



POLICY ISSUE **(Notation Vote)**

August 2, 2021

SECY-21-0072

FOR: The Commissioners

FROM: Margaret M. Doane
Executive Director for Operations

SUBJECT: UNITED STATES NUCLEAR REGULATORY COMMISSION'S 2021
REPORT TO CONGRESS ON THE PRICE-ANDERSON ACT

PURPOSE:

The purpose of this paper is to request the Commission's approval to submit to Congress the attached report on the need for continuation or modification of the Price-Anderson Act,¹ as required by the Energy Policy Act of 2005. This paper does not address any new resource implications.

BACKGROUND:

Congress enacted the Price-Anderson Act in 1957 to meet two basic objectives: (1) assuring that adequate funds are available to the public to satisfy public liability² claims if a catastrophic nuclear accident were to occur, and (2) removing 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. The 1957 law established accident liability limits for the nuclear industry (i.e., the maximum amount of damages for public liability that the nuclear industry could be required to cover) and a mechanism to assure that damage compensation would be readily available within those limits. The Price-Anderson Act has been extended by Congress several times since its enactment. At the time of each extension, Congress also reviewed the Price-Anderson Act and modified various aspects of the law as were deemed necessary at the time.

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¹ The provisions of the Price-Anderson Act are codified in Sections 11 and 170 of the Atomic Energy Act of 1954 (42 U.S.C. §§ 2014 and 2210, respectively).

² The term "public liability" means any legal liability arising out of or resulting from a nuclear incident or precautionary evacuation (42 U.S.C. 2014(w)). Insurance under Price-Anderson covers bodily injury, sickness, disease or resulting death, property damage and loss, including reasonable living expenses for evacuated individuals.

In the Energy Policy Act of 2005, Congress extended the Price-Anderson Act through 2025 and modified certain elements of the framework. Congress also required that the Commission submit to them, by December 31, 2021, a detailed report “concerning the need for continuation or modification 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 [the Price-Anderson Act].” Enclosure 1 to this paper is a draft of the “The Price-Anderson Act: 2021 Report to Congress – Public Liability Insurance and Indemnity Requirements for an Evolving Commercial Nuclear Industry.”

DISCUSSION:

The staff assesses that the Price-Anderson Act provides a legal framework that assures that a significant amount of funds would be available to the public to satisfy claims if a nuclear event were to occur. The provisions of this framework also removed barriers to private sector participation in the nuclear power industry resulting from the threat of potentially very significant liability claims in case of a catastrophic nuclear incident. The assurance of adequate funding is provided through a combination of a primary layer of private liability insurance and a secondary layer of financial protection provided through industry retrospective premiums for large commercial nuclear power reactors, and a combination of private liability insurance and, government indemnification for other types of nuclear facilities. The assurance of adequate funding has been strengthened as the system has grown in depth of coverage over the years.

Even with a decrease in the number of operating reactor units in the last 24 years (i.e., a decrease from 110 reactor units operating at 69 sites in 1996 to 94 reactor units operating at 56 sites in 2020), private sector participation in the nuclear industry has remained strong and commercial nuclear energy continues to make up almost the exact same share of total electricity generated in the United States now as it did 24 years ago (i.e., approximately a 20-percent share of total electricity generation). Despite this decline in the number of operating nuclear power reactor units since the last report to Congress and the expected early retirement of additional units in the future, Price-Anderson will continue to make a large sum of funds available for public liability associated with nuclear incidents for at least the next decade based upon its existing framework. Notably, while the Act provides for government indemnification to cover public liability associated with a nuclear event in certain limited circumstances, because of the level of private sector participation in the nuclear industry and the associated level of financial protection provided by the nuclear industry, the Federal indemnity obligations under the Act have effectively been eliminated for large, operating commercial nuclear power reactors since 1982.

The enclosed report recommends only modest changes in connection with continuation of the Price-Anderson Act because the Act:

1. Has benefited from extensive public discussion and legislative modification over the years, creating an effective and balanced framework for financial protection, and
2. Provides the U.S. Nuclear Regulatory Commission (NRC) a fair amount of discretion and flexibility in implementing that framework.

Purpose and Structure of the Enclosed Report

The enclosed report was developed to respond to the Energy Policy Act of 2005 requirement for the Commission to submit to Congress by December 31, 2021, a detailed report on the continuation or modification of Section 170 of the Atomic Energy Act, the Price-Anderson provisions. Part 1 of the enclosed report presents an overview of the Price-Anderson system. Part 2 examines the issues that the Commission is required by statute to study (i.e., condition of the nuclear industry, state of knowledge of nuclear safety, and availability of private insurance). The Part 2 discussion on the condition of the nuclear industry covers, among other topics, the key topics of new nuclear technologies and the impact of power reactor retirements on the Price-Anderson system. The Part 2 discussion on the state of knowledge of nuclear safety covers, among other topics, the safety performance of nuclear power reactors and the potential for occurrence of accidents. Part 3 covers other issues of interest and importance to Congress and to the public, such as international agreements relevant to the Price-Anderson Act and the potential financial burden of increasing retrospective premium assessments. Part 4 contains conclusions and recommendations. Part 5 is the list of references. The enclosed report includes four appendices: Appendix A, Listing of Litigation Surrounding the Price-Anderson Act and the Summary Results; Appendix B, Historical Claims Data from American Nuclear Insurers; Appendix C, Listing of Each Price-Anderson Act Report Submitted to Congress Since 1957; and Appendix D, Currently Operating Nuclear Power Reactors.

Report Conclusions and Recommendations

The structured payment system created to meet the two objectives of the Price-Anderson Act assured that significant funds are available to the public to satisfy claims if a nuclear event were to occur, enabled private sector participation in atomic energy, and has operated for over 60 years with minimal cost to the taxpayer. In considering the future direction of the Price-Anderson Act, the Congress has before it a range of possible actions, from termination of the Act to its unchanged continuation.

Among other key topics, the report considers whether the development of advanced nuclear technologies spurs the need for changes to the Price-Anderson Act. In particular, the report addresses whether the Price-Anderson Act needs to be revised to address financial protection requirements for a nuclear power plant comprised of multiple small modular reactors (SMRs). The report acknowledges that based on existing NRC regulations, a multi-module plant composed of multiple SMRs may be subject to a significantly lower amount of financial protection requirements than large, operating nuclear power reactors with similar plant electrical output. Specifically, an SMR facility with multiple reactors each below 100 megawatts electric would only be required to purchase primary insurance despite having an overall capacity that is similar to that of a large light water reactor and would not be required to participate in the secondary layer of insurance (SECY-11-0178, "Insurance and Liability Regulatory Requirements for Small Modular Reactor Facilities") that is currently required of large light water reactors. Such an approach could be an issue if events affecting multiple SMR units resulted in offsite consequence risks being significantly higher than the risk posed by a single SMR unit. The NRC assesses multi-unit risks as part of the licensing process for nuclear reactors, including SMRs and future advanced reactor designs. The assessments are used to ensure appropriate treatment of risks related to multi-unit design and operation. The information gathered through the licensing process for specific designs and facilities, together with the analysis performed for the development of a regulatory framework for advanced reactors (SECY-21-0010, "Advanced Reactor Program Status"), will inform future decision making

relating to Price-Anderson Act coverage of SMR facilities. Based on current activities and anticipated future development of smaller power reactors (both non-light water reactors and light water reactors), it would be prudent to consider if an inequity exists in the application of financial protection requirements for these reactor types. If such an inequity exists, staff concluded that it could be addressed through rulemaking activities as opposed to legislative changes to the Price-Anderson Act. At this time, the staff does not recommend changes to the Price-Anderson Act framework to address different designs of SMR facilities. However, the staff will monitor the progress of SMR technology and operational experience with SMR facilities to further assess this topic for future consideration as it relates to Price-Anderson Act coverage.

Overall, the staff has not identified any information that suggests discontinuing the Price-Anderson Act provisions would be warranted based on NRC's public health and safety mission. The NRC staff therefore recommends that the same amount, type, and terms of public liability protection should be provided for future and existing licensees.

The enclosed draft staff report presents information supporting the following recommendations for Commission consideration:

- (1) A recommendation that the Congress continue the Price-Anderson Act, because the Act provides a valuable public benefit by establishing a system for the prompt and equitable resolution of public liability claims resulting from a nuclear incident. Consistent with previous renewals, it is further recommended that the Act be continued for 10 years to allow Congress to be better able to consider substantial changes related to trends in decommissioning and in advanced reactor technologies that are anticipated to continue within the nuclear power industry. Continuation of the Act would provide the same indemnification provisions for future nuclear licensees as are currently provided to existing nuclear licensees, and the existing financial protection and limit of public liability provisions should be maintained. Any changes in the Act should apply to both existing and new nuclear licensees.
- (2) A recommendation, consistent with a recommendation in the previous Price-Anderson Report, that the Congress clarify its intent on the following issues that have been sources of uncertainty in implementing Price-Anderson. The clarifications should:
 - a. Address whether the prohibition on payment of punitive damages extends to every case where a defendant has entered into an indemnification agreement under Price-Anderson, or only to those where damages would exceed the non-governmental first and second layers of financial protection and actually involve the government paying for punitive damages, to resolve conflicting holdings from district courts described in more detail in Section 1.2.7 of the report.
 - b. Clarify that a nonprofit NRC licensee shall not be indemnified for legal costs incurred in connection with the settlement of a claim, to confirm the Commission's interpretation of the relationship between 42 U.S.C. 2210(h) and 42 U.S.C. 2210(k) described in more detail in Section 1.2.9 of the report.
- (3) A recommendation that any modifications to the Price-Anderson Act should take into account U.S. obligations under the Convention on Supplementary Compensation for Nuclear Damage, which is described in more detail in Section 3.3 of the report.

RECOMMENDATION:

The staff recommends that the Commission approve the enclosed report to Congress on the continuation or modification of the Price-Anderson Act.

After receiving Commission approval to proceed with the report, the staff will submit letters to the NRC's Office of Congressional Affairs to transmit the report to the Speaker of the U.S. House of Representatives, the President of the U.S. Senate, and the NRC's oversight committees. The Office of Congressional Affairs will then arrange for appropriate distribution to Congress. The NRC staff will also issue a *Federal Register* notice announcing publication of the enclosed report.

RESOURCES:

This paper does not address any new resource implications.

COORDINATION:

The Office of the General Counsel reviewed this package and has no legal objections.

The Office of the Chief Financial Officer reviewed this package and determined that it has no financial impact to NRC resources.

Margaret M. Doane

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Margaret M. Doane
Executive Director
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Enclosures:

1. The Price-Anderson Act:
2021 Report to Congress
2. Proposed Letters to Congress

SUBJECT: UNITED STATES NUCLEAR REGULATORY COMMISSION'S 2021 REPORT TO CONGRESS ON THE PRICE-ANDERSON ACT; DATED August 2, 2021

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SECY-012

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