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## Solar Sticker Shock Hits Washington County

Written by H. Sterling Burnett

Kittitas County, Washington is experiencing sticker shock as the true cost of solar power is coming in at more than three times the promised price.

In less than one month's time, the cost estimate for a proposed 75 megawatt solar power plant has soared by more than 200 percent.

### **Estimates Rising Rapidly**

On July 9, Howard Trott, managing director of Teanaway Solar Reserve, the company proposing the plant, estimated it would cost approximately \$100 million to build what would be the largest solar power plant in the world.

By mid-August, Teanaway revised its estimate to more than \$300 million, and other analysts fear the final cost may be much higher still.

Based on calculations by the Northwest Power and Conservation Council, the price tag of the Teanaway solar power plant would be a minimum of \$525 million and could rise as high as \$750 million. The council was established by Congress in 1980 to develop a regionwide electric power plan to guarantee adequate, reliable energy at the

lowest economic cost while protecting environmental resources.

### **Expensive Alternative**

Solar power currently costs three-and-a-half to four times the price of conventional power purchased on the spot market. When stripped of subsidies and preferential tax treatment, moreover, solar power is between 570 percent and 887 percent more expensive to produce than coal power, according to a recent study by Tufts University economics professor Gilbert Metcalf.

Adding to the costs of solar power is the fact that solar panels deliver direct current, while the Northwest power grid uses alternating current. Converting from direct to alternating current boosts costs, and power is lost in the process.

Trott estimates the loss would be about 2 percent but could be higher. In addition, power from solar plants fluctuates with the intensity and amount of sunlight and passing clouds, so the Northwest power grid will have to be upgraded to adjust for such fluctuations.

## Clear-Cut Forests

In addition to rising cost estimates, the projected land requirements for the plant have more than doubled. Teanaway had planned to lease a 400-acre site of previously clear-cut forestland, but it now estimates the site will require 900 acres.

Todd Myers, director of the Center for the Environment at the Washington Policy Center, says it's hypocritical of environmentalists to support a solar power project on the site of clear-cut forestland.

"The irony is that while environmentalists have opposed timber harvests in the area of the proposed solar farm, this project will be on the site of some of those harvests. They oppose harvests which are temporary and grow back, but support projects that preclude the return of the forest," Myers said.

## Insignificant Power Generation

The Teanaway Solar Reserve plant would be the largest in the world, with its 75 megawatt capacity providing intermittent power to approximately 45,000 homes when operating at peak capacity.

Compared with coal, natural gas, nuclear, or hydropower plants, however, Teanaway will provide a relatively small amount of power. The Bonneville Dam, which spans the Columbia River 40 miles east of Portland, Oregon, produces 1,050 megawatts, and the Columbia Generating Station nuclear reactor 12 miles east of Richland, Washington provides 1,150 megawatts on a nearly constant basis.

"Renewable energy, like solar, must be backed up by consistent energy sources, which in Washington state is likely to be hydro power," Myers said. "In low water years, ... intermittent renewables are backed up by water-dependent hydro which must, in turn, be backed up by something else. Rules requiring that water be used to protect salmon rather than used for energy make it even more difficult to build a system that is dependent on intermittent, renewable energy."

Local climate conditions indicate solar power production will be far from reliable. The Kittitas site receives an average of 145 inches of snow a year, making the plant barely operational in the winter. Also, Kittitas County has an average of 164 cloudy days per year, diminishing its daytime production capacity to one-half to two-thirds of each year.

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