noise the plant will make when it is operating. The city's environmental consultant said that noise is similar to that of a truck idling inside a building.

CCWRP manager Dave Gromm said standard emergency procedures are in place at the plant and will be followed if necessary. As the CCWRP is, the new biodiesel component will be inspected by U.S. Fish and Wildlife, Bay Area Air Quality Management District, the local fire marshal, city planning staff and the California Air Resources Board.

Many speakers at the meeting spoke in favor of the project.

"It's consistent with other efforts to make this city a green city. The people driving this will see that it is environmentally sound. This is a project whose time has come," said Lynn Shuette.

Mayor Jim Vreeland said the project is a unique collaboration.

"The fact that we are putting together biodiesel and wastewater treatment is very exciting," he said.

A permit from the Coastal Commission is required for the project to proceed to this point. Ongoing communication with the Coastal Commission has raised no issues, Hall said. There will be lots more opportunities for public input.

"The partnership met with the Coastal Commission on Jan. 17 and there were no indications from them that they had objections. The staff person felt like we had done everything that we were expected to do," Hall said.

In addition, the partners are excited that the biodiesel project is being recognized as helping the State of California meet its goal to phase in biofuels.

"A person from the Department of Energy of the State of California stood up at a biodiesel symposium at Dominican University last week and told us we are doing the work that we are expected to do in California. We have a mandate in California to move to biofuels by a certain date. This is helping us meet our mandate to move away from petroleum," Hall said.

Contact Hall at 359-2073 to arrange to have waste oil hauled away from a restaurant or business. Homeowners may drop off waste vegetable oil at the Coastside Scavenger Recycling Yard at 1046 Palmetto Ave. for the biodiesel project.