No. 16-1275

IN THE

# Supreme Court of the United States

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

v.

JOHN WARREN, *et al.*
*Respondents.*

*ON A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT*

## BRIEF OF NUCLEAR ENERGY INSTITUTE AS *AMICUS CURIAE* IN SUPPORT OF PETITIONERS


ELLEN C. GINSBERG
ANNE W. COTTINGHAM
JONATHAN M. RUND
NUCLEAR ENERGY INSTITUTE
1201 F Street, NW, Suite 1100
Washington, DC 20004
Telephone: (202) 739-8140

PETER C. MEIER
*Counsel of Record*
STEPHEN B. KINNAIRD
SEAN D. UNGER
PAUL HASTINGS LLP
875 15th Street, N.W.
Washington, D.C. 20005
Telephone: (202) 551-1700
petermeier@paulhastings.com

*Counsel for Amicus Curiae Nuclear Energy Institute*

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## STATEMENT OF INTEREST OF AMICUS CURIAE NUCLEAR ENERGY INSTITUTE

In accordance with Supreme Court Rule 37, the Nuclear Energy Institute, Inc. ("NEI") respectfully submits this brief in support of Petitioners.[1]

NEI is responsible for establishing and advocating on legal, regulatory, technical, and policy matters affecting the commercial nuclear energy industry. Our members include licensed operators of commercial nuclear power plants in the United States, nuclear plant designers, architect/engineering firms, nuclear fuel fabricators and other nuclear material licensees, and other entities involved in all aspects of the nation's nuclear energy sector.

NEI has a pressing interest in this case. The comprehensive federal regulatory framework that Congress has established over the past sixty years undergirds the continued viability of the nuclear industry. An important feature of that framework is the federal government's exclusive authority over the regulation of radiological risks, an authority established by the Atomic Energy Act, 42 U.S.C. §§ 2011, *et seq.*, and administered today largely by the U.S. Nuclear Regulatory Commission ("NRC"). The nuclear industry relies upon that federal exclusivity. Without it, states could impose inconsistent safety

[1] No counsel for a party authored this brief in whole or in part, and no counsel or party made a monetary contribution intended to fund the preparation or submission of this brief. No person other than *amicus curiae*, its members, or its counsel made a monetary contribution to its preparation or submission. All parties have consented in writing to the filing of this brief, and the consent letters are on file with the clerk.

standards, creating disruption, uncertainty, and higher costs. State laws that would frustrate the established regulatory framework for addressing radiological risk would not only threaten the continued availability of commercial nuclear power, but also discourage investment in new nuclear technologies and undermine national security.

## SUMMARY OF ARGUMENT

In enacting the Atomic Energy Act and its amendments, Congress carefully balanced when the federal government has exclusive control over nuclear regulation and when states may regulate. The line is bright. The federal government has exclusive regulatory authority over risks associated with radiological materials, while states have some authority over non-radiological aspects of nuclear development. States may, for example, engage in ratemaking, and enact land use regulations affecting nuclear generation. But the federal government regulates radiological risks in the nuclear fuel cycle, including uranium upon its removal from its place of deposit in nature, through enrichment, nuclear fuel production, the operation in nuclear generation facilities, and the disposal of nuclear waste.

The federal government's occupation of the field of radiological risk is settled law and categorical. "[T]he safety of nuclear technology [is] the exclusive business of the Federal Government, which has occupied the entire field of nuclear safety concerns." *In re Hanford Nuclear Reservation Litig.*, 534 F.3d 986, 1003 (9th Cir. 2008) (citations omitted). Thus, any state law that seeks to regulate nuclear safety is preempted. *See, e.g., English v. Gen. Elec. Co.*, 496

U.S. 72, 81–82 (1990). As this Court has observed, the boundaries of the "pre-empted field" are defined in part "by reference to the motivation behind the state law[.]" *Id.* at 84. States are permitted to regulate areas impacting nuclear energy only "for *purposes other* than protection against radiation hazards." 42 U.S.C. § 2021(k) (emphasis added). Under this Court's authority, states may not regulate nuclear safety based on some other pretextual regulatory purpose.

But, some states have tried. Federal courts have repeatedly had to reinforce the federal government's exclusive regulatory authority over radiological safety by rejecting state laws passed with a nuclear-safety motivation or which affect nuclear safety. *See, e.g., Entergy Nuclear Vt. Yankee, LLC v. Shumlin*, 733 F.3d 393 (2d Cir. 2013); *Skull Valley Band of Goshute Indians v. Nielson*, 376 F.3d 1223 (10th Cir. 2004).

If affirmed, the Fourth Circuit's reasoning here would open the door to state regulation of radiological risks. Predicated on state-specific concerns over the radiological safety of certain mining activities (uranium milling and uranium tailings[2]), Virginia has permanently foreclosed the safe development of the largest known uranium deposit in the United States.

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[2] Milling is the process of grinding uranium ore to facilitate the separation the uranium from rock. Once ground, milling also involves chemically separating the uranium. This produces a quantity of concentrated uranium, which can be enriched, and a larger quantity of waste called "tailings." Pet. App. 54a-55a.

NEI therefore asks this Court to overturn the Fourth Circuit's judgment sanctioning the state's reach into exclusive federal authority over the safety of processing uranium. Preserving the exclusivity of the extensive federal regulatory regime governing radiological risks is necessary to maintain the legal and economic stability on which the nuclear industry continues to depend. Stability is beneficial not only to the industry. Nuclear power is the nation's largest source of carbon-free power, and a healthy nuclear industry is vital to our national security. Preserving the existing federal regulatory framework thus supports both the advancement of clean energy and our national security.

## ARGUMENT

### I. The Federal Government Occupies the Field of Nuclear Safety, Regulating the Entire Lifecycle of Radiological Materials from Uranium Processing to the Disposition of Spent Fuel.

The Atomic Energy Act of 1954 ("AEA" or "the Act"), reflected Congress' determination that "the national interest would be best served if the Federal 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." *Pacific Gas & Elec. Co. v. State Energy Resources Conservation & Dev. Comm'n*, 461 U.S. U.S. 190, 207 (1983) (citing H.R. Rep. No. 2181, 83d Cong., 2d Sess. 1-11 (1954)). That determination reflected a fundamental shift from the federal government's focus on nuclear energy for military power to its focus on spawning the private application of nuclear energy for electrical power. To

encourage the latter, the Act established the Atomic Energy Commission and the basic framework of today's nuclear regulatory regime.[3] *Roberts v. Florida Power & Light Co.*, 146 F.3d 1305, 1306 (11th Cir. 1998). *See also* 42 U.S.C. §§ 2011 *et seq.* Through the AEA, Congress has sought to achieve two goals: the promotion of civil uses of nuclear energy and the management of any resulting radiological risks. *O'Conner v. Commonwealth Edison Co.*, 13 F.3d 1090, 1105 (7th Cir. 1994) ("Congress has attempted for nearly fifty years to encourage private sector involvement in the nuclear industry and at the same time has sought to protect the public.").

Some basic background may illuminate the boundaries of state and federal regulation that this case presents. The NRC does not regulate uranium mining (*i.e.,* the physical extraction of uranium ore from the ground). *See, e.g., In the Matter of Hydro Res., Inc. (P.O. Box 777 Crownpoint, Nm 87313)*, 63 N.R.C. 510, 510 (May 16, 2006). But extensive

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[3] In 1974, Congress enacted the Energy Reorganization Act of 1974, 88 Stat. 1233, as amended, 42 U.S.C. § 5801 *et seq.*, which abolished the AEC. The AEC's functions were divided between two regulatory bodies, with its licensing and related regulatory functions transferred to the Nuclear Regulatory Commission, and all other functions, including the enrichment-services program, transferred to the Energy Research and Development Administration, § 5814(c), which later became part of the U.S. Department of Energy (DOE), *see* §§ 301 and 703 of Department of Energy Organization Act, 91 Stat. 577, 606, 42 U.S.C. §§ 7151(a) and 7293. Today, the NRC administers the federal nuclear safety regulatory scheme for commercial nuclear activities, with support from DOE and the Environmental Protection Agency as well.

federal regulations apply as soon as uranium is removed from its "place of deposit in nature." 42 U.S.C. § 2092. Once unearthed, uranium ore is milled to extract from the surrounding rock a refined uranium product referred to as "yellowcake," which is used to make nuclear fuel. *See* U.S. Energy Info. Admin.,https://www.eia.gov/energyexplained/index.php?page=nuclear_fuel_cycle (last checked July 23, 2018). This milling process also results in a byproduct—the remainder of the ore after the milling process—known as uranium "tailings," which must be processed. *Id.* The chemical processing during milling and the storage of tailings both typically take place near the mine.

NRC regulations (and some EPA regulations) govern uranium processing, including milling at or near the mine site. In particular, federal regulations require a license for any person who seeks to "possess and use source material [natural uranium is source material] in conjunction with uranium or thorium milling, or byproduct material at sites formerly associated with such milling." *See generally* 10 C.F.R. 40, App. A. These extensive federal regulations also regulate "the siting, operation, decontamination, decommissioning, and reclamation of mills and tailings or waste systems and sites at which such mills and systems are located." *Id.*; *see also* 42 U.S.C. §§ 2022(b)(1)(2), 2111; 10 C.F.R. 40.1-40.3, 40.20-21, 40.32, 40.51; 40 C.F.R. 192.

The federal regime accomplishes the AEA's goal of protecting the public from radiological risks by regulating the nuclear industry *extensively*. The administration and enforcement of the AEA and its many implementing regulations cover all stages of

nuclear development and all phases of the production, use, and disposition of uranium and other radiological materials. This includes the regulation of uranium milling, tailings management, enrichment, the transportation of nuclear fuel, the use of nuclear fuel, the disposition of nuclear waste, and related activities involving radiological risk. *See supra*. The federal government also licenses and comprehensively regulates the construction and operation of nuclear power plants. *See* https://www.nrc.gov/reactors/new-reactors/regs-guides-comm.html (last checked July 23, 2018). The federal government imposes many requirements on licensees to maintain various forms of commercial and self-insurance, here too to protect the public against radiological risks. *See generally* 10 C.F.R. 50.54(w), 140.119(a)(4). And, federal regulations also extend even beyond the lifespan of nuclear facilities, as comprehensive regulations govern the decommissioning of nuclear power plants after they have stopped production. *See, e.g.,* U.S. Nuclear Reg. Comm'n,https://www.nrc.gov/waste/decommissioning.html (last checked July 23, 2018). In short, "a nuclear power plant operator. . . is required to comply with extensive regulations promulgated by the NRC." *Int'l Bhd. of Elec. Workers, Local 97 v. Niagara Mohawk Power Corp.*, 143 F.3d 704, 707 (2d Cir. 1998).

The federal framework at the same time accomplishes the AEA's goal of promoting commercial nuclear development by regulating radiological risks *exclusively*. Given the scale of capital expenditures necessary for nuclear development, and the costs and complexity associated with nuclear research and

development in advanced nuclear technologies, the nuclear industry depends, crucially, on the legal certainty that comes with centralized federal regulation. NEI's members do not seek weak regulation. Rather, they need to know that the extensive regulatory regime governing them reflects the view of the federal expert agency charged with its administration.

Reflecting these policy objectives, Congress put in place a regulatory system making the field of nuclear safety, "the exclusive business of the Federal Government." *Pacific Gas & Elec.*, 461 U.S. at 208. The Act thus gave the AEC "exclusive jurisdiction to license the transfer, delivery, receipt, acquisition, possession and use of nuclear materials." *Pacific Gas*, 461 U.S. at 207 (citing 42 U.S.C. §§ 2014, (e), (z), (aa), 2061–2064, 2071–2078, 2091–99, 2111–14 (1976 and Supp. IV 1980)). "Upon these subjects, no role was left for the states." *Id.*

That is not to say state regulation does not touch the nuclear industry. Since the passage of the AEA, states have retained authority to regulate some economic aspects of nuclear power, as well as various types of non-radiological environmental and land use issues that also impact the nuclear industry. As this Court has observed, the relevant history here "indicates that from the passage of the Atomic Energy Act in 1954, through several revisions, and to the present day, Congress has preserved the dual regulation of nuclear-powered electricity generation[.]" *Pacific Gas,* 461 U.S. at 211–12. "[T]he federal government maintains complete control of the safety and 'nuclear' aspects of energy generation; the states exercise their traditional

authority over the need for additional generating capacity, the type of generating facilities to be licensed, land use, ratemaking, and the like." *Id*.

In 1959, for example, "to promote an orderly regulatory pattern between the Commission and State governments with respect to nuclear development and use and regulation of byproduct, source, and special nuclear materials," *see* 42 U.S.C. §2021(a)(3), Congress passed an amendment to the AEA "prohibit[ing] the states from regulating the safety aspects of nuclear development." *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 250 (1984). The 1959 amendment "was premised on [Congress'] belief that the Commission [*i.e.*, the AEC and later the NRC] was more qualified to determine what type of safety standards should be enacted in this complex area." *Silkwood*, 464 U.S. at 250. Meanwhile, "state public utility commissions or similar bodies . . . [were] "empowered to make the initial decision regarding the need for power." *Vermont Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, Inc.*, 435 U.S. 519, 550 (1978).[4]

[4] The 1959 AEA amendment did allow the federal government "by agreements with state governors to discontinue its regulatory authority over certain nuclear materials under limited conditions," *Pacific Gas,* 461 U.S. at 209, but only where such agreements are "coordinated and compatible" with federal regulations. *Id.* (citing S.Rep. No. 870). This flexibility is not relevant here, however, as Virginia has not coordinated with the federal government to regulate uranium milling and tailings management.

## II. In Deciding Federal Preemption Issues, the Atomic Energy Act Directs Courts To Examine Whether the State Acted for Radiological Safety Purposes.

Policing the respective boundaries of federal and state authority requires consideration of the purpose underlying state regulation. States may not regulate radiological safety under the cover of some other regulatory purpose. The AEA itself makes this clear. Section 2021(k) of the Act provides that states may regulate areas impacting nuclear energy only "*for purposes other than protection against radiation hazards*." 42 U.S.C. § 2021(k) (emphasis added). By permitting regulation "for purposes other than protection against radiation hazards," Congress "underscored the distinction drawn in 1954 between the spheres of activity left respectively to the federal government and the states." *Pacific Gas*, 461 U.S. at 210. If a state's purpose in enacting the law is motivated by nuclear safety, or has an "actual effect on nuclear safety," it is preempted. *English*, 496 U.S. at 84.

Courts do not "'blindly accept the articulated purpose'" of state regulation in evaluating the motivation underlying it. *Entergy Nuclear Vt. Yankee*, 733 F.3d at 416 (quoting *Greater N.Y. Metro Food Council, Inc. v. Giuliani*, 195 F.3d 100, 108 (2d Cir. 1999)). Such unquestioned acceptance would allow states to "'nullify nearly all unwanted federal legislation.'" *Id.* Courts therefore engage in a "more searching review to determine whether a statute was enacted based upon radiological safety concerns." *Id.* In undertaking permissible state economic regulation of "a nuclear generating facility," for example, a state

may "not even consider the safety aspects." *Suffolk Cty. v. Long Island Lighting Co.*, 728 F.2d 52, 58 (2d Cir. 1984).

Upon reviewing a challenged state regulation, courts have looked carefully at the regulation's underlying purposes to resolve claims that the regulation actually targets radiological risks. For example, in *Skull Valley Band of Goshute Indians v. Nielson*, 376 F.3d 1223 (10th Cir. 2004), the Tenth Circuit considered whether the AEA preempts numerous Utah statutes, one of which designated as a state highway the only road that would have provided access to a proposed spent nuclear fuel storage facility. That statute also "requir[ed] the consent of the governor and the state legislature" before any "company engaged in the transportation or storage of spent nuclear fuel was allowed to drive on it." *Skull Valley*, 376 F.3d at 1251-52. When challenged, Utah defended the challenged statutes by claiming they were facially neutral: "According to the Utah officials, the district court erred by failing to explain how these statutes affect radiological safety decisions." *Id.* at 1252. The Utah officials "criticize[d] the district court for relying on findings regarding the legislature's motive in passing these statutes." *Id.*

The Tenth Circuit correctly rejected those arguments. "*Pacific Gas*, *Silkwood*, and *English*," the court explained, "require consideration of the purpose of the allegedly preempted statute, along with its effects." *Skull Valley,* 376 F.3d at 1252. Looking beyond the claimed facial neutrality of the statute, the court concluded that Utah had undertaken to regulate nuclear safety notwithstanding exclusive federal regulatory jurisdiction. "The state legislator

who sponsored the Road Provisions explained that they established a 'moat' around the proposed SNF [spent nuclear fuel] site, and the Governor added that the Road Provisions will add substantially to our ability as a state to protect the health and safety of our citizens against the storage of high-level nuclear waste." *Id.* (internal citations omitted). Because the record revealed that the Utah laws were enacted for reasons of radiological safety, they were preempted.

Similarly, in *Entergy Nuclear Vt. Yankee, LLC v. Shumlin*, 733 F.3d 393 (2d Cir. 2013), Vermont sought to regulate nuclear safety with a law providing that a nuclear facility long in operation could continue to operate only with the consent of the state legislature. *Entergy Nuclear*, 733 F.3d at 416. Vermont argued that two non-safety purposes within the state's regulatory authority, including the promotion of an "increased use of a diverse array of renewable power sources; and . . . of energy sources that are more cost-effective," motivated the law. *Id.*

The Second Circuit granted that "Vermont's asserted policy interests would not necessarily interfere with the preempted concern of radiological safety," 733 F.3d at 416, but noted correctly that the "inquiry does not end at the text of the statute." *Id.* As the Second Circuit stated, if the preemption analysis ended with the text of the law or an express purpose, a state could regulate nuclear safety "by simply publishing a legislative committee report articulating some state interest or policy—other than frustration of the federal objective—that would be tangentially furthered by the proposed state law." *Id.* (citation omitted).

The Second Circuit thus went on to consider "the legislative record," which contained "references, almost too numerous to count, [that] reveal legislators' radiological safety motivations and reflect their wish to empower the legislature to address their constituents' fear of radiological risk, and [legislators'] belief that the plant was too unsafe to operate." *Id.* at 420. The Vermont law was therefore preempted. *Id.*

This Court, too, has concluded both that "[a] state moratorium on nuclear construction grounded in safety concerns falls squarely within the prohibited field" of state regulation, and that "a state judgment that nuclear power is not safe enough to be further developed would conflict" with Congress' controlling view. *Pacific Gas*, 461 U.S. at 213. Still other courts have likewise recognized that "a state law related to nuclear power is preempted if it . . . is motivated by safety concerns." *Vermont Yankee Nuclear Power Corp. v. Entergy Nuclear Vermont Yankee, LLC*, 683 F.3d 1330, 1347 (Fed. Cir. 2012);[5] *see also United States v. Manning*, 527 F.3d 828, 836–37 (9th Cir. 2008) ("The CPA is preempted because it regulates within the field that is occupied by the AEA"); *United States v. Commonwealth of Kentucky*, 252 F.3d 816, 823 (6th Cir. 2001) ("The permit conditions therefore represent an attempt by the Cabinet to regulate materials covered by the AEA based on the Cabinet's

[5] In other preemption contexts, too, courts have emphasized the "real purpose of the state law," as opposed to "the area of law that the state statute addresses." *Movsesian v. Victoria Versicherung AG*, 670 F.3d 1067, 1075 (9th Cir. 2012) (citations omitted); *see also Am. Ins. Ass'n v. Garamendi*, 539 U.S. 396, 426 (2003) (rejecting stated purpose of state law).

safety and health concerns, and are thus preempted.").

## III. The Decision Below Conflicts With the Federal Government's Exclusive Regulatory Authority over the Radiological Risk of Nuclear Materials, on which the Nuclear Industry Has Long Relied.

In this case, as in *Skull Valley* and *Entergy Nuclear*, the respondent states or state officials defended their attempt to regulate nuclear safety by arguing their laws were neutrally stated. Petitioners have alleged otherwise.

In the 1970s, the largest known uranium ore deposit in the United States was discovered in Virginia. Pet. App. 5a. The Virginia General Assembly reacted by calling on state regulators to "evaluate the environmental effects . . . and any possible detriments to the health safety, and welfare of Virginia citizens which may result from uranium exploration, mining, or milling." *Id*. (quoting 1981 Va. Acts 1404). In 1982, the Virginia General Assembly permitted some uranium exploration, but imposed a one-year moratorium on uranium mining. 1982 Va. Acts 426. A year later, Virginia extended its ban on uranium mining indefinitely. 1983 Va. Acts 3; Pet. App. 178a. The 1983 moratorium extension also created a working group to consider "all pathways which radionuclides and other contaminants may enter or affect ground waters, receiving surface waters, and the air and the biota and be transmitted to critical receptors as result of mining, milling, and tailing management at the specific site." 1983 Va. Acts 3; Pet. App. 183a-84a. Two years later, the

commission and working group suggested that under certain conditions the mining moratorium should be lifted. *See* Pet. App. 5a. Notwithstanding that recommendation, and despite Virginia Uranium Inc.'s longstanding efforts since to have the ban lifted, a complete ban on uranium mining remains in effect.

Petitioners Virginia Uranium Inc.'s (*et al.*) suit asked the United States District Court for the Western District of Virginia to declare the ban preempted by federal law, and to issue an injunction compelling Virginia to consider uranium mining permits. In response, state officials moved to dismiss, requiring the district court to accept the Petitioners' factual allegations for the purposes of resolving that motion. And indeed the district court acknowledged Virginia Uranium's allegation "that the moratorium rested on 'radiological safety concerns' associated with milling and tailings management," *see* Pet. App. 68a, as the text of the 1983 Act—in particular its reference to "radionuclides and other contaminants," and "mining, milling, and tailing management"—indicates. Nevertheless, the district court granted the motion to dismiss on the grounds that the text of Virginia's prohibition itself only applied to mining. *Id.* at 71a-80a.

On appeal to the Fourth Circuit, Virginia Uranium Inc. emphasized its allegations in the district court that safety concerns regarding milling and tailings *motivated* Virginia's ban. In affirming, a divided panel "agree[d] that milling and tailings storage are 'activities' under section 2021(k) because they are regulated by the NRC, and states may therefore not regulate them except for purposes other than protection against radiation hazards." Pet. App.

at 13a-14a (citing 42 U.S.C. §§ 2021, 5842, 7918-19; 10 C.F.R. § 40.3). The majority nonetheless held that "the plain language of the commonwealth's ban does not mention uranium or tailings storage," and thus there was no need to look to the State's purpose in passing the law. Pet. App. 14a.

The majority's conclusion that the ban's language renders irrelevant Virginia's motivation for the ban is inconsistent with the Atomic Energy Act and this Court's approach to the Act's preemptive effect. As Judge Traxler explained in dissent, Virginia banned uranium mining "because of radiological safety concerns regarding uranium milling and tailings management," ignoring that "Congress has taken away a state's ability to limit mining for this particular reason." Pet. App. 20a. Judge Traxler explained that the fact that the text of the statute addresses mining and not safety is simply not determinative in the preemption analysis. Pet. App. 42a. Instead, and consistent with *Pacific Gas*, *Skull Valley*, and *Entergy Nuclear*, Judge Traxler would have held that "state statutes enacted to protect against the radiological dangers of activities the AEA regulates are preempted *regardless of whether the statutory text reveals that purpose and regardless of whether the statute expressly prohibits an activity the Act regulates.*" *Id.* (emphasis original). The Petitioners' allegations and the legislative history leading to Virginia's ban indicate Virginia was motivated by radiological risks, but the Fourth Circuit majority looked past that history in limiting its analysis to the statutory language. Pet App. 40a (Traxler, J. dissenting).

In failing to consider the State's purpose in passing the mining ban, the majority departed from this Court's instructions in *Pacific Gas* and *English*, and, in doing so, also failed to adhere to the boundaries Congress has established for state regulation.

Virginia can regulate uranium mining for reasons genuinely unrelated to the safety of nuclear source materials or activities related to the risks of processing uranium.

But Virginia may not ban or suspend uranium mining motivated, in particular, by safety concerns related to the processing of uranium once extracted from the earth. A ban targeting the radiological risks of those activities interferes with the exclusive authority of the federal government and achieves something indirectly that a state could not do directly. Such a result turns preemption on its head, allowing a state to purposefully regulate radiological risks and short circuit federal regulation so long as the state does not mention safety in the language of the law.

## IV. A Healthy Nuclear Industry Is Vital for National Security.

As Judge Traxler noted in his dissent below, "[t]he stakes in this case are significant," Pet. App. at 21a. Nuclear power is an integral part of the nation's domestic energy supply. Currently, the United States has 99 operating commercial nuclear reactors in 30 states that produce nearly 20 percent of our nation's electricity and nearly 60 percent of our carbon-free electricity. *See* U.S. Dept. of

Energy,https://www.energy.gov/ne/nuclear-power-summary-may-2018 (last checked July 23, 2018). A healthy nuclear industry is necessary both to satisfy the country's power demands and to meet clean air goals.

A healthy nuclear industry is important also for other aspects of national security. Indeed, there is broad expert consensus that U.S. national security requires a strong domestic nuclear industry, given that the industry in various ways supports not only the country's defense mission but also global nonproliferation. *See, e.g.,* M. Wallace, A. Roma, & S. Desai, Back from the Brink: A Threatened Nuclear Energy Industry Compromises National Security (July 2018) (the domestic commercial nuclear energy industry is of "critical importance to the country for national defense, research, economic growth, geopolitics, and international nonproliferation); Energy Futures Initiative, *The U.S. Nuclear Energy Enterprise: A Key National Security Enabler* (Aug. 2017) (explaining the central importance of a healthy domestic nuclear industry to national security); J. Carl & D. Fedor, *Keeping the Lights on at America's Nuclear Power Plants* (2017) (a robust nuclear power industry is necessary to protect U.S. leadership in technology, safeguard national security, and to reduce carbon emissions). For example, a strong commercial nuclear industry is essential to the national-defense supply chain, including for the nation's nuclear powered navy, which depends on the nuclear industry. *See The U.S. Nuclear Energy Enterprise, supra,* at 8 (explaining why "a strong domestic supply chain is needed to provide for nuclear Navy requirements"). *See also id.* at 9

("Without a strong nuclear energy program . . . the supply chain for both civilian and national security objectives will be challenging.").

The importance of the nuclear industry to national security can be seen, for instance, in expressions by Senators Cotton, Cruz and Inhofe, at the *certiorari* stage of this case, of their "support [for] the prudent development of U.S. natural resources [i.e., uranium]." *See Brief of Senator Tom Cotton, Senator Jim Inhofe, and Senator Ted Cruz as Amicus Curiae in Support of Petitioner* ("Cotton Amicus"), Case No. 16-1275 at 18 (May 25, 2017). But notwithstanding consistent (and bipartisan) recognition at the federal level of the importance of the nuclear industry for our economy, climate, and national security, the fact is that challenges at the local level sometimes remain. As Senator Cotton put it, there can be a "public penchant to stigmatize localities hosting nuclear facilities or to otherwise perceive the development of nuclear energy as unsafe." Cotton Amicus at 13 (citation omitted). "Public hostility is frequently manifested in state or local laws that attempt to dismantle what the federal government has already approved." *Id.*

To allow states to regulate radiological risks would undermine the federal regulatory framework on which the industry has long relied. Congress determined decades ago that exclusive federal regulation of radiological safety would best promote commercial nuclear development. New layers of state regulation on top of—or at odds with—the robust federal regime could prove counterproductive and unnecessarily costly to the industry supplying one-fifth of U.S. electricity.

There is much more than an abstract principle at stake here. If courts begin to allow state regulation of radiological safety so long as the regulation's language makes no mention of that goal and regulates indirectly, Congress' careful balance would be undone. Consider, as an illustration, the implication if in *Skull Valley*, *Entergy Nuclear*, and this case the state regulations targeting radiological risks were all allowed as within state authority. In that scenario, going forward any state could prevent the processing of uranium source materials (like Virginia is attempting), the operation of a nuclear power plant (like Vermont attempted), and the storage of spent nuclear fuel (like Utah attempted). That result—restricting the lifecycle of uranium production, use, and disposition—certainly would not leave much of a role for federal regulation. Such a result cannot square with the AEA, basic preemption principles, or with Congress' aim to promote a nuclear industry that in many ways has become so important to the nation and its security.

## CONCLUSION

For the above reasons, the judgment of the Court of Appeals should be reversed.

Respectfully submitted,

PETER C. MEIER
*Counsel of Record*
STEPHEN B. KINNAIRD
SEAN D. UNGER
PAUL HASTINGS LLP
875 15th Street N.W.
Washington, DC 2005
(202)551-1700
petermeier@paulhastings.com

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