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Nuclear energy needs to shake off links to coal

By Chris Tomlinson

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In the debate over how to provide reliable, clean and affordable electricity, coal-fired and nuclear power plants get lumped together.

A handful of companies that operate coal and nuclear power plants have threatened to mothball their facilities because they can't compete with cheap natural gas and subsidized renewable energy. They are demanding subsidies because they claim the plants play an essential role in keeping the nation's electric grids resilient.

Experts from the Department of Energy and most power plants operators insist the grid will work just fine without these uneconomic generators. However, President Donald Trump has ordered Secretary of Energy Rick Perry to consider invoking war-time powers under the Defense Production Act to order electric customers to pay higher bills to keep the old plants operating.

All of this crony capitalism, though, risks linking the costly, archaic and dirty coal sector with the emissions-free nuclear industry that is critical for the nation's future.

Sixty-six nuclear power plants currently provide 20 percent of the nation's electricity, but 24 are either scheduled to close or will be losing money by 2021, according to Bloomberg New Energy Finance, an energy research group. Closing those plants would shut down a quarter of the nuclear fleet's generation capacity, or about 32.5 gigawatts.

Perry would need to approve \$1.3 billion a year in subsidies to keep the plants open, according to Bloomberg New Energy Finance. But nuclear plants in New York, Illinois and New Jersey are in less trouble because those states reward them for generating electricity without emitting greenhouse gases.

Nuclear plants generate more than 50 percent of the country's zero-carbon power, avoiding at least 400 million tons of CO2 equivalents in emissions. If those plants shut down, generators would likely replace them with natural gas plants-the cheapest alternatives-resulting in more carbon pollution.

"Even if we were able to replace retired nuclear solely with renewables, it's still a setback in the climate fight," according to Third Way, a moderate, non-partisan think tank in Washington.

The most significant problems with nuclear power plants are the high life-cycle costs and the inability to ramp up or down quick enough to support wind and solar generation. Nuclear energy developers, though, are beginning to address these problems with new reactor designs.

Companies such as NuScale are seeking licenses for small, modular reactors that can ramp electric output. The Tennessee Valley Authority is seeking permission to test what the industry calls SMRs at its Clinch River location.

Perry granted \$40 million to help NuScale last month to deploy its first SMR in 2026.

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"Making these new investments is an important step to reviving and revitalizing nuclear energy, and ensuring that our nation continues to benefit from this clean, reliable, resilient source of electricity," Perry said.

That doesn't help existing reactors. And companies that own nuclear power plants also tend to own coal-fired power plants, and they want to maximize profits from their existing fleet. Ohiobased First Energy has lobbied hard to convince Perry and Trump to subsidize both forms of generation. Invoking the Defense Production Act, though, would essentially nationalize their plants and guarantee profits.

"I don't favor nationalizing anything," Sen. John Hoeven, R-N.D., said at a recent energy conference sponsored by the Washington Post. Using the act would disrupt competitive markets and benefit "few uneconomic" power plants, he added.

The best solution is to put a price on carbon emissions, thereby improving competitive markets by forcing emitters to pay for their pollution and rewarding companies that don't emit. Major oil companies, such as Exxon Mobil, and power generators, including NRG, support carbon pricing.

A small carbon tax of \$25 a ton, increasing 5 percent a year from 2020, would keep existing nuclear plants open and encourage new, more flexible technologies, according to the Energy Information Administration. But it would also put coal plants out of business.

First Energy, Exelon and their allies want Perry to rig the system to keep their inefficient plants profitable. But if he genuinely believes in free and efficient markets, Perry should support a small carbon tax instead to encourage innovation and reward companies that control their pollution.

Every expert study agrees that competitive markets are providing customers more than enough electricity, even with dozens of coal and nuclear power plants scheduled to close. Invoking the Defense Production Act to save old, dirty coal plants would be nothing more than a political payoff to Trump's supporters and betray free market capitalism and consumers.