

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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USNRC

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD ~~82~~ OCT -7 110:28

In the Matter of )  
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PUGET SOUND POWER & LIGHT ) Nos. STN 50-522, 50-523  
COMPANY, et al. )  
 )  
(Skagit/Hanford Nuclear ) DATE: October 4, 1982  
Project, Units 1 and 2) )  
 )  
 )

OFFICE OF SECRETARY  
DOCKETING & SERVICE  
BRANCH

RESPONSE OF NATIONAL WILDLIFE FEDERATION  
AND OREGON ENVIRONMENTAL COUNCIL TO  
APPLICANTS' FIRST SET OF INTERROGATORIES

The National Wildlife Federation and Oregon Environmental Council (NWF/OEC) submit the following answers to Applicants' first set of interrogatories. These responses were prepared by Terence Thatcher, attorney of record for NWF/OEC in this proceeding, who affirms that all representations herein are true and accurate to the best of his knowledge. Responses are numbered to correspond to the Applicants' individual interrogatories.

Interrogatory 1A.

NWF/OEC intend to rely completely upon the Natural Resources Defense Council contentions and bases to support NWF/OEC's contentions enumerated as II.1 and 2 in the Board's July 6, 1982 Order. NWF/OEC will rely on all four of NRDC's Contentions, i.e., Paragraphs I.1, 2, 3, and 4 of the Board's July 6 Order. NWF/OEC believe that the lack of out-of-region marketing opportunities for the power from

Skagit/Hanford supports their general contention that there is no demand for the power for Skagit/Hanford.

Interrogatory 1B.

Not applicable.

Interrogatory 2.

The primary bases for NWF/OEC's Contention II.3 (numbering from Board's Order) are set out in NWF/OEC's Second Supplement to Petition to Intervene.

Interrogatories 3 - 7.

In the following response, NWF/OEC will identify such documents or other materials upon which they base their contention II.3 (as numbered in the Board's July 6, 1982 Order). NWF/OEC anticipate that they will continue to develop support for their Contention II.3, although they cannot predict with certainty when further information will be available. Since hearings are tentatively set in April, 1983, NWF/OEC anticipate that further material will be collected at least by February, 1983.

A. Basis A - Plant Capacity Factors

NWF/OEC contend that the applicants' 70% plant capacity estimate is excessive, particularly in the early years of operation of the Skagit/Hanford Project (S/HP). There are a number of compilations of nuclear plant operating histories that support NWF/OEC's position. These include:

- (1) Regular compilations in the Monthly Energy Review, published by the U.S. Department of Energy (e.g., August, 1982 volume).
- (2) Compilations issued by the publication Nucleonics Week (e.g., April 29, 1982; and issues in June, 1981).
- (3) Compilations found in the "Gray Books" produced by the Nuclear Regulatory Commission.
- (4) The statistical analysis found in NRC, "Statistical Analysis of Power Plant Capacity Factors Through 1979," NUREG -/CR-1881. (showing a 62% capacity factor for operating years 2 - 10 of large reactors).
- (5) Prepared Testimony of Charles Komanoff for the Idaho Public Utilities Commission, Case No. U - 1008-156 (Application of Washington Water Power for rate increase). (estimating 59% capacity factor for large Boiling Water Reactors over a cumulative 28 1/2 year operating history, based on "Gray Books" and Nucleonics Week material.)

In addition, Charles Komanoff, the well-known New York energy consultant, has analyzed the history of nuclear plant operations in his book, Power Plant Performance: Nuclear and Coal Capacity Factors and Economics (Council on Economic Priorities, 1976), updated as of December 31, 1976.\* / Komanoff projects an average 48.6% plant capacity factor for large nuclear plants, based on his analysis.

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\* / Komanoff has written several books on energy development, has worked for the Council on Economic Priorities, and is currently an independent consultant on energy matters who testifies frequently in state utility regulatory proceedings.

All these materials demonstrate substantially lower plant capacity factors than the 70% predicted by applicants for S/HP. In addition, in the Pacific Northwest, thermal plant capacity factors may well be lower than the factors assumed solely on the basis of forced outage rates, maintenance shutdowns, and station service. This is so because of the regular availability of significant amounts of inexpensive nonfirm hydropower. See, Comments of Natural Resources Defense Council, Inc. on BPA's Proposed Near-Term Resource Policy (August 13, 1982) at 11; BPA Near-Term Resource Policy, Technical Support Document, at 18, 47 Fed. Reg. 30811 (1982); BPA Forecasts of Electrical Consumption in the Pacific Northwest (Final), July, 1982, at 140.

B. Basis 3.B - Decommissioning Costs

NWF/OEC supported their Contention 3 by pointing out that the applicants had not included decommissioning costs in their cost calculations. S/HP Environmental Report, Table 8.2-2. The staff's Draft Environmental Statement has now included such costs, with all estimates calculated at less than 1 mill/kwh. That figure may well be too low based on the following:

- (1) Testimony of Charles Komanoff, August 10, 1981; In the Matter of the Application of Washington Water Power for an Order Approving Increased Rates, Idaho Public Utility Commission, Case No. U-1008-156 (estimate of 2.4 mills/kwh decommissioning costs for S/HP).

(2) NRDC has estimated the cost of decommissioning at approximately 10% of the total cost of construction. See, NRDC, Statement in Response to the Bonneville Power Administration's Notice of Intent to Develop Policy Guidelines And a Methodology to Compute Billing Credits (June 29, 1981); NRDC, Model Power and Conservation Plan (for Northwest Conservation Act Coalition) Draft, January, 1982; at 47-49.

C. Basis 3.C - Cost of Money

NWF/OEC contend that the applicants' assumption that the cost of money for S/HP will be 10.67% is too low. At this point, NWF/OEC base their contention on two documents. One contains the estimates of the cost of money provided to the Oregon Public Utility Commission by Pacific Power and Light, one of the S/HP sponsors. (Letter from PP & L to Abraham Kramer, Oregon PUC, December 22, 1981, transmitting PP & L 1982 Electric Utility Construction Budget.) That letter predicts capital costs ranging from 15-16.25%. The other document is the Bonneville Power Administration's Forecast of Electricity Consumption In the Pacific Northwest (Draft), Appendix II. There BPA assumed a 12.06% interest rate for private utilities for thermal plant construction. That figure has been criticized as being much too low, based on current interest charges, but it is still higher than the applicants' assumptions. Criticism found in, NRDC, Comments on BPA Draft Regional Forecast, (June 2, 1982) at 22-23.

D. Basis 3.D - Total Cost Figures

NWF/OEC have criticized the total cost figure (141 mills/kwh) for S/HP provided by applicants. In support of that criticism, NWF/OEC rely at this time on the estimate of PP & L (one of the S/HP sponsors) that its share of Washington Public Power Supply System Nuclear Unit No. 3 will be 191.5 mills/kwh in 1987 dollars. Letter from James F. Pienovi, PP & L, to Willaim Kramer, Public Utility Commission of Oregon (December 22, 1981). Converting that cost into 1991 dollars, to compare to S/HP estimates (assuming 7% inflation) gives approximately 249 mills/kwh. NWF/OEC will also rely to support this contention on the analysis contained in C. Komanoff, Power Plant Cost Escalation: Nuclear and Coal Capital Costs, Regulation, and Economics (Komanoff Energy Associates, 1981). There, Komanoff concludes that the costs of nuclear power plants increased by 13.5% over inflation from 1971 - 1978, and argues that they will continue to increase at least 4.5% over inflation until 1988. (These figures represent comparison costs of plants started one year as opposed to later years, comparison of different "vintages" of plants.) These figures also support the conclusion that S/HP will be substantially more expensive than suggested so far by applicants. S/HP is a much later vintage than WNP No. 3, for instance.

Interrogatory 8

NWF/OEC do intend to offer testimony at the hearings. They have not yet selected their experts. They expect to offer testimony on Contention 3 and Contention 4 (the latter was deferred by the

Board, without prejudice to reintroduction).

NWF/OEC expects, with respect to some of its contentions and bases, that staff members of the Bonneville Power Administration and the National Marine Fisheries Service, would provide significant, non-partisan testimony. This is particularly so with respect to NWF/OEC Contention 4. For that reason, NWF/OEC join with NRDC in suggesting that such witnesses should be sponsored by the Licensing Board, in order to develop a complete record.

Interrogatory 9

NWF/OEC will seek to enter into testimony all materials identified in this response to interrogatories for the purposes explained herein.

Interrogatory 10

NWF/OEC anticipates that it will wish to introduce evidence additional to that identified herein as it becomes available. Nevertheless, no specific answer to interrogatories 10 A, B, and C is possible at this time.

Respectfully submitted,



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DATED: October 4, 1982

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CERTIFICATE OF SERVICE

I hereby certify that the Response of National Wildlife Federation and Oregon Environmental Council to Applicants' First Set of Interrogatories in the above-captioned proceeding has been served upon the persons shown on the attached list by depositing copies thereof in the United States mail on October 4, 1982 with proper postage affixed for first class mail.

DATED: October 4, 1982.



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SKAGIT/HANFORD SERVICE LIST

DATED: October 4, 1982

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