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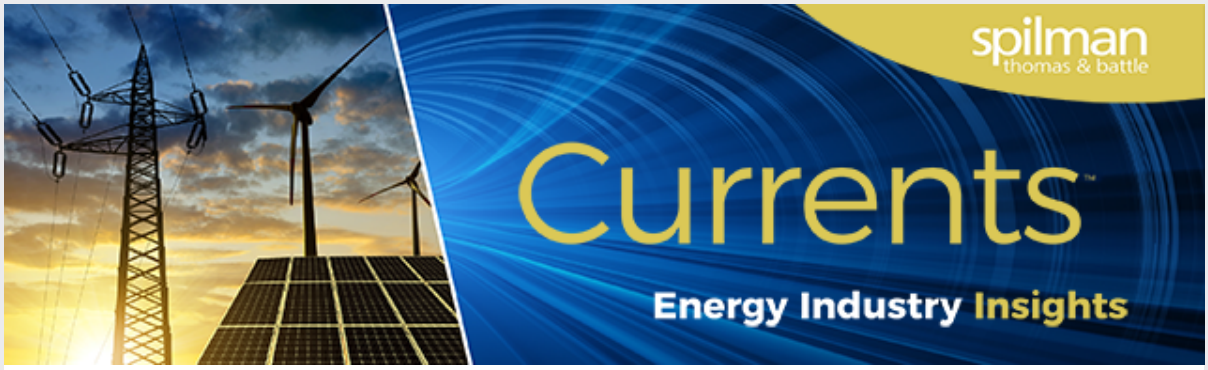

Volume 5, Issue 27

Welcome

Welcome to Volume 5, Issue 27 of *Currents*. In each issue, our authors give their insights on the articles and hot topics that interest them the most. But we'd like to know -- are our interests the same as yours? What energy or environmental topics would you like us to write more about? We appreciate your feedback and your continued readership of *Currents*.

Nicholas S. Preservati
Co-Chair, Spilman's Energy Practice Group

How a Colorado Coal Plant Could Become a Massive Battery for Renewable Energy

"If the idea works, it could be a case study for other communities trying to preserve jobs and property taxes as the world shifts to cleaner electricity."

Why this is important: The one drawback to the use of wind and solar to generate electricity is what to do when winds die down and the sun does not shine. A Colorado town may be one of the first large-scale storage facilities to fill the gaps in renewable power. The Hayden Generating Station in Hayden, Colorado is now set to close in 2028 as its owner Xcel Energy has a goal to decrease greenhouse gas emissions by 85 percent by 2030. The plant has a significant economic impact with jobs starting at $80,000 and the town and labor unions want to keep the jobs. Xcel Energy, subject to Public Service Commission approval, wants to convert the now coal-fired plant to a molten salt facility in which wind and solar power would heat up salt in bins until the salt is molten, and then the stored heat energy can be used to power the steam turbines formerly fired by coal to generate electricity when renewables are

not available. Xcel believes the process would mean the current plant would be able to generate 150 MW of power for 10 hours and then repeat the process. Molten salt is believed to provide more long-term power as a bridge for renewables than batteries that discharge quickly. --- Mark E. Heath

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Climate Benefits vs. Burdens: Which Products are Best Suited for Emerging Carbon Capture Technologies?

"Pulling heat-trapping carbon dioxide out of the air and turning it into useful products, a concept called carbon capture and utilization, has the potential to offer both environmental and economic benefits."

Why this is important: Carbon capture and utilization ("CCU") is the process using captured CO2 to make concrete, fuels, plastics, and various chemicals and minerals used in industry, agriculture, medicine and elsewhere. Right now, only four CCU techniques demonstrate significant CO2 reductions. However, with the potential to generate more than $800 billion by 2030, industry is likely to find more products to create using CCU and more efficient ways to employ the technologies. --- Joseph C. Unger

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When There's a Will, There's a Way: Building the Foundation for Municipal EV Infrastructure

"As EV technology surges ahead and the environmental impact of gas-powered cars becomes more apparent, cities across the U.S. are rolling out plans to accommodate this shift."

Why this is important: Everybody and their brother are building electric vehicles. The hard part of wider adoption of EVs is not the car itself, but the ready-availability of charging stations where people live and work. In addition to the additional electricity that must be generated, the charging stations will require large investments in the transmission of significant amounts of electricity to a multitude of places in every city. It's not entirely clear who will be funding this build-out of charging stations. --- David L. Yaussy

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Bituminous Plants Represent Nearly 70 Percent of U.S. Coal-Fired Retirements Since 2011

"Bituminous coal, which dominated the U.S. power generation landscape for decades, is now taking the biggest hit as coal-fired plants are increasingly retired."

Why this is important: Over 68 percent of the coal-fired electrical generation plants retired in the last 10 years have been fueled by bituminous coal mined in the Appalachian and Illinois basins. In 2011, the U.S. had 318 GW of coal-fired generation, but since that time, plants producing 90 GW of that coal-fired power have closed. That lost capacity has been replaced with 94.5 GW of gas-fired generation, fueled by cheap shale-drilled natural gas in many of those same bituminous regions. Gas now produces 38 percent of the U.S. electricity, and coal has declined to 20 percent. The changes have also favored western sub-bituminous coal as it is cheaper to buy over higher-BTU eastern coal. Powder River basin coal, with a lower BTU, now sells for $11.90 a ton, while Appalachian steam coal is $60 and Illinois basin coal is $35 per ton. --- Mark E. Heath

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Pennsylvania's Carbon Plan Clears Last Regulatory Hurdle

"The plan to impose a price on carbon dioxide emissions from fossil fuel-fired power plants in Pennsylvania won a 3-2 party-line vote from the Independent Regulatory Review Commission, a five-member panel of gubernatorial and legislative appointees."

Why this is important: In 2019, Governor Wolf signed an executive order directing the Department of Environmental Protection ("DEP") to issue a rulemaking to establish a program to limit CO2 emissions by entering into the Regional Greenhouse Gas Initiative ("RGGI"). DEP has issued the final regulations and on September 1, 2021, the Independent Regulatory Review Commission ("IRRC") held a meeting to vote on the regulations. Prior to voting, IRRC listened to presentations from DEP, organizations and individuals who expressed their views on the regulations. A majority of the members of IRRC voted to approve the regulations. This approval moves Pennsylvania one step closer to joining RGGI.

The focus will now shift to the Pennsylvania General Assembly. A majority of the House Environmental Resources and Energy Committee voted for a concurrent resolution to disapprove the regulations and the Senate Committee is expected to do the same. The measure will then go before the full House and Senate for consideration. If the resolution passes, it will go before the Governor who is expected to veto the measure. Should that occur, the General Assembly will need sufficient votes to override the veto.

The concurrent resolutions are not the only obstacle with respect to RGGI. Senate Bill 119 and House Bill 637 require legislative approval to join RGGI. Should one of these measures pass, the Governor will need to assess whether or not to veto the bill or engage in negotiations with the General Assembly. Litigation may also be filed, which could delay the process even further. Although IRRC's approval cleared a regulatory hurdle, it will be some time before the matter is concluded, as significant steps remain in the approval process. --- Annmarie Kaiser Robey

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Tesla Plan to Sell Electricity in Texas Would Cut Out the 'Middleman'

"The Public Utility Commission of Texas has until November 15 to decide on Tesla's application to sell electricity in the state's deregulated market."

Why this is important: After the energy crisis that struck Texas this winter, 13 potential electric retailers have submitted applications to enter the market, while five retailers have left. If its application is approved, Tesla's brand recognition could give the company an edge in a hypercompetitive retail energy market. --- Joseph C. Unger

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Top Energy Producing States Gain Even Greater U.S. Market Share, EIA Says

"The states that are home to the most oil, natural gas and coal production have substantially increased their collective share of American energy output in the 21st century, concentrating production in a few key locations."

Why this is important: Six states - TX, PA, WY, OK, WV and ND - are producing more than 55 percent of America's primary energy. That figure was less than 40 percent 20 years ago. Interestingly, the additional power was not just from fossil fuels, but included increased wind power and other renewables. --- David L. Yaussy

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Coking Coal Closing in on Record After China's Ban on Australia Imports

"While the price of iron ore is slumping in Asia, that of coking coal is heading in the opposite direction, driven, ironically, by China's ban on imports from Australia and supply struggles."

Why this is important: World prices for coking coal to make steel continue to climb. China, in part due a dispute with Australia over issues like the origins of the COVID-19 virus, continues to not buy Australian coking coal. That means the U.S., normally second to Australia in world coke markets, now gets a higher price for its coking coal. On September 3, the U.S. export price hit $315.05 a ton (AU), the highest level recorded and above the previous record set in May 2011 of $295.40. In the meantime, China's coke needs, being filled by the U.S. and others, have driven up the price of Australian coking coal exports to the rest of the world to $274 (AU), up a staggering 170 percent since last year and the highest prices seen since November 2006. World coke prices have also increased due to supply issues as storms are preventing the loading and shipping of met coal on ships. These increased prices help offset declines in steam coal consumption in the last few years. --- Mark E. Heath

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Russia's Promise of Building Nuclear Plants in Africa

"But now, with financial support from the European Union, two international organizations have been chosen as modelling partners for the development of the African Continental Power Systems Master Plan (CMP)."

Why this is important: In 2019, the IMF declared Africa the world's second-fastest growing region. At the same time, more than 620 million in Sub-Saharan Africa out of 1.3 billion people do not have electricity. This fast-paced growth, mixed with an energy crisis, makes Africa a prime target for international investment. On the energy side, Russia has made agreements with several African countries to construct power plants worth billions of dollars, while Chinese contractors claim a 40 percent share of the infrastructure construction market in the region. --- Joseph C. Unger

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India is Running Out of Coal

"As the country's population continues to grow and more and more Indians join ranks of the middle class, the country's energy demand is set to far outpace its renewable energy capacity."

Why this is important: India has one-fifth of the world's population and will soon have the world's biggest middle class. These facts mean its energy needs are exploding and renewables cannot meet that need at this time. Seventy percent of its electricity comes from coal-fired generation and while it has the fourth largest coal reserves in the world, India relies heavily on imported coal. India is importing coal primarily from Indonesia, Australia and South Africa. Of its 135 coal-fired electrical generation plants, 50 percent of the plants have less than a one-week supply of coal to burn, 50 plants have three days of coal and six plants have run out of coal to make electricity. These developments mean that, along with trying to increase domestic production, the nation will have to increase coal imports even more. --- Mark E. Heath

EIA Energy Statistics

Here is a round-up of the latest statistics concerning the energy industry.

PETROLEUM
This Week in Petroleum

Weekly Petroleum Status Report

NATURAL GAS

Short-Term Energy Outlook - Natural Gas

Natural Gas Weekly Update

Natural Gas Futures Prices

COAL

Short-Term Energy Outlook - Coal

Coal Markets

Weekly Coal Production

RENEWABLES

Short-Term Energy Outlook

Monthly Biodiesel Production Report

Monthly Densified Biomass Fuel Report

What are your areas of interest? If there are particular industries or issues that you would like to hear about, email us! We have a large number of attorneys willing to weigh in on the issues that impact you and your business.

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If you have any energy questions, please feel free to contact us.