

APPENDIX 1C

## HBRP News in the Community

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# Cleaner, quieter, efficient power

## PG&E brings King Salmon plant replacement before county

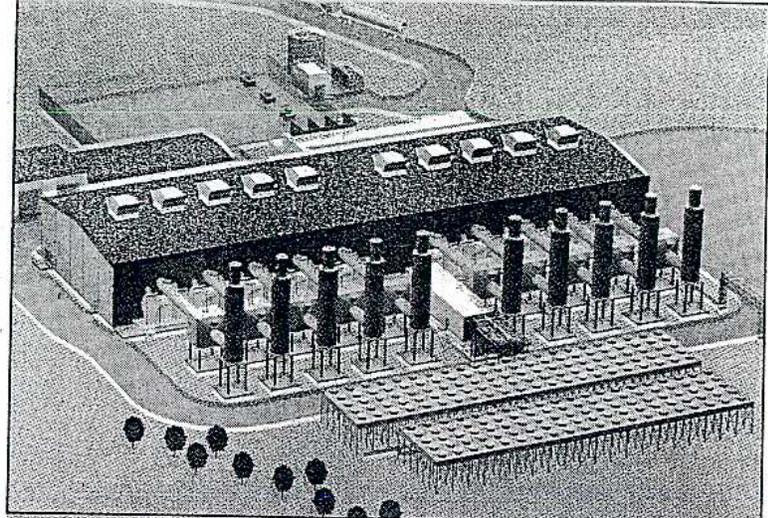
John Driscoll  
THE TIMES-STANDARD

EUREKA — The Pacific Gas and Electric Co. offered details of its plan to replace its aged Humboldt Bay Power Plant with a more efficient, low-profile facility to county supervisors Tuesday.

Representatives of the utility said the proposed 163-megawatt plant would be more efficient, quieter, cleaner, more reliable and more sightly than the unsightly 50-year-old King Salmon plant. Its bank of new natural gas-fired engines will be flexible enough to work with other renewable-energy projects planned in the area, they said.

The approximately \$250 million plant would also use a tiny fraction of the water the current facility uses, which raised a question about

■ See POWER/A8



SUBMITTED

An illustration shows what the new \$250 million Humboldt Bay Power Plant may look like.

## POWER

### FROM A1

maintaining the King Salmon channel from Supervisor Jimmy Smith.

The new power plant would be built by Wärtsilä North America Inc., whose parent company is out of Finland. It would supply enough power to meet Humboldt County's demands during peak energy use today, which is about 158 mw. PG&E would operate the plant.

"We're looking at every aspect of this plant to be a good neighbor," said Greg Lamberg with PG&E's energy supply department.

The facility's 10 Wärtsilä 18V50DF engines would emit far fewer ozone pollutants and fewer fine particles. The existing units put out 6.31 pounds per megawatt hour of ozone precursors and 6.54 lbs/mwh of PM10; that would be dropped to 0.43 and 0.74 respectively. The plant could also operate on diesel cleaner than the original plant does on natural gas. Carbon dioxide emission would be cut almost in half.

The new generators would be air cooled, using only 1.3 gallons of fresh water per minute, a radical reduction in water use. The existing plant uses 27,000 gallons of bay water per minute, pumped from a channel PG&E owns — the same channel used by King Salmon boaters to reach the bay.

Smith asked Lamberg if halting that flow could affect the hydrology of the channel and cause additional sedimentation — putting it on the list of potential impacts. Lamberg said that would have to be studied.

In a phone interview after the meeting, Steve Costa, a Trinidad

physical oceanographer who has studied the channel in the past, said the pumping draws water — and with it sand and silt — into the channel where it's deposited. Without the pumping, the tides would tend to draw sediment out of the channel, he said.

"My guess is it wouldn't have a negative impact and it might have a positive impact," Costa said.

Visually, the new plant would have about the same footprint as the existing facility. The current smoke stacks are about 100 feet tall, while the row of stacks for the new generators would be 65 feet.

Permitting for the new facility is overseen by the California Energy Commission, and must go through the California Environmental Quality Act process, which allows for public involvement. The California Public Utilities Commission is also currently considering an application that considers the effect of building the project on rate payers.

In a follow-up interview, Lamberg said the construction of the plant would provide between 150 to 200 jobs for about two years, and will use union labor. The new facility would need fewer employees, Lamberg said, but any reduction would probably be met through attrition.

"We get a chance to do this every 30 to 50 years," Lamberg said. "We've got to do it right."

PG&E anticipates the energy commission would approve the project in October 2007, and construction would start in January 2008. It would be operational by May 2009.

John Driscoll can be reached at 441-0504 or jdriscoll@times-standard.com.

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## PG&E donates early warning sirens to Humboldt County

Dozens of Diablo Canyon's old warning sirens were "retired" this month, and are on their way to a new home and a new purpose.

Pacific Gas and Electric Company is donating 50 of its old DCPD Early Warning System (EWS) sirens to the National Weather Service in Eureka and, on January 4, 47 of those sirens were loaded onto trucks at the Pismo Beach Yard and sent on their way. At their new home, the sirens will equip a tsunami warning system for Humboldt County.

PG&E has been replacing the EWS sirens with newer models that include battery back-up power. So far, 112 of the 131 sirens have been replaced. IS Supervisor **Eric Nelson**, who managed the project, expects to have all the sirens replaced by June.

"With 2004's devastating tsunami in Asia, we've all seen the terrible force these storms can produce. Having a warning system in place can save lives," said Nelson. "We're happy to be able to help Humboldt County improve its capacity to warn residents about potential catastrophic events."

As a side note, the New Years' weekend storms resulted in a loss of AC power to a total of 59 EWS sirens but, because of the new battery back-up powered sirens, 47 of the sirens affected remained operable.

Article by Sharon Gavin

# Peter and the Fuel Cell

Schatz lab founder says it's time to end our energy adolescence

ON THE COVER

by JIM HIGHT

**I**F YOU BELIEVE IN THE awesome potential of hydrogen energy, then talking to Peter Lehman can be a real turn-off.

If authors like Jeremy Rifkin, who wrote *The Hydrogen Economy*, have convinced you that hydrogen will one day rocket the planet to a new era of abundant, clean energy, Lehman will point out that hydrogen is a very expensive way to store energy, not an energy source at all.

If you think fuel cell vehicles running on hydrogen will ease up the accelerator pedal on global warming, Lehman will tell you that after 10 years of research and development, Honda, General Motors and other car makers have managed to produce only prototypes with short life expectancies and million-dollar price tags. He might add that most hydrogen is made by refining natural gas, a process that emits carbon dioxide, the culprit of global warming.

Such opinions may seem odd coming from Lehman, who sits on the board of the National Hydrogen Association, and who directs the Schatz Energy Research Center at Humboldt State University which produced both the first street-legal hydrogen fuel cell vehicle and the first solar-powered hydrogen energy system in the United States.

As Lehman sees it, however, the myths about hydrogen energy are big distractions from the real energy challenges facing the planet, America in particular.

"The biggest misconception people have is that hydrogen energy technology is a silver bullet technology that will save our butts and



PETER LEHMAN, PHOTO BY BOB DORAN

enable us to have business as usual and not have to deal with dwindling energy supplies and global climate change," Lehman said recently.

It's not that Lehman isn't excited about technology. In fact, he's amped up about things like solar hot water heaters and electric

vehicles, cogeneration that can efficiently produce heat and power on-site for a building or a school, energy-saving appliances and super-insulated homes. He even approves of the high-tech natural gas engines that are slated to replace Pacific Gas & Electric's aging steam turbines at the Humboldt Bay Power Plant. "They're incredibly efficient," he said of the Finnish-made engines, "as efficient as any fuel cell."

So why even bother with hydrogen and fuel cells?

Because, according to Lehman and his colleagues, at some point in the future — perhaps 20, 30 or 40 years from now — conventional energy sources will be so scarce that humankind will have to rely mostly on renewable energy sources like wind and solar. In that scenario, hydrogen technology will be critically important for storing and transporting energy.

The Schatz lab's focus on hydrogen was also a natural progression of Lehman's pioneering career in alternative energy. And it was the product of a remarkable connection that Lehman and his co-director, Charles Chamberlin, established 17 years ago with a tacturn and wealthy plastics manufacturer who happened to be interested in hydrogen energy.

SOLAR ARRAY FOR POWER PLANT AT HSU'S TELONICHER MARINE LAB IN TRINIDAD. PHOTO BY BOB DORAN

## Harvesting the sun

Like many Americans of his generation, Lehman, 61, got engaged in solving environmental problems during the late 1960s. He was a graduate student in physical chemistry at the University of Chicago during the first Earth Day, April 22, 1970, when he volunteered to speak at local high schools about Chicago's severe air pollution.

Originally headed for an abstract research career, he began charting a course that focused on tangible environmental issues. Along the way, he had some singular experiences that formed his passion for renewable energy, one of which was in a place called Deep Springs.

"Did you ever hear of Deep Springs College?" he asked me one day as we talked over lunch at Arcata's Golden Harvest restaurant. I hadn't.

"It's an interesting place, a whole story in and of itself," Lehman said. "It's one of the most exclusive, if not the most exclusive, colleges in the world. It's in a high desert valley in Eastern California, and it has 24 students, all men, who live and work on a cattle ranch." The

continued on pg. 10

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Greg,

Thank you so much for taking the time to present the information on the upcoming power plant project. The Building Trades representatives that were able to attend greatly appreciated having the opportunity to hear about the project + ask questions. I look forward to working with you + hope to see you soon. Thank you, Mariann T. Hassler  
local 751