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PENNSYLVANIA'S LITHIUM ABUNDANCE

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PENNSYLVANIA COULD TRIPLE AMERICAN LITHIUM PRODUCTION

Pennsylvania plays a crucial role in the development of the American energy industry. The Nation's first commercial oil well was drilled in northwestern Pennsylvania in 1859, and the world's first civilian nuclear power plant came online in 1957 at Shippingport, along the Ohio River. More recently, thanks to the shale revolution, Pennsylvania's natural gas production today is around <u>27 times</u> greater than in early 2010. In addition to Pennsylvania's prolific natural gas production, recent research has highlighted how the Commonwealth can play an important role in the Nation's quest for secure and reliable <u>critical mineral supply chains</u>.

FRACKING UNLOCKS MORE THAN JUST OIL AND GAS.

Hydraulic fracturing (i.e., "fracking") has been the key to Pennsylvania's spectacular increase in natural gas production. Fracking involves drilling a well—<u>often horizontally</u> for several miles—and pumping the well with water and sand to fracture the surrounding rock, thereby releasing nearby oil and gas.

The Marcellus geological formation, which holds Pennsylvania's natural gas wealth, is also rich in minerals such as magnesium and lithium, a key input for batteries. These minerals are unlocked through fracking and are collected in the fracking water solution. According to a recent <u>research article</u> in the journal *Scientific Reports*, collecting the lithium within Pennsylvania's fracking water would produce 1,160 tons of lithium each year.

There is enormous global demand for Pennsylvania's largely untouched lithium resources.

- ★ Lithium is a key input for most modern, rechargeable batteries found in cell phones, laptops, and electric vehicles.
- ★ In 2023, the United States <u>imported</u> more than five times the amount of lithium it <u>produced</u>.
 - In recent years, 51% of imported lithium came from Argentina and 43% from Chile.
 - Developing Pennsylvania's lithium resources alone would triple national production and could reduce lithium imports by one-third.
- ★ In 2023, the United States imported \$13.1 billion worth of lithium-ion batteries from China.*
 - That figure constituted 71% of lithium-ion battery imports.*

Federal policies that limit the development of Pennsylvania's natural gas resources also limit the potential development of the Commonwealth's lithium abundance. Misguided policies include:

- ★ The Biden-Harris Administration's attempted <u>moratorium</u> on liquified natural gas export permits.
- ★ Bureaucratic slow walking of pipeline approvals.
- ★ The <u>weaponization</u> of capital through the environmental, social, and governance (ESG) movement.
- ★ The Inflation Reduction Act's <u>methane tax</u> on oil and gas producers.
- ★ Proposals to <u>ban fracking</u>.

Source: <u>United States Census Bureau</u>. Data includes imports from the People's Republic of China and Hong Kong.

