

Thank you for helping save energy

Compact fluorescent bulbs delivered to Stehekin are expected to reduce the amount of diesel that must be burned to produce electricity.

Bob Nielsen, Stehekin operations attendant for the PUD, hand-delivered packages of eight 13-watt compact fluorescent bulbs to about 150 homes and businesses this month. The bulbs can help reduce the demand on diesel generators that are being used while repairs are made to the Stehekin hydro plant.

Residents are encouraged to replace their standard, 60-watt incandescent bulbs with the new compact fluorescents. If 85 percent of the 1,200 bulbs are used, energy demand will be cut by one quarter.

About 100 additional bulbs in other sizes – including 23-watt bulbs to replace 100-watt incandescent



Above: Nielsen chats with Lew Davis about energy conservation for Stehekin. Davis uses compact fluorescent bulbs almost exclusively at his Stehekin cabin.

bulbs, and flood-style compact fluorescents – are available on a first-come/first-served basis by contacting Nielsen.

PUD staff decided to offer the compact fluorescent bulbs for free due to the high cost of running the generators. Diesel fuel

Below: Bob Nielsen, hydro operations attendant, checks an outdoor fixture as he delivers compact fluorescent bulbs to a Stehekin home.



costs can reach \$1,000 a day. The \$2,000 cost of the bulbs can quickly be recouped if their use reduces run time of the generators.

That's a clear benefit to the PUD. But customers benefit as well through reduced electric bills. Compact fluorescent bulbs use about two-thirds less energy than standard bulbs and can last up to 10 times longer.

Not all compact fluorescents will fit in all fixtures. The bulbs distributed this month can be used in enclosed fixtures but cannot be used on a dimmer switch.

Customers with questions about the bulbs should contact Jim White, PUD senior energy services engineer, at the address listed below. Thank you for helping save energy!

How to reach us

Energy Efficiency

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To have a question answered in the newsletter:

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Mail can be addressed to any of these individuals at P.O. Box 1231, Wenatchee, WA 98807

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Old runner may be back from retirement

The old turbine runner from the Stehekin powerhouse may be put back to work temporarily to reduce use of diesel generators.

Canyon Turbine Industries of Deming, Wash., is designing and building a replacement runner for the hydro plant. At the same time, the company will run tests to determine the extent of cracking in the old runner, which had been repaired several times before it was removed this spring. If it's deemed repairable, the runner will be "normalized," said John Sagerser, hydro engineering manager for the PUD. The process involves placing the runner in a 1,500-degree oven for an extended period, re-crystallizing the metal at a molecular level.

"The main purpose (of repair) is to run safely from September to March and forego having to burn diesel during that time," he said.

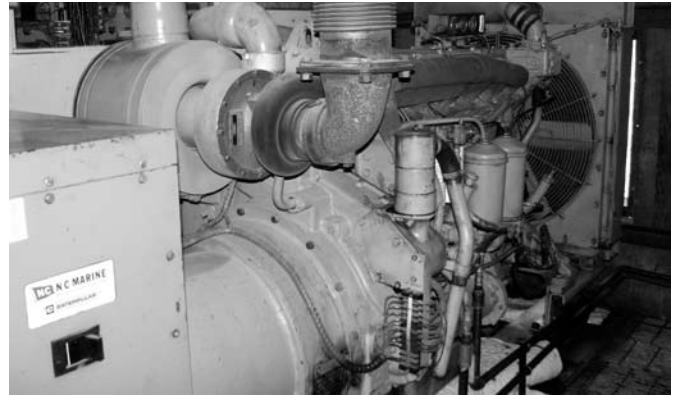
If repairs are feasible, the old turbine

could be back in place within four to eight weeks. It would be checked once a week for signs of cracking.

The new turbine won't be ready for at least six months.

Repairing the old runner could add up to \$70,000 to the \$300,000 project. But it will be worth it, Sagerser said, if it cuts down on run time of the diesel generators. Diesel fuel is costing the PUD up to \$1,000 a day. The PUD is using a biodiesel mix of 20 percent soybean oil, which costs the same as the ultra-low-sulfur diesel normally used in trucks and equipment.

The diesel generators were never meant to be run full bore. They're



The PUD has purchased a used unit to replace this diesel generator, which is more than 40 years old.

normally used as backups when demand exceeds the hydro plant's capacity. As a precaution, the PUD has purchased a used, 250-kilowatt generator from a Denver hospital to replace the oldest of three generators at the powerhouse. The unit cost \$24,000 – about one-third of the cost of a new generator – and has only 1,000 hours of use. It is expected to be more efficient and more reliable than the 40-year-old generator it's replacing. The old generator will be kept as a backup.