



NATURAL RESOURCES: LIGHTING OUR FUTURE

Utah's near-term energy future depends on natural resources, fossil fuels in particular, to power Utah homes and businesses.

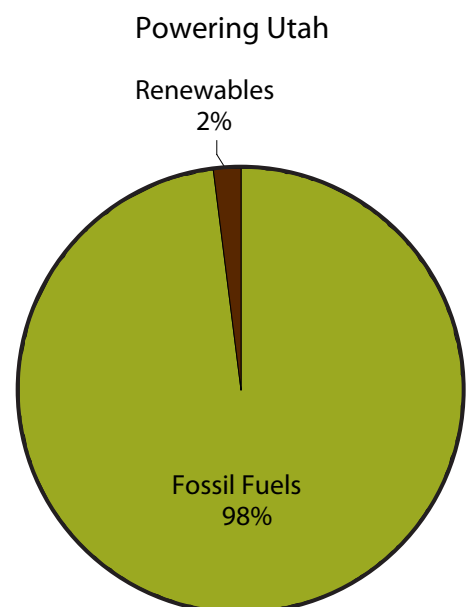
FACT: ABOUT 98 PERCENT OF THE ELECTRICITY THAT POWERS UTAH HOMES AND BUSINESSES CURRENTLY COMES FROM FOSSIL FUELS

Fossil fuels, such as coal, natural gas, and petroleum, are currently the most reliable source of affordable electricity in Utah. Historically, these three sources have produced almost 95 percent of Utah's electricity.¹ More recently, that figure has risen to over 98 percent.² Utah's reliance on fossil fuels as a source of consistent, affordable power has not been misplaced. Relative to renewable energy, fossil fuels are unmatched sources of abundant, reliable power.

Several renewable power sources exist that could possibly provide electricity to Utah's homes and businesses: solar, wind, hydroelectric, biomass, and geothermal. Solar and wind energy, however, are unreliable as major sources of electricity. Solar energy provides useful power when the sun is out, but if heavily relied upon in Utah would leave families freezing in the dark on overcast winter days. Similarly, wind energy provides power only when the wind blows, and it is unlikely that wind energy could meet Utah's growing electrical demands.

A telling estimate is that, even using generous figures, Utah's total wind-power potential could meet only 35 percent of Utah's present electricity needs.³ This percentage will only shrink as Utah's population grows.

Other renewable power sources have different drawbacks that make them incompatible with Utah's near-future electricity needs. Hydroelectric energy (i.e. damming rivers) has little room for expansion in Utah, as most good sources have been tapped. Biomass



energy, if relied upon heavily, would require large tracts of land and is likely to raise already rising food prices for Utah families.⁴ Geothermal energy is, by and large, an unknown quantity. However, in the short-term, geothermal would require significant tax increases to support research and development, which will damage Utah's economy, in order to make it viable on a large scale.⁵

The message of these facts is clear: renewable energy can at best supplement, but not replace, fossil fuels as Utah's major source of affordable electricity in the foreseeable future. Is there value in diversifying and supplementing Utah's energy portfolio with alternative sources of energy? Of course. But in order to make wise policy decisions concerning Utah's near-future power needs, we must recognize the fact that fossil fuels are one of the only viable sources for the abundant, affordable power that is required for Utah families and businesses to live and prosper.

ENDNOTES

1. The average proportion of electricity generated in Utah from coal, natural gas, and petroleum for the last thirty years (1976-2006) is 94.3 percent. Utah Geological Survey. 2008. "Net Generation of Electricity in Utah

by Energy Source, 1960-2006." Utah Energy and Mineral Statistics. At <http://geology.utah.gov/sep/energydata/statistics/overview1.0/pdf/T1.10%20&%20F1.5.pdf>.

2. Governor's Council of Economic Advisors. 2008. *2008 Economic Report to the Governor*. Governor's Office of Planning and Budget: Salt Lake City, UT.
3. This figure was calculated using the American Wind Energy Association's (AWEA) estimate of the potential electrical capacity from wind energy in Utah (2.77 GW= 24,265.2 potential GWh/year), the highest AWEA capacity factor of 40%, and Utah's 2007 electrical consumption of 27,746 GWh from the 2008 *Economic Report to the Governor*.
4. Innis, Roy. 2008. *Energy Keepers, Energy Killers – The New Civil Rights Battle*. Merril Press: Bellevue, WA.
5. Blakett, Robert E., Glade M. Sowards, and Edie Trimmer. 2004. *Utah's High Temperature Geothermal Resource Potential – Analysis of Selected Sites*. Utah Geological Survey (July). Also Idaho National Laboratory. 2006. *The Future of Geothermal Energy – Impact of Enhanced Geothermal Systems (EGS) on the United States in the 21st Century*. U.S. Department of Energy: Washington, D.C.