



Rural Vistas

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Special Report: The Future of Utah's Coal Industry

What does the future hold for Utah's coal industry?

This is the question explored in a recent study by the Rural Planning Group* in partnership with Southern Utah University's Utah Center for Rural Life. Examination of this question is critical, especially when considered within the context of the dramatic changes affecting the industry in other parts of the country.

Over 10,000 coal mining jobs have been lost in eastern Kentucky since 2009, devastating the economies in that region.

Shifts in the coal industry could have

similarly dramatic impact on communities in Utah that are heavily dependent upon coal mining and its related support industries. This study was undertaken to provide these communities with data to help them assess future economic likelihoods, and to help them develop strategic responses to a changing economic future.

Coal mining and electric power generation from coal directly impact six of Utah's counties – Carbon, Emery, Kane, Millard, Sanpete, and Sevier Counties. Over 20 percent of the jobs in Carbon and Emery Counties are tied to coal mining and associated support industry jobs.



Huntington Canyon Power Plant, Emery County, Utah

Key Factors Affecting Utah's Coal Future

- ◆ IPP's primary customer — Los Angeles Division of Power and Water (LADWP) — will not be renewing its power purchase agreement, set to expire in 2027. LADWP's goal is to eliminate all coal-fired power from its portfolio.
- ◆ IPP/LADWP intend to build a new natural gas plant adjacent to IPP's existing facilities by 2025.
- ◆ The Carbon Plant, near Helper, Utah, is set to close its doors in 2015 due to the prohibitive costs of operating under existing federal regulations.
- ◆ The Bonanza Plant, near Vernal, faces uncertainty due to an increasingly stringent regulatory environment.
- ◆ Rocky Mountain Power intends to reduce its reliance on coal by 15 percent in the next 10 years.
- ◆ Natural gas production in Utah exceeded coal production for the first time in 2010.
- ◆ The Ute Indian Tribe recently announced it is exploring plans for a 1,000-megawatt natural gas power plant.
- ◆ Since 2010, over 150 of the nation's power plants have closed or have been scheduled for retirement — mostly due to the prohibitive costs of newly imposed federal regulations.
- ◆ The U.S. is experiencing a shift away from coal. For example, Nevada has reduced its coal-generated power production from 70 percent of its total power generation in 1992 to 12 percent in 2012.
- ◆ Currently, there are only 11 planned coal-fired generating unit additions in the U.S. compared with 281 natural gas generating unit additions.
- ◆ The EPA estimates that 50 gigawatts of coal-fired generating capacity — over four times PacifiCorp's total generating portfolio — will go offline as a result of proposed CO2 regulation.
- ◆ The world produced an oversupply of coal amounting to 840 million short tons between 2008 and 2012.

Coal in Decline

Declines in coal mining jobs and output are already taking place in Utah. Utah's coal production has fallen from a high of 27 million tons in 1996, to 17 million tons in 2013. Coal mining employment has dropped from a peak of 4,296 in 1982 to 1,445 in 2013 — the lowest figure since 1971. PacifiCorp recently announced it will close its Deer Creek mine in 2015, eliminating another 180 mining jobs in Emery County.

As the study points out, the United States is experiencing a substantial shift away from coal-fired power. The state of Nevada, for instance, reduced its coal-fired power production from 70 percent of its total power generation in 1992, to 12 percent in 2012. Much of this is due to negative public perceptions toward coal, and even more so, to increasing federal environmental regulations.

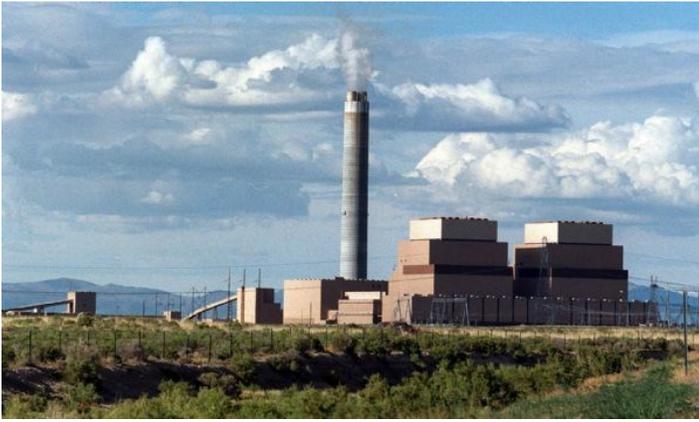
Since 2010, over 150 of the nation's coal-fired power plants have closed or are scheduled for retirement — mostly due to the prohibitive costs of operating under existing federal regulations. Among these is Rocky Mountain Power's Carbon

Plant, near Helper, Utah, which is set to close its doors in 2015.

The Environmental Protection Agency (EPA) estimates that 46 to 50 gigawatts of coal-fired generating capacity — over four times PacifiCorp's total generating portfolio — will go offline as a result of its proposed CO2 regulation.

The Utah coal mining industry is fortunate, in that most of the coal mined in Utah is burned in Utah power plants which sell most of their electricity within the state. This in-state market helps insulate Utah coal from some of the volatility experienced in national markets, and gives Utah some of the lowest electricity rates in the country.

This, however, is not the case for Utah's largest power plant — the Intermountain Power Project (IPP) in Millard County. IPP sells over 90% of its electricity to California. The Los Angeles Division of Water and Power (LADWP) — the primary customer of IPP — is moving away from coal and will not be renewing its purchase contracts with IPP, which are set to expire in 2027.



Intermountain Power Project, Millard County

Because of its policy to eliminate coal-generated power from its portfolio, LADWP intends to build a new natural gas plant adjacent to IPP's existing facilities and begin purchasing natural gas-fired electricity from IPP by 2025.

From Coal to Natural Gas

This shift to natural gas poses a significant threat to coal. With renewable energy sources still years away from being able to meet the nation's energy demands, natural gas, which is a cleaner burning fuel than coal, is viewed as the transitional energy source for the coming decades.

Natural gas production in the U.S. has increased dramatically in recent years, mostly due to continued improvements in the fracking process for extracting natural gas. This is also true for Utah, which is witnessing a significant boom in oil and gas production in the Uintah Basin and in Southeastern and Central Utah.

Natural gas production in Utah exceeded coal production for the first time in 2010, with that trend continuing over the past four years.

New natural gas-fired power plants are already operating in Utah, with several more in the planning stages. Because of the trend toward natural gas, Rocky Mountain Power is not planning to build any additional coal-fired generating capacity in Utah. None of this bodes well for the future of coal.

The Future of Utah Coal

So what does the future hold for Utah's coal industry?

As Yogi Berra so eloquently stated, "It's tough to make predictions, especially about the future." This is also true for the future of Utah's coal industry. Even though all current indicators point to a declining future for coal, such may not necessarily be the case. The study concludes that the future of coal in Utah hinges on five key uncertainties – public opinion, governmental regulation, technology, market forces, and catastrophic events – any of which could cause coal production to rise or fall.

A major event or shift in any one of these key areas could substantially alter the future of coal -- even to the point of coal seeing a significant resurgence in the future. For example, the 2011 tsunami in Japan – a catastrophic event – led Germany to a significant return to coal-fired power. German officials decided the risks of nuclear power generation were less attractive than the emissions problems that had compelled Germany to phase out coal. Consequently, coal production in Germany has been increasing since 2011.

In analyzing the future of Utah coal, the study offers four possible future scenarios – ranging from "coal dives" to "coal thrives." Each scenario uses different assumptions relating to the five key uncertainties, and invites the reader to do the same – to look at the future based on a personal supposition of how the five key uncertainties are likely to play out.

Therein lies the ultimate purpose of the study, to help elected officials and business leaders explore their personal appraisals of Utah's coal industry, assess the probability of the alternative futures, and then decide how to act.

Developing a strategic response to each of these scenarios will provide Utah's coal-producing communities the best opportunity for success in the face of any future.

The full report can be found at: <http://ruralplanning.org/coalstudy/>

**The Rural Planning Group, within the Department of Workforce Services, was established by the Permanent Community Impact Board in December 2013, and is under the administrative purview of the PCIB.*



The Utah Center for Rural Life

At Southern Utah University

Advocacy, Research, and Leadership for Rural Utah

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