

Solar power may provide for the future

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On first glance, solar power appears to be an expensive alternative to conventional grid supplied electricity. But with an eye to the future, peeling back the onion skin reveals that solar isn't a bad deal after all. In some instances, it is the only cost effective alternative.

For remote locations, away from the grid, the cost of bringing electrical grid power tends to be prohibitively expensive. As such, solar is often the only viable and cost effective option. A few years ago, no grid access would have accounted for almost all solar systems. That's

not the case today. Since 2002, about 60 percent of all new solar systems are connected to the grid in a net metering application. The approximate breakout by use of solar systems is 60 percent residential and grid-tied, 23 percent residential off-grid and commercial on and off-grid (e.g., communication towers) account for the remaining 17 percent. How does the price of electricity you produce compare at home with the price that the power company provides?

Rocky Mountain Power currently charges between \$0.075 and \$0.10 per Kilowatt depending on how much power is used and the time of year.

• See SOLAR on page 6

SOLAR

• Continued from page 5

This is inexpensive power, especially when compared to our neighbors. For example the average rate in California is almost \$0.22 per kW, with price rising as high as \$0.36 based on usage.

Looking solely at the price of electricity, it makes economic sense in California to add a solar system. Add to that the great government incentive package, and it's no wonder California leads the nation in grid-tied systems. In California, the system can easily pay for itself in just a few years.

Your home based net metering system produces electricity for about 30 cents per kW. And while higher than the power company, it is significantly cheaper than it was a few years ago. In the early

1980's, solar modules averaged almost \$30 per watt. Today, the price has dropped to about \$5 per watt. Adding the balance of system components brings to price to about \$9 per watt.

Now, if you just compared the current prices, the answer is that grid power is in fact cheaper. But, that would be an unfair place to stop the comparison. Another important consideration is that your solar system solar system will probably out live you, unless you are awfully young, and there will never be an increase in the price of the electricity it produces.

Compare that with Rocky Mountain Power who has increased their rates twice since December 2006. Add to this customer charges, taxes and tariffs and the price of solar power starts to look even bet-

ter. Solar power is a wonderful hedge against future rate hikes. Washington City has just announced a 29 percent price hike for February 2008. Don't think they are the only ones. With contracts coming up in almost every community we all will see the same price hikes. It would be wise to negotiate a contract today. The more months or years go by the higher the hike will be.

Federal lawmakers are seriously considering a tax on carbon emissions. And since coal accounts for 36 percent of carbon emissions and since burning coal accounts for about 92 percent of Utah's electrical production, we could see dramatic increases in the cost of our electricity. According to the group Carbon Tax Center, "electric generators will pay the mandated carbon tax to their coal suppliers ... the generators will pass along the tax to the retail electric utility which in turn will charge it to customers" to the tune of about \$720 per family a year. And that's only the initial rate; it could go up significantly from there.

Clearly, the concern for controlling global warming and reducing greenhouse gas emissions will cause the price of energy to increase. A recent NPR segment noted that the Congressional Budget Office released a report stating "that if the government adopts a so called (carbon) cap and trade program to reduce emissions of green house gases... consumers will bear the cost of this kind of program. They would face higher prices for electricity, gasoline and other products." Just this past May, President Bush called for a reduction in greenhouse gases by 2009.

While noble and important, these efforts and programs will have to be paid for by someone and as usual, it will be the consumer. Solar generated electricity may be higher in price right now, but there is a good chance in just a few years, it will become the power source of choice. Solar makes environmental sense right now and it is becoming apparent that solar will make even better economic sense in the near future.

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