

POLICY ISSUE NOTATION VOTE

September 23, 2009

SECY-09-0137

FOR: The Commissioners

FROM: J. E. Dyer
Chief Financial Officer

SUBJECT: NEXT STEPS FOR ADVANCE NOTICE OF PROPOSED
RULEMAKING ON VARIABLE ANNUAL FEE STRUCTURE FOR
POWER REACTORS

PURPOSE:

To request Commission decision on the next steps for the Advance Notice of Proposed Rulemaking (ANPR) on variable annual fee structure for power reactors. The staff recommends establishing an U.S. Nuclear Regulatory Commission (NRC) workgroup to analyze options for setting fees for power reactors that would include small and medium sized reactors. A summary of comments on the ANPR is included with this paper ([Enclosure 1](#)).

BACKGROUND:

The Omnibus Budget Reconciliation Act of 1990 (OBRA-90), as amended, requires that the NRC recover approximately 90 percent of its budget authority by charging fees to its licensees. The fee amounts for NRC licensees are computed by first allocating the NRC budget among the various classes of licensees. The staff then estimates the amount of collections for fee for service for each class. This amount is subtracted from the allocated budget to compute the total annual fee amount for each class of licensees. The annual fee for an operating power reactor is equal to the total annual fee amount for power reactors divided by 104 reactors. The power reactors that are currently licensed by the NRC each pay an annual fee of \$4,503,000.

The 104 operating power reactors licensed by the NRC have power limits ranging from 1500 to 3990 megawatts thermal (MWt). However, the NRC anticipates receiving applications to license small and medium sized commercial nuclear reactors with capacities ranging from 30 to 1000 MWt. The ANPR published on March 25, 2009 (74 FR 12735), was NRC's initiative to invite early input from interested stakeholders and the public on the issues relevant to the establishment of an annual fee structure based on the size of the reactor.

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DISCUSSION:

The NRC received fifteen comments in response to the ANPR. The general consensus from the commenters is that an adjustment to the current power reactor annual fee methodology is needed to account for small and medium sized power reactors. The suggestions in the comments are to base the annual fee on: a) a risk matrix; b) the thermal power ratings (MWt); c) the cost of providing regulatory service; d) an amount proportional to the size of system based on megawatt (MW) ratings compared with a fixed baseline. Other commenters recommended the following: a) reinstatement of size factor in fee exemption; b) establishment of power reactor subclasses; or c) additional analysis in lieu of any change to current structure.

The staff looked at three options on how to proceed: (1) establish an NRC workgroup to analyze the suggested methodologies; (2) proceed with the development of a variable annual fee structure for power reactors based on licensed power limits; and (3) revisit the issue when an application for a small or medium sized reactor is received.

RECOMMENDATION:

The staff recommends option 1. This recommendation is based on the need to evaluate the suggestions received for computing fees. Given the interest within the NRC stakeholders, delaying the consideration of the issues (option 3) is not advisable.

The NRC workgroup will analyze the various suggested methodologies, including using licensed power limits (option 2). The members of the workgroup will include staff from the Office of New Reactors (NRO) and Office of the Chief Financial officer (OCFO). The workgroup will analyze the administrative feasibility of the various methodologies and whether the outcome provides fairness and equity to NRC's licensees. The workgroup will provide a recommendation to me. Depending on the workgroup's recommendation, a proposed amendment to the rule would be presented in a future fee rule to get public comment. The NRC may publish another ANPR and/or hold a public meeting, if appropriate.

RESOURCES:

This workgroup will be developed and pursued using the NRC's planning, budgeting and performance management process within existing agency resources.

COORDINATION:

This action has been coordinated with NRO. The Office of the General Counsel (OGC) has reviewed this paper and has no legal objections.

This document is marked "Official Use Only – Sensitive Internal" because it contains predecisional information about the NRC's fee rulemaking.

/M. Brown for/RA//
J. E. Dyer
Chief Financial Officer

Enclosure:
[Summary of comments on the ANPR](#)

**Summary of Comments on Advance Notice of Proposed Rulemaking
Variable Annual Fee Structure for Power Reactors
NRC-2008-0664**

1. George J. Silvestri, Jr.: believes it will significantly change the economics of large power reactors and distrusts the hidden motives behind the proposal.
 2. Mark Kirshe, Glenwood, MD: recommends an initial phased in low fee period until there is a sufficient number (10 or more) of small reactors to support staff activities. The fee basis should not deter development or commercialization.
 3. Brian Bedford, Tetra Tech EC, Inc., Morris Plains, NJ: agrees a variable fee structure should be established. It should be proportional to the level of NRC oversight required, which should directly correlate to the potential risk to public health and safety. A risk matrix that measures probability and severity could be used in the determination of annual fees. The output of the plant (heat, electric, other) or site location (modules) should not be factors unless they directly affect public health and safety. Fees should not be applied to the number of modules licensed, but rather to the number of modules that currently have fuel loaded.
 4. Edward Wallace, Pebble Bed Modular Reactors (Pty) Ltd, Chattanooga, TN: believes the annual fee structure should be based on thermal power ratings. Rulemaking should define a "modular reactor plant" as one or more reactors with a common final safety analysis report, in which each of the reactors is equal to or less than 1500 MWt and the plant is defined as equal to or less than 4000 MWt in the aggregate for the purpose of fee assessment. Annual fee calculations remain the same for Non-modular reactor plants. Annual fees for a modular reactor plant up to 4000 MWt should equal fees for one large light water reactor. Sites containing modular reactors in total excess of 4000 MWt would be treated as a separate modular reactor in combinations of reactors totaling up 4000 MWt (e.g. site totaling 10,000 MWt would be assessed annual fees equivalent to 3 large light water reactors).
 5. Rod Adams, Adams Atomic Engines, Inc.: believes the annual fees should be based on the cost of providing the regulatory service. If proper accounting for costs is not possible, then the fee should be variable and based on the licensed power output of the reactor. The formula should be the licensed thermal output times the fee per unit output. Also, the fee structure should not be a disincentive to use a multi-reactor configuration, if that provides a safer result. Regarding modules, it should be less costly to provide oversight and, thus, fees should reflect this cost reduction. There should be an option for a single comprehensive license with a clear understanding of potential effects of construction of additional modules.
- Finally, the commenter believes that the government should be consistent in its policies as to whether or not it charges fees. For example, enforcing emissions standards on fossil fuel plants is at the taxpayer expense, while nuclear reactor oversight assesses fees.
6. William Phillips: believes the NRC fee should be based on the actual man hours / cost of regulating a particular style of reactor (i.e. a simple design with inherent safety features would require less regulation and follow up.) If this is not possible, then a simple fee based on the

Enclosure

thermal output of the reactor or on the electrical output of the reactor is the best structure. If a variable annual fee structure is established, it should be as neutral as possible, covering only what is necessary to ensure the health and safety of the public. This will naturally group reactors according to design. The reactor size should only be considered as it relates to the complexity of design and safety. Regarding multiple reactors at the same site, a variable annual fee should consider the site location as one element with the reactor(s) as a second part of the fee.

7. Daniel Ingersoll, Oak Ridge, TN: encourages NRC to pursue the development of a variable fee structure that will appropriately reflect the enhanced safety features of smaller sized nuclear power plants. Although unproven, the expectation is smaller sized plants will require lower level of NRC oversight. It appears the basis for defining the variable structure should be based on thermal power, which applies to all plant applications. Regarding plant configuration, base annual fees on total thermal power of the plant rather than the individual modules, which is more likely to model complexity of the plant and required level of NRC resources.

8. John W. (Bill) Pitesa, Duke Energy, Charlotte, NC: should not establish a variable annual fee structure at this time. Concerned that financial predictability of imposed fees will be lessened with a variable annual fee structure, which will require reanalysis annually to determine its cost and sufficiency. Regardless of how the heat energy is used, the NRC should be reviewing nuclear operations and charging fees for all heat producers. If a variable annual fee structure is enforced, the current (uprated) licensed thermal power rating should be used as the basis for a two tiered fee structure. Reactors between 1500 and 4000 MWt should have one fixed rate per unit, and for smaller reactors there should be a sliding scale approach based on licensed thermal power rating. Other factors that affect NRC resources, such as plant health, should also be used as inputs to the equation, if a variable annual fee structure is enforced.

9. Debrorah Deal Blackwell, Hyperion Power Generation, Inc.: suggests a two part fee. One part would be a baseline fixed component applicable to all reactors (suggest \$50,000/year and universities charged only 10%). The second part is proportional to the size of the system and based on MW provided. It should be devised to reflect the fact that larger systems have more complexity and more potential hazards; thus, they should be more costly to regulate. The current single annual fee structure for all nuclear power reactors would pose a prohibitive obstacle for many expected customers of Hyperion's small, mass-produced reactors.

10. John C. Butler, Nuclear Industry Institute (NEI): believes that the analyses performed in 1987 and 1995 remain valid and support the conclusion that there is not a relationship or predictive trend between regulatory resources and the type of reactor or the thermal megawatt rating of the reactor. A detailed analysis, similar to the 1995 analysis, should be performed to support an equitable change to the fee structure. This analysis could better support the base administrative and research burden that the NRC would assign to regulation of this new class of reactors, and whether licensed thermal power is an appropriate basis.

11. Jeffrie Keenan, PSEG Nuclear, LLC, Hancocks Bridge, NJ: concludes that the NRC should not establish a variable annual fee structure based on reactor output because it would

result in an increased financial burden on the current operating reactors. The annual fee should continue to be imposed according to 10 CFR 171 and the “size of reactor” factor should be re-established in § 171.11(c) to accommodate smaller reactors by allowing a fee exemption.

12. Darin M. Benyak, Exelon Generation Company, LLC, Warrenville, IL: does not believe a variable annual fee structure based on reactor output should be established. Believes the current single uniform base fee for all operating power reactors provides predictability, stability, and fairness of allocating the NRC’s cost recovery. Recommends there are suitable alternatives: re-establish size exemption for partial exemption from the annual fees; or create one or more unique sub-class of operating power reactors or a separate distinct class for small and medium sized reactor licensees. NRC’s regulatory costs for the small and medium sized reactors should not be borne by other classes of licensees.

13. Richard A. Meserve, Covington & Burling, LLP, Washington, DC: criterion in setting fees should be based on overhead costs from which the licensees benefit, with the aim that the fee recovery of costs that benefit solely one type or group of reactors are not unfair taxes on other types or groups. Power output should also be a consideration because the recovery costs are generally based on power output. However, to avoid a possible unfair burden on the small reactors and to plan for technology uncertainty, the established system needs to provide maximum flexibility. In addition, the fee exemption rule should be relaxed so that any unfairness in fee allocation can be addressed readily without the burden and delay associated with rulemaking.

14. Dennis L. Koehl, Northern States Power Company, Minneapolis, MN: in general endorses the consideration of power limits as basis for determining annual fees, but there should not be a distinction regarding the type of energy produced. A possible approach would be to categorize the reactors into five groups based on power level (MWt): 1.) 3600 or greater; 2.) > 3000 but < 3600; 3.) > 2400 but < 3000; 4.) > 1800 but < 2400; and 5.) < 1800. To preserve equity, smaller reactors should bear a larger proportion of the fees (per megawatt) because category 5 and some category 4 reactors will almost exclusively involve new technology, which will likely require greater NRC involvement. The term “reactor” should be expanded to include multiple co-located reactors (modules) supplying the same offsite power lines or heat loads. Where the only commonality of two or more reactors is that they supply the same offsite power lines, they should be considered as separate reactors and categorized similar to above grouping.

15. John Wheeler, Producer, “This Week in Nuclear” Podcast: supports restructuring licensing fees to significantly reduce or eliminate the cost for small reactors for five reasons: 1.) high fees are an impediment to investment and innovation, 2.) current structure is unfairly biased towards large nuclear plants, 3.) fees are biased against nuclear energy in general (e.g. solar, wind and renewable power plants do not pay high licensing fees or required to reimburse the Federal Government for regulatory costs), 4.) nuclear energy should receive equal treatment in regulatory framework (e.g. the airline, food and automobile industries are not subject to same fees and not required to reimburse the Federal Government for regulatory costs), and 5) licensing framework should encourage investment in small reactors and in doing so promote job growth.