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**NORTHEAST UTILITIES**



THE CONNECTICUT LIGHT AND POWER COMPANY  
WESTERN MASSACHUSETTS ELECTRIC COMPANY  
WATERBURY WATER POWER COMPANY  
NORTHEAST UTILITIES SERVICE COMPANY  
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December 14, 1990

Docket Nos. 50-213  
50-245  
50-336  
50-423  
813689

Mr. Samuel J. Chilk  
Secretary of the Commission  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555

Attention: Docketing and Service Branch

**Draft Policy Statement**  
**Possible Safety Impacts of Economic Performance Incentives**  
**55 Fed. Reg. 43231 (October 26, 1990)**  
**Request for Comments**

Dear Mr. Chilk:

The following comments are submitted by Northeast Utilities (NU) on behalf of Connecticut Yankee Atomic Power Company (CYAPCO) and Northeast Nuclear Energy Company (NNECO) in response to the request of the U.S. Nuclear Regulatory Commission (NRC) for comments on the Draft Policy Statement of Possible Safety Impacts of Economic Performance Incentives (55 Fed. Reg. 43231 (October 26, 1990)). The driving force behind our comments is minimization of any negative impacts on nuclear safety that could materialize, either directly or indirectly, as a result of economic regulation.

At the outset, we wish to applaud the NRC's initiative in addressing this important public policy issue via a Policy Statement. Since economic performance incentives have the potential to influence plant operation and thus the safe operation of nuclear units, it is appropriate for the NRC to express its views formally for the benefit of both licensees and economic regulators.

Mr. Samuel J. Chilk  
U. S. Nuclear Regulatory Commission  
December 14, 1990  
B13689/Page 2

The most important aspect of any program affecting the nuclear industry is the overriding priority of safety in the operation of nuclear generating units. NU shares the NRC's concerns over potential negative impacts that could result from economic incentive programs, which include sharp thresholds in differentiations between null zones, rewards, and penalties. NU also agrees that short time intervals are inappropriate as relevant periods for decision making in incentive programs, as this concept could create additional inappropriate pressure to alter plant operation to achieve short-term rewards or to avoid short-term penalties. We have no knowledge that such inappropriate actions have occurred, but the potential is present. Furthermore, regulatory reliance on individual, short-term evolutions or events for decision making is inappropriate in our view.

The NRC draft Policy Statement describes various characteristics and potential results that might flow from an appropriate incentive program. Only fair and reasonably designed incentive programs, which could guarantee that the program results would not adversely impact the operational safety of generating units and would be consistent with the public's right to insist upon safe operation of nuclear plants, should be acceptable. The economic regulator's review of unit operation performance should be focused on the long-term basis only, thereby emphasizing sustained long-term safety and reliability, eliminating the specter of isolated, short-term penalties. Such a period should be sufficiently long to eliminate the temptation of compromising unit operation on a short-term basis. Any successful and fair program would have to approximate a two-way street of equal and opposite road widths, with safeguards against moving the center line to either side. We believe that any incentive program should have a relatively wide null zone, so that normal operation would be unaffected. In designing the null zones, there should be sufficient symmetry so that it would be reasonable to expect a responsible operator to have as good a chance of exceeding the zone, and thereby realizing financial rewards, as it would of falling below the zone, and incurring financial penalties. This symmetry and the resulting reward and penalty system should fairly balance the potential upside gain with the potential downside risk.

In the case of utilities with multiple-plants, consideration of the performance of all the units in aggregate would go a long way towards dampening the short-term impact of spectacularly good performance of a single plant or the short-term difficulties of a specific unit.

Two of NU's operating subsidiaries, The Connecticut Light and Power Company (CL&P) and Western Massachusetts Electric Company (WMECO), have annual reviews of generating unit performance in two different jurisdictions. CL&P has an annual hearing review process in which state regulators review nuclear unit performance through a detailed review of selected outages, throughout a twelve month period ending July 31 of each year. The units and outages selected have shown little correlation between long-term performance (one year or greater) and short-term performance (less than one year). Recent reviews have in fact focused on "operator errors" with no consideration for long term performance of the unit or the operator's overall nuclear performance. As an illustration, a recent disallowance of

Mr. Samuel J. Chilk  
U. S. Nuclear Regulatory Commission  
December 14, 1990  
B13689/Page 3

replacement power costs was associated with a short outage (30 hours) at the Haddam Neck Plant which took place during a performance year (12 months ended July 1987) in which the unit's capacity factor was 83.9%, and the composite NU capacity factor for all of its nuclear units was 74.5%. In practice, the current annual review process offers no economic rewards for consistently above average operational performance. It offers only neutral recovery of costs or prudence penalties, and the prudence penalties are possible even when overall performance has substantially exceeded national averages.

WMECO has an annual review process in which the state regulators review nuclear and fossil unit performance. Operational goals are established by the regulators based on five criteria. They are capacity factor (CF), availability factor (AF), equivalent availability factor (EAF), forced outage rate (FOR) and heat rate (HR). With the exception of EAF and CF, all of the factors are based on actual previous year's operation on a unit-specific basis and do not reflect anticipated performance in the upcoming performance year. EAF and CF are based on a selection of the 85th percentile level of similar units' actual data throughout the United States. Thus, NU's generating units' performance is compared to or measured against the top 15% of the industry's units. A similar disallowance for the same CY outage noted above was ordered by the WMECO regulators. The actual CY nuclear capacity factor for the performance year (12 months ended May 1987) was 76.4% compared to the set regulatory goal of 76.8% based on the 85th percentile of like units.

We believe that this brief explanation of the annual review process in both jurisdictions illustrates the important concept that the absence of a formal, published economic performance incentive program does not preclude the possibility of regulatory disincentives being applied on a case-by-case basis. In other words, economic regulators are empowered to make decisions in individual proceedings which can result in adverse implications for nuclear safety. This may be particularly true depending upon the articulated basis for the individual decision in question. We believe that this potential is a more real and pressing concern than that evidenced to date via formal, published programs.

A possibly more bothersome dimension of economic regulation concerns the occasional use of thoughtful, probing root-cause analyses and self-assessment results by economic regulators as a basis for disallowances. At times, economic regulators have used root cause analyses provided to the NRC by licensees as a basis for an admission of licensee error and subsequent disallowance. If not revised, this approach could lead to strong disincentives for NRC licensees to engage in the type of probing self-assessment processes which are beneficial to licensees, the NRC, and ultimately, the public. Accordingly, we recommend that the NRC include some highly focused discussion of these concerns in the final version of the subject Policy Statement. As one option, the NRC could forcefully express its objections to such practices as being inconsistent with the NRC's desire to encourage licensees to self-discover, self-evaluate and self-correct.

Mr. Samuel J. Chilk  
U. S. Nuclear Regulatory Commission  
December 14, 1990  
E13689/Page 4

NU also acknowledges and respects the obligations of state regulators to review all costs associated with the NU generating units NU owns and operates. However, the process and level of performance of these reviews must not be allowed to affect or even appear to affect the overall integrity of operational safety at nuclear plants. NU believes that considerable open discussion among utilities, economic regulators and the NRC should occur before comprehensive incentive program characteristics could be more clearly defined. We would welcome further discussion on this important topic, and we believe that the NRC should assume a visible role in encouraging economic regulators to adopt responsible programs, and also to render individual ratemaking decisions which reflect the principles discussed herein.

Very truly yours,

CONNECTICUT YANKEE ATOMIC POWER COMPANY  
NORTHEAST NUCLEAR ENERGY COMPANY

*ORIGINAL SIGNED BY*

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