No. 16-1275

IN THE

Supreme Court of the United States

VIRGINIA URANIUM, INC., *et al.*,
Petitioners,

v.

JOHN WARREN, *et al.*,
Respondents.

On Writ of Certiorari to the United States Court of Appeals for the Fourth Circuit

BRIEF OF SENATOR TOM COTTON, SENATOR JIM INHOFE, AND SENTATOR TED CRUZ AS *AMICI CURIAE* IN SUPPORT OF PETITIONERS

GORDON D. TODD *
KIMBERLY A. LEAMAN
T.J. HERRON
SIDLEY AUSTIN LLP
1501 K Street, N.W.
Washington, D.C. 20005
(202) 736-8000
gtodd@sidley.com

Counsel for Amici Curiae

July 26, 2018

* Counsel of Record

TABLE OF CONTENTS

TABLE OF AUTHORITIES

CASES Page

STATUTES AND REGULATIONS

TABLE OF AUTHORITIES—continued

TABLE OF AUTHORITIES—continued

SCHOLARLY AUTHORITIES Page

OTHER AUTHORITIES

TABLE OF AUTHORITIES—continued

TABLE OF AUTHORITIES—continued

TABLE OF AUTHORITIES—continued

TABLE OF AUTHORITIES—continued

TABLE OF AUTHORITIES—continued

INTEREST OF *AMICI*[1]

Amici curiae are three currently serving United States Senators, with distinct interests in the national security and federalism issues presented by this case. Specifically, *amici* have an interest in the proper interpretation of the Atomic Energy Act's preemptive scope, to ensure that local interests do not circumvent federal priorities on issues of national concern. Domestically produced uranium is one such issue. Not only is a domestic supply of uranium critical to the United States' security and defense strategy, it also affects the Nation's status as an independent and forward-looking leader on the global stage. *Amici* are responsible for developing federal legislation related to nuclear policy, making them uniquely situated to address the strategic importance of uranium. *Amici* further have a vested interest in ensuring that federal law on this issue is both respected and effectuated.

Senator Tom Cotton, an army veteran, represents the State of Arkansas and serves on the Senate Committee on Armed Services and the Senate Select Committee on Intelligence. His assignments afford him a distinct perspective on the need for nuclear material as it relates to military defense and readiness in today's geopolitical climate. He is keenly aware of the risks in failing to meet that need.

---

[1] No counsel for a party authored this brief in whole or in part, and no party or counsel for a party made a monetary contribution intended to fund the preparation or submission of this brief. No one other than *amici curiae*, its members, or its counsel made a monetary contribution to the preparation or submission of this brief. *Amici* certify that all parties have consented to the filing of this brief.

Senator Jim Inhofe represents the State of Oklahoma and serves on the Senate Committee on Armed Services. He also chairs the Subcommittee on Readiness and Management Support, where he is responsible for overseeing policy relating to military readiness and construction, defense energy and environmental programs, and conventional ammunition procurement. Senator Inhofe has a particular interest in the role nuclear energy plays in defense readiness.

Senator Ted Cruz represents the State of Texas and serves on the Senate Committee on Armed Services. As part of his work on that Committee, Senator Cruz is responsible for advancing policy related to the Department of Defense, military research and development, and nuclear energy. Senator Cruz has long been an advocate for a strong and cohesive national defense, which in turn requires a well-articulated nuclear regulatory framework.

As part of their service on the Committee on Armed Services, *amici* are also members of the Subcommittee on Strategic Forces, which steers federal policy on nuclear and strategic forces, nuclear defense, defense environmental management programs, and arms control and non-proliferation programs. The Subcommittee also has oversight over several agencies devoted to nuclear safety and defense. Accordingly, *amici* are intimately familiar with the issues that drove Congress to allocate responsibility for nuclear safety between the federal government and the states, and *amici* continue to work on matters committed to the federal government by the Atomic Energy Act.

In light of their deep experience, *amici* agree that national interests require the Atomic Energy Act's jurisdictional balance between the federal government and the states be respected. Because the decision below upsets that balance and jeopardizes na-

tional interests, *amici* agree with Petitioners that the Court should reverse the Fourth Circuit.

SUMMARY OF ARGUMENT

The Fourth Circuit's determination that the Commonwealth of Virginia's ban on uranium mining is not preempted by the Atomic Energy Act (the "Act") *solely* because the ban's literal text addresses an activity not covered by the Act provides states a clear path to nullify federal policy in favor of local preferences through creative backchannels and artful wording. Tying the Act's preemptive scope to the strict language of a statute disregards Congress's prior decision to vest regulation of radiological hazards with the federal government and undermines federal policy concerning assets, like uranium, that are critical to our Nation's security and defense.

The Act and its amendments memorialize Congress's cumulative attempt to grapple with the military, political, social, and economic consequences of harnessed nuclear power and to allocate oversight responsibility for those consequences in a workable regulatory framework. The Act's legislative history demonstrates the careful consideration with which Congress allocated federal and state responsibilities for regulating nuclear safety. In early amendments to the Act, Congress committed oversight responsibility of radiological hazards to the federal government. However, Congress also created an agreement-based scheme whereby the civilian-led Nuclear Regulatory Commission ("the Commission")[2] can transfer certain

---

[2] The Energy Reorganization Act of 1974, 42 U.S.C. § 5801 *et seq*., abolished the Atomic Energy Commission and transferred its regulatory functions to the Nuclear Regulatory Commission. References to "the Commission" shall refer to both agencies.

of its regulatory functions to the states. Absent transfer of authority pursuant to a valid agreement, the *federal* government retains exclusive authority to regulate activities covered by the Act for purposes of radiological safety. That is, federal law preempts state law.

Pursuant to this Court's precedents, which require consideration of the purpose and effect of a state statute vis-à-vis radiological safety, Virginia's ban is preempted by the Act. The ban purports to regulate an activity that is properly within Virginia's jurisdiction: uranium mining on nonfederal lands. In purpose and effect, however, the ban actually targets post-mining activities (uranium *milling* and *tailings* storage and disposal) because of those activities' perceived radiological hazards. However, such post-mining activities are not accounted for in Virginia's current agreement with the Commission, making regulation of those activities for purposes of radiological safety the exclusive province of the federal government.

The Act's legislative history demonstrates the careful consideration with which Congress allocated federal and state responsibilities for regulating nuclear safety. In willfully blinding itself to the purpose of Virginia's ban, the Fourth Circuit upended the Act's deliberate jurisdictional balance without any consideration for the national and international consequences that flow from the military, political, and economic interests that drove Congress to assign regulatory responsibility in the manner it did. The Fourth Circuit also disregarded the Court's prior teachings and refused to consider the plethora of evidence disclosing the motivation behind the ban: perceived radiological hazards associated with uranium milling and tailings management.

Restricting the Act's preemptive scope would permit states to do indirectly what they cannot do directly, carrying far-reaching and serious risks. In this case, local-based preferences threaten the implementation of uniform federal policy over uranium, a strategic national resource, at a critical time. Domestic production and development of uranium is at historic lows, exacerbated in no small part by Virginia's ill-conceived blockade of the largest known uranium deposit in the United States. But an unduly formalistic approach that eschews any analysis of purpose or policy would extend well beyond this case, affecting a host of nuclear-related activities covered by the Act, and no less critical to our common national interests. Accordingly, *amici* urge the Court to reverse the Fourth Circuit and reaffirm that the Act's preemptive scope encompasses both the purpose and effect of any state regulation.

ARGUMENT

I. RESTRICTING THE ACT'S PREEMPTIVE SCOPE TO ACTIVITIES REGULATED BY THE ACT WITHOUT REGARD TO PURPOSE OR EFFECT WOULD UNDERMINE IMPLEMENTATION OF UNIFORM FEDERAL POLICY OVER ISSUES OF NATIONAL IMPORTANCE.

A. The Act's Preemption Framework Reflects Congress's Careful Determination Of Federal And State Competencies Balanced Against Federal And State Interests.

The development of nuclear energy and technology in the United States has been uniquely federal in nature. Indeed, the Manhattan Project—the genesis of the United States' nuclear program—was sponsored

by the federal government. *See* Arthur W. Murphy & D. Bruce La Pierre, *Nuclear "Moratorium" Legislation in the States and the Supremacy Clause: A Case of Express Preemption*, 76 COLUM. L. REV. 392, 394–95 (1976). While the atomic bomb dramatically demonstrated the military and political implications of atomic energy, the role atomic energy would come to play in civilian life was less clear. Congress struggled to develop a legislative framework capable of handling atomic energy's unique policy issues. *See, e.g.*, Byron S. Miller, *A Law is Passed — The Atomic Energy Act of 1946*, 15 U. CHI. L. REV. 799 (1948).

Reflecting Congress's then-judgment that the federal government was the only body prepared to address these policy issues, the inaugural 1946 version of the Act committed nuclear energy exclusively to federal authority by way of the Commission. Murphy & La Pierre, *supra*, at 395. The 1946 Act further declared a national policy—"subject at all times to the paramount objective of assuring the common defense and security"—to direct efforts toward "improving the public welfare, increasing the standard of living, strengthening free competition in private enterprise, and promoting world peace." Atomic Energy Act of 1946, ch. 724, § 1, 60 Stat. 755, 756.

Within a decade, however, Congress "concluded that the national interest would be best served if the Government encouraged the private sector to become involved in the development of atomic energy for peaceful purposes under a program of federal regulation and licensing." *Duke Power Co. v. Carolina Envtl. Study Grp., Inc.*, 438 U.S. 59, 63 (1978). Accordingly, Congress passed the Atomic Energy Act of 1954, which allowed private entities to own and operate nuclear facilities that produced and utilized special nuclear materials, including uranium. *See*

H. Hamilton Hackney III, Comment, *Recent Congressional Proposals for Providing Relief to the Domestic Uranium Industry: Saving Grace or Just Another Expensive Bailout?*, 10 J. ENERGY L. & POL'Y 171, 175 (1990).

The 1954 Act encouraged private development "by opening the door to private construction, ownership, and operation of commercial nuclear-power reactors under the strict supervision of the [Commission]." *English v. Gen. Elec. Co.*, 496 U.S. 72, 81 (1990). However, both the 1946 and 1954 versions of the Act stipulated that the federal government remained "the sole owner of uranium products." *Atlas Corp. v. United States*, 895 F.2d 745, 748 (Fed. Cir. 1990). The Commission, therefore, maintained "pervasive control" over all aspects of uranium procurement, production, sales, and disposal. *Id.*

Termination of the federal monopoly on the development of nuclear energy exposed states to a variety of potential health and environmental hazards that they had previously been precluded from regulating. *Federal-State Relationships in the Atomic Energy Field: Hearings Before the J. Comm. on Atomic Energy*, 86th Cong. 25 (1959) ("*Hearings*"). Consequently, federal and state agencies endeavored to cooperate in regulating those hazards, with the federal government providing extensive assistance in the form of information-sharing, training, funding, and model regulations and standards. *Id.* at 25–26.

Nonetheless, there became evident a "need for clarification of the responsibilities of the Federal and State Governments for regulating atomic energy." *Id.* at 26; *see also*, *id.* at 393. As the nuclear power and mining industries grew, states pressured the federal government for the right to regulate those activities occurring within their borders. Ronald H. Rosenberg,

Uranium Mining and Milling in Virginia: An Analysis of Regulatory Choice, 4 VA. J. NAT. RESOURCES L. 81, 96 (1984). Federal, state, and industry officials agreed on the need for clarification, but the precise allocation of authority was hotly debated, in part because then-existing state efforts and competencies were far from uniform. *See Hearings* at 127–31, 394.

Two competing considerations drove the uncertainty as to which government was properly responsible for regulating nuclear hazards. On the one hand, providing for the welfare and public health of its citizens had traditionally fallen within the states' core police powers. *Id.* at 20, 274, 289. Conversely, the legal enforceability of any state regulation of atomic energy was questionable: "the 1954 act set[ ] forth a directive to the Federal agency to adopt a comprehensive scheme of regulations," and courts frequently treated such direction as preempting any corresponding state regulation. *Id.* at 126. Moreover, "under the act, the objectives of Federal regulations are to assure protection of the public while not unduly burdening industrial progress, and thus more restrictive requirements by the State might be deemed as interference with national nuclear development policy." *Id.*

An early bill drafted by the Commission "provided for the exercise of dual or concurrent jurisdiction by both the [Commission] and the States over activities licensed by the Commission." *Id.* at 27. To minimize "inconsistency," the proposed bill excluded licensing responsibilities already exercised by the Commission and provided that state requirements "may not be 'in conflict with' those adopted by the Commission." *Id.* at 290. However, the notion of concurrent jurisdiction elicited concerns over duplication of efforts, industry burden from conflicting and overlapping re-

quirements, and whether the federal or a state government would prevail in the event of conflicting standards or decisions, particularly as it came to overregulation. *Id.* at 20, 120, 129, 131. In light of these concerns, shared federal and state jurisdiction over radiological safety was rejected. *Id.* at 290.

Instead, Congress

> provide[d] a statutory framework within which the States may assume an independent regulatory role in extensive areas now occupied by the Atomic Energy Commission on a basis which will assure appropriate protection for public health and safety and compatibility between the regulatory programs of the States and those of the Commission.

Id. at 290. Specifically, the 1959 amendments established a program through which the Commission could transfer to states limited portions of its regulatory authority to license and regulate nuclear byproduct materials, source materials (including uranium), and certain quantities of special nuclear materials. Qualified states, known as "Agreement States," were authorized to enter into an agreement executed by the Governor of the state and the Chairman of the Commission under which the state could *partially* assume the Commission's regulatory duties. 42 U.S.C. § 2021(b).

There are several steps to becoming an Agreement State. The Governor of the applicant state must certify that the state is willing to "assume regulatory responsibility" for nuclear material, including uranium. 42 U.S.C. § 2021(d)(1). The Governor must also certify that the state possesses a "program for the control of radiation hazards adequate to protect the public health and safety." *Id.* In turn, the Commission

must make several independent findings, including that the state's program is compatible with and at least as restrictive as the Commission's own rules and regulations. *Id.* § 2021(d)(2); *see also* S. Rep. No. 86-870, at 11 (1959). The Commission further reserves the right to take back all or part of these regulatory functions from a state upon notice and hearing, or peremptorily in emergency circumstances. 42 U.S.C. § 2021(j).

Certain regulatory responsibilities, because of their nature, were not eligible for transfer to an Agreement State. The federal government retains exclusive jurisdiction over "areas in which the technical safety considerations are of such complexity that it is not likely that any State would be prepared to deal with them during the foreseeable future," as well as those "areas as to which interstate, national, or international considerations seem to be paramount." *Hearings* at 291. Also excepted from the program were activities associated with high levels of radioactive hazards, such as managing nuclear reactors. *Id.* As reported by the Joint Committee on Atomic Energy: "These are areas which, because of their special hazards, or for reasons of Federal responsibility, are believed desirable for continued responsibility by the Commission." S. Rep. No. 86-870, at 10.

With regard to those responsibilities that may be devolved to the states, the Act provides that once an agreement is established, "[d]uring the duration of such an agreement . . . the State shall have authority to regulate the materials *covered by the agreement* for the protection of the public health and safety from radiation hazards." 42 U.S.C. § 2021(b) (emphasis added). Otherwise, state and local authorities may only "regulate activities for purposes *other than* protection against radiation hazards." *Id.* § 2021(k). In

other words, "State laws and regulations concerning the control of radiation hazards from byproduct, source, and special nuclear materials shall not be applicable except pursuant to an agreement entered into with the Commission."[3] *Hearings* at 488; *see also* S. Rep. No. 86-870, at 12 ("As indicated elsewhere, the Commission has exclusive authority to regulate for protection against radiation hazards until such time as the State enters into an agreement with the Commission to assume such responsibility."); *id.* at 3 ("[I]n order for a State to so regulate or license [materials covered by the Act], it must first establish an adequate program for this purpose and enter into an agreement with the Commission.").

The Act's legislative history demonstrates the careful consideration with which Congress allocated federal and state responsibilities for regulating nuclear safety. In so doing, Congress considered both the competencies of the states as well as the national or international implications that may flow from an activity regulated by the Act. Truly local concerns were left to the province of the states, while issues of na-

---

[3] This language originally appeared in one of the near-final proposed bills, but was subsequently removed "as unnecessary," because "[w]ith or without this sentence, in order for a State to so regulate or license [materials under the Act] it must first establish an adequate program for this purpose and enter into an agreement with the Commission." S. Rep. No. 86-870, at 3. The removal was "*not* intend[ed] to change the substantive effect of the bill" and was "*not* intend[ed] to leave any room for the exercise of concurrent jurisdiction by the States to control radiation hazards." *Hearings* at 500 (emphases added). Rather, it meant to provide courts with "greater latitude in sustaining certain types [of laws, (*e.g.*, zoning requirements)] which have *purposes other than control of radiation hazards*, even though such requirements might have an *incidental* effect upon the use" of material licensed by the Commission. *Id.* (emphases added).

tional or international significance, including highly technical and highly hazardous activities, were committed exclusively to the Commission's control.

For those regulatory aspects that could potentially be transferred to the states, the federal government assumed responsibility for supervising that transition. As part of that responsibility, the Commission must ensure that the state has in place a regulatory scheme that both adequately protects against radiological harms *and* meets federal expectations for achieving the purposes of the Act—namely, the private development and use of nuclear energy for peacetime purposes, subject, of course, to the national interest in common defense and security. *See* 42 U.S.C. § 2011; S. Rep. No. 83-1699, at 3, 4 (1954). At bottom, the responsibility for setting policy over radiological hazards rests with the federal government.

B. Formalistic Limits To The Act's Preemptive Scope Upset The Federal/State Jurisdictional Balance And Permit State And Local Governments To Override The Federal Government On Issues Of National Importance.

In preempting a field of regulation, Congress has determined an area is of such significance or national import that it must be governed by a single, national policy for which state or local authorities may not substitute their own judgments.

Here, "the federal government has occupied the entire field of nuclear safety concerns, except the limited powers expressly ceded to the States." *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190, 212 (1983). In line with traditional tenets of preemption that look to "whether 'the

matter on which the State asserts the right to act is in any way regulated by the Federal Act,'" *id.* at 213 (quoting *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 236 (1947)), "the Court defined the pre-empted field, in part, by reference to the *motivation* behind the state law," *English*, 496 U.S. at 84 (emphasis added). The remaining "part of the field is defined by the state law's actual effect on nuclear safety." *Id.* In other words, "state regulation of matters directly affecting" aspects of radiological safety committed exclusively to the federal government also impermissibly intrude upon the preempted field. *Id.* Taken together, this Court has made clear that the preemptive scope of the Act is not limited to the "plain language" of the challenged statute.

And for good reason. Federal preemption could be rendered meaningless if state or local authorities could circumvent federal policy through artful wording or other creative backchannels. *Cf. Entergy Nuclear Vt. Yankee, LLC v. Shumlin*, 733 F.3d 393, 416 (2d Cir. 2013) (explaining that courts do not "blindly accept the articulated purpose . . . for preemption purposes," because that would permit states to "nullify nearly all unwanted federal legislation" (quoting *Greater N.Y. Metro. Food Council, Inc. v. Giuliani*, 195 F.3d 100, 108 (2d Cir. 1999))). The danger is particularly acute here given the public penchant to stigmatize nuclear development out of fear associated with the radiological hazards of nuclear material. *See, e.g.*, M.V. Ramana, *Nuclear power and the public*, 67 Bull. of the Atomic Scientists, July 1, 2011, at 43-51. Any approach to preemption that turns a blind eye to motive and effect would give state and local authorities carte blanche to override federal policy concerning nuclear material and radiological hazards, so long as the pertinent language does not pur-

port to regulate activities under the Commission's exclusive jurisdiction.

In fact, some states have previously attempted to do just that, but were prevented by courts that looked beyond the text of the statute to understand the motivating purpose behind the statute. *See Entergy Nuclear*, 733 F.3d 393; *Skull Valley Band of Goshute Indians v. Nielson*, 376 F.3d 1223 (10th Cir. 2004). In *Entergy*, the Second Circuit held as preempted a Vermont statute that required state legislative approval to build a nuclear power plant. 733 F.3d at 403, 428. While the statute purported to regulate the generation, sale, and transmission of electric power, the Second Circuit observed that Vermont's legislative history "expressed concern about radiological safety" associated with nuclear power plants and further "expressed a desire to evade federal preemption." *Id.* at 420. In holding the statute preempted, the court explicitly noted that the preemption inquiry "does not end at the text of the statute." *Id.* at 416. Similarly, in *Skull Valley*, the Tenth Circuit went beyond the plain language of a Utah statute that facially regulated state highways and right-of-way restrictions when transporting spent nuclear fuels to determine that those laws were enacted for the purpose of regulating radiological safety and, thus, were preempted. 376 F.3d at 1251–53.

Virginia's moratorium on uranium mining is cut from the same cloth as the statutes at issue in *Entergy* and *Skull Valley*. While it purports to regulate activities within the Commonwealth's purview, local concern regarding the radiological hazards associated with *post*-mining activities—activities that fall within the Commission's jurisdiction—has sustained the ban

since its inception.[4] Moreover, the mining ban effectively operates as a ban on those same post-mining activities allowing Virginia to regulate indirectly what it may not regulate directly.

Critically, while Virginia is a partial Agreement State under the Act, the 2009 agreement expressly carves out uranium mill tailings from the Commonwealth's regulatory authority. *See* William Brice Fiske, *Virginia's Moratorium: Is Uranium Mining on the Horizon in the Commonwealth?*, 37 WM. & MARY ENVTL. L. & POL'Y REV. 289, 307–08 (2012). Nor does Virginia possess the statutorily required regulatory structure to assume responsibility for uranium millings due to its moratorium over conventional mining. *See id.* (citing William Robert G. Burnley, *How Will Virginia Regulate Uranium Mining?*, 60 VA. LAW., 41, 43 (2011)).[5] The power to regulate the radiological

---

[4] *See, e.g.*, Pet. App. 239a–297a; Associated Press, *Proposed East Coast Uranium Mine Dividing Va.*, USA Today (Jan. 26, 2013), https://www.usatoday.com /story /news/nation/2013/01/26/ virginia-uranimum-mine/1866489/; Jonathon Wilson, *Rural Community Debates Pros and Cons of Uranium Mining*, WAMU (Mar. 29, 2013), http://wamu.org/story/13/03/29/rural_ community_debates_pros_and_cons_of_uranium_mining/; Ana Komnenic, *Amid Fierce Political Opposition, US Uranium Miner Suspends Mine Plans*, Mining.com (Dec. 15, 2013), http:// www.mining.com/amid-fierce-political-opposition-us-uranium-miner-gives-up-on-one-of-the-worlds-largest-uranium-deposits-66417; KTAR Newsroom, *Drive to Mine Uranium in Va. Comes to Quiet Pause*, KTAR News (Dec. 14, 2013), http://ktar.com/ story/112903/drive-to-mine-uranium-in-va-comes-to-quiet-pause/.

[5] Should a state assume responsibility for tailings management, the state is required to comply with federal standards governing the safety of that material. *See* Uranium Mill Tailings Radiation Control Act of 1978, Pub. L. No. 95-604, § 204(e), 92 Stat. 3021 (providing for federal regulation of radiological hazards associated with uranium tailings left over from the mill-

hazards associated with uranium milling and tailing activities therefore remains *exclusively* with the Commission. 42 U.S.C. § 2021(b), (k). Congress and the Commission have already determined that the post-mining processing and subsequent waste storage of uranium is sufficiently safe to license. The Commonwealth may not substitute its own judgment regarding the safety of post-mining activities by effectively blocking such activities within its borders. Reducing the preemptive inquiry to a text-based analysis would effectively rubberstamp state legislation challenged under the Act.

C. Domestic Production Of Uranium Is A National Strategic Interest.

As Judge Traxler observed in his dissent below, "[t]he stakes in this case are significant." Pet. App. 21a. *Amici*, as sitting Senators and members of the Senate Committee on Armed Services—including the subcommittee charged with overseeing nuclear defense policy—are aptly suited to speak to those stakes.

Most importantly, the availability and development of uranium, and particularly, the *domestic production* of uranium, is integral to the Nation's security. International treaty obligations prohibit the use of imported foreign enriched uranium, or uranium enriched on U.S. soil using foreign technology, for defense purposes. George David Banks & Michael Wallace, Ctr. for Strategic & Int'l Studies, *Recapturing U.S. Leadership in Uranium Enrichment* 5 (Nov. 2013). Any uranium used for defense purposes must be "produced by and procured from domestic sources

---

ing process); 10 C.F.R. § 150.31 (requiring state compliance with any standards promulgated by the Commission or the Environmental Protection Agency pursuant to UMTRCA).

using U.S. enrichment technology." *Id.* However, there remains just one active enrichment plant in the United States, which is European-owned and utilizes foreign enrichment technology.[6] World Nuclear Ass'n, *US Nuclear Fuel Cycle*, http://www.world-nuclear.org/information-library/country-profiles/countries-t-z/usa-nuclear-fuel-cycle.aspx (last updated July 2018); *see also* Banks & Wallace, *supra*, at 3. Thus, the United States is not presently able to generate any enriched uranium for defense purposes.

In addition, domestic production of uranium has plummeted since the Cold War due to market pressures from heavily subsidized European enriched uranium and the importation of low-enriched uranium from Russia under the Megatons to Megawatts Program.[7] Banks & Wallace, *supra,* at 2. In 2017, domestic production of uranium concentrate, which came from just seven facilities in three states, fell 16% year-over-year and was the lowest annual pro-

---

[6] A demonstration plant, American Centrifuge, was intended to develop new U.S. technology for enrichment but the Department of Energy cut all funding for the plant in September 2015, and the plant demobilized shortly thereafter. *See* World Nuclear News, *American Centrifuge Demonstration Plan Completes Operations* (Feb. 22, 2016), http://www.world-nuclear-news.org/C-American-Centrifuge-demonstration-plant-completes-operations-2202167.html.

[7] The Megatons to Megawatts Program was a commercially financed government program in which weapons-grade uranium from dismantled Russian nuclear warheads was recycled into low-enriched uranium for use in U.S. nuclear power plants. *See* Centrus, *Megatons to Megawatts*, http://www.centrusenergy.com/who-we-are/history/megatons-to-megawatts/ (last visited July 23, 2018). During the Megatons to Megawatts Program, which lasted from 1994 through 2013, almost half of the uranium used in U.S. nuclear power plants came from Russia. World Nuclear Ass'n, *US Nuclear Fuel Cycle*, *supra*.

duction level since 2004. U.S. Energy Info. Admin., *Domestic Uranium Production Report – Annual*, Nuclear & Uranium (May 22, 2018), https://www.eia.gov/uranium/production/annual/. In 2018, domestic uranium production is expected to drop even further, to approximately 0.7 million pounds, the lowest production since 1949 and less than 2% of the uranium required to power U.S. reactors. *See* Uranium Energy Corp., *Uranium Energy Corp 2018 Letter to Shareholders* (Jan. 29, 2018), http://www.uraniumenergy.com/news/releases/index.php?content_id=645. Even though the Coles Hill uranium deposit provides a significant, legally viable source of uranium—indeed, it is the largest such deposit in the United States—Virginia's blanket ban precludes any development that might aid in the Nation's defense.

While some experts suggest that the United States has sufficient high-enriched uranium and depleted material to meet its defense needs in the near future, they acknowledge that stockpiles of low-enriched uranium, used to produce the quick-decaying tritium that is essential for several military applications, are far more limited. Banks & Wallace, *supra*, at 8-9. Although high-enriched uranium can be downblended to produce low-enriched uranium, because the United States "no longer has any capacity to produce [high-enriched uranium] to replace consumed material," the availability of high-enriched uranium for this purpose is unknown, and most high-enriched stocks "are reserved primarily for defense program strategic reserves and for production of fuel for the U.S. Navy." *Id*. at 9. Significant dependence on foreign uranium creates a serious national security concern.

Moreover, the demand for high-enriched uranium is likely to increase, further depleting critical domestic uranium stores. The Navy is increasing its oceanic

surveillance as "a very critical element of [U.S.] national security and [the U.S.'s] ability to influence and ensure that . . . vital interests are protected throughout the world." *See* CBS News, *Inside the U.S. Navy's Newest Fastest Submarines* (May 10, 2017), http://www.cbsnews.com/news/us-navy-newest-submarine-squad-virginia-class/. In January 2017, the Pentagon approved a $128 billion executive program to build a brand new fleet of 12 nuclear submarines, Anthony Capaccio, *Fleet of 12 Nuclear Submarines in Line for Pentagon Approval*, Bloomberg (Jan. 4, 2017), https://www.bloomberg.com/news/articles/2017-01-05/new-nuclear-armed-subs-win-pentagon-approval-before-obama-leaves, which garners significant support from *amici* and other members of the Committee on Armed Services. However, expansion of the Navy's nuclear fleet faces "major obstacles," including the limited ability of nuclear fuel producers to ramp up the supply of fuel. *See Trump's Navy Warship Expansion Plan Faces Major Obstacles*, Newsweek (Mar. 20, 2017), http://www.newsweek.com/donald-trump-navy-warships-navy-expansion-571281.

The limited availability of homegrown enriched uranium also damages the Nation's ability to implement its nuclear nonproliferation agenda. The United States has a "significant stake" in preventing the proliferation of foreign enrichment facilities, because those facilities can easily be converted to produce weapons-grade uranium. Banks & Wallace, *supra*, at 10. To reduce foreign powers' need to develop their own enrichment technology, the United States has previously sold certain countries uranium, already enriched, with the condition that it be used solely for peaceful purposes. *Id.* In so doing, the United States has "use[d] market power to strengthen its non-

proliferation efforts" by "back[ing] up its policy objectives with a means to achieve them." *Id.* at 10–11. But as domestic production and export of uranium decline, the United States risks losing market leverage and becoming increasingly dependent on foreign powers such as France and Russia to "lead in negotiations with countries seeking to develop enrichment capabilities." *Id.* "Reversing this trend is crucial to preserving U.S. influence in shaping global nonproliferation policy." *Id.*

Aside from military and defense concerns, there are also significant economic and geopolitical interests at stake. Domestic mining comprises just a small fraction of the fuel used in domestic reactors, and the Nation's "nuclear fuel production capacity [is] insufficient for domestic needs." World Nuclear Ass'n, *US Nuclear Fuel Cycle*, *supra*. Indeed, 93% of the uranium purchased by domestic utilities is imported, 32% of which comes from Russia, Kazakhstan, and Uzbekistan. U.S. Energy Info. Admin., *Uranium Marketing Annual Report* (May 31, 2018), https://www.eia.gov/uranium/marketing/.

Because the United States is the world's largest consumer of nuclear energy, The Statistics Portal, *Leading countries in nuclear energy consumption in 2017 (in million metric tons of oil equivalent)*, https://www.statista.com/statistics/265539/nuclear-energy-consumption-in-leading-countries/ (last visited July 20, 2018), the gap between what domestic uranium producers can deliver and what consumers require represents an unrealized domestic economic benefit that is instead exported to countries such as Russia, Kazakhstan, and Uzbekistan.

Industry experts further predict "a significant expansion of global nuclear power," with China, India, and Russia making up nearly 40% of the world's fleet

of nuclear reactors by 2030. Banks & Wallace, *supra*, at 11; *see also* U.S. Energy Info. Admin., *China Expected to Account for More than Half of World Growth in Nuclear Power Through 2040*, TODAY IN ENERGY (Sept. 28, 2016), https://www.eia.gov/todayinenergy/detail.php?id=28132. The expansion of the global nuclear market will likely result in higher fuel costs as domestic owners and operators compete with new foreign entrants. Banks & Wallace, *supra,* at 11.

Notably, in the last five years, five nuclear power plants have shut down for economic reasons. *See* Sonal Patel, *More Premature Nuclear Unit Retirements Loom*, POWER Magazine (Feb. 1, 2018), http://www.powermag.com/more-premature-nuclear-unit-retirements-loom/?pagenum=1. Several other plants have announced early retirement plans in the immediate future, and long before the plants' scheduled license expiration. U.S. Energy Info. Admin., *Fort Calhoun Becomes Fifth U.S. Nuclear Plant to Retire in Past Five Years*, TODAY IN ENERGY (Oct. 31, 2016), https://www.eia.gov/todayinenergy/detail.php?id=28572.

The shuttering of domestic nuclear facilities will force utility companies either to replace lost capacity with alternative sources, such as domestic fossil fuels, or to import electricity from other countries, frustrating national efforts to both reduce foreign energy dependence and to encourage private investment and development of nuclear energy. *Id.*; *see also*, U.S. Energy Info. Admin., *U.S. Nuclear Capacity and Generation Expected to Decline as Existing Generators Retire*, TODAY IN ENERGY (May 12, 2017), https://www.eia.gov/todayinenergy/detail.php?id=31192; a*ccord* World Nuclear Ass'n, *Nuclear Power in the USA*, http://www.world-nuclear.org/information-library/country-profiles/countries-t-z/usa-nuclear-power.aspx

(last updated June 2018) ("Given that nuclear plants generate nearly 20% of the nation's electricity overall and 63% of its carbon-free electricity, even a modest increase in electricity demand would require significant new nuclear capacity by 2025.").

The dangers of foreign dependency on uranium underscore the need for easier access to domestic uranium in a time of increased global tension. Not only does the near complete reliance on uranium imports deny an economic opportunity for domestic producers, it erodes the United States' ability to ramp up nuclear production or to leverage its uranium supply as a bargaining chip for nonproliferation negotiations. *Amici* support the prudent development of U.S. natural resources to secure U.S. interests and insulate the Nation from undue external influence. Similarly, Congress has expressed a desire to encourage uranium mining while "avoid[ing] dependence on imports." *See* 42 U.S.C. §§ 2296b-3(a), -6(a)–(b).

The White House has also affirmed that domestic access to and prudent development of nuclear materials is a vital component of the Nation's security and also necessary to promote affordable, reliable, and clean energy consumption. *See*, *e.g.*, Exec. Order No. 13,783, 82 Fed. Reg. 16,093, 16,093–97 (Mar. 28, 2017). Domestic production of energy sources is a key component of this platform. To that end, the President directed agency heads to undertake an immediate review of all existing agency actions that "potentially burden the development or use of domestically produced energy resources, with particular attention to . . . nuclear energy resources." *Id.* at 16,093. A guidance memorandum subsequently issued by the Office of Information and Regulatory Affairs explained that agency actions covered by the executive order included those that: (1) "[a]ffect the design

and/or location of domestic energy production"; (2) "[a]ffect the design and/or location of drilling or mining of energy production resources; and (3) "[l]imit the use of certain sources of energy, such that the development of domestically produced energy resources from a certain sector may be negatively affected." Dominic J. Mancini, Office of Info. & Regulatory Affairs, Exec. Office of the President, M-17-24, *Guidance for Section 2 of Executive Order 13783, Titled "Promoting Energy Independence and Economic Growth"* 2–3 (2017), https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/memoranda/2017/M-17-24.pdf.

In response to Executive Order 13,783, the U.S. Department of Agriculture recommended revising a prior public land order that withdrew certain lands in the Grand Canyon watershed from federal mining laws, noting revision could potentially open the area up to exploration for and mining of uranium. U.S. Dep't of Agric., *Final Report Pursuant to Executive Order 13783 on Promoting Energy Independence and Economic Growth* 9 (Oct. 11, 2017), https://www.fs.fed.us/sites/default/files/eo-13783-usda-final-report-10.11.17.pdf; U.S. Dep't of Agric., *EO 13783 USDA Final Report; Recommendations Sorted by Priority* (Oct. 11, 2017), https://www.fs.fed.us/managing-land/energy.

Declining productivity of domestic nuclear power poses significant strategic risks that threaten national security. Recognizing the need for an effective and uniform policy regarding nuclear development, the Act affirmatively removes certain regulatory decisions from the states and commits them exclusively to the judgment of the Commission to allow the *federal* government to mitigate and remediate many of these risks. A needlessly formalistic approach to

preemption that focuses on the literal text of the statute permits states to second-guess sound federal judgment and undermine national policy through backdoor legislation. Reaffirming the Court's prior holdings that the Act's preemptive scope is informed both by purpose and effect, and not limited by the text of the state statute, would ensure federal policy appropriately carries the day in these strategically critical areas.

D. Uranium Is A Critical And Strategic Mineral Warranting Of Federal Oversight.

The importance of federal control over uranium mineral supplies for national military, economic, and energy purposes was the motivating factor for Congress to first implement federal oversight over uranium development. *See* Anthony J. Thompson & Christopher S. Pugsley, Rocky Mountain Mineral Law Found., 2006 No. 2 RMMLF-Inst. Paper No. 3, *United States Federal / State Licensing / Permitting Regimes Implicated By Uranium Development* (2006). Both the 1946 and 1954 versions of the Act granted the Commission broad and general powers to search for and mine uranium, which was considered to be "in the national interest." *See* Robert S. Palmer, Rocky Mountain Mineral Law Inst., 2 RMMLF-Inst. 4, *Problems Arising Out of Public Land Withdrawals of the Atomic Energy Commission* (1956).

The Defense Production Act of 1950 ("DPA") further provided financial assistance to private enterprise for exploration, development, and mining of critical and strategic metals and minerals, including uranium. *See* Defense Production Act of 1950 (DPA), ch. 932, 64 Stat. 798 (codified as amended at 50 U.S.C. § 4501) (formerly at 50 U.S.C. app. § 2061). The Secretary of the Interior was permitted to withdraw public lands

from purchase or occupation to carry out uranium exploration. Palmer, *supra*, at 1. Once the federal government had surveyed geographic areas for viable uranium deposits, the Commission would award special government contracts to private entities to perform the actual drilling operations. *Id.*

At the time, the federal government was the only legal owner of uranium material. *Atlas*, 895 F.2d at 748. To encourage private enterprise participation in the program, the Commission guaranteed a market for those uranium producers and committed to purchase all of the producers' output. *Id.* at 747, 755. The program was "successful beyond the [g]overnment's highest expectations," causing the Commission to announce significant cutbacks in 1956 to mitigate unforeseen burdens associated with the unlimited purchase commitment. *See* Jon. J. Indall, Rocky Mountain Mineral Law Found., 2006 No. 2 RMMLF-Inst. Paper No. 16, *A Historical Review of the Relationship Between The Federal Government and the Domestic Uranium Industry and Current Uranium Activities and Issues in New Mexico* (2006).

Through the DPA, Congress also conferred upon the Executive Branch an "array of authorities to shape national defense preparedness programs and to take appropriate steps to maintain and enhance the domestic industrial base" to ensure domestic capability to provide essential material, like uranium, in furtherance of national defense. 50 U.S.C. app. § 4502(a)(4) (formerly at 50 U.S.C. app. § 2062(a)(4)). The DPA extends the executive's power to domestic preparedness, response, and recovery against natural disasters, terrorist attacks, and other national emer-

gencies.[8] Jared T. Brown & Daniel H. Else, Cong. Research Serv., R43767, *The Defense Production Act of 1950: History, Authorities, and Considerations for Congress* (2014).

Exclusive federal ownership over uranium ended in 1964, with the passage of the Private Ownership of Special Nuclear Materials Act ("1964 Ownership Act"). The 1964 Ownership Act permitted private ownership of uranium as well as the sale of uranium to private entities. *See* Private Ownership of Special Nuclear Materials Act, Pub. L. No. 88-489, 78 Stat. 602 (1964) (codified as amended in scattered sections of 42 U.S.C.). In releasing the federal government's monopsony on uranium, Congress recognized the value of private enterprise in assuring a ready and robust uranium supply for both the United States military in addition to other security needs. *See* S. Rep. No. 88-1325, at 17 (1964) ("*1964 Report*") ("It is the committee's view that the measures taken in this bill to assure the viability of the domestic uranium industry are in the *national* interest since this industry is closely related to our vital *defense* and *security* interests.") (emphases added).

The 1964 Ownership Act further encouraged the private development and investment of domestic uranium by requiring the Commission to deny uranium enrichment services for foreign-source uranium "to the extent necessary to assure the maintenance of a viable domestic uranium industry." 42 U.S.C. § 2201(v)(B)(iii) (1988). At this time, the Commission was the only entity capable of enriching natural uranium for use in nuclear reactors and it issued sup-

---

[8] The President has delegated these powers to department and agency heads. *See* Exec. Order No. 13,603, 77 Fed. Reg. 16,651 (Mar. 16, 2012).

plemental guidance stating that it would not enrich any foreign-source uranium for domestic use. *See* 31 Fed. Reg. 16,479 (Dec. 19, 1966). However, the Commission amended its position in 1974 and the restrictions on foreign-source uranium were gradually phased out. *See* 39 Fed. Reg. 38,016 (Oct. 21, 1974). In 1983, Congress reaffirmed the Commission's responsibility for monitoring and assessing the viability of the domestic uranium industry. *See* Hackney, *supra*, at 181 (citing 42 U.S.C. § 2011 (1982)).

To this day, the federal government continues to show a special interest in the domestic production and procurement of uranium. Recognizing that "the United States is heavily reliant on imports of certain mineral commodities that are vital to the Nation's security and economic prosperity," the White House issued Executive Order 13,817, titled "A Federal Strategy To Ensure Secure and Reliable Supplies of Critical Minerals." Exec. Order No. 13,817, 82 Fed. Reg. 60,835, 60,835 (Dec. 20, 2017). Concerned that the "dependency . . . on foreign sources creates a strategic vulnerability for both [the United States'] economy and military to adverse foreign government action, natural disaster, and other events that can disrupt supply of these key minerals," the Executive Order encouraged "[a]n increase in private-sector domestic exploration, production, recycling, and reprocessing of critical minerals." *Id.*

Pursuant to this Executive Order, the Department of the Interior classified uranium as one such "critical mineral" that is "essential to the economic and national security of the United States." Exec. Order No. 13,817, 82 Fed. Reg. 60,835, 60,835 (Dec. 20, 2017); *see also* U.S. Dep't of the Interior, Final List of Critical Minerals 2018, 83 Fed. Reg. 23,295 (May 18, 2018). Three crucial features qualify uranium as a

"critical mineral": (1) it is "essential to the economic and national security of the United States"; (2) "the supply chain . . . is vulnerable to disruption"; and (3) it "serves as an essential function in the manufacturing of a product, the absence of which would have significant consequences for our economy or our national security." Exec. Order No. 13,817, 82 Fed. Reg. 60,835, 60,835 (Dec. 20, 2017). The purpose of the "critical minerals" list is to facilitate the creation of a national, multi-agency effort to reduce foreign reliance on uranium and promote access to domestic supply of uranium in both the immediate short term and going forward. USGS, *Interior Releases 2018's Final List of 35 Minerals Deemed Critical to U.S. National Security and the Economy* (May 18, 2018), https://www.usgs.gov/news/interior-releases-2018-s-final-list-35-minerals-deemed-critical-us-national-security-and.

As recognized by this Court, the federal government has long exercised monopsony-like power to influence uranium production in the name of national interest. *See, e.g.*, *Huffman v. W. Nuclear, Inc.*, 486 U.S. 663 (1988).

* * *

Uranium will "never be wrestled completely free from military and political exigencies." James R. Wilch, Comment, *GATT and the Half-Life of Uranium Industry Protection*, 10 N.W. J. INT'L L. & BUS. 150, 192 (1989). As Congress has previously observed:

> [T]he Government's inventories of source and special nuclear materials represent a precious national asset. Unlike other materials which are perishable . . . the uranium inventory represents a vast nonperishable asset with intrinsic value in

> units of usable energy. Wisely managed, it can contribute to the common defense and security and to the welfare of the Nation."

1964 Report at 3122. In preempting the field of nuclear safety, Congress determined that the federal government was best positioned to balance the need for domestic production and development of nuclear material against the radiological hazards attendant to those activities. Uranium's importance to numerous national strategic interests underscores courts' responsibility to zealously guard federal policy from state obstruction.

Here, Virginia has enacted a blanket prohibition on uranium mining due to concerns about the radiological hazards of post-mining activities—activities committed exclusively to the Commission's regulatory authority. To prevent state subversion of a critical national policy, the Court should reaffirm that the Act's preemptive scope turns on the purpose and effect of a state's statute, even when, as here, the text of the statute purports to regulate activities appropriately within the state's jurisdiction.

CONCLUSION

For the foregoing reasons, the Court should reverse the Fourth Circuit's decision.

Respectfully submitted,

GORDON D. TODD *
KIMBERLY A. LEAMAN
T.J. HERRON
SIDLEY AUSTIN LLP
1501 K Street, N.W.
Washington, D.C. 20005
(202) 736-8000
gtodd@sidley.com

Counsel for Amici Curiae

July 26, 2018

* Counsel of Record