

Price Anderson Act

The staff requirements memorandum (SRM-SECY-12-0110) stated that “the staff paper should address if and how Option 2 [update cost-benefit guidance] may influence future U.S. Nuclear Regulatory Commissions (NRC) recommendations to Congress regarding renewal of the Price-Anderson Act.” The Price-Anderson Act (PAA), which became law on September 2, 1957,¹ was designed to ensure that adequate funds would be available to satisfy liability claims of members of the public for personal injury and offsite property damage in the event of a “nuclear incident” involving a commercial nuclear power plant.² The PAA was enacted to meet two basic objectives: 1) remove the deterrent to private sector participation in atomic energy presented by the threat of potentially enormous liability claims in the event of a catastrophic nuclear accident; and 2) ensure that adequate funds are available to the public to satisfy liability claims if such an incident were to occur.³ Thus, the PAA provides a framework of compensation to the public for damages from a nuclear incident.

While the PAA originally provided a government indemnification for all nuclear power reactors, the PAA has been amended over the years to phase out the government indemnity for large commercial reactors. The large commercial reactors are now subject to a two-tier insurance system, consisting of primary insurance obtained from private sources and a secondary program funded by the nuclear industry. Through its indemnification program and limits on licensee liability, the PAA has been successful in removing impediments for firms to enter, and then remain, as participants in the civilian nuclear sector. Companies representing both utilities and support service and equipment suppliers indicated they would likely not participate in the nuclear industry without some method of liability limitation, such as that provided under the PAA. Public testimony submitted during initial enactment of the PAA in 1957 and its subsequent renewals (most notably, in 1965, 1966, 1975 and 1988) supported this viewpoint.⁴

The PAA was most recently revised and extended through December 31, 2025 by Section 602 of the Energy Policy Act of 2005, Public Law 109-58 (EPA).⁵ Sections 603 and 607 of the EPA required the NRC to adjust the maximum total and annual premiums of the secondary, industry funded program not less than once during each 5-year period following August 20, 2003, in accordance with the aggregate percentage change in the Consumer Price Index—in short, these amounts became inflation adjusted.⁶ The NRC made the initial adjustment on October 27, 2005 (70 FR 61885), and the first periodic inflation adjustment was made on September 29,

¹ Pub. L. No. 85-256, 71 Stat. 576 (1957). The PAA is codified primarily in Section 170 of the Atomic Energy Act (AEA). The NRC’s PAA regulations are set forth in 10 CFR Part 140.

² Section 11q. of the AEA defines the term “nuclear incident” as meaning “any occurrence, including an extraordinary nuclear occurrence, within the United States causing, within or outside the United States, bodily injury, sickness, disease, or death, or loss of or damage to property, or loss of use of property, arising out of or resulting from the radioactive, toxic, explosive, or other hazardous properties of source, special nuclear, or byproduct material.”

³ “The Price-Anderson Act - Crossing the Bridge to the Next Century: A Report to Congress,” NUREG/CR-6617 (1998) at p. 1.

⁴ NUREG/CR-6617 at p. 1.

⁵ Pub. L. No. 109-58, 119 Stat. 594, 779 (2005).

⁶ *Id.*, 119 Stat. at 780-81.

2008 (73 FR 56451). On July 12, 2013, the NRC made the second required periodic inflation adjustments to the maximum total and annual standard deferred premiums (78 FR 41835).

Under the PAA, the NRC must require all power reactor licensees, including research reactor licensees (i.e., licenses issued under sections 103 and 104 of the AEA) – and, as a matter of discretion, may require materials licensees (i.e., licenses issued under sections 53, 63, or 81 of the AEA) – to maintain financial protection to cover public liability claims resulting from a nuclear incident.⁷ Large power reactor licensees (those having a rated capacity of 100,000 electrical kilowatts or more) are required to carry the maximum level of primary insurance available from private sources (currently \$375 million) and are also required to participate in a secondary financial insurance program.⁸ Under the secondary program, if a nuclear incident at any participating power reactor results in injury or damage in excess of the primary insurance layer, all power reactor licensees will be charged a retrospective premium up to a specified amount per reactor (currently up to \$121.255 million per reactor) per nuclear incident, although no more than \$18.963 million may be charged per nuclear incident within one calendar year.⁹ Currently, all commercial power reactors participate in the secondary retrospective insurance pool.

For power reactors below 100,000 electrical kilowatts and materials facilities designated by the NRC, the maximum public liability from a nuclear incident is \$560 million per nuclear incident.¹⁰ The liability protection for smaller reactors and materials facilities consists of a combination of private insurance, in amounts specified by NRC regulation, and a maximum government indemnity of \$500 million per licensee.¹¹ The \$500 million government indemnity begins phasing out for every dollar of private liability insurance protection required by the NRC above \$60 million.¹²

Section 170p of the PAA sets forth a reporting requirement, namely:

The Commission and the Secretary [of Energy] shall submit to Congress by December 31, 2021,¹³ detailed reports concerning the need for continuation or modification of the provisions of this section, 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.¹⁴

⁷ AEA § 170a.

⁸ AEA § 170b.(1); 10 CFR 140.11(a)(4).

⁹ *Id.*

¹⁰ AEA § 170e.(1)(C).

¹¹ AEA § 170c.

¹² *Id.*

¹³ Section 606 of the EPA extended the NRC's reporting requirement from August 1, 1998 to December 31, 2021.

¹⁴ Section 170p. was added in 1975 by Pub. L. No. 94-197, § 14.

The purpose of the staff's planned activities under Option 2 is "to enhance the currency and consistency of the existing framework through updates to guidance documents integral to performing cost-benefit analyses in support of regulatory, backfit, and environmental analysis." These analyses provide a basis for the NRC to make an informed decision on whether to approve or disapprove a prospective regulatory or licensing action. These analyses could be used to determine whether the benefit of a new safety or security requirement, in terms of estimated averted property damages, exceeds the cost of implementing such a requirement. The PAA, on the other hand, prescribes the extent of liability for damages caused by a radiological accident and establishes an insurance system to fund such potential liability. The cost-benefit analyses identified under Option 2 do not consider a licensee's potential liability for offsite property damage in the event of a radioactive release from a licensed facility. To the staff's knowledge, Congress has never analyzed the consequences of a nuclear incident in setting the PAA liability amounts or used a cost-benefit analysis in determining such amounts (as noted above, the current system of adjustments is based on inflation).

Section 170p of the PAA enumerates three listed factors to be discussed in the report due to Congress on December 31, 2021: 1) the condition of the nuclear industry, 2) the availability of private insurance, and the 3) state of knowledge concerning nuclear safety at that time. Whether the cost-benefit analyses described in Option 2 could be used as a means to inform Commission conclusions on these three factors,¹⁵ and whether and how Option 2 may influence future NRC recommendations regarding PAA renewal are policy issues. Given the rather attenuated relationship between the purposes for which the NRC staff has used cost-benefit analyses and the means by which Congress has determined the liability amounts for the PAA, and given the PAA reporting requirements, the staff does not plan to use the Option 2 cost-benefit analyses as a basis for preparing the report due to Congress in December 2021.

¹⁵ The descriptions of the condition of the nuclear industry and the availability of private insurance circa 2021 do not appear amenable to an Option 2 type cost-benefit analysis. Similarly, the requirement to describe the state of knowledge concerning nuclear safety in 2021 would most likely be a qualitative description.