



Issue 36, 2019

● [This Breakthrough Lithium Extraction Technology Could Accelerate the Sustainable Energy Transition](#)

"A breakthrough nanotechnology from cleantech start-up EnergyX promises to revolutionise the speed, cost and sustainability of accessing the world's lithium reserves."

Why this is important: As the author notes, lithium ion batteries are being used to power electric vehicles and battery energy storage in the electric energy sector. The use of lithium ion batteries is expected to grow exponentially over the next 20 years. The current method for extracting lithium reserves is labor intensive and inefficient, with only 30 to 50 percent of available lithium being extracted through current processes. If this technology succeeds, it could simultaneously decrease the time and labor to extract lithium while capturing a higher percentage of lithium in the process. According to the article, not only will this drive the price of batteries to a more affordable level, but it will make more efficient use of a finite resource. --- [Carrie H. Grundmann](#)

● [More States and Groups Voice Opinions about Washington State's Crude-by-Rail Law](#)

"The attorneys general for Arkansas, Indiana, Louisiana, Nebraska, Ohio, South Dakota, Utah and West Virginia signed a letter that they support North Dakota and Montana's argument that federal law preempts Washington state's crude-by-rail law."

Why this is important: The Commerce Clause of the U.S. Constitution generally prohibits one state from favoring its own citizens to the detriment of other states. States with ports to the Atlantic or Pacific can't proscribe shipments from other states simply because they don't like the materials being conveyed. The Pipeline and Hazardous Materials Safety Administration now is considering whether there is a real justification for Washington State's crude-by-rail law, which effectively blocks shipments of North Dakota's Bakken crude oil to Washington's ports. Whatever PHMSA decides, the result likely will set up a potential legal challenge between land-locked states with oil, gas and coal energy resources, and coastal states with political interests that are inimical to fossil fuels. --- [David L. Yaussy](#)

● [Coal's Future is Murky but the Need for Investment in Carbon Capture is Clear](#)

"But that progress is being offset by strong growth in India and Southeast Asia where it is affordable and where economies are in growth mode."

Why this is important: Coal usage in the world's economically advanced countries continues to decline. But, that decline is offset by increased coal consumption in developing economies in India and Southeast Asia. Economically viable carbon capture is the key for continued coal usage. While small

carbon capture projects remain active in the U.S., economically viable large scale projects remain elusive. But, there are some declines in greenhouse gas emissions forecast in China. China, the world's largest consumer of coal, currently produces 59 percent of its electricity from coal. By 2030, that is forecast to decline as China turns to renewables for electric generation. --- [Mark E. Heath](#)

● [No More Status Quo as Pipeline Safety Takes a Big Step Forward](#)

"The new regulations strengthen gas transmission and hazardous liquid pipeline safety by raising the bar on federal pipeline safety standards."

Why this is important: The most significant rule of the three is the Gas Transmission Rule, which requires transmission pipeline operators to determine the material strength of their pipelines built prior to 1970 by reaffirming their Maximum Allowable Operating Pressure. Don Santa, CEO of the Interstate Natural Gas Association of America, acknowledged the importance of this rule because it "embraces new pipeline safety technologies and engineering practices and constitutes the most significant enhancement to PHMSA natural gas transmission pipeline safety regulations since the federal code was created in 1970." --- [Nicholas S. Preservati](#)

● [The U.S. Department Of Energy Says More Oil, More Natural Gas](#)

"Any slowdown in new consumption for these two comes from a lack of economic growth (e.g., 2008 Economic Recession) and shouldn't be taken as some sort of structural change."

Why this is important: The U.S. Department of Energy foresees no slowdown in the use of oil and gas in the coming decades, in America or the rest of the world. Renewables will continue to grow, but from their present small share, they will remain dwarfed by fossil fuels for years to come. This accords with the recent outlook of the International Energy Agency, which sees continued heavy reliance on fossil fuels in the world's future. --- [David L. Yaussy](#)

● [China Struggling to Kick Its Coal Habit Despite Beijing's Big Climate Pledges](#)

"But even as China reiterated its commitment to reducing emissions, earlier this month at least three large, new coal-fired power stations appeared to be either operating or under construction in Inner Mongolia in northern China -- including Mengneng Xilin."

Why this is important: In the past few years, China has pledged to reduce its greenhouse gas emissions and increase renewables by 20 percent. With a slowing economy and trade issues, China appears to resist reductions in coal usage as it continues to build large coal-fired generation plants in provinces like Mongolia, in the 700 to 1,300 megawatt range. Also, its coal usage in 2018 rose by 2.8 percent. Many question how China can continue to reduce coal usage with these large new coal-fired plants coming online. --- [Mark E. Heath](#)

● [Too Late for Gas to Save a Looming Power Deficit?](#)

"It is already too late to hope that the introduction of gas generation in the new energy mix would contribute to avoiding the projected power deficit from about 2023, according to panelists at a recent gas forum."

Why this is important: As the world intensifies its focus on cutting global warming emissions and replacing coal-fired power plants, developing new gas infrastructure and gas-to-power plants will be critical to bridge the transition from fossil fuel based energy to viable renewable energy sources. The U.S. Energy Information Administration projects world energy consumption to grow by nearly 50 percent between 2018 and 2050. Also per the EIA, worldwide renewable energy consumption will increase by 3.1 percent per year between 2018 and 2050, so electricity storage systems and other renewable technologies eventually will meet a large portion of the world's energy consumption. However, as shown by the lack of a viable gas sector in South Africa despite at least 10 years of planning, many (most?) countries will not be prepared to meet their projected energy demands during the next 30+/- years of decarbonisation. --- [Travis H. Eckley](#)

● [ExxonMobil CEO Dismisses Electric Vehicles: 'What's the point?'](#)

"In comments during the 2019 Oil and Gas Climate Initiative meet, the CEO extended a rather blunt dismissal of EVs, suggesting that the zero-emissions vehicles will serve little purpose if they remained charged by a coal-powered grid."

Why this is important: Mr. Woods' comments highlight a fundamental misunderstanding of the benefits of electric vehicles. Fossil fuels comprise 95 percent of the fuel source for the entire U.S. transportation industry. However, only 63 percent of U.S. electric generation comes from fossil fuels. Switching to electric cars would result in a significant decrease in the use of fossil fuels along with a corresponding decrease in CO2 emissions. --- [Nicholas S. Preservati](#)

● [Coal will be Southeast Asia's Main Energy Source Until 2027](#)

"According to CNBC, a new Wood Mackenzie study revealed that coal is expected to continue its dominance in Southeast Asia's energy sector. The product's use will keep growing until its expected slowdown by 2027."

Why this is important: Less developed countries, under pressure to provide power to burgeoning populations that want regular electricity, will continue to seek fossil fuels for at least the short-term. Southeast Asia is racing to catch up with the rest of the world and will be relying on coal to provide its electrical generation for at least the next seven years, and perhaps beyond. --- [David L. Yaussy](#)

● [EIA Energy Statistics](#)

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

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[This Week in Petroleum](#)

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[Short-Term Energy Outlook - Natural Gas](#)

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[COAL](#)

Short-Term Energy Outlook - Coal

Coal Markets

Weekly Coal Production

RENEWABLES

Short-Term Energy Outlook

Monthly Biodiesel Production Report

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