

ISSUE BRIEF

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Virginia Uranium Mining: Draft Regulations Now, Lift Moratorium Later

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Virginia Governor Bob McDonnell (R) has consistently spoken about making his state the energy capital of the east coast. And indeed, Virginia has the potential to be exactly that with oil and gas resources on and off its shores and significant coal deposits in the state's southwest. It also has the largest uranium deposit in the nation located on private property in the south-central part of the state.

While the federal government makes accessing oil, gas, and coal resources difficult or impossible, the Commonwealth is to blame for keeping the uranium off limits. Virginia has maintained a moratorium on uranium mining since 1982 that essentially forbids uranium mining in the state until regulations are in place. Responsibility to set these regulations lies within the General Assembly.

While the governor cannot lift the moratorium, he could advance his call to promote Virginia energy production by directing relevant government agencies to develop draft regulations. While these regulations cannot be implemented so long as the moratorium is in place, they would provide the General Assembly with additional information as it considers reversing the mining halt.¹

Fueling Economic Development. Uranium is used as fuel for nuclear power reactors. There are currently over 430 reactors operating around the world; over 100 of them in the U.S., and four of those are in Virginia. According to the World Nuclear Association, countries around the world have proposed or plan to build 479 additional units. Five are currently under construction in the U.S., with over 60 being built in other countries.

Each of these reactors will need fuel. In 2012, American nuclear reactors alone purchased some 57 million pounds of uranium, a 23 percent increase from 2010.² At current market prices, the massive deposit of over 100 million pounds of ore is worth somewhere between \$6 billion and \$7 billion, and extracting that resource would result in substantial jobs growth and economic activity.

The mining project would create 323 jobs each year during the construction phase and 1,052 jobs annually during the 35-year lifetime of the mine. The net economic benefit to Virginians during the mine's lifetime would be nearly \$5 billion, according to a study commissioned by the Commonwealth.³ Further, this economic development would occur in south-central Virginia, one of the state's most economically depressed regions, and it would be financed entirely by private investors.

Uranium Is Mined Safely All over the World, Including the U.S. Uranium is mildly radioactive, and thus its extraction does present some challenges. However, the best practices and regulations that have developed over the past half-century in countries such as the U.S., Canada, and Australia make modern uranium mining an extremely safe activity.

This paper, in its entirety, can be found at
<http://report.heritage.org/ib3951>

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Good regulations protect workers and nearby communities by controlling time, distance, and shielding—that is, monitoring and limiting the time spent with uranium ore, distancing miners from radiation, and using protective barriers. In practice, this means using remote-controlled machinery and personal meters tracking radiation exposure, among many other measures of protection. Good regulations pay off: A recent study by the Canadian government found that uranium miners over the past half-century are as healthy as the rest of the population.⁴

Even then, uranium is not especially radioactive in comparison. Cancer and immediate health effects do not occur before exposure to 5,000 millirem (mrem), and yet the average uranium miner is exposed to 200 mrem a year,⁵ about the same level of exposure as living in an average American house for a year.⁶

To protect the environment, the federal government holds strict regulations on mine tailings so that they are neutralized and stored safely for the long term. Former mine sites are restored to their original state and, in some cases, left even better than before mining started. For example, the city of Elliot Lake, Ontario, once a uranium boomtown, is now a popular vacation and retirement destination.

Virginia, Not Washington, Is Standing in the Way. Whether through outright bans on such activities as drilling for gas and oil off Virginia's shores or through burdensome regulations such as those that artificially reduce demand for coal, Washington is often to blame for restricting access to America's resources. However, that is not the case

for developing Virginia's uranium deposits. The state's politicians resist fully accepting the copious scientific evidence and the experience of other states and nations that demonstrate that uranium mining is extremely safe.

There was an effort to put forth regulations during the most recent legislative session of the General Assembly to lift the moratorium. Though mining enjoys broad support, many politicians were reluctant to take a position on lifting the moratorium, and the bill to do so (S.B. 1353) was ultimately withdrawn. A primary reason given for their reluctance was a desire to better understand precisely how uranium mining would be regulated. This created a dilemma: Legislators chose not to make a decision about whether to lift the moratorium without first seeing how mining would be regulated but state agencies were waiting for the moratorium to be lifted before drafting proposed regulations.

Governor McDonnell Holds the Solution. The relevant agencies within the Virginia government—most notably the Department of Mines, Minerals, and Energy (MME)—have already been considering the mining regulations. Governor McDonnell should continue this momentum by directing the MME (and other agencies as needed) to develop draft regulations. Indeed, the governor's interagency working group on uranium mining has already said that Virginia government agencies maintain adequate resources and expertise to develop the regulations.⁷

Such an approach would help to inform the General Assembly when considering lifting the moratorium by showing precisely what a permitting

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1. See Jack Spencer and Katie Tubb, "Time to Allow Uranium Mining in Virginia," Heritage Foundation *Backgrounder* No. 2738, October 15, 2012, http://www.heritage.org/research/reports/2012/10/time-to-allow-uranium-mining-in-virginia?ac=1#_ftnref37.
 2. U.S. Department of Energy, Energy Information Administration, "Uranium Mining Annual Report," Table 1: Uranium Purchased by Owners and Operators of U.S. Civilian Nuclear Power Reactors by Supplier and Delivery Year, 2008–2012, May 16, 2013, <http://www.eia.gov/uranium/marketing/html/table1.cfm> (accessed May 28, 2013).
 3. Chmura Economics and Analytics, "The Socioeconomic Impact of Uranium Mining and Milling in the Chatham Labor Shed, Virginia," November 29, 2011, <http://dls.state.va.us/groups/cec/Uranium/Chmura.pdf> (accessed May 28, 2013).
 4. Canadian Nuclear Safety Commission, "Updated Analysis of the Eldorado Uranium Miners' Cohort: Part I of the Saskatchewan Uranium Miners' Cohort Study (RSP-0205)," May 2011, <http://www.nuclearsafety.gc.ca/eng/readingroom/healthstudies/eldorado/#S7> (accessed May 23, 2013).
 5. World Nuclear Association, "Occupational Safety in Uranium Mining," July 2012, <http://www.world-nuclear.org/info/Safety-and-Security/Radiation-and-Health/Occupational-Safety-in-Uranium-Mining/> (accessed May 23, 2013).
 6. U.S. Department of Energy, Oak Ridge Office, "About Radiation," 2012, <http://www.oakridge.doe.gov/external/PublicActivities/EmergencyPublicInformation/AboutRadiation/tabid/319/Default.aspx> (accessed May 28, 2013).
 7. Commonwealth of Virginia, 2012 *Uranium Working Group Report*, November 30, 2012, <http://www.uwg.vi.virginia.gov/pdf/UWG%20Report%20-%20FINAL%2030Nov2012.pdf> (accessed May 28, 2013).

program would entail. This has been a major sticking point for many Assembly members. Promulgating the regulations now could also promote public confidence in the final regulations if they are pursued under the Administrative Process Act, which guarantees process transparency and provides for public input.⁸

Moving Forward with Uranium Mining.

Despite decades of experience, a proven safety record, and volumes of scientific study that finds that uranium can be mined safely, much of the public and

many political leaders remain fearful of the practice. Indeed, as with the rest of the nuclear industry, its greatest support comes from those who live near and work at nuclear facilities and uranium mines.⁹

By directing Virginia agencies to develop uranium mining regulations now, Governor McDonnell can help to ensure that south-central Virginia is the next bastion of uranium mining support.

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8. Cravens and Noll PC, "Administrative Law," <http://www.cravensnoll.com/Environmental-Land-Use-Law/Administrative-Law.shtml> (accessed May 28, 2013).

9. The Heritage Foundation, "Living Near Nuclear Facilities," in *Powering America*, July 2012, <http://www.heritage.org/poweringamericafilm/>.