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BY FAX AND FIRST CLASS MAIL
March 4, 1994

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

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

Re: Environmental Review for Renewal of Operating Licenses,
10 CFR Part 51

Dear Mr. Chilk,

Please accept the attached comments of the Massachusetts Public Interest Research Group. In addition to this fax, a copy of the comments, with all attachments, is being mailed, first class. Thank you.

Sincerely,

Alan Noguee
Energy Program Director

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Before the
U.S. Nuclear Regulatory Commission
Washington, DC.

Environmental Review for) 10 CFR Part 51
Renewal of Operating Licenses)

COMMENTS OF THE MASS. PUBLIC INTEREST RESEARCH GROUP (MASSPIRG)

I. Introduction

MASSPIRG appreciates this opportunity to submit these comments on the proposed license renewal rule of the Nuclear Regulatory Commission ("NRC"), 10 CFR Part 51. We also thank the NRC for sponsoring the recent meeting in Chicopee, Massachusetts. MASSPIRG filed joint comments with Massachusetts Citizens for Safe Energy on this issue on the license renewal issue on October 15, 1990 and adopts those comments here as well. MASSPIRG also thanks the New York State Energy Office and the Minnesota state agencies for their excellent written comments, which we endorse.

Our comments below demonstrate that nuclear plant license renewal cannot be generically found to be a least-cost option, that new coal plant construction cannot be generically found to be the best potential least-cost alternative, that the NRC must fulfill its National Environmental Policy Act mandate to find that plant-specific nuclear license renewal requests are needed and economical before approving them; and we make alternative recommendations.

MASSPIRG is the largest consumer and environmental advocacy organization in Massachusetts, with over 120,000 members. MASSPIRG has had extensive experience analyzing issues relating to the need for and cost-effectiveness of nuclear plant license renewal. MASSPIRG litigated construction of the proposed Pilgrim Unit II on economic grounds until it was canceled by Boston Edison in 1982. The organization has conducted analyses on the economics of operation vs. retirement on the Pilgrim Nuclear Power Station and on Yankee Rowe, which are discussed in greater detail below. We have researched alternative generation options in comparison to both continued operation of nuclear units and the construction of new coal generating capacity. MASSPIRG has also been an active participant in the collaborative design of cost-effective Demand-Side Management ("DSM") programs with Boston Edison, Western Mass. Electric and Commonwealth Electric.

The author of these comments has 17 years of experience in energy policy analysis, and has directed MASSPIRG's energy/economic analysis since 1987. Previously, with the Environmental Action Foundation, in Washington, D.C., I published a 1984 national report on the rate impacts and life-cycle cost-effectiveness of nuclear plants then under construction. In 1986, I conducted a national study on utility demand forecast accuracy and on the costs of excess

power plant construction. I was invited to testify before House and Senate subcommittees on utility regulatory reform; my House testimony on federal versus state regulatory authority over utility construction was appended to the Senate testimony of William J. Clinton, then-Governor of Arkansas, testifying on behalf of the National Governors' Association, on S. 1149, the Ratepayer Protection Act of 1985 (Before the Subcommittee on Water and Power, July 23, 1986).

II. Nuclear plant license renewal cannot be generically found to be the least-cost option, especially at this time.

MASSPIRG must wholeheartedly agree with the characterization of the New York State Energy Office that making generic, as opposed to site-specific, assumptions about the need for generating capacity and alternatives is "ridiculous." In our view, this proposal is topped only by the fantastic attempt to reach such conclusions decades in advance of when the potential alternatives would actually be implemented.

The NRC's proposed generic finding is inconsistent with a 1988 analysis by the Energy Information Administration of the U.S. Department of Energy, which concluded:

Continued escalation in operating costs could erode any cost advantage that operating nuclear power plants now have... If operating costs continue to escalate, it may become economical to close some of the older plants, and thus the assumption of a 40-year operating life may be optimistic." (An Analysis of Nuclear Power Plant Operating Costs, DOE/EIA-0511, March 1988 at vii)

MASSPIRG's own plant-specific analyses of the cost-effectiveness of continued operation vs. retirement of the Pilgrim nuclear station and of Yankee Rowe -- along with the relatively recently announced early retirement of five nuclear units -- also demonstrate the impossibility of reaching such a generic conclusion.

In 1987, MASSPIRG published an analysis of the costs of the continued operation and maintenance of the Pilgrim nuclear plant. At that time, Pilgrim was in the midst of an extended (three-year) outage, during which approximately \$400 million was expended on a number of essential equipment, emergency planning and management improvements. MASSPIRG concluded that, based on Pilgrim's historical performance, the effort to refurbish and operate Pilgrim would cost \$49 million to \$1.5 billion net present value (in 1987 dollars) more than retiring the plant and replacing it with alternatives bid in response to a Boston Edison Request for Proposals ("RFP"). (Attachment 1)

The analysis only considered incremental capital, operating and maintenance costs. During subsequent litigation over the cost recovery of Pilgrim expenditures, the Massachusetts Division of Energy Resources conducted an independent study of the cost-effectiveness of operating Pilgrim, and found the benefits of early retirement to be as high as \$2.3 billion net present value.

Indeed, Boston Edison's own 1989 analysis, conducted at the order of the Department of Public Utilities, found that the Pilgrim outage expenditures would not be cost-effective even if the unit operated at the 68 percent capacity factor then projected by the utility (Response to Department of Public Utilities Record Request RR-DPU-RSH-10, DPU 89-100). That analysis used all the utility's own projections of Pilgrim costs, and the same assumptions on the long-run cost of alternatives approved in the utility's previous forecast and supply plan. (Summary tables from Edison's analysis were attached to our October 15, 1990 comments on license renewal.)

In 1992, MASSPIRG reexamined the cost-effectiveness of Pilgrim. We found that, despite significant improvements in Pilgrim cost trajectories and operating performance, the cost of energy and capacity alternatives to Pilgrim had decreased even more. Continued operation was found likely to cost at least \$198 million net present value more than early retirement.

In 1988, MASSPIRG analyzed the costs and benefits of continuing to operate the Yankee Rowe nuclear plant, and found that retiring the plant would save \$114 million to \$267 million, net present value. (Attachment 2). At that time, Yankee Atomic and its owner utilities, along with Boston Edison, spent millions of dollars in a public campaign to convince voters in a ballot initiative that both nuclear plants were economical, and that it was essential to keep both nuclear plants operating.

Yet only three years later, Yankee Atomic's own studies confirmed that it would make economic sense to retire the unit immediately. During the intervening three years, there were substantial changes in the energy marketplace. Projected demand growth declined as a result of the recession and with the success of large-scale utility DSM programs. Increasing competition was reducing the cost of generating alternatives. And estimates were increasing of the cost of Yankee Rowe improvements to respond to reactor pressure vessel embrittlement concerns.

MASSPIRG believes that these events only confirmed trends analyzed in our 1988 study. Even if one were to argue, however, that Yankee Rowe only became uneconomic as a result in these changes in the energy marketplace during those three years, Yankee Rowe would still vividly illustrate the folly of attempting to reach a the need for and economics of even a plant-specific nuclear plant life renewal decades in advance, let alone the preposterous attempt to reach such a conclusion generically for all nuclear plants.

Among the changing conditions in the utility industry that make such attempts increasingly futile, in addition to fundamental uncertainty over economic conditions and the demand for electricity, are:

- * uncertainty over the structure of the utility industry, and the potential impact of retail competition;

- * the success of utility DSM programs, and the continued development of more efficient end-use technologies and more cost-

effective DSM delivery mechanisms;

- * the potential for increasing electrification, particularly in the transportation sector;

- * rapidly declining prices for wind and solar-powered generating technologies, and the continued evolution of fuel cell development;

- * continued improvement in gas-fired combined cycle plant efficiencies;

- * continued uncertainty around fossil fuel supplies and prices;

- * new methods and regulatory mechanisms for evaluating the environmental externalities costs of energy alternatives;

- * new methods and regulatory mechanisms for evaluating the contribution of energy alternatives to mitigating system planning risks;

- * the environmental acceptability of new large-scale hydro generation;

- * continued escalation in nuclear waste disposal and decommissioning costs, and uncertainty around siting both low-level and high-level waste facilities; and

- * uncertainty around nuclear capital and operating costs, particularly as a result of aging effects.

The same considerations are relevant to an analysis of which potential least-cost alternatives may be most preferable to nuclear plant license renewal, and to the NRC's conclusion that new coal plants are the only potential alternative to relicensing in most regions. A recent MASSPIRG examination of the contract costs of new coal plants that have been proposed to serve Massachusetts ratepayers shows that they are more expensive than utility energy efficiency programs, contracts with a proposed Maine wind energy farm, proposed landfill gas plants, proposed biomass plants, proposed small hydro development, and proposed natural gas combined-cycle plants (Attachment 3). Indeed, in the most recent utility Request for Proposals, coal plants have finished no higher than 3rd from last of 35 to 40 proposals.

It was for all these reasons that we suggested, at the Chicopee hearing, that the proposed generic finding on the need for and cost-effectiveness of nuclear license extensions would destroy the NRC's credibility with informed citizens and with state governments. If the NRC is so clearly willing to overlook the potential for economic alternatives to keeping today's nuclear plants running, the public would have no reason to believe that the agency would give any more serious scrutiny to safety concerns as well.

III. The NRC may not ignore the requirement under NEPA to find that proposed license extensions are needed and the most economical alternative.

MASSPIRG concurs with the many state officials who commented on the authority of state utility regulators to approve or to disapprove utility generation plans on economic grounds. The U.S. 1983 U.S. Supreme Court decision in Pacific Gas & Electric unambiguously clarified that authority.

At the same time, NEPA clearly establishes the responsibility of the NRC to find that license extensions are needed and the most economical alternative before approving them. Federal agencies are directed to cooperate with state agencies to avoid duplication, but are not relieved of their obligation to reach necessary conclusions. In most cases, states are likely to have more resources and expertise to evaluate these issues. It would be reasonable for state reviews to precede NRC reviews, therefore, and perhaps for the NRC to adopt the records of state proceedings. However, interested parties must retain the right to present new or additional evidence to and argue before the NRC on the issues of need and alternatives.

IV. Recommendations

MASSPIRG agrees with the proposal by the liaison officer for the state of New York at the Chicopee hearing that:

1) the text of the NRC's proposed rule must be modified to include, and that each individual relicensing decision should include, statements that the NRC's findings with respect to the need for generating capacity and alternative energy sources are only intended to assist the NRC in meeting its NEPA obligations and do not preclude the states from making their own determinations with respect to these issues;

2) determinations of the need for capacity and alternatives must be designated Category 3 issues requiring site-specific reviews; and

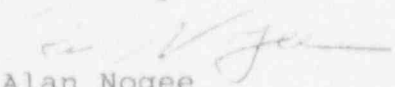
3) NRC relicensing decisions should make reference to state determinations on the issues of need for generating capacity and alternative energy sources and should defer to and be guided by those determinations to the maximum extent possible pursuant to NEPA (emphasis added).

Additionally, MASSPIRG would add:

4) need for capacity and alternatives decisions must be made as close to the date of the license renewal as possible and must rely on the best information available at that time.

Thank you for your consideration.

Sincerely,


Alan Noguee
Energy Program Director
MASSPIRG
March 4, 1994