



RESOURCE SECURITY WATCH

The American Foreign Policy Council's Review of
Changes to the Global Strategic Environment

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Related Categories: Warfare; Resource Security; China; Russia

AMERICA'S LITHIUM PRODUCTION PROBLEM

Australia and South American countries currently possess the world's largest stores of raw lithium. However, it is another country – China – that controls the processing supply chain of the "petroleum of the future." In fact, in 2020 alone, China produced 15 times more lithium than the United States. If the U.S. is to adapt to the effects of climate change, the nation will require an increase in electric vehicles (EV), the expansion of charging infrastructure, and electrification of the production industry. All of that, however, requires increased importation of lithium from abroad, and risks a growing dependency on foreign powers.

The scope of the problem is massive. "It is estimated that the U.S. alone will need 500,000 metric tons per year of unrefined lithium by 2034 just to power EVs. The U.S. produces just a fraction of that today. The current global production of lithium in 2020 was about 440,000 metric tons of lithium carbonate equivalent (LCE, contains about 18% of pure lithium), and not all of that is in pure enough form for batteries," says Chris Doornbos, president and CEO of E3 Metals Corp, a lithium extraction firm. In response, the Department of Energy is recommending the subsidization and promotion of domestic production of lithium, and the creation of lithium supply chains as well as a lithium recycling industry to ensure imported lithium remains in the local supply chain. (Department of Energy, June 2021; *Forbes*, January 11, 2022; *Forbes*, January 20, 2022)

THE PENTAGON PLANS A GREEN FOOTPRINT

In early February, the U.S. Army announced its goals to reduce its greenhouse gas pollution by 50% by 2030, to attain "net-zero" emissions by 2050. These objectives are encapsulated in the Department's 2022 *U.S. Army Climate Strategy*, which is a direct response to Defense Secretary Lloyd Austin's January 2021 announcement that DoD would "immediately take appropriate policy actions to prioritize climate change considerations in our activities and risk assessments, to mitigate this driver of insecurity." The report's opening statement, penned by Secretary of the Army Christine Wormuth, states: "The time to address climate change is now. The effects of climate change have taken a toll on supply chains, damaged our infrastructure, and increased risks to Army Soldiers and their families due to natural disasters and extreme weather."

According to the report, the service will meet those goals by employing a number of strategies, including: the installation of a microgrid (energy and water) at every military facility by 2035; fielding an all-electric, light duty non-tactical vehicle fleet by 2027, deploying an all-electric non-tactical vehicle fleet by 2035; and incorporating climate change threat mitigation into Army land management decisions. (U.S. Department of Defense, January 27, 2022; *CNN*, February 8, 2022; 2022 *U.S. Army Climate Strategy*, February 8, 2022)

RUSSIAN TACTICS COULD SPARK AN ENVIRONMENTAL DISASTER

The Russian government's military offensive against Ukraine runs the risk of setting off an environmental catastrophe of epic proportions, due to its deliberate targeting of sensitive nuclear sites. One of the earliest moves made by the Russian military following the start of the conflict in late February involved the shelling and subsequent takeover of the decommissioned Chernobyl power plant and its Exclusion Zone, leading to worries over radiation and seepage. "If as a result of the occupiers' artillery strikes the nuclear waste storage facility is destroyed, the radioactive dust may cover the territories of Ukraine, Belarus and the EU countries," Anton Herashchenko, an advisor to the Ukrainian Interior Ministry, warned at the time.

Russia's military, however, did not stop there. Subsequently, in early March, Russian forces captured Europe's largest nuclear power facility located near Zaporizhzhya, Ukraine – sparking fears of a catastrophic meltdown at the facility that would "exceed all previous accidents at nuclear power plants, including the Chernobyl accident." Russian tactics, and the presence of sensitive nuclear sites on Ukrainian soil, make the possibility of an atomic accident a real one as the conflict rages on. (Reuters, February 24, 2022; *Radio Free Europe/Radio Liberty*, February 24, 2022; *CNBC*, March 4, 2022; *Newsweek*, March 4, 2022)