U.S. DEPARTMENT OF ENERGY

Price-Anderson Act

Report to Congress
January 2023

United States Department of Energy
Washington, DC 20585

Message from the Secretary

This Report to Congress, prepared pursuant to section 170p. of the Atomic Energy Act of 1954, as amended, 42 U.S.C. § 2210(p), provides the Department of Energy's review and recommendations concerning the need for continuation or modification of the provisions of the Price-Anderson Act as it applies to the Department of Energy.

This report is being provided to the following Members of Congress**:**

- **The Honorable Patty Murray**
  Chair, Committee on Appropriations, U.S. Senate

- **The Honorable Susan Collins**
  Vice Chair, Committee on Appropriations, U.S. Senate

- **The Honorable Kay Granger**
  Chair, Committee on Appropriations, U.S. House of Representatives

- **The Honorable Rosa DeLauro**
  Ranking Member, Committee on Appropriations, U.S. House of Representatives

- **The Honorable Dianne Feinstein**
  Chair, Subcommittee on Energy and Water Development, Committee on Appropriations, U.S. Senate

- **The Honorable John Kennedy**
  Ranking Member, Subcommittee on Energy and Water Development, Committee on Appropriations, U.S. Senate

- **The Honorable Chuck Fleischmann**
  Chair, Subcommittee on Energy and Water Development, and Related Agencies, Committee on Appropriations, U.S. House of Representatives

- **The Honorable Marcy Kaptur**
  Ranking Member, Subcommittee on Energy and Water Development, and Related Agencies, Committee on Appropriations, U.S. House of Representatives

If you have any questions on this report, please contact me or Katie Donley, Director, Office of Budget, Office of the Chief Financial Officer, (202)586-0176.

Sincerely,

Jennifer M. Granholm

Executive Summary

This report fulfills the statutory requirement in section 170p. of the Atomic Energy Act of 1954, as amended (AEA), 42 U.S.C. § 2210(p), by providing Congress with the Department of Energy's (the Department or DOE) review and recommendations concerning the need for continuation or modification of the provisions of the Price-Anderson Act (PAA) as it applies to the Department of Energy.[1] Pursuant to statutory direction, this report accounts for the present condition of the nuclear industry, availability of private insurance, nuclear safety considerations, and other relevant factors.

The report sets forth the legislative background of the PAA, the major events that have occurred since DOE's prior report to Congress under section 170p. in 1998, and an explanation of the key attributes of the DOE indemnification made available under the PAA in the event of a nuclear incident or precautionary evacuation. In addition, the report provides a summary of comments received in response to DOE's Notice of Inquiry (NOI) soliciting public input to assist in the preparation of the report. Finally, the report concludes with the Department's analysis of its experience with and application of the DOE indemnification and review of public input to reach its findings and recommendations to Congress on the need for continuation, repeal, or modification of provisions of the PAA.

The Department's recommendations to Congress are:

(1) the PAA should be continued
(2) the DOE indemnification should continue and expand upon its broad and mandatory coverage
(3) the PAA should continue in effect in a manner compliant with the Convention on Supplementary Compensation for Nuclear Damage

The Department strongly believes and concludes that continuation of the PAA and the DOE indemnification in their current form without substantial modification remains, as concluded in its 1998 report to Congress, "in the best interests of DOE, its contractors, its subcontractors and suppliers, and the public." The DOE indemnification is a longstanding and critical component of DOE's ability to achieve its statutory missions, now and in the future. The availability of the DOE indemnification supports nuclear safety practices and outcomes in contractual activities performed by or on behalf of DOE; protects the public through the PAA's specialized system of legal and financial protections for injured parties; is cost-effective to the Federal Government; and is without an equivalent and adequate alternative.

[1] The NRC has submitted a report to Congress based on its authorities and administration of the PAA. *See* U.S. NUCLEAR REG. COMM'N, THE PRICE-ANDERSON ACT: 2021 REPORT TO CONGRESS PUBLIC LIABILITY INSURANCE AND INDEMNITY REQUIREMENTS FOR AN EVOLVING COMMERCIAL NUCLEAR INDUSTRY (2021), https://www.nrc.gov/docs/ML2133/ML21335A064.pdf.

Further, DOE recommends that the broad and mandatory coverage of the DOE indemnification remain unchanged and undiminished with respect to contractual activity within the United States and be expanded to include additional contractual activity by DOE contractors on behalf of DOE outside the United States to reflect changed circumstances. Lastly, the United States' continuation of existing PAA provisions in a manner compliant with the Convention on Supplementary Compensation for Nuclear Damage (CSC) is vitally important to the promotion of American leadership and a strong domestic industry in nuclear exports. As a CSC member, the United States and its nuclear industry exporting nuclear goods and services abroad are afforded the protection of a global nuclear liability regime that addresses legal liability with consistent rules and ensures the availability of compensation of victims in the event of a nuclear incident. DOE finds that the existing PAA provisions provide the level of protection required to continue as a member of the CSC and recommends that such provisions continue in effect in a manner compliant with the CSC.

PRICE-ANDERSON ACT

Table of Contents

I. Legislative Language

This report was prepared pursuant to the Price-Anderson Amendments Act of 2005, passed as part of the Energy Policy Act of 2005, amending section 170p. of the Atomic Energy Act of 1954, (AEA) wherein Congress directed both the Department of Energy (DOE) and the Nuclear Regulatory Commission (NRC) to file reports with Congress containing their respective recommendations for continuation, repeal, or modification of provisions of the Price Anderson-Act.

Section 170p. of the Atomic Energy Act of 1954, as amended, 42 U.S.C. § 2210(p), provides:

> *The Commission [NRC] and the Secretary shall submit to the Congress by December 31, 2021, detailed reports concerning the need for continuation or modification of the provisions of [the Price-Anderson Act], taking into account the condition of the nuclear industry, availability of private insurance, and the state of knowledge concerning nuclear safety at that time, among other relevant factors and shall include recommendations as to the repeal or modification of any of the provisions of this section.*

This report addresses the Price-Anderson Act as applicable to and administered by DOE.[2]

II. Background

A. Report Preparation

This report fulfills the statutory requirement in section 170p. for the Department to report to Congress by December 31, 2021 (2021 Report), on the need for continuation or modification of those provisions of the Price-Anderson Act (PAA or Act) under which DOE indemnifies its contractors and other persons for legal liability arising from a nuclear incident or precautionary evacuation caused by activities under a contract with DOE. This report provides background information on the PAA and DOE's implementation of the PAA, updates significant legislative and other events since DOE's prior report to Congress on the PAA in 1998,[3] and makes findings and recommendations pertaining to the continuation, modification, or repeal of provisions of the PAA based on DOE experience and relevant industry conditions.

This report was prepared by a team of DOE personnel from affected DOE program offices, representing headquarters and field sites, and led by the Office of the General Counsel. The

[2] The NRC has submitted a report to Congress based on its authorities and administration of the PAA. *See* U.S. NUCLEAR REG. COMM'N, THE PRICE-ANDERSON ACT: 2021 REPORT TO CONGRESS PUBLIC LIABILITY INSURANCE AND INDEMNITY REQUIREMENTS FOR AN EVOLVING COMMERCIAL NUCLEAR INDUSTRY (2021), https://www.nrc.gov/docs/ML2133/ML21335A064.pdf.

[3] U.S. DEP'T OF ENERGY, REPORT TO CONGRESS ON THE PRICE-ANDERSON ACT (1998) https://www.energy.gov/sites/prod/files/gcprod/documents/paa-rep.pdf [hereinafter 1998 Report].

team provided input and recommendations on the need for continuation or modification of the Price-Anderson Act based on their respective experience with the DOE indemnification, their perspective on the potential effects on current and future DOE activities if there were changes or discontinuation of the PAA, and the feasibility of alternatives to the DOE indemnification.

To garner other viewpoints and promote transparency, DOE published a Notice of Inquiry (NOI) in the *Federal Register* soliciting comments from the public on the need for continuation or modification of the provisions of the Price-Anderson Act as administered by DOE.[4] The NOI traced the history and events that occurred since the last report to Congress on the PAA in 1998, summarized in Section B, below. The NOI included references to relevant documents and reports and a suggested list of topics to facilitate public review and comment. DOE reviewed and considered the comments and viewpoints expressed in response to the NOI, summarized in section D of this report, in the preparation of this report. DOE did not use any contractor or subcontractor support directly in the preparation of this report.

B. Recent Legislative Actions

1. Introduction

The PAA was enacted in 1957 as an amendment to the AEA to encourage the development of nuclear power and nuclear activities by establishing a system of financial protection that would serve to benefit both 1) persons who may be liable for a nuclear incident and 2) persons who may be injured by a nuclear incident.[5] DOE and the Nuclear Regulatory Commission (NRC) are authorized to administer the PAA system of financial protection with respect to DOE contractual activities and NRC licensees, respectively. In the DOE PAA system, financial protection is in the form of an indemnification by DOE ("DOE indemnification") to contractors or other persons for legal liability for a nuclear incident or a precautionary evacuation arising from activity under a DOE contract. [6] The availability of the DOE indemnification to persons

[4] Notice of Inquiry on Preparation of Report to Congress on the Price-Anderson Act, 86 Fed. Reg. 40,032 (July 26, 2021), https://www.federalregister.gov/documents/2021/07/26/2021-15840/notice-of-inquiry-on-preparation-of-report-to-congress-on-the-price-anderson-act; Notice of Inquiry on Preparation of Report to Congress on the Price-Anderson Act, 86 Fed. Reg. 45,714 (Aug. 16, 2021) (extending the public comment period), https://www.federalregister.gov/documents/2021/08/16/2021-17440/notice-of-inquiry-on-preparation-of-report-to-congress-on-the-price-anderson-act.

[5] Price-Anderson Act, Pub. L. No. 85-256, 71 Stat. 576 (1957) (amending Atomic Energy Act of 1954, Pub. L. No. 83-703, codified as amended at 42 U.S.C. § 2011 *et seq*.). For brevity, the Atomic Energy Act of 1954 will be cited throughout simply as "Atomic Energy Act" or AEA. The pertinent sections of the PAA amended AEA § 11 and created AEA § 170, which are codified respectively at 42 U.S.C. §§ 2014 and 2210.

[6] In the NRC system, the PAA financial protection requirements for NRC licensees are in the form of insurance and/or indemnification, or neither depending on the type of nuclear installation and nuclear operator. *See* U.S. Nuclear Reg. Comm'n, *The Price Anderson Act – Crossing the Bridge to the Next Century: A Report to Congress,* 1–8 (1998), https://www.nrc.gov/docs/ML1217/ML12170A857.pdf (describing the NRC Price-Anderson Act financial protection scheme) and 10 C.F.R. Part 140, Financial Protection Requirements and Indemnity Agreements (NRC regulations implementing the PAA financial protection requirements for licensees and the indemnification and liability limitations).

liable for a nuclear incident, coupled with the special administrative and judicial requirements in the PAA, provides assurance that persons who may be injured by a nuclear incident receive full and prompt compensation for damage to their person or property. The PAA has been extended and amended several times since enactment, with significant amendments to the Act in 1988[7] (1988 Amendments) and the most recent amendments in 2005.[8]

2. 1988 Amendments

The 1988 Amendments made three important changes with respect to the DOE indemnification. Specifically, the 1988 Amendments (1) significantly increased the amount of the DOE indemnification for a nuclear incident in the United States from $500 million to $9.43 billion, (2) made DOE indemnification mandatory in all DOE contracts involving the risk of a nuclear incident, and (3) established a system of civil penalties for DOE indemnified contractors, subcontractors, and suppliers.

The 1988 amendments also revised the jurisdictional grant in 42 U.S.C. § 2210(n)(2) by replacing "extraordinary nuclear occurrence" with "nuclear incident."[9] This change also provided a broader means of consolidating cases in Federal court, granting "district courts original and removal jurisdiction over all 'public liability'" actions.[10] Finally, the 1988 Amendments also extended the Price-Anderson Act for 15 years until August 1, 2002.

3. 1998 Report to Congress

DOE was required to submit a report to Congress pursuant to section 170p. in 1998, four years before the then-applicable expiration date of 2002 for the PAA. DOE's report to Congress in 1998 recommended—with respect to DOE—the continuation of the PAA as being in the "best interests of DOE, its contractors, its subcontractors and suppliers, and the public."[11] The 1998 Report included five key recommendations: (1) DOE indemnification should continue as-is; (2) DOE indemnification amounts "should not be decreased"; (3) "Broad and mandatory coverage" for contracted activities should continue to be provided by DOE indemnification; (4) DOE should have "continued authority to impose civil penalties for violations of nuclear safety requirements by for-profit contractors, subcontractors and suppliers"; and (5) the CSC "should be ratified and conforming amendments to the [PAA]" be adopted.[12]

---

[7] Price-Anderson Amendments Act of 1988, Pub. L. No. 100-408, 102 Stat. 1066 (amending Atomic Energy Act §§ 11, 170, codified as amended at 42 U.S.C. §§ 2014, 2210).

[8] Price-Anderson Amendments Act of 2005, Pub. L. No. 109-58, 119 Stat. 594, 779–82 (amending Atomic Energy Act § 170, codified as amended at 42 U.S.C. § 2210).

[9] Price-Anderson Amendments Act of 1988, Pub. L. No. 100-408, 102 Stat. 1066 (amending Atomic Energy Act § 11, codified as amended at 42 U.S.C. § 2210).

[10] *El Paso Nat. Gas Co. v. Neztsosie*, 526 U.S. 473, 477 (1999).

[11] 1998 Report at 1.

[12] *Id*. at 2.

In sum, DOE concluded that continuation of the PAA indemnification without any substantial change was essential to the Department's ability to fulfill its statutory missions; provided protection to members of the public that may be affected by DOE's nuclear activities; and was a cost-effective option without any satisfactory alternative.

4. Energy Policy Act of 2005

As part of the Energy Policy Act of 2005 (Title VI, Subtitle A), Congress passed the Price-Anderson Amendments Act of 2005 (2005 Amendments).[13] Considering the question of whether to extend the DOE indemnification, and following a series of temporary extensions,[14] the 2005 Amendments extended the authority of DOE to grant the DOE Price-Anderson indemnification until December 31, 2025.[15] In addition, the 2005 Amendments re-instituted the DOE mandate under section 170p. to report to Congress on the need for continuation, modification, or elimination of PAA provisions, with a due date of December 31, 2021, four years prior to the 2025 expiration of the extended PAA authority.[16]

In the 2005 Amendments, Congress continued the key attributes of the PAA and the DOE indemnification *(infra*, Section C) with some adjustments to DOE authorities[17] to: (1) increase the liability limit and the Department's indemnification amount for DOE contractors in the case of nuclear incidents within the United States to $10 billion, to be adjusted every five years for inflation; (2) increase the liability limit and the Department's indemnification amount for DOE contractors in the case of certain nuclear incidents outside the United States from $100 million to $500 million; and (3) modify section 234A of the AEA—which imposes civil penalties on DOE contractors covered by DOE indemnification for violations of DOE nuclear safety regulations—as it applies to nonprofit entities that are DOE contractors. Specifically, section 234A was modified to rescind the automatic remission of civil penalties for DOE contractors that are nonprofit educational institutions and to repeal the exemption from such penalties for seven named entities. In its place, the 2005 Amendments imposed a limitation on civil penalties for not-for-profit contractors, subcontractors, or suppliers to not exceed the total amount of fees paid within any 1-year contract period under which the violation occurs.[18]

[13] Price-Anderson Amendments Act of 2005, Pub. L. No. 109-58, 119 Stat. 594, 779–82 (amending Atomic Energy Act § 170, codified as amended at 42 U.S.C. § 2210).
[14] *See* FY2003 and FY2005 Defense Authorization Acts, Pub. L. No. 107-314, § 3171, 116 Stat. 2458 and Pub. L. No. 108-375, § 3141, 118 Stat. 1811, respectively.
[15] Price-Anderson Amendments Act of 2005, Pub. L. No. 109-58, § 602(b), 119 Stat. 594, 779 (amending Atomic Energy Act § 170d.(1)(A), 42 U.S.C. § 2210(d)(1)(A)). The NRC's authority for the PAA system of financial protection was similarly extended.
[16] *Id.* at § 606 (amending Atomic Energy Act § 170p., 42 U.S.C. § 2210(p)).
[17] The 2005 Amendments modified certain authorities applicable to either or both the NRC and DOE. This Report focuses on those modifications applicable to DOE and does not address the modifications specific to the NRC.
[18] Price-Anderson Amendments Act of 2005, Pub. L. No. 109-58, §§ 604–05, 610. 119 Stat. 594, 780–81 (amending Atomic Energy Act § 170, 234A.b, 42 U.S.C. §§ 2210(d)–(e), 2282a).

5. Energy Independence and Security Act of 2007

In 2007, Congress passed the Energy Independence and Security Act of 2007 (EISA), containing section 934, *Convention on Supplementary Compensation for Nuclear Damage Contingent Cost Allocation* (CSC or Convention), to implement the CSC in the United States.[19] The CSC is an international treaty adopted under the auspices of the International Atomic Energy Agency that establishes a global nuclear liability regime to address legal liability and compensation of victims in the event of a nuclear incident as defined in the CSC.[20] The CSC provides consistent rules for addressing legal liability for Parties to the CSC and, in the event of a nuclear incident in any Party's territory, requires all Parties to contribute to an international supplementary fund to provide an additional tier of compensation beyond that available under that Party's national law. In 2006, the Senate ratified the CSC, and in the following year, Congress passed section 934 of EISA. The CSC went into effect in 2015, and at present has eleven member countries, and nineteen signatory countries.[21]

The CSC, like other nuclear liability treaties,[22] requires a country's domestic (national) nuclear liability law to comply with certain international nuclear liability law principles that, among other things, modify normal tort law by channeling all legal liability for nuclear damage exclusively to the operator of a nuclear facility on the basis of strict liability. The PAA, however, operates on top of the existing tort law of the State where a nuclear incident occurs. Thus, for the United States, membership in the CSC would have required significant changes to the PAA were it not for a provision in the CSC that permits the United States to be deemed in compliance with certain of the CSC requirements relating to the international principles if it maintains certain provisions of the PAA that were in effect on January 1, 1995 and that provide for: (1) strict liability in the event of a nuclear incident where there is substantial off-site nuclear damage; [23] (2) the indemnification of any person other than the operator liable for nuclear damage;[24] and (3) an indemnification amount of at least 1,000 million Special Drawing Rights (SDR) (roughly $1.4 billion USD) for nuclear damage resulting from a nuclear incident at a civilian nuclear power plant and of at least 300 million SDRs (roughly $425 million USD) for

---

[19] Energy Independence and Security Act of 2007, Pub. L. No. 110-140, § 934, 121 Stat. 1492, 1741 (42 U.S.C. § 17373).

[20] Convention on Supplementary Compensation for Nuclear Damage, T.I.A.S. No. 15-415 (Sept. 29, 1997) [hereinafter Convention]. For the full text of the Convention and related information, *see* Int'l Atomic Energy Agency, *Convention on Supplementary Compensation for Nuclear Damage*, https://www.iaea.org/topics/nuclear-liability-conventions/convention-supplementary-compensation-nuclear-damage.

[21] The Convention went into effect on April 15, 2015, in accordance with Article XX.1 of the Convention and acceptance by Japan. Convention, at art. 10; *see also* Int'l Atomic Energy Agency, *Convention on Supplementary Compensation for Nuclear Damage* at 1, https://www-legacy.iaea.org/Publications/Documents/Conventions/supcomp_status.pdf (showing dates of ratification, acceptance, and approval for signatories).

[22] The other major nuclear liability treaties are the Paris Convention on Third Party Liability in the Field of Nuclear Energy, July 29, 1960, 1519 U.N.T.S. 329, and the Vienna Convention on Civil Liability for Nuclear Damage, May 21, 1963, 1063 U.N.T.S. 265.

[23] Convention, at Annex art. 2.1.a.

[24] Convention, at Annex art. 2.1.b.

nuclear damage resulting from a nuclear incident at certain other nuclear installations.[25] Those PAA provisions relate primarily to: (1) the waiver of certain defenses with respect to "extraordinary nuclear occurrences";[26] (2) the definition of "person indemnified";[27] and (3) the amount and availability of financial protection to compensate for nuclear damage and to indemnify any person with legal liability for such liability.[28]

C. Key Attributes of the DOE Indemnification

The key attributes of the DOE indemnification are:

(1) omnibus coverage of all persons who might be legally liable;
(2) full indemnification for all legal liability up to the statutory limit on aggregate legal liability (as of 2018, approximately $13.7 billion for a nuclear incident in the United States[29] and $500 million for certain nuclear incidents outside the United States);
(3) coverage applicable to all DOE contractual activity that might result in a nuclear incident in the United States;
(4) payments are not subject to the availability of funds;[30] and
(5) coverage is mandatory and exclusive.

These attributes result in a comprehensive indemnification, as explained below.

1. Omnibus Coverage

"Omnibus coverage" refers to the fact that the coverage of the DOE indemnification extends beyond DOE contractors, to any person who meets the definition of a "person indemnified" under the Act. The term "person indemnified" is defined as 1) the person with whom an indemnity agreement is executed (e.g., a DOE contractor) and 2) "any other person who may be liable for public liability" for a nuclear incident.[31] The second category extends the indemnification to persons who may have no legal relationship to DOE or the indemnified contractor but that may be subject to public liability for a nuclear incident within the United States arising under a DOE contract. This definition was intended to be broad and inclusive, covering the entire range of persons that may be legally liable for damage resulting from a nuclear incident arising from DOE activities even if not a party to an indemnity agreement with DOE. Thus, the DOE indemnification covers not only DOE contractors, subcontractors,

[25] Convention, at Annex art. 2.1.c.
[26] Atomic Energy Act § 170n., 42 U.S.C. § 2210(n).
[27] Atomic Energy Act § 11s–t., 42 U.S.C. § 2014(s)–(t).
[28] Atomic Energy Act § 170b–d., 42 U.S.C. §2210(b)–(d).
[29] Adjustment of Indemnification Amount for Inflation, 83 Fed. Reg. 49,374 (Oct. 1, 2018) (adjusting the statutory public liability limit to the present $13.7 billion).
[30] Atomic Energy Act § 170j., 42 U.S.C. § 2210(j).
[31] Atomic Energy Act § 11t., 42 U.S.C. § 2014(t).

suppliers, and shippers, but also any other person that might be legally liable,[32] notwithstanding whether the contractor or other person indemnified caused the nuclear incident as an act of gross negligence or willful misconduct. This system of coverage avoids the need for plaintiffs to assert claims against multiple defendants, minimizes duplicative litigation, streamlines the process to provide prompt compensation to injured persons, and assures the availability of compensation regardless of who may be legally liable for nuclear damage.

There are a few limited exceptions to this omnibus coverage, however. DOE (and NRC) are not persons under the AEA, and therefore are excluded from PAA coverage.[33] In addition, where DOE contractual activities are undertaken pursuant to an NRC license, and the NRC has extended PAA coverage to such activities, the NRC rather than the DOE PAA indemnification would apply. If the NRC did not extend PAA coverage to the activity, then the DOE indemnification would apply.

While the DOE indemnification is broad and inclusive of all persons with legal liability, it only covers nuclear incidents arising from DOE activities. There must be a sufficient nexus between activities undertaken pursuant to a DOE contract and a nuclear incident to demonstrate a causal connection that provides a basis for legal liability. For example, in the absence of other factors, the DOE indemnification would not cover a nuclear incident involving radioactive material not under the possession and control of DOE or a DOE contractor at the time of the nuclear incident, even though the material had previously been used in or generated by a DOE contractual activity. There would need to be a showing that a DOE contractual activity in the past had such a causal relationship to the nuclear incident that it could give rise to legal liability to persons involved in the DOE contractual activity in order for the DOE indemnification to cover the incident.[34]

---

[32] The seminal example of the intended breadth of this definition is based on Congressional intent evinced in the legislative history of the PAA when originally enacted in 1957. In Senate hearings it was explained that "the question of protecting the public was raised where some unusual incident, such as negligence in maintaining an airplane motor, should cause an airplane to crash into a reactor and thereby cause damage to the public. Under this bill, the public is protected and the airplane company can also take advantage of the indemnification and other proceedings." S. Rep. No. 296, 85th Cong., 1st Sess. (1957), U.S. Code Cong. & Adm. N. 1803, 1818.

[33] As Federal agencies, unless expressly waived, DOE and NRC have sovereign immunity from certain liabilities and lawsuits. DOE contractors, however, may not be covered by the same sovereign immunity defenses.

[34] Recently, the Cotter Corporation has asserted in a pending lawsuit against the United States that it is entitled to PAA indemnification for settlement payments it made and legal costs it incurred as a defendant in tort cases related to Cotter's handling and disposal of radioactive waste materials that Cotter had acquired for its own commercial use. Although Cotter was neither a contractor nor subcontractor for the Government, Cotter argues it is entitled to PAA indemnification because the waste materials it purchased were originally generated by a contractor of the Atomic Energy Commission (AEC) in fulfillment of an AEC contract. However, the waste materials generated by the AEC contractor were sold to a different private buyer, and only later acquired by Cotter for its commercial use. As reflected in the Government's responsive pleading in this case, DOE disagrees that a sufficient nexus to the contracted activities exists in this scenario to establish a basis for indemnification under the PAA. *See Cotter Corp. (N.S.L.) v. United States*, Case No. 1:22-cv-00414-DAT (Fed. Cl.).

A final exception applies to nuclear incidents occurring outside the United States. For incidents occurring outside the United States, the definition of person indemnified does not extend to any person that may be liable for public liability and instead is limited to persons with a legal relationship to DOE. Such persons would include DOE contractors and any other person who may be liable "by reason of his activities under any contract . . . or any project to which indemnification . . . has been extended or under any subcontract, purchase order, or other agreement, of any tier, under any such contract or project."[35]

2. Legal Liabilities Covered and Liability Limits

DOE is required under the PAA to indemnify its contractors and any other person who may be legally liable for "public liability" arising out of or in connection with DOE contractual activities. The term "public liability" is defined in pertinent part as "any legal liability arising out of or resulting from a nuclear incident or precautionary evacuation, (including all reasonable additional costs incurred by a State or political subdivision or a State, in the course of responding to a nuclear incident or precautionary evacuation)." Certain types of liability are expressly excluded from the DOE indemnification: (1) claims under State or Federal workmen's compensation; (2) claims arising out of an act of war; and (3) claims for damage to property of persons indemnified which is located at the site of and used in connection with the activity where the nuclear incident occurs.

DOE and its predecessors have construed these exclusions narrowly. The workmen's compensation exclusion is limited to claims of employees of a person indemnified who were engaged in the activity giving rise to the nuclear incident.[36] The act of war exclusion is limited to acts of war as defined in the law of war.[37] The exclusion does not apply to claims arising from sabotage or terrorist acts.[38]

One of the areas that has given rise to questions on DOE indemnification coverage is what property is considered "located at the site of and used in connection with the activity where the nuclear incident occurs" sometimes referred to as "on-site" property.[39] The exclusion of on-site property of persons indemnified[40] is limited to property directly involved in the activity giving

[35] Atomic Energy Act § 11t., 42 U.S.C. § 2014(t).
[36] Atomic Energy Act § 11w., 42 U.S.C. § 2014(w).
[37] S. Rep. No. 296, 85th Cong., 1st Sess. (1957), U.S. Code Cong. & Adm. N. 1803, 1818.
[38] *Id.* (noting that "any single act of sabotage would be covered by the indemnification provisions of the bill if it could not be proven to be an act of war.").
[39] Atomic Energy Act § 11w., 42 U.S.C. § 2014(w).
[40] The last sentence of the definition of "public liability" is clear that damage to the property of a person indemnified is deemed to be public liability (and thus covered by the DOE indemnification) to the same extent as the legal liability of the person indemnified would have been if the property had been the property of another person, with the exclusion of property which Is located at the site of and used in connection with the activity where the nuclear incident occurs. The exclusion in the first sentence of the definition of "public liability" of legal liability for damage to on-site property is limited to nuclear incidents arising from NRC licensed activity and thus only affects the DOE indemnification in only a very few situations.

rise to the nuclear incident. For example, with respect to a nuclear incident during rail transportation of radioactive material, the exclusion would apply only to the radioactive material, the transporting railcar and the container; the DOE indemnification would cover damage to all other property of the person indemnified (that is, the railroad) including the engine and other cars of the transporting train, tracks, rights of way, bridges, stations and switch yards.

While legal liability is not expressly defined in the PAA, based on the structure and intent of the PAA, its legislative and case law history, and relevant terms, such as the definition of nuclear incident (i.e., an occurrence causing "bodily injury, sickness, disease, or death, or loss of or damage to property, or loss of use of property"), "legal liability" refers to third-party claims for tort liability. Further, the applicable tort law is that of the state in which the nuclear incident occurred. This point was explicitly made in the 1988 Amendments, which provided that the substantive rules for decision in a public liability action derive from the substantive law of the state in which the nuclear incident occurred, unless inconsistent with provisions of the PAA.

The areas where the PAA provides uniform procedural rules that may supersede state substantive law are few but significant. These rules include: a limitation on the award of punitive damages; the waiver of certain defenses in the event of an extraordinary nuclear occurrence, having the resulting effect of strict liability; the elimination of charitable and governmental immunities; the substitution of a three-year discovery rule in place of statutes of limitation that would normally bar all suits after a specified number of years; the designation of original jurisdiction in the U.S. District court for the district in which the nuclear incident occurs; and special procedures to expedite legal proceedings and the distribution of compensation.

In the 2005 Amendments, Congress significantly increased and simplified the liability limits in the event of a nuclear incident within or outside the United States. Section 170d.(2) provides that agreements for indemnification shall require the Secretary to "indemnify the persons indemnified against [public liability] . . . to the fullest extent of the aggregate public liability of the persons indemnified for each nuclear incident, including such legal costs of the contractor as are approved by its Secretary." Section 170e. establishes a limit of $10 billion, adjusted every five years for inflation, on the aggregate amount of legal liability for any one nuclear incident within the United States.[41] This limit has the effect of limiting the amount of legal liability for damage that courts in the United States can assess under applicable state tort law. In addition, section 170e.(4) sets the limit for aggregate public liability for a covered nuclear incident outside the United States at $500 million.

The PAA provides additional safeguards to assure equitable compensation for persons injured by a nuclear incident or precautionary evacuation. Section 170e.(2) provides that Congress will "take whatever action is deemed necessary . . . to provide full and prompt compensation to the

[41] Adjustment of Indemnification Amount for Inflation, 83 Fed Reg. 49,374 (Oct. 1, 2018) (adjusting the statutory public liability limit to the present $13.7 billion).

public for all public liability claims" if damage from a nuclear incident exceeds the statutory limit on aggregate public liability. In the event the aggregate liability limit may be insufficient, section 170i. requires the President to submit a compensation plan to Congress that "provides for full and prompt compensation for all valid claims" no later than 90 days after the determination by a court that the liability limit may be exceeded.

3. Contractual Activity

The DOE indemnification covers all DOE contractual activity involving the risk of a "nuclear incident" in the United States. The PAA indemnification coverage is intended to be broad so that it ensures funds are available, and expedited claims processing procedures are in place to compensate the public against damage to their person and property arising from the special dangerous properties of the nuclear materials used in various DOE energy programs and applications. This broad coverage is limited, however, in the case of nuclear incidents occurring outside the United States. In such cases, the coverage extends only to contractual activity engaged in, for, or on behalf of DOE that involves nuclear materials owned by the United States. As explained in the 1998 Report, to ensure broad coverage of the indemnification, DOE considers contractual activity to include, but is not limited to, procurement contracts.[42] A DOE contractual activity may be any arrangement that is contractual in nature and that DOE uses to secure a direct benefit. Contracts may be expressed in many forms, including but not limited to leases, fixed price contracts, cost reimbursement agreements, or contracts with multiple parties. Each arrangement is examined considering the facts and circumstances surrounding it to determine whether it may be covered by the indemnification. Further, DOE clarified in its 1998 Report that the indemnification covers all activities on behalf of DOE that may give rise to a nuclear incident or precautionary evacuation resulting in public liability, including activities related to: a repository for civilian nuclear spent fuel; transportation of nuclear material in connection with a DOE activity; and cleanup at DOE sites.

One exception is coverage for an activity that is undertaken for DOE but is conducted under an NRC license. If the activity is covered by NRC's system of financial protection requirements and indemnification under the PAA, then the DOE indemnification does not apply. In the NRC system, the PAA financial protection requirements for NRC licensees is in the form of insurance and/or indemnification, or neither depending on the type of nuclear installation and nuclear operator. Presently, NRC requires[43] or has extended financial protection requirements to nuclear reactors and certain non-reactor nuclear facilities (e.g., commercial plutonium fuel fabrication facilities).[44] Most DOE activities do not involve these types of NRC-licensed nuclear

[42] 1998 Report at 19–21.

[43] Under the PAA, only NRC licensees of nuclear reactors above 100 MW capacity are required to obtain private insurance and participate in NRC's secondary financial protection system, a pooling arrangement among nuclear reactor operators that would be invoked in the event of a nuclear incident. Atomic Energy Act § 170b., 42 U.S.C. § 2210(b).

[44] 10 C.F.R. Part 140.

installations. The DOE indemnification applies to all DOE activities not covered by NRC's PAA system.

While a variety of arrangements can constitute a DOE contract, the DOE indemnification only covers nuclear incidents caused by activities undertaken pursuant to such arrangements. For example, the sale by DOE of radioactive material would involve a DOE contract and the purchaser could be considered a contractor for the limited purposes of the sales transaction. However, unless the sales contract explicitly obligated the purchaser to undertake activities for the benefit of DOE after the sale, the DOE indemnification would not cover nuclear incidents arising from the purchaser's own commercial activities after the sale. In other words, in the absence of explicit provisions in the sales agreement, post-sale activities would not constitute contractual activities for the benefit of DOE and the purchaser would not be a DOE contractor after the sale. The DOE indemnification would not cover post-sale activity merely because a sale of radioactive material might indirectly benefit DOE in some manner such as by eliminating the need to store and ultimately dispose of the material. However, the DOE indemnification would cover a post-sale nuclear incident if it could be demonstrated that the nuclear incident was caused by pre-sale DOE contractual activity such as defective packaging of the material before it was transferred to the purchaser.[45]

4. Funding

The DOE indemnification is not subject to the standard legal restrictions on a Federal agency's ability to obligate funds in advance of appropriations. The Anti-Deficiency Act prohibits Federal agencies from incurring obligations or expenditures in advance of, or more than, their appropriations.[46] Section 170j. of the AEA waives the provisions of the Anti-Deficiency Act with respect to indemnity agreements under the PAA. This waiver permits DOE to incur, in advance of appropriations, an obligation to provide whatever funds are needed to satisfy a DOE indemnification.

5. Mandatory and Exclusive

Prior to the 1988 Amendments, DOE had discretionary authority to include indemnification agreements in DOE contracts. The 1988 Amendments modified section 170d.(1)(A) to provide that the Secretary of Energy "shall [ ] enter into agreements of indemnification under this subsection with any person who may conduct activities under a contract with the Department of Energy that involve the risk of public liability . . . ." This amendment changed the DOE indemnification from discretionary to mandatory, to provide greater certainty and uniformity in coverage under the PAA. DOE includes the DOE PAA indemnification clause[47] in all contracts

[45] As noted above, a company has asserted in pending litigation that it is entitled to PAA indemnification for private commercial activities involving radioactive waste materials that it purchased from a different private company, after those waste materials had been sold by the Government. *See supra* note 34.
[46] Anti-Deficiency Act, 31 U.S.C. §§ 1341 *et seq.*
[47] Nuclear hazards indemnity agreement, 48 C.F.R. § 952.250-70.

that involve any risk of public liability even though, as a matter of law, including the contractual clause is not a condition precedent to the indemnification coverage.

The 1988 Amendment also added section 170d.(1)(B)(i)(I) to make the DOE indemnification "the exclusive means of indemnification for public liability arising from [DOE] activities" undertaken pursuant to a contract to which the DOE indemnification is applicable. In the absence of this section, several other indemnification mechanisms could be available to cover liability for nuclear incidents resulting from activity under a DOE contract, e.g., Public Law 85-804 and section 162 of the AEA. While these other mechanisms could be used where PAA is not applicable, neither is mandatory and the scope of indemnification coverage differs from that available under the PAA.[48]

D. Summary of NOI and Public Comments

On July 26, 2021, DOE published a NOI requesting public comment to assist with its preparation of a report to Congress on the need for continuation or modification of the provisions of the PAA as administered by DOE. In the NOI, DOE provided an update on significant changes in law or circumstances since the 1998 Report, included a non-exhaustive list of questions and topics to be considered by commenters, and requested public comment to assist with preparation of the 2021 Report. The NOI requested public comment from interested persons to be submitted by August 25, 2021.

Following the publication of the NOI, several organizations requested an extension of the original comment period deadline of August 25th.[49] DOE granted the extension requests, resulting in a 90-day comment period, closing on October 25, 2021.

DOE received comments from eleven entities,[50] representing members of the nuclear industry or nuclear-affected industries, DOE contractors, public policy organizations, and individual

[48] Public Law 85-804, codified at 50 U.S.C. §§ 1431–35 (authorizing the President and certain federal agencies, including DOE, to indemnify contractors for damage or loss claims arising from unusually hazardous or nuclear risks related to work that facilitates the national defense); *See also* Atomic Energy Act § 162, 42 U.S.C. § 2202 (providing that the President may exempt any specific action of the DOE in a particular matter from laws relating to contracts "whenever he determines that such action is essential in the interest of the common defense and security").

[49] On July 29, 2021, DOE received comments from the Nuclear Energy Institute ("NEI") requesting a 30-day extension to provide comments. NEI stated the additional time is necessary to collect views and comments from its members and to enable those comments to reflect substantive responses to the specific enumerated questions and topics posed by DOE. On August 6, 2021, DOE received a request for a 60-day extension from the Natural Resources Defense Council ("NRDC"), on behalf of the combined membership of NRDC, Nuclear Information and Resources Service, Beyond Nuclear, and Savannah River Site Watch. NRDC requested the longer extension given the significance of the PAA to the framework of the nuclear industry and the range of economic, technical, policy and legal considerations raised in the NOI.

[50] The entities providing comments: NEI; Energy Contractors Price-Anderson Group (ECPG), an ad hoc group of DOE prime contractors or subcontractors; National Federation of Independent Business (NFIB); University Laboratory

members of the public. All commenters submitted thoughtful and informative commentary and supporting data regarding the provisions of the PAA and its operation and impact on DOE's missions and the nuclear industry, while also providing specific recommendations for legislative or other changes to the PAA in furtherance of the commenter's position. Many commenters also included specific responses to the questions posed in the NOI.

The majority of commenters, representing the nuclear industry, nuclear-affected industries, and DOE contractors, supported continued operation and extension of the PAA, some with suggested modifications to certain provisions to expand its scope and function. Among the many benefits of the PAA and the DOE indemnification, commenters noted: it enables DOE contractors to support DOE missions, especially important given the rise in tort litigation over the last 40 years and the financial risk to contractors without the coverage; the lack of available insurance for DOE contractors operating existing DOE facilities and uncertain coverage for new facilities; the successful operation of safeguards put in place since 1988 to ensure DOE contractor accountability, by establishing a system of fines and penalties for violations of DOE safety regulations; and the cost savings on balance to DOE from self-insuring its contractors and incurring costs only in the unlikely and infrequent event of legal liability under a PAA claim.

Several commenters, however, did not support continuation of the PAA as administered by DOE (and NRC), and recommended against its extension as being an outdated system that no longer serves the purposes for which it was enacted in 1957. The chief reasons cited for discontinuation of the PAA include: the PAA is an unnecessary economic subsidy or "corporate welfare" for the nuclear industry, effectively distorting the full cost and economic viability associated with nuclear energy, and undermining advancement of other, cleaner energy sources, such as renewables; the PAA is insufficiently funded to compensate victims in the event of a major nuclear incident or precautionary evacuation, as evidenced by the Fukushima incident in Japan estimated to cost in the hundreds of billions of dollars and growing; and, as a broader matter, the concern that the nuclear industry creates public health and environmental damage with inadequate insurance and consideration of environmental justice issues in the communities surrounding nuclear facilities.

III. Recommendations

A. Introduction

Based on a review of the Department's history and experience with the PAA, taking into account the condition of the nuclear industry, availability of private insurance, and the state of knowledge concerning nuclear safety, and after careful review and consideration of public

Group, composed of three universities and an association of institutions of higher learning that operate DOE National Laboratories; URENCO, USA; Council on Intelligent Energy & Conservation Policy; Association of American Railroads and the American Short Line and Regional Railroad Association; Rockland Environmental Group, LLC; and three individual members of the public.

comments received in response to the NOI, the Department makes the following findings and recommendations to Congress regarding continuation, repeal, or modification of provisions of the PAA. The Department recommends that: (1) the PAA should continue; (2) the DOE indemnification should continue and expand upon its broad and mandatory coverage; and (3) the PAA should continue in effect in a manner compliant with the CSC.

Recommendation 1: The PAA Should Continue

1. The DOE Indemnification is Essential to Fulfill DOE's Missions

The DOE indemnification made available under the PAA is a longstanding and critical component of DOE's ability to achieve its statutory missions. The Department's overall mission is to ensure America's security and prosperity by addressing its energy, environmental and nuclear challenges through transformative science and technology solutions.[51] The Department operates an extensive network of laboratories, production plants, and other sites and facilities located across the country that enable the Department to fulfill its myriad responsibilities to maintain a safe, secure and effective nuclear deterrent, oversee the United States' energy supply, and carry out environmental clean-up from the Cold War mission. Most of these sites and facilities are managed and operated for the Department by a variety of private for-profit and non-profit contractor organizations: prime contractors, individually or in partnership with other entities; subcontractors to the prime contractors; support service contractors; supplier companies; non-profit organizations; and educational institutions. This network of contractor support and supply is central to the Department's functionality and capability to meet its statutory responsibilities and missions.

As stated in the 1998 Report and supported in comments received in response to the NOI, DOE believes the willingness of these contractor organizations to provide goods and services for the Department that involve the risk of a nuclear incident is highly dependent upon the availability of the DOE indemnification. Most commenters on the NOI, representing both the private and non-profit nuclear sector, were very clear in expressing the position that their ability and desire to continue to perform work for DOE would be in question if the DOE indemnification were not available. These commenters strongly encouraged the Department to recommend Congress continue the PAA largely in its current form after December 31, 2025, if not make it permanent. Commenters emphasized the critical role the PAA plays in benefiting both private and public interests in that it assures businesses and the public that liability risks are covered and funding for compensation is available in the event of a nuclear incident or precautionary evacuation. The financial risk to these businesses and organizations would be substantial and potentially unacceptable, in the unlikely event of a nuclear incident resulting in significant damage. The risk of large legal liabilities that have the potential to bankrupt companies, particularly smaller companies, educational institutions (both public and private), or other non-profit organizations, would deprive DOE of the opportunity to hire and retain high-quality contractors that can assist

[51] *Mission*, ENERGY.GOV (Nov. 23, 2021), https://www.energy.gov/mission.

in fulfilling DOE's statutory missions in a safe, dependable, and competent manner. The mandatory and exclusive nature of the DOE indemnification coverage, available only under the PAA, adds stability and reassurance to these contractors and, additionally, anyone else that may be subject to public liability in connection with a DOE activity that they will not suffer undue financial risk from their work for and on behalf of DOE. The need for continued and mandatory PAA coverage is equal if not greater now than in the past, given the Department's role in supporting new and advanced nuclear technologies related to nuclear reactors (e.g., small modular reactors and microreactors), nuclear fuels (e.g., high-assay low-enriched uranium), and nuclear applications in other cutting-edge efforts (e.g., nuclear medicine).

In sum, the Department's ability to perform its missions would be severely jeopardized if the mandatory and exclusive PAA indemnification coverage for DOE contractors, suppliers, and any other person providing goods or services in connection with DOE nuclear activities is not continued beyond 2025.

2. The DOE Indemnification Supports Nuclear Safety

The Department and its contractors across the DOE complex have a good record of safe and responsible nuclear operations protective of workers and the public. This record is made possible by the initiatives and regulatory actions undertaken by DOE to improve the safety of its nuclear activities, and advancements in its contracting practices that incentivize and hold contractors accountable for their actions regarding safety and security. The availability of the DOE indemnification enhances, rather than detracts from, DOE contractors' motivation to engage in safe and responsible policies and practices in performance of their DOE contractual activities.

DOE implements a suite of nuclear safety requirements, in the form of rules, regulations, orders and other requirements on nuclear safety that govern the conduct of persons, specifically DOE contractors, subcontractors and suppliers involved in any DOE nuclear activity. These rules and regulations include those published at 10 CFR Part 707, *Workplace Substance Abuse Programs at DOE Sites*, 10 CFR Part 708, *DOE Contractor Protection Program*, 10 CFR Part 830, *Nuclear Safety Management*, 10 CFR part 835, *Occupational Radiation Protection,* and specifically relevant to the PAA, 10 CFR part 820, *Procedural Rules for DOE Nuclear Activities*. Based on the authority granted under section 234A of the AEA, DOE is authorized to impose civil monetary penalties on any contractor, subcontractor or supplier that has an agreement of indemnification with DOE under the PAA who is in violation of DOE nuclear safety regulations. DOE's regulations at 10 CFR 820 provide the procedural rules and processes to investigate violations of DOE's nuclear safety requirements and enforce those requirements by imposing an appropriate remedy, including the payment of civil penalties. In addition to regulatory requirements, DOE contractors also are subject to nuclear safety requirements set forth in DOE Orders and Manuals to the extent these requirements are incorporated into their contract. Violations of these contractual requirements are subject to contractual remedies.

The Department's Office of Nuclear Safety Enforcement, currently located within the Office of Enterprise Assessments, is responsible for implementing the Department's nuclear safety enforcement program in accordance with 10 CFR Part 820.[52] That office is responsible for the enforcement program, which includes among other functions, implementing processes and incentives for contractors to promptly identify, report, and correct nuclear safety issues and non-compliances. The office is a vital component of the DOE self-regulatory framework. Since the 1998 Report, the Office of Nuclear Safety Enforcement has a proven track record of successful enforcement outcomes related to nuclear safety concerns. The independent presence of the office serves as an important counterbalance to schedule and budget priorities faced by DOE program offices and ensures that any noncompliance is handled consistently across the Department. The progressive level of regulatory enforcement encourages issues related to nuclear safety to be addressed as soon as reasonable and with the greatest amount of accountability at the lowest level of management. This benefit is reflected in the cooperation of both DOE program office and field element organizations and their contractors during investigations and the efforts taken by contractors to identify the causes of nuclear safety noncompliance and prevent recurrence.

Any DOE contractor, subcontractor or supplier involved in a DOE nuclear activity would be covered by the DOE indemnification under the PAA and, concurrently, subject to DOE nuclear safety requirements and enforcement actions and penalties in the event of violations of those requirements. These nuclear safety requirements instill and emphasize quality assurance measures and practices in contractor performance, ensuring that DOE acquires goods and services from high-quality, competent contractors and suppliers. Without the indemnification coverage, several commenters raised the concern that DOE would be unable to attract the highest quality of contractor, resulting in a lesser, not greater, assurance of safe contractor performance.

3. The DOE Indemnification Protects the Public

The PAA is unparalleled as a system to provide assured compensation in an expedited process to members of the public injured by a nuclear incident or precautionary evacuation. The provisions of the PAA that are unique to it and are key attributes of the DOE indemnification include: 1) a guarantee of approximately $13.7 billion, adjusted for inflation, in compensation for a single nuclear incident; and 2) provisions that provide rules for efficient, equitable, and prompt litigation and claims processes. Several commenters observed that the current PAA legal regime provides a robust and efficient legal framework to compensate claimants promptly, as opposed to costly litigation in state or Federal court, and that no changes to the administrative and judicial claims procedures in the PAA are necessary. The Department also finds that the PAA system as currently written is designed to provide prompt and fair compensation to all injured parties, in accord with principles of environmental justice, and

[52] 10 C.F.R. Part 820 assigns responsibility to NNSA and Naval Reactors to take enforcement action against their contractors.

should continue to apply to all public liability claims, to the exclusion of inconsistent state law claims.

One commenter suggested, and DOE agrees that there are multiple ways in which DOE could further improve on environmental justice, diversity, equity, and inclusion principles in PAA implementation plans following a nuclear incident. A few of the suggestions that could further ensure equitable processes in the event of a nuclear incident or precautionary evacuation, and that DOE could undertake without any change in the PAA, include establishing a hotline to address questions; translating claim information into other languages; expanding outreach to community groups; and setting up pro bono legal panels or clinics to assist affected, disadvantaged communities.

a. Assured Funding to Compensate Victims

The DOE indemnification ensures that approximately $13.7 billion is available and can be equitably distributed to compensate persons suffering personal injury or property damage arising from a nuclear incident or precautionary evacuation occurring in the United States in connection with a DOE activity, and up to $500 million is available for certain nuclear incidents occurring outside the United States. This level of funding commitment is a critical feature of the PAA that provides members of the public with confidence that they will be compensated in the unlikely event of a nuclear incident or precautionary evacuation, while also fostering continued public support for DOE's nuclear missions and activities. Absent this system of guaranteed financial protection, potential victims could not be certain that a DOE contractor or any other person connected to a DOE activity giving rise to a nuclear incident has the financial backing to provide compensation to the victims in any amount, much less in amounts in the billions. With this system of guaranteed financial protection, the public is much better protected than without it.

b. Efficient Litigation and Claims Processes

The PAA contains a unique set of provisions that work in combination to ensure not only the availability of funding to compensate victims but also special rules for litigation and claims processing to provide efficient, equitable, and prompt distribution of funds to victims.

i. Strict Liability for Extraordinary Nuclear Occurrence

In the case of an extraordinary nuclear occurrence (ENO), that is, a nuclear incident that causes substantial off-site damage, the PAA contains provisions that impose a standard of strict liability by requiring the waiver of any defenses related to conduct of the claimant or fault of any person indemnified.[53] By imposing strict liability, the PAA greatly enhances the likelihood and speed by which an injured party may be compensated for damages in the event of an ENO.

[53] Atomic Energy Act § 170o., 42 U.S.C. § 2210(o).

ii. Channeling Claims to One Source

Under the PAA, all payments of claims for public liability in connection with DOE activities are paid from the same, single source of funding: the DOE indemnification. This feature of the PAA, referred to as "economic channeling" simplifies the process and minimizes protracted litigation to the benefit of claimants by eliminating the need to identify and sue each and every potential defendant or the need to allocate liability among multiple defendants.[54] This outcome derives from the operation of the broad coverage and applicability of the DOE indemnification to "all persons indemnified." Any person who may be legally liable for a nuclear incident in the United States in connection with DOE activities, regardless of whether they have any contractual or other relationship with DOE, will be indemnified by DOE regarding any payments made to injured persons.[55]

iii. Consolidation and Prioritization of Claims

The PAA provides that the United States district court in the district where a nuclear incident takes place shall have original jurisdiction over any case resulting from a nuclear incident.[56] Cases brought in other courts must be removed to the Federal district court.[57] Further, the PAA provides the option to establish a special caseload management panel to consolidate claims, establish priorities, and implement other measures that will encourage the equitable and efficient resolution of claims.[58] Where appropriate, the PAA also provides for a plan for the distribution of funds.[59]

iv. Emergency Assistance Following a Nuclear Incident

The PAA provides DOE with the express authority to make payments for the purpose of providing immediate assistance following a nuclear incident, and to establish processes for coordination for the prompt handling, investigation, and settlement of claims.[60]

4. The DOE Indemnification is Cost-Effective and Without an Equivalent Alternative

DOE self-insures against the financial risk associated with legal liability from a nuclear incident or precautionary evacuation. DOE does not carry private insurance or pay premiums, or require its contractors, as a reasonable and reimbursable cost to DOE to carry insurance associated

[54] This same principle is embodied in the international nuclear liability conventions, referred to as "legal channeling," which limits all legal claims to be made against the same, single entity – the nuclear operator.
[55] *See supra* note 32.
[56] Atomic Energy Act § 170n.(2), 42 U.S.C. § 2210.
[57] *Id.*; *see also El Paso Nat. Gas Co. v. Neztsosie*, 526 U.S. 473, 476 (1999).
[58] Atomic Energy Act § 170n.(3)(A) & (B), 42 U.S.C. § 2210.
[59] Atomic Energy Act § 170o., 42 U.S.C. § 2210.
[60] Atomic Energy Act § 170m., 42 U.S.C. § 2210.

with nuclear liability risks. The cost to the taxpayer is only the amount that DOE pays in actual settlements of claims and judgments in lawsuits brought under the PAA. This system has proven over decades of experience to be the most cost-effective means to provide financial protection to DOE, DOE contractors, and taxpayers. The reason is two-fold: nuclear hazards insurance is largely unavailable and the actual costs to DOE and the Federal Government in payments under the PAA have been substantially less relative to the likely cost of insurance if it were available.

a. Private Insurance is Unavailable

The American Nuclear Insurers (ANI), a voluntary, unincorporated joint underwriting association of private insurance companies, has historically been and currently is believed to be the sole source of third-party nuclear liability insurance in the United States, insuring all currently operating domestic commercial nuclear power reactors and various non-government entities who participate in the nuclear industry. In a response to the NOI, included as part of EPCG's comments on the NOI, ANI stated that it has "routinely declined requests to provide nuclear liability insurance coverage for DOE contractors."[61] ANI took this position in 1998, and again in 2001, in response to a Congressional request, explaining that it would be imprudent for ANI to offer coverage to existing DOE facilities based on the history of DOE being subject to massive litigation for troubled operations and environmental cleanup, mixed civilian and defense uses of the facilities, and a legacy of contamination, known and unknown. While ANI is open to writing coverage for a new DOE facility, any such coverage would be subject to individual evaluation, and it would be impossible to guarantee coverage, or at what liability limit.

In the 1998 Report, DOE noted that ANI estimated, at that time, that if it were to provide coverage for DOE facilities the insurance would be limited to the maximum of $200 million, with premiums between $500,000 to $2 million annually.[62] Assuming such premiums as allowable and reimbursable costs under the contract, and 60 prime contractors, the costs would be between $30 million and $120 million annually, not including any subcontractor insurance premium costs. The cost to reimburse the premiums would secure insurance coverage equal to only approximately 2 percent of the then-DOE indemnity amount of $9.43 billion.

Unlike the 1998 Report, ANI did not provide any estimate of possible coverage amounts or premium costs in its comments to EPCG for this report. Nonetheless, even with inflation adjustments and assuming for comparison purposes some interest by ANI, the 1998 estimates for insurance coverage would be wholly insufficient in relation to the potential liability limits.

[61] Energy Contractors Price-Anderson Group Comment, Responding to DOE Notice of Intent, 86 Fed. Reg. 40,032 (July 26, 2021), and Extension of Public Comment Period, 86 Fed. Reg. 45,714 (Aug. 16, 2021).
[62] 1998 Report at 14–15.

Given ANI's recent statement of its position, it is extremely unlikely there exists any private insurer that would provide coverage of DOE facilities in any amount, or at any reasonable cost.

b. Claims under the PAA Have Been Limited

The Department has had a relatively small number of cases filed in United States' Federal courts, and no cases in any foreign courts in the more than two decades, since 1998, where claimants have sought and been provided compensation for claims alleged under the DOE indemnification. There have been a few large cases involving claims of multiple plaintiffs asserting a nuclear incident under the PAA, and several other single incident or individual plaintiff cases alleging PAA claims, among other claims. The following is a non-exhaustive discussion of notable PAA related claims arising since the 1998 Report.

One prominent case, *Cook v. Rockwell International Corp.*, involved a putative class of landowners in the vicinity of the former Rocky Flats Nuclear Weapons Plant near Denver, Colorado, alleging operations at Rocky Flats resulted in the release of plutonium into the surrounding environment.[63] The landowner plaintiffs made several claims under state law, including trespass and nuisance that led to the diminution of their property values. Here, the Tenth Circuit concluded plaintiffs' state law claims were "lesser nuclear occurrences" that were not preempted by the PAA, expanding plaintiffs' available remedies.[64] Prior to entry of final judgment, the parties agreed to settle the litigation for $375 million.

Another instance of multiple parties was the consolidated cases that comprised the *In re Hanford Nuclear Reservation Litigation*, involving several thousand plaintiffs' claims under the PAA alleging injuries caused by radioactive and toxic emissions from the Hanford Nuclear Reservation starting in 1943. In this case, there were no Federal standards governing emissions levels at the time such emissions occurred, leaving the establishment of causation for the injuries up to the jury.[65] While most of the claims were dismissed or settled, the jury awarded damages of approximately $545,000 to two plaintiffs out of six chosen for a bellwether trial.[66]

Finally, the PAA indemnification was invoked for an incident which occurred at the University of Washington in May 2019. There, a subcontractor for the Department's semi-autonomous National Nuclear Security Administration's (NNSA) Los Alamos National Laboratory management and operation contractor inadvertently breached a sealed cesium-137 source,

[63] 790 F.3d 1088 (10th Cir. 2015).
[64] *Id.* at 1096. *But see*, *Matthews v. Centrus Energy Corp.*, 15 F.4th 714, 725 (6th Cir. 2021) (noting that *Cook* "is a unique (and inapposite) case. There, the plaintiffs accepted after *Cook I* that they could not prove a "nuclear incident" under the Act, a concession the defendants did not dispute."); *Steward v. Honeywell Int'l, Inc.,* 469 F. Supp. 3d 872, 879 (S.D. Ill. 2020) (collecting cases) ("The Tenth Circuit's opinion in *Cook* is an outlier however.").
[65] *In re Hanford Nuclear Rsrv. Litig.*, 534 F.3d 986, 1003 (9th Cir. 2008).
[66] *Id.* at 999.

causing a release of a maximum of 1.25 curies of radioactive material.[67] Despite the small amount of material, over 200 researchers and laboratory staff had to be relocated. The total cost of the incident, including cleanup, remediation, reconstruction, and other costs, was approximately $150 million.

In all, apart from the two bellwether plaintiffs in the *In re Hanford Nuclear Reservation Litigation*, these noted cases or claims alleging a nuclear incident under the PAA have been settled or dismissed either administratively or judicially on various grounds. The payments made by the Federal Government range in amounts from thousands to several hundreds of millions of dollars, with most payments well below the PAA liability limits. Further, these amounts that have been paid out over the more than two decades since the 1998 Report are less than any likely insurance premium payments over that same time span, if insurance was available, reinforcing the finding that the DOE system of self-insurance is cost-effective and appropriate.

c. Other Indemnification Provisions are not Equal or Sufficient

DOE received many comments from industry representatives expressing the view that other available Federal Government indemnification authorities for nuclear incidents, specifically, Pub. L. 85-804 and section 162 of the AEA are not satisfactory alternatives to PAA coverage for DOE contractors, or equally protective of the public. DOE also believes these other indemnification authorities are inadequate alternatives to the PAA that would not serve DOE or the public's interests. Both indemnification methods are discretionary, not mandatory, and therefore do not carry the same level of protection for the contractor or the public. The public is not protected because the contractor, or any other person who may be deemed liable for the incident may not have the financial wherewithal to provide sufficient or prompt compensation for injuries, and the contractor or other person is not protected from the risk of financial loss from legal liability. Further, there are other limitations to these indemnifications.

Where the PAA is not applicable, e.g., for DOE contract work outside the United States that does not involve nuclear material owned by the United States, then Public Law 85-804 indemnification coverage may be included in a DOE contract involving unusually hazardous or nuclear risks. There are several prerequisites for inclusion, however: the contracted work covered by the indemnification must be to facilitate the national defense; the indemnification is tied to specific projects or programs; the Secretary, or an authorized delegee would approve it; and there is an exclusion for liability attributable to the gross negligence or willful misconduct of the contractor.[68] Section 162 is even more limited in scope and applicability, requiring

[67] GOV'T ACCOUNTABILITY OFFICE, ALTERNATIVES TO RADIOACTIVE MATERIALS at Fig. 4 (2021), https://www.gao.gov/assets/gao-22-104113.pdf.

[68] 48 C.F.R. § 52.250-1(d) ("When the claim, loss, or damage is caused by willful misconduct or lack of good faith on the part of any of the Contractor's principal officials, the Contractor shall not be indemnified for— (1) Government claims against the Contractor (other than those arising through subrogation); or (2) Loss or damage affecting the Contractor's property.").

Presidential approval of indemnification coverage prior to entering into a contract, and only for contracts deemed essential in the interest of common defense and security. As summarized in the 1998 Report, "[t]hese alternative statutory indemnities [ ] are cumbersome to administer; do not guarantee omnibus coverage of subcontractors, suppliers, and other persons; and lack the procedural mechanisms that ensure prompt and equitable compensation for the public."[69]

5. The PAA Should Not Be Discontinued or Eliminated

In recommending continuation of the PAA, DOE has considered the concerns and opinions expressed by several commenters that the time has come to end PAA coverage for DOE contractor and NRC-licensee activities. DOE does not agree with these commenters. With respect to the DOE indemnification, many of the views expressed by these commenters are not applicable, or, to the extent applicable, do not outweigh the many benefits and necessity of the DOE indemnification for the accomplishment of DOE's statutory missions and the protection of the public.

The DOE indemnification does not place DOE contractors working on nuclear-related programs and activities at a competitive advantage relative to any other DOE contractor, or support one type of the energy sector more than another. DOE's statutory missions require certain activities and programs be undertaken, which include activities involving radionuclides, and DOE contractors stand on an equal footing regarding the energy programs they support and the work they undertake for the Department. Some commenters view the PAA system of indemnification as a subsidy to the DOE contractors specifically, and the nuclear industry generally. However, in the case of DOE contractors, absent the DOE indemnification, the contractors would be reimbursed by DOE for insurance (to the extent available) and other allowable costs under the contract, which may include at least some of any damages paid by the contractor for claims arising from a nuclear incident in connection with DOE contract work. As such, the DOE indemnification is not an exclusive means of shifting financial risk from the contractor to the government.

Several commenters also pointed out that the PAA's aggregate public liability amount – over $13 billion – may not be adequate to cover the potential damages to the public from a nuclear incident, essentially taking the position that nuclear energy or related activities should not be pursued given the financial as well as the public health and safety risks and costs. As previously noted, the Department has statutory missions that require it to undertake certain programs and activities that may give rise to a nuclear incident or precautionary evacuations. In the event of a nuclear incident that results in damages exceeding the liability limit, the PAA contains provisions to address that situation and compensate injured parties. This provides the Department a statutorily based mechanism to address situations in which public liability exceeds the aggregate liability amount. It also has the added benefit of being an established system that recognizes in advance and plans for potential compensation exceeding liability

[69] 1998 Report at 15.

limits, in contrast to having no or an improvised system with attendant uncertainty regarding the availability and process to provide adequate compensation to injured parties from nuclear damage. In sum, having such a statutory system in place as needed is much better than a situation where no such statutory system is established, which would be the result if the PAA and the DOE indemnification were discontinued or eliminated.

Finally, several commenters were concerned that the PAA supported a nuclear industry that is not protective of public health and safety and raised environmental justice concerns regarding the communities in which nuclear facilities are located. However, addressing this concern weighs in favor rather than against continuing the PAA. The PAA itself is an equitable and non-discriminatory system of financial protection requirements and specialized administrative and judicial procedures to enable injured persons to seek redress in an expedited manner and assure that funding is available to compensate those persons. Without the PAA in place, those persons would need to seek redress for their claims through normal tort litigation, which may involve filing suit against multiple defendants in multiple fora, allocating liability among them, and any recovery would be subject to the uncertain financial viability of the defendants to pay damages.

DOE is obligated to pursue and support its statutorily mandated nuclear activities and missions. Within that context, the continuation of the PAA and the DOE indemnification is more protective of persons in these communities and, further, does not prevent DOE from making enhancements to the process as the need arises. As one commenter noted, there are many actions DOE could take to improve the processing of claims and the distribution of compensation in the event of a nuclear incident, for example, opening legal aid clinics to assist injured persons to file claims and expedite compensation.

Recommendation 2: The DOE Indemnification Should Continue and Expand Upon its Broad and Mandatory Coverage

The PAA requires DOE to extend indemnification to cover all contractors and all other persons that may be legally liable for nuclear damage caused by a nuclear incident arising from any DOE contractual activity in the United States. The PAA also requires DOE to extend indemnification to cover certain DOE contractual activity outside the United States. This intentionally broad coverage ensures that funds are available, and expedited claims processing procedures are in place to compensate the public against damage to their person and property resulting from a nuclear incident arising in connection with contractual activity on behalf of DOE, without the need to identify who might be legally liable. DOE recommends that these features of the DOE indemnification remain unchanged and undiminished with respect to contractual activity within the United States and expanded to include additional contractual activity on behalf of DOE outside the United States to reflect changed circumstances.[70]

[70] *See infra* text accompanying note 84.

1. Contractual Activity Should Be Broadly Interpreted

One aspect of the DOE indemnification DOE has been called upon to further clarify is whether and how the coverage for DOE contractual activity operates in the increasing variety of contract and transactional arrangements the Department utilizes to perform its missions. Commenters on the NOI were highly supportive of maintaining omnibus coverage for DOE contractors and persons indemnified. These commenters also encouraged DOE—or Congress—to interpret contractual activity to include activities undertaken by non-DOE entities receiving DOE funding, resources or other support through various arrangements, including: financial assistance, either in the form of cooperative agreements or grants; Cooperative Research and Development Act (CRADA) agreements, and Strategic Partnership Project (SPP) agreements.[71] Commenters expressed the view that the certainty and stability of the DOE indemnification would benefit arrangements undertaken, in combination with DOE by private industry, non-profit entities, or other Federal agencies to advance the next generation of nuclear capabilities, such as in small modular reactors, microreactors, and space and defense applications.[72]

DOE does not believe modification of what constitutes a contractual activity for purposes of the DOE indemnification is necessary. As explained in the 1998 Report, a DOE contractual activity may be any arrangement that is contractual in nature and that DOE uses to secure a direct benefit. DOE interprets the meaning of a DOE "contract" and "contractual activity" in the broadest sense of each term, to include arrangements that may be expressed in many forms, with the common denominator being that DOE derives a specific or direct benefit from the arrangement in the pursuit of its statutory missions. As a general principle, the determination whether a specific arrangement is to be considered a DOE contract or contractual activity benefiting DOE will depend on a fact specific analysis of the arrangement. For additional clarity, provided below is DOE's approach to assessing DOE contractual activity in terms of certain types of arrangements: procurements, financial assistance, Other Transaction Authority (OTA) agreements, CRADAs, and SPPs.

As previously noted, DOE considers contractual activity to include but is not expressly limited to procurement contracts, or any specific type of procurement contract.[73] DOE utilizes a multitude of contracting mechanisms to procure goods and services from other entities to perform its statutory missions, with direct benefit to DOE. These mechanisms range from management and operating (M&O) contracts for its National Laboratories and production

[71] Commenters also suggested that the PAA should be modified to directly apply to contractual activities involving the risk of public liability that are funded solely by other federal agencies, e.g., National Aeronautics and Space Administration and the Department of Defense. This would allow such agencies to provide PAA coverage directly to their contractors, eliminating the need to enter into an interagency agreement (i.e., a contract) with DOE, under which DOE provides PAA coverage to those contractors. In this report, DOE does not express an opinion on whether other federal agencies should be provided with PAA authority.

[72] Where these activities result in a facility licensed by the NRC and subject to NRC's system of financial protection requirements and indemnification, then DOE's indemnification would not apply. *See supra* p. 10.

[73] 1998 Report at 19–21.

plants, to non-M&O contracts for environmental cleanup work, to support services contracts for administrative and related activities, and to interagency agreements with other Federal agencies.[74] In turn, these DOE contractors may engage subcontractors to complete the DOE work. In the case of DOE contracts that may pose any risk of public liability, DOE indemnification coverage is incorporated into the contract through a mandatory DOE Acquisition Regulation clause, which will also cover any subcontractors.[75]

In addition to procurement-type contracts, DOE also provides financial assistance to other entities in furtherance of its statutory missions. Financial assistance may be in the form of either a grant or a cooperative agreement. The stated purpose of a grant or a cooperative agreement is to transfer assets of value from the Federal Government to the financial assistance recipient to further a public purpose.[76] In such cases, DOE is the Federal agency with the authority and responsibility for the transfer. While work performed under financial assistance arrangements may be primarily for the benefit of the public, that fact alone may not prevent it from being considered a DOE contract or contractual activity, with a direct benefit to DOE. Where Congress has directed DOE to provide financial assistance to support certain activities, such as the development of next generation nuclear technologies and advanced accident tolerant nuclear fuels, or the deployment of next generation small modular and advanced reactors, it is appropriate for DOE to evaluate the facts of the arrangement to determine whether PAA coverage properly applies. For purposes of the DOE indemnification, a financial assistance arrangement may be deemed to be a contractual activity from which DOE derives a direct benefit, depending upon the specific facts of the arrangement.

In the case of a grant, where the recipient receives the government asset outright with no DOE involvement in the activity or product for which the grant is provided, DOE generally would not consider this arrangement to be of direct benefit to DOE, and the DOE indemnification would not be applicable. In most cases of DOE grant assistance, the recipients receive the DOE funding and perform the work themselves at their own facilities, with minimal if any DOE monitoring or oversight of the work performed that may give rise to a nuclear incident. The activity undertaken by the grant recipient is certainly of benefit to the public and supportive of DOE missions but may not be sufficiently connected to DOE as to provide a direct benefit to DOE that would make the DOE indemnification applicable.

Cooperative agreements, on the other hand, are more varied and complex in their formation and may involve a greater range of DOE involvement and benefit from the activity undertaken pursuant to the cooperative agreement. The parties to a cooperative agreement may be a combination of DOE, a general DOE contractor (e.g., the M&O contractor at a National Laboratory), and a specific third-party (e.g., a private or non-profit entity). The work under the cooperative agreement may be performed at a DOE facility, a DOE contractor facility, the third-

[74] DOE considers other government agencies with whom DOE has entered into an interagency agreement to be DOE prime contractors for purposes of DOE indemnification. *See* 48 C.F.R. § 950.7002.
[75] 48 C.F.R. § 952.250-70.
[76] 31 U.S.C. §§ 6304–05.

party's facility, or some combination thereof, and may use either, or in combination DOE or the third-party's nuclear materials and equipment. Moreover, the cooperative agreement would be funded under a cost-sharing arrangement between DOE and the third-party, with varying options for proportional funding by each party (e.g., an even 50-50 split between two parties, or a 20-80 split, etc.). Accordingly, each cooperative agreement is unique and would be assessed based on its individual facts and formation to determine applicability of the DOE indemnification to the activity by the non-DOE entity.

OTA agreements can be awarded in lieu of a procurement contract or financial assistance. The Energy Policy Act of 2005 provided DOE with additional authority to enter agreements with the private sector for research, development, and demonstration projects in situations where a standard contract, grant, or cooperative agreement is neither feasible nor appropriate.[77] Congress intended DOE to use this authority to attract participation of nontraditional Government contractors in DOE-funded projects. DOE's implementing regulations of this OTA authority do not mention PAA indemnification,[78] and, to date, DOE has not awarded an OTA that poses the risk of public liability. If an OTA were used in place of a procurement contract, then DOE would include the DOE indemnification pursuant to the acquisition regulation governing nuclear hazards indemnification.[79] If an OTA were used in place of financial assistance, then PAA coverage would depend upon a fact specific analysis of the arrangement.

DOE contractors perform work (including nuclear activities) for non-DOE entities[80] under a variety of arrangements, such as SPP agreements (formerly referred to as "Work for Others"), CRADAs, agreements for commercializing technology, and other arrangements with the private sector, state and local governments, and academia.[81] These various arrangements are not in the nature of a subcontract to the DOE contract. To the extent these arrangements come within the scope of work the DOE contractor can undertake under the DOE contract, the DOE indemnification covers activities performed by a DOE contractor under these arrangements. The activities performed by DOE contractors often are part of a project in which the non-DOE entity performs nuclear activities. As discussed above, the extent to which such activities by a non-DOE entity are covered by the DOE indemnification depends on a number of factors including: the nature of the arrangement under which they are performed; the degree to which they benefit DOE, the non-DOE entity or the public; the degree to which DOE regulates or otherwise controls them; whether they take place at a DOE site or during transportation to or from a DOE site, and whether or not NRC's PAA coverage applies.

[77] Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (2005); Energy Act of 2020, Pub. L. No. 116-260, Div. Z, 134 Stat. 2418 (2020).
[78] 10 C.F.R. Part 603.
[79] 48 C.F.R. § 952.250-70.
[80] 42 U.S.C. § 2053 and the Stevenson-Wydler Technology Innovation Act (15 U.S.C. § 3710).
[81] SPPs sponsored by other federal agencies must comply with Federal Acquisition Regulations regarding interagency acquisitions and will be formalized through an interagency agreement. *See supra* note 71 and accompanying text.

2. Expanded Coverage Outside the United States

The scope of the DOE indemnification, while comprehensive in its coverage of, and amount of compensation for nuclear incidents occurring within the United States, is more limited in the case of nuclear incidents occurring outside the United States. In such cases, the coverage extends only to contractual activity engaged in for or on behalf of DOE that involves nuclear materials owned by the United States.[82] In addition, the amount of the indemnification is lower, $500 million, compared to over $13 billion for an incident within the United States.

In response to the NOI, DOE received suggestions on potential modifications to the PAA.[83] One suggestion was to align the PAA with financial protection amounts available under other international nuclear liability regimes. For nuclear incidents outside the United States, it was recommended by commenters that Congress increase the aggregate public liability limit from $500 million to $2 billion, to be consistent with the increased liability limits in other international nuclear liability regimes. Specifically, it was pointed out that, with the recent entry into force on January 1, 2022, of the 2004 Paris Convention and the 2004 Brussels Convention Supplementary to the Paris Convention, the liability limit for member countries to those conventions increased to approximately $1.75 billion. DOE believes it is important to make the indemnification amount available under the PAA comparable to that available in foreign courts.

Commenters also recommended the definition of "nuclear incident" be modified to remove the condition that a nuclear incident arising from DOE contractual activity abroad must involve nuclear material owned by the United States. Specifically, commenters recommended PAA coverage apply to activities of DOE and other Federal agency contractors that are undertaken outside the United States for certain missions, such as non-proliferation, nuclear risk reduction or improvement of nuclear safety, or the development and utilization of terrestrial and space microreactors, even where the nuclear material the contractor is handling is not owned by the United States or the project is financed solely by another Federal agency. Given the increasing and diverse work the Department conducts outside the United States, commenters believed eliminating some of the restrictive conditions in the definition and implementation of coverage for contractor work abroad is warranted and would assist in promoting those government missions.

DOE supports expanding the DOE indemnification to cover contractual activity that is for or on behalf of DOE outside the United States, without the condition that the nuclear materials involved in the activity must be owned by the United States. DOE also supports increasing the

[82] Atomic Energy Act § 11q., 42 U.S.C. § 2014(q).

[83] One other recommendation on legislative modifications from a commenter, although not directed at the PAA, regards the EISA. It was recommended that the EISA be amended to eliminate the requirement that the United States' contribution under the CSC be funded by United States' nuclear suppliers. Such action would increase the competitiveness of United States nuclear suppliers.

amount of that indemnification to $2 billion. Such an expansion would be fully consistent with the long-standing dual purposes of the PAA to benefit both persons who may be liable for a nuclear incident and persons who may be injured by a nuclear incident.

These updates to the PAA would acknowledge the type of work DOE is increasingly calling upon its contractors to perform in the national interest, eliminate an unnecessary constraint on those missions, and provide equitable compensation to members of the public in amounts comparable to that available in other countries. This important national defense and energy security work, whether or not it involves the use of United States owned nuclear material, presents the same financial risks and public protection requirements as work performed by DOE contractors within the United States and should be afforded the same indemnification coverage. Further, eliminating the requirement that the nuclear material be United States owned would enable more DOE contractual activity conducted in foreign countries to be covered by the PAA, instead of utilizing other indemnification coverage, principally Public Law 85-804. Coverage under Public Law 85-804 may not be available or applicable in all cases where indemnification coverage is necessary for a contractor to accept the financial risk of performing the work. In those case, DOE's ability to fulfill its mission may be jeopardized or diminished.

Recommendation 3: The PAA Should Continue in Effect in a Manner Compliant with the CSC

The 1998 Report recommended ratification of the CSC, which the United States did in 2006. Since then, the United States has encouraged other countries to join the CSC, with the goal of establishing a global nuclear liability regime. Achieving this goal is dependent on continued US membership in the CSC, which, in turn, is dependent on certain PAA provisions continuing in effect.

1. The PAA Provisions that Provide the Protections Required by the CSC Should Continue in Effect

Article 2 of the Annex to the CSC enabled the United States to join the CSC without making any significant changes to the PAA. Article 2 was based on protections afforded by certain provisions of the PAA in effect January 1, 1995. For the United States to remain in conformity with Article 2 and to remain a CSC member, these protections must continue in effect. The "continue in effect" language means that the PAA provisions providing these protections cannot be diminished or otherwise changed in a manner that calls into question whether the PAA continues to provide the levels of financial, administrative, and judicial protections required by Article 2. Compliance with the CSC does not prevent changing PAA provisions to increase the level of protection afforded. The PAA provisions of relevance are those that provide for: (1) strict liability in the event of a nuclear incident where there is substantial

nuclear damage off the site of the nuclear installation where the incident occurs; [84] (2) the indemnification of any person other than the operator liable for nuclear damage to the extent that person is legally liable to provide compensation;[85] and (3) an indemnification amount of at least 1,000 million SDRs (roughly $1.4 billion USD) for nuclear damage resulting from a nuclear incident at a civilian nuclear power plant and of at least 300 million SDRs (roughly $425 million USD) for nuclear damage resulting from a nuclear incident at certain other nuclear installations.[86] DOE recommends that these PAA provisions continue in effect.

2. The Existing PAA Provisions Provide the Level of Protection Required by the CSC

The existing PAA provisions continue to afford the level of protection required by Article 2. Specifically, the PAA provisions providing for strict liability in the event of an extraordinary nuclear occurrence and for indemnification of all persons legally liable for nuclear damage have not changed since January 1, 1995. Also, while the PAA provisions establishing public liability amounts have changed, the current public liability amounts are the same or higher than the amounts in effect on January 1, 1995 and are sufficient to satisfy the indemnification amounts required by Article 2. Accordingly, DOE does not believe any change in existing PAA provisions is needed to maintain compliance with the CSC.

One commenter expressed concern that the future deployment of small modular reactors (SMRs) could raise questions about compliance with the Article 2 requirement to ensure the availability of an indemnification amount of at least $1.4 billion (1000 million SDRs) with respect to civil nuclear power plants. Specifically, the existing PAA provisions require a public liability amount of $560 million with respect to reactors with capacity under 100 MW, including reactors that produce power. DOE believes there is no need to change any existing PAA provision to address this concern. As an initial matter, DOE notes that Article 2 is intended to permit the United States to be a CSC member without any significant change in the PAA. In addition, development and adoption of the Article 2 requirements were accompanied by thorough discussions of the PAA and how its provisions operated on January 1, 1995. The PAA provisions in effect on January 1, 1995, provided for public liability amounts greater than $1.4 billion only with respect to power reactors with capacity of 100 MW or higher; the public liability amount for other reactors was $560 million—the same as today. Thus, DOE believes the best reading of the term “civil nuclear power plants” is reactors with capacity of 100 MW or higher.

[84] Convention, at Annex art. 2.1.a.
[85] Convention, at Annex art. 2.1.b.
[86] Convention, at Annex art. 2.1.c.

3. Global Nuclear Liability Regime Based on CSC Will Promote Nuclear Exports

Nuclear exports can provide a number of important benefits, including increasing the availability of carbon-free energy sources, providing good paying jobs for American workers, improving the balance of trade, supporting American leadership in nuclear technology, maintaining American influence over global nuclear safety and non-proliferation norms, and reducing the reliance of the United States and its allies on insecure energy sources. DOE supports efforts to promote nuclear exports and to increase the competitiveness of United States nuclear suppliers.

Since ratifying the CSC in 2006, the United States has been a strong proponent of establishing a global nuclear liability regime based on the CSC. Such a regime will address concerns about the treatment of legal liability resulting from a nuclear incident, while assuring the availability of compensation for nuclear damage. Such a regime is critical to American nuclear suppliers' being able to compete in international markets on a level-playing field and thereby secure the benefits associated with the export of American nuclear goods and services. Such a regime also will facilitate involvement by investors and lenders in export projects. Considerable progress has been made towards achieving this goal; the CSC currently covers more than 40 percent of the commercial nuclear powerplants in the world. United States membership in the CSC is the lynchpin of a global nuclear liability regime.

This viewpoint is underscored by comments received from the two organizations that represent many of the major nuclear suppliers. These commenters recognized the importance of the CSC to nuclear exports and the relationship between the CSC and the PAA, observing that if the U.S. were to fall out of compliance with the CSC, there would be repercussions, and U.S. global leadership in nuclear power would decline. These commenters also supported extending the PAA and maintaining compliance with the Article 2 requirements.

IV. Conclusion

Based on a review of the Department's history and experience with the PAA, taking into account the condition of the nuclear industry, availability of private insurance, and the state of knowledge concerning nuclear safety, and after careful review and consideration of public comments, the Department concludes and recommends to Congress that:

(1) the PAA should be continued
(2) the PAA DOE indemnification should continue and expand upon its broad and mandatory coverage
(3) the PAA should continue in effect in a manner compliant with the CSC

The Department strongly believes that continuation of the PAA and the DOE indemnification without substantial modification is vitally important to the achievement of DOE's statutory missions, protection of the public and injured persons in the event of a nuclear incident, and promotion of American leadership and a strong domestic industry in nuclear exports with continuation of the PAA in a manner compliant with the CSC.