Charting a New Path for Idaho's Electricity Generation and Use

Idaho's energy future is at a crossroads

One path leads to increased dependency on fossil fuels—threatening our economy and fueling global warming. The other leads to a new, smarter energy future for Idaho. Investing in clean energy alternatives—like solar and wind power—can create and protect jobs in Idaho, save families and businesses money, and make America more energy independent. Clean energy is also the most effective solution to the threat of global warming. We can start making progress right away using proven technology, and then draw on American innovation to take us the rest of the way with new technologies.

How does Idaho generate electricity today?

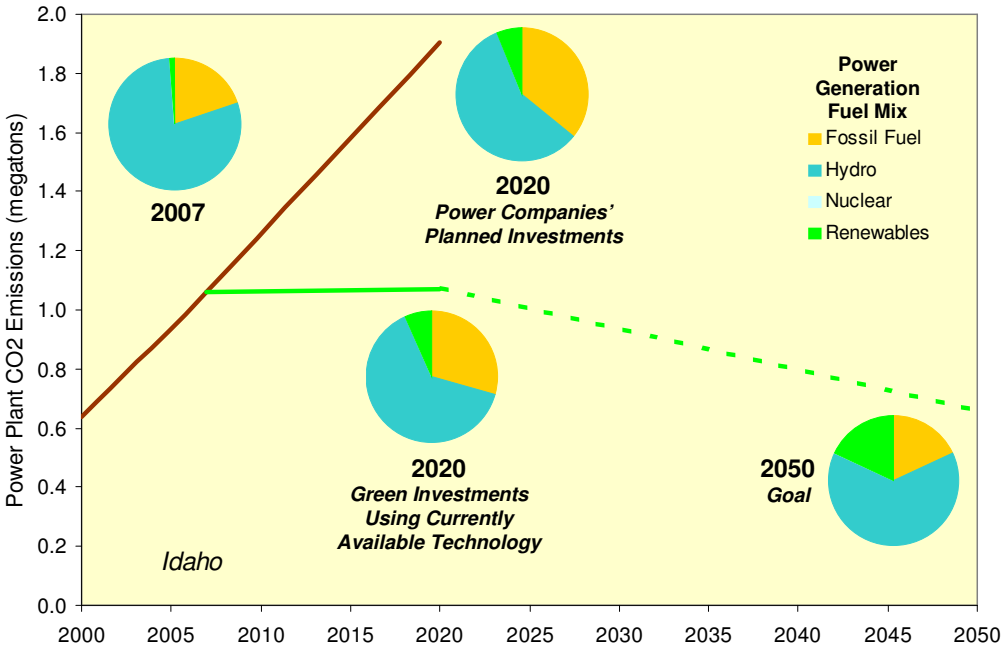
In 2007, electric power generated in Idaho primarily came from gas (9.8 percent), and hydro (78.7 percent). Most utilities intend to continue relying heavily on fossil fuels in the coming decade. Idaho power companies plan to increase the energy generation from gas by 28.1 percent. Only about 1.2 percent of electricity generated in Idaho is expected to come from renewable sources like wind, solar, geothermal, and biomass under current plans.

Idaho has a choice to invest in a cleaner energy future

Idaho can achieve a new energy future by making better investments as utilities replace increasingly aged infrastructure and expand capacity. An important first step is for Idaho to generate at least 20 percent of electricity from renewable sources by 2020, a goal readily achievable with today's technology. Continuing to convert 15 percent of the state's energy portfolio to renewable energy sources each decade could yield an energy profile of at least 65 percent renewables by 2050.

Idaho can also benefit from improved energy efficiency. Technologies are available that could reduce demand nationally by 20 to 30 percent over the next decade. Innovations in energy efficiency should allow us to keep demand constant after 2020, even as the population grows.

Today, Idaho is ranked 18th in the nation for energy efficiency, largely because the state's utilities are already spending $7 million annually to improve energy efficiency.



About the chart: 2000, 2007 and 2020 Power Companies' Planned Investments from CARMA 1.0 (www.CARMA.org). The 2020 Green Investments projection assumes that, using currently available technology, Idaho makes (1) improvements in efficiency to reduce overall demand by 25 percent and (2) shifts away from fossil fuels so that 20 percent of power generation is from renewable energy sources. The 2050 Goal assumes (1) hydro and nuclear are unchanged, (2) continued efficiency improvements keep total demand flat, and (3) renewable energy replaces at least 65 percent of power generation formerly done through fossil fuel burning. Note that the projection of future CO_2 emissions from fossil fuels assumes no investment in carbon capture and storage.

Making a Difference in Idaho

In Idaho, small-scale projects make a big difference in the transition to a new energy future. The state's Office of Energy Resources has a instituted a number of programs to help individuals, corporations and communities reduce their energy use and the Rebuild Idaho program provides information and consultation on how improve efficiency in old buildings at low cost. The program demonstrates how simple changes can have a large impact. For example, they convinced one school district to shut down its unused buildings during winter break, saving the school system $20,000 in just one week.

Idaho also offers residents a $5,000 tax deduction for four years to install new small-scale solar, wind, biomass, or geothermal energy systems. Utility and power companies also offer rebates and incentives for improving efficiency.

Sources:
http://energy.idaho.gov/community/Rebuild_Idaho.htm

Making a dent in global warming pollution

Simply by shifting to renewable energy sources and improving energy efficiency over the next decade or so, Idaho can reduce its future carbon dioxide (CO_2) emissions from electricity generation by 44 percent compared to the business-as-usual path that utilities are following now.

Given that 4 percent of Idaho's CO_2 emissions come from electricity generation, diversifying and updating our power sources is critical for cutting the state's total global warming pollution.

Increasing Idaho's energy and economic security

Investing in renewable energy sources will reduce Idaho's dependence on fossil fuels and at the same time create new green collar jobs. A new energy future in Idaho could include:

Expanded solar power. Idaho has enough solar resources to produce 4,000 to 5,500 Whr per square meter using photovoltaic systems and 3,500 to 5,500 Whr per square meter using concentrating solar power systems. This means that devoting just 1 square mile in Idaho to solar power can provide enough electricity for about 1,300 households each year.

Expanded wind power. Idaho is currently ranked 21st for wind power, with 75 MW of existing electricity generation capacity and 71 MW under construction. The American Wind Energy Association ranks Idaho 13th in terms of its future wind potential, with 8,290 MW of potential capacity.

Biomass power. Idaho has 7.2 million dry tons of biomass available each year that could be used to generate about 1,400 MW of electricity.

Geothermal power. Idaho has 6 geothermal projects under development, with the potential to produce as much as 326 MW of new power capacity.

How does Idaho use electricity?

Idaho's energy is used to power:

- homes (35 percent),
- businesses (26 percent), and
- industry (39 percent).

Per capita residential electricity use is 5,504 kilowatt hours per year, 22 percent greater than the national average.

References and Additional Reading:

American Council for an Energy-Efficiency Economy, www.aceee.org.
American Wind Energy Association, www.awea.org.
Bioenergy Feedstock Information Network. bioenergy.ornl.gov
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Renewable Energy Policy Project, www.repp.org.

For more information, visit www.nwf.org/globalwarming.