

PRIORITY ISSUE #3: ENERGY ISSUES

Each gubernatorial election year since 2004, Utah Foundation organizes the Utah Priorities Project in partnership with the Hinckley Institute of Politics. The project is designed to engage the public and political candidates in serious dialogue on the most important issues facing our state. It begins with survey work that establishes what voters view as the top ten issues for the election year. This month, Utah Foundation releases a series of policy briefs of each of the top ten issues. In 2012, voters listed energy issues as the 3rd most important priority in the election year.

In the 2012 Utah Priorities Survey, 70% of respondents indicated that they were concerned or very concerned with energy issues. This concern was mainly due to gasoline costs, based upon the follow-up question in which 80% of respondents indicated they were concerned or very concerned with the price of gasoline.¹ These response rates are likely due to the fact that gasoline prices have been rising sharply over the past ten years, although Utah's other energy prices are quite competitive. In 2009, the state had the seventh lowest energy prices in the United States (about 87% of the national average) and the lowest residential energy prices (about 62% of the national average).²

Electricity

Commercial electricity consumption accounts for 36.5% of the total electricity consumed in Utah, followed by industrial (32.3%), residential (31.0%), and transportation (<0.1%), according to the Utah Geological Survey (UGS).³ The average electric bill for a residential customer regulated by the Utah Public Service Commission (UPSC) increased by 42% from 1992 to 2012, which is actually a decrease of 14% when adjusted for inflation; the average Utah home saw its annual bill increase from \$586 to \$831 over that period.⁴

Utah's electricity generation is largely derived from coal-fired power plants (81.6%), followed by natural gas (13.1%), hydroelectric (2.4%), wind (1.4%), and geothermal (0.7%). Utah's access to coal contributes to making the state an electricity exporter (a majority of the state's energy exports are from the coal-fired Intermountain Power Project plant in Millard County). Despite this reliance on Utah's coal reserves, which the UGS estimates should last for as many as 50 more years, most of Utah's increase in electricity generation in the past 20 years has been from natural gas.

In terms of renewable energy, Utah's Flaming Gorge dam produces over half of the state's hydroelectric power; the Milford Wind Corridor Project produces about 75% of the state's wind power; and small to medium sized geothermal, biomass and solar projects are being continually added to Utah's infrastructure.⁵ Governor Herbert's 10-year energy plan, introduced in 2011, intends to meet Utah's future energy demand by utilizing "existing fossil fuel resources while augmenting them with new, cost-effective energy efficiency measures and alternative and renewable energy resources as they become more economically feasible."⁶ Utah Foundation recently evaluated the economic feasibility of alternative and renewable resources. This research found that renewable energy production can be economically feasible, and that the future of electricity generation "is likely to be more diverse and varied" than it is currently.⁷

Utah has no nuclear power plants, though a group of investors has proposed building a nuclear power plant near Green River, Utah. It is difficult to compare the costs of nuclear power with coal and natural gas-fired plants because of the variability in nuclear construction costs and natural gas prices, and the possible imposition of additional regulation on coal and natural gas plants.⁸ One of nuclear power's advantages is that it does not create the greenhouse gas emissions of coal and natural gas power generation, but it does come with other challenge such as nuclear waste disposal and water use.

Oil and Gas

Over 80% of Utah households use natural gas for home heating.⁹ The average natural gas bill for a residential customer regulated by the UPSC increased from \$581 to \$916 from 1992 to 2012. However, when adjusting for inflation, this represents a decrease of 4%¹⁰

From 1989 to 2011, the number of gas wells in Utah increased from 834 to 6,267. This contributed to an increase in natural gas production by 66.1%, the ninth fastest growth rate in the nation. UGS estimates that Utah's natural gas reserves are about 2.6% of the country's total.

The United States produces the third most crude oil of any country but is the top consumer.¹¹ In 2011, 55% of the oil used in the U.S. was produced domestically. This percentage has been on an upward trend since 2005 (due primarily to increases in domestic production), but is still lower than the early- to mid-1990's, and far below the peak reached in 1985.¹² UGS estimates that the state's crude oil reserves are about 2.2% of the country's total.

There are several issues facing Utah's oil and gas exploration industry. First, elected officials have expressed interest in the state taking ownership of most of its federal lands, except for national parks, monuments, historic sites, and wilderness areas, in order to manage and self-regulate Utah's natural resources.¹³ Another issue has to do with the greater sage-grouse. The U.S. Fish & Wildlife Service is currently monitoring the bird population, which has been decreasing mainly due to habitat disturbance.¹⁴ The state is circulating a plan to keep the grouse off of the List of Endangered and Threatened Wildlife, which listing could seriously hamper oil and gas extraction in the Uinta Basin, which according to UGS produces 80% of the state's natural gas and 72% of its oil.¹⁵

Gasoline

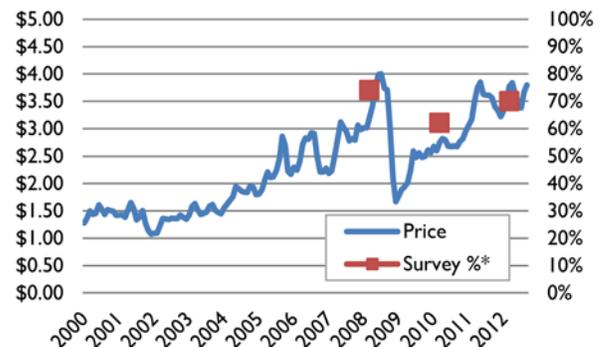
When adjusting for inflation, the costs for electricity and natural gas have declined in Utah over the past 20 years, but motor vehicle fuel costs have been climbing. The 2008, 2010, and 2012 Utah Priorities surveys showed that voters' concerns about energy fluctuate somewhat with gasoline costs. During a sharp increase just before gasoline hit its historical peak in 2008, survey respondents were particularly concerned about energy issues, pinning it to the top of the Utah Priorities list. Two years later, when prices were about two-thirds of the peak, energy concern had dropped to seventh on the list. In 2012, after some fluctuation, but with prices again nearing the historical peak, energy issues climbed back up to third on the list.

One alternative to high gasoline prices is conversion of vehicles to compressed natural gas (CNG). Utah's growth in the adoption of CNG vehicles is driven by lower price, which in the state is less than half the price of gasoline. According to the Utah Clean Cities Coalition, Utah has among the lowest natural gas prices in the nation (in part due to Utah's regulation of natural gas fuel) as well as the most CNG refueling stations per capita.

While it is clear that the high price of gasoline is a major concern for Utah voters, there is little the state can do, as gasoline prices are mainly determined by crude oil prices (68%), and to a lesser extent refining costs (11%), federal and state taxes (11%), and distribution/marketing costs (9%).¹⁶ As Utah will need to look toward revenue generation for roads and transit in the near future, many are considering increasing existing excise taxes per gallon and/or implementing a sales tax on gasoline. This is a difficult policy choice for elected officials faced with a need for continued infrastructure development while voters already rank the high price of gasoline among their top concerns.

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U.S. Gasoline Prices and Utah Priorities Survey Respondents' Energy Concern



* Respondents who are "concerned" or "very concerned" about energy issues (only asked in the 2008-2012 surveys).
Source: U.S. Energy Information Admin., regular retail prices.

¹ Utah Foundation, "The 2012 Utah Priorities Survey: The Top Issues and Concerns of Voter for the 2012 Election," March 2012.

² Energy Information Administration, State Data for Prices. <http://www.eia.gov/state/state-energy-profiles-more-prices.cfm>

³ Michael Vanden Berg, Utah Geological Survey, Energy and Mineral Statistics. <http://geology.utah.gov/emp/energydata/index.htm>

⁴ Utah Public Service Commission "Utah Power/Rocky Mountain Power Rate Changes 1992-2012" June 1st, 2012.

⁵ Utah Office of Energy Development, Renewable Energy Development in Utah. http://www.energy.utah.gov/renewable_energy/docs/2012/Mar/2REonePager_20110920_1_MVB%20edits_2.PDF

⁶ Utah Governor's 10-Year Strategic Energy Plan, March 2, 2011; <http://www.utah.gov/governor/docs/10year-strategic-energy.pdf>

⁷ Utah Foundation, "Is the Price Finally Right? The Economics of Renewable Energy," March 2012. <http://www.utahfoundation.org/img/pdfs/rr705.pdf>

⁸ Bureau of Economic and Business Research, A Review of the Costs of Nuclear Power Generation, 2012. <http://bebr.utah.edu/Documents/uebr/UEBR2012/UEBR2012no1.pdf>

⁹ Utah Oil and Gas, Utah Department of Natural Resources. <http://oilgas.ogm.utah.gov/Facts/Facts.htm>

¹⁰ Utah Public Service Commission "Questar Gas Rate Changes 1992-2011" May 1st, 2012.

¹¹ Utah Oil and Gas, Utah Department of Natural Resources. <http://oilgas.ogm.utah.gov/Facts/Facts.htm>

¹² Energy Information Administration Energy, Monthly Energy Review, September 2012, Topic 3.3a. <http://www.eia.gov/totalenergy/data/monthly/#petroleum>

¹³ Utah House Bill 148, 2012 General Session. <http://le.utah.gov/~2012/bills/hbillenr/hb0148.pdf>

¹⁴ U.S. Fish and Wildlife. <http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B06W>

¹⁵ Utah Greater Sage-grouse Management Plan 2009. http://wildlife.utah.gov/uplandgame/sage-grouse/pdf/management_plan_2009.pdf

¹⁶ Energy Information Administration, factors affecting gasoline prices. http://www.eia.gov/energyexplained/index.cfm?page=gasoline_factors_affecting_prices

The mission of Utah Foundation is to promote a thriving economy, a well-prepared workforce, and a high quality of life for Utahns by performing thorough, well-supported research that helps policymakers, business and community leaders, and citizens better understand complex issues and providing practical, well-reasoned recommendations for policy change.