

Volume 5, Issue 21

Welcome



Welcome to Volume 5, Issue 21 of *Currents*. This week, we take a look at hydrogen, nuclear, cyber security, renewable energy storage, and the latest in the coal industry. As always, please <u>contact us</u> if you have topics you would like us to cover or if you would like to add someone to our distribution list.

<u>Nicholas S. Preservati</u> Co-Chair, Energy Practice Group

How An Old Power Plant Is Being Refitted For The <u>Hydrogen Economy</u>

"It will use petroleum coke and biomass to produce hydrogen for power."

Why this is important: Wabash Valley Resources LLC and Honeywell UOP are undertaking a project in West Terre Haute, Indiana, to convert the Wabash River Generating Station, previously a 972.7 MW coal-fired power station, to produce hydrogen for power. It will use petroleum coke and biomass to produce hydrogen, and it also will capture and sequester the resulting CO2. The energy likely will be sold to power generators and chemical makers. The project has received both federal funding and federal tax credits. It is estimated that the "hydrogen economy" will generate hundreds of billions in annual revenues and create significant numbers of jobs during the next 10 years. Critics state there are better uses for development resources and attention needs to be placed on "green hydrogen" made from wind and solar. Supporters of the project state that Indiana does not have a lot of wind and solar and this

project is important to meet the country's CO2 reduction targets. What is definitely clear is that hydrogen energy projects in many forms are not just a future goal, but are happening now. --- <u>Susan J. Riggs</u>

Judge: US can't delay challenge to public land coal sales

"The coal leasing program was temporarily shut down under President Barack Obama because of concerns about climate change, and then revived by the Trump administration."

Why this is important: The Biden administration's attempt to delay a lawsuit to end coal lease sales for mining on federal lands has been rejected by a federal judge. There have been few sales lately as the use of coal plummeted as utilities turn to cleaner-burning fuels. Despite the decline, lease applications are pending for at least 1 billion tons of coal. Approximately 4 billion tons of coal have been mined from federal reserves in the past decade. In 2019, the federal government and state governments made more than \$500 million in royalties and other payments. But amounts are declining. In 2017 and 2018, the federal government sold leases for 134 million tons of coal on public land in six states, but that is less than 7 percent of the 2 billion tons sold in Wyoming alone in 2011 and 2012. Mining extracted almost 250 million tons of coal from federal lands in 2020, down almost 50 percent since 2011. --- Mark E. Heath

Biden administration launches program to cut cost of <u>climate-friendly hydrogen production</u>

"The department will announce the 'Hydrogen Shot' program to breathe life into the DOE's goal, first announced in April, to drive the costs of clean hydrogen down from about \$5 per kilogram today to \$1 per kilogram by 2030."

Why this is important: The Department of Energy has requested about \$400 million in funding to support various projects related to hydrogen and even issued a <u>request for information</u> on viable hydrogen demonstrations. Hydrogen has the potential to play a key role in the Biden administration's plan to decarbonize heavy industrial processes, specifically the transportation sector. However, issues such as a lack of hydrogen storage capacity have prevented large-scale reliance on hydrogen. --- <u>Joseph</u> <u>C. Unger</u>

• <u>Asia coal prices surge, but China-Australia dispute means</u> <u>rally is uneven</u>

"The driver for the price increase has been strong demand from Japan and South Korea, the main buyers of high-grade Australian thermal coal, amid expectations for a warm northern hemisphere summer that will bring surging power demand for air-conditioning."

Why this is important: Steam coal exports to China still are being affected by the Chinese government's decision not to buy Australian coal because of a dispute on the origins of COVID-19. There are now wide price swings on Australian coal. Newcastle Port coal is a higher quality coal selling at \$121.40 (AUD), up from a low of \$46.37 (AUD) in 2020. But this coal is a smaller spot market coal, and the Newcastle coal is headed to South Korea and Japan. Lower quality Australian coal is more than \$50 a ton cheaper at \$70.10 (AUD) and previously went to China. Now, it is primarily going to India as China is buying its steam coal from Indonesia. --- Mark E. Heath

• If Cyber Criminals Attack Energy Assets, The U.S. Will Hit Back Hard

"To this end, President Biden would help fund new energy infrastructure and cybersecurity measures as part of his American Jobs Plan, which would pony up at least \$20 billion to enhance such efforts."

Why this is important: Whether it is the ransomware attack on Colonial Pipeline or a hacker's attempt to poison the water in Oldsmar, Florida, cyber-attacks have brought infrastructure security to the forefront of energy discussion. President Biden has indicated that he will treat cyber-attacks as a national security matter, which will broaden the options of available responses and resources to the issue. What is not clear is whether using cyber-warfare as an offensive tactic—at least publicly—is on the table. ---Joseph C. Unger

• Fate of Illinois nuclear plants in balance after PJM auction fail and stalled subsidy plan

"Exelon, in a filing with the U.S. Securities and Exchange Commission, revealed that its Bryon, Dresden and Quad Cities nuclear plants in Illinois all failed to sell their power at the PJM auction, losing out to other power plants and energy resources."

Why this is important: According to grid operator PJM, commitments for 2022-2023 power secured at its semi-annual auction were at prices 64 percent lower than its last auction three years prior, and three of Exelon's plants failed to clear the auction. Energy experts report nuclear power is being undervalued in wholesale markets due to comparatively larger subsidies for renewable energy sources and "the money nuclear plants are required to spend in order to prevent any sort of contamination, compared to power stations that run on fossil fuels, which face few restrictions on their carbon emissions." Although Illinois Governor Pritzker supports an energy bill that provides as much as \$540 million in subsidies for Exelon's nuclear plants, the bill has stalled in the legislature, leaving Exelon's fate in limbo. Two of its nuclear plants that successfully bid in the auction already are slated for closure in May 2023, but those are now in danger of "premature retirement" should the energy bill fail to be enacted. Nuclear power, which generates carbon-free electricity, is critical for Illinois' energy plans to transition from fossil fuels to cleaner energy. Closure of the Exelon plants undoubtedly will impede Illinois' goal to become carbon-free by 2050 and are a portent of a larger problem nationwide as the country attempts to move away from fossil fuels. --- Dennise R. Smith

<u>'Renewable Energy' Enthusiasts Vastly Underestimate</u> <u>Storage Requirements, according to the Journal of American</u> <u>Physicians and Surgeons</u>

"Prestigious medical publications advocate without reservation for renewable energy, which is 'expected to increasingly supplant the traditional fossil fuel energy industries of coal, oil, and natural gas.""

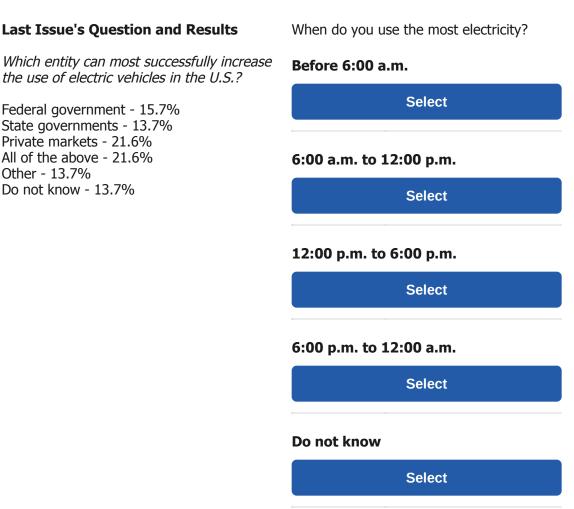
Why this is important: While the possibilities of renewable energy generation are promising, the issue with storing that energy for when it is needed must be overcome before large-scale reliance on renewables becomes a reality. Solar and wind are inherently intermittent, i.e., peak production may not align with peak demand. The U.S. can be covered with solar panels, but it will not do any good if we cannot use the energy when we need it. --- <u>loseph C. Unger</u>



"About 180 workers will be laid off between August and September."

Why this is important: Monongalia County Coal has announced it will close its underground mine and preparation plant by October 2021. The mine employed 300 miners in April 2020 and is now down to 180. The remaining employees will be laid off in August and September 2021. The West Virginia mine, along the state's Pennsylvania border, produces steam coal. As steam coal fired electrical generation plants continue to close, mine closures are increasing. Experts predict the U.S will make only 15 to 16 percent of its electricity from coal by 2026. --- Mark E. Heath

Energy Question of the Week



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, <u>email us</u>! We have a large number of attorneys willing to weigh in on the issues that impact you and your business.

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Responsible Attorney: Michael J. Basile, 800-967-8251