

51 FR 40334  
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**10 CFR Part 50**

**Production and Utilization Facilities;  
Request for Comments on  
Development of Policy for Nuclear  
Power Plant License Renewal**

**AGENCY:** Nuclear Regulatory  
Commission.

**ACTION:** Policy statement: Request for  
comments.

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**SUMMARY:** In light of the industry and government initiatives which are already underway, the U.S. Nuclear Regulatory Commission (the Commission) is considering the development of a regulatory policy on extending nuclear power plant licenses beyond 40 years. In order to solicit early comments from the public, industry and other government agencies on various issues that will require timely resolution, responses to questions bearing on the issues that the Commission has identified to date are being solicited via this notice of a Request for Comments on Development of Policy for Nuclear Power Plant License Renewal.

**DATE:** The comment period expires  
January 5, 1987.

**ADDRESSES:** Send written comments or suggestions to the Secretary of the

Commission, Washington, DC 20555, Attention: Docketing and Service Branch. Copies of comments received by the Commission may be examined at the NRC Public Document Room, 1717 H Street NW., Washington, DC 20555.

**FOR FURTHER INFORMATION CONTACT:** Jerry E. Jackson, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555 Telephone (301) 492-8544.

**SUPPLEMENTARY INFORMATION:** In the early part of the twenty-first century, a significant number of the licenses for the existing operating nuclear power plants are due to expire. Without renewal of these licenses, these plants will be shut down and their generating capacity will be lost. If this potential loss of generating capacity is combined with potential losses of electric generating capacity from other existing non-nuclear sources, the electric power which would have to be supplied from new generating capacity is substantial. In response to their recognition of this situation and the necessity to address life extension issues early, the utilities, industry and the Department of Energy (DOE) are sponsoring programs to study plant life extension for both nuclear and non-nuclear generating plants.

The Commission recognizes the long term nature of the issues and believes that it may be desirable to develop an agency policy at this time to help assure that issues which could affect public health and safety are identified and resolved in a timely manner. And, further, it would be a help in planning for the nation's long term stable supply of commercial nuclear energy. In addition, although not all issues can be resolved at this time, it may be useful at this time to develop a unified approach to the extension of operating licenses beyond 40 years. The Commission also believes that the operating performance of nuclear power plants, especially in the 10 to 20 years prior to the end of a plant's operating license term will be a significant factor in its determination of any license extension. Therefore, it is the Commission's intention that any license extension and the conditions for extending a license will take into account the operating performance history of the power plant.

#### **Applicable Statutory Requirements**

The current regulatory requirements for extending a plant's operating license are quite general. Chapter 10, section 103(c) of the Atomic Energy Act of 1954, as amended, states:

Each license shall be issued for a specified period, as determined by the Commission, depending on the type of activity to be licensed, but not exceeding forty years, and may be renewed upon the expiration of such period.

10 CFR 50.51 reflects this requirement and states:

Each license will be issued for a fixed period of time to be specified in the license but in no case to exceed 40 years from the date of issuance . . . Licenses may be renewed by the Commission upon the expiration of the period.

Another important provision is stated in Title 5 of the U.S. Code, Chapter 5, Subchapter II, section 558(c):

. . . When the licensee has made timely and sufficient application for a renewal or a new license in accordance with agency rules, a license with reference to an activity of a continuing nature does not expire until the application has been fully determined by the agency.¶

10 CFR 2.109 implements this provision by providing that:

If, at least thirty (30) days prior to the expiration of an existing license authorizing any activity of a continuing nature, a licensee files an application for a renewal or for a new license for the activity so authorized, the existing license will not be deemed to have expired until the application has been finally determined.

#### **Current NRC Initiatives**

In its 1986 Policy and Planning Guidance, the Commission has stated:

Requests for an operating license renewal are to be anticipated and will require advanced planning and analysis. The Commission intends to continue development of the policies and criteria to define requirements for operating license extensions to help assure that industry's efforts in this area are focused on the primary regulatory concerns.

The following guidance is provided to the staff to implement this policy:

In view of industry initiatives to address operating license renewals, the staff should propose policy guidance and develop licensing criteria to define requirements for operating license extensions. The staff should work with industry to ensure that key regulatory issues are identified.

The NRC staff has approved limited research on nuclear power plant "aging" issues for several years. In recognition of the importance of aging issues to plant life extensions and to be responsive to the industry interests in extension of nuclear plant life extension, these efforts have been directed to consider the life extension issue. The NRC staff is in the process of developing its "Plan to Accomplish Technical Integration for Plant Aging/Life Extension." One of the primary purposes of this plan is to integrate current NRC activities in aging so that any overlaps or deficiencies in agency programs may be identified and state-of-the-art information on aging is coordinated and disseminated within the NRC and among its contractors. A key element of

this plan is the establishment of a Technical Integration Review Group for Aging and Life Extension (TIRGALEX) which will involve all interested NRC offices in the formulation and implementation of the plan.

#### **Questions for Public Comment**

To aid the NRC in developing this policy, and in its planning for timely responses to any requests for nuclear power plant operating license extensions beyond a forty-year period and to help assure that the staff and industry resources are allocated appropriately, and the relevant programs are coordinated effectively, the Commission is soliciting the public, government and industry views on the following issue questions that will require timely resolution.

##### **1. Timeliness of Policy**

(a) To what extent should the NRC proceed at this time in defining the regulatory policy which would be applicable to requests by utilities to extend the operational life of commercial light-water power reactors beyond the current forty-year operating license period?

(b) Is an effort by the Commission to formulate such policy well in advance of the expiration of operating licenses appropriate?

(c) When must such a policy be in place? What is the basis for this time?

(d) To what extent are the individual reactor licensees or industry groups acting on behalf of licensees actively planning at this time to request NRC permission for extended operation beyond the expiration of power reactor licenses?

##### **2. Timing and Length of License Extension Requests**

(a) What criteria should be applied to judge that a request for license extension is both timely and sufficient?

(b) Current regulations do not define a time limit beyond the initial 40 year term for which plants could operate while being considered for license extension. Should there be a limitation? If so, what should the limiting period beyond the 40 year term be during which a plant could continue operation while undergoing license extension review?

##### **3. Acceptable Level of Plant Safety**

(a) In addition to NRC's current requirements, how should the NRC incorporate performance based information coupled with insights derived from probabilistic risk assessment into the decision making process?

(b) Should plants applying for life extension be required to demonstrate

conformance to regulations in effect on the date of the extension application? On what basis should a licensee not have to demonstrate continued conformance with applicable rules and regulations?

(c) Should the intent to operate in excess of a forty-year operating period be factored into current and future benefit-cost analyses and safety findings for backfitting considerations? If not, why not?

#### ***4. Scope of Plant Life Extension Applications***

(a) Should a life extension application be for a specific period of time? If so, for what length should it be? Should the Commission specify varying requirements based on the period requested for life extension?

(b) Which, if any, of NRC's licensing criteria are not appropriate for the purpose of reviewing plant life extension requests?

(c) How and to what extent should the prior operating history of the plant be factored into considerations for license extensions?

#### ***5. Technical Considerations for Plant Life Extension***

(a) Which components and structures will require residual lifetime evaluations in consideration for license extensions? What are the criteria for the selection of these components and structures?

(b) What are the major technical parameters and criteria which should be considered in NRC reviews to permit power reactor operation beyond the expiration of licenses?

(c) What additional monitoring and maintenance programs will be needed to assure safety during extended life?

(d) Which of these technical factors, including degradation processes and methods for detecting such degradation, are major "leadtime" items requiring data accumulation over the years prior to expiration of power reactor licenses?

(e) How should codes and standards be revised to support license extension?

(f) What investigations and research have been or are going on that address nuclear plant life extension? What mechanisms should be established to assure timely information exchange with the NRC to encourage communication, early consideration and avoid duplication?

#### ***6. Schedule for Resolution of Issues***

(a) What overall schedule is appropriate to achieve major milestones and for resolution of the issues relative to nuclear plant license extension?

#### ***7. Procedural Considerations***

(a) Should there be any procedural changes regarding future operating license extensions and current treatment

of initial operating license applications? If so, what changes should be made?

(b) Please be as specific as possible, e.g., identify the specific procedural requirement and describe how it should be changed; identify whether such change can be accomplished under the current provisions of applicable statutes or whether it would involve a statutory change.

Dated at Washington, DC, this 3rd day of November 1988.

For the Nuclear Regulatory Commission,  
Samuel J. Chilk,  
*Secretary of the Commission.*