

Financial Qualifications

1. The Board considered the financial qualifications of the Applicants to construct the proposed Skagit facility in the process of resolving SCANP PSAR Contention 3 as well as FOB/CFSP Contentions 9 and 10. In considering the contentions, the Board construes SCANP PSAR Contention 3 and FOB/CFSP Contention 9 to be similar in scope in that they question the ability of the Applicants to finance the construction of the proposed facility.^{1/} To the extent that SCANP's contention also seeks to question the ability of the Applicants to finance the operation of Skagit, it is improper. Since this proceeding involves the application for a construction permit, and not an operating license, the regulations do not require the Applicants to submit evidence of their ability to operate the proposed facility. 10 CFR § 50.33(f).
2. During the course of this proceeding, the Board received evidence on this subject from the following parties: the Staff submitted its SER, Supplement 1, Chapter 20, (following Tr. 14,441), as updated by "Supplemental Testimony of Louis Gittleman Regarding Financial Qualifications" (following Tr. 14,625; hereinafter "Gittleman"); the Applicants submitted "Applicants' Testimony on Financial Qualifications" by Russel E. Olson,

^{1/} In its Contention 10, FOB/CFSP contends that the NRC Staff has not completed its review of the Applicants' financial qualifications. However, as indicated by the testimony filed by the Staff and the Board's findings on this subject below, the Board finds that the Staff has in fact completed its review.

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Michael E. Coberley, Lawrence S. Pack, and James M. Coombs (following Tr. 14,836; hereinafter "Olson, et al."); and SCANP submitted "Intervenor SCANP's Testimony on Financial Qualifications" by Jim Lazar (following Tr. 14,711; hereinafter "Lazar"). FOS/CFSP did not present evidence on its contention, but did cross-examine the Staff's and Applicants' witnesses.

3. Both Gittleman and Olson, et al. discussed the general economic conditions of the Applicants and their ability to finance a project of the magnitude of Skagit. Lazar, on the other hand, concentrated on his estimates of the cost of the facility, and concluded that utilities such as the Applicants could not finance the project.

A. Cost of Plant

4. The Applicants currently project the cost of the Skagit facility to be \$3,086,600,000 exclusive of interest costs incurred during construction (AFDC). (Olson, et al., Appendix, p. 1) This estimate is based on assumed commercial operation dates for Skagit Units 1 and 2 of September, 1986 and September, 1988, respectively. (Id., Appendix, p. 2) The cost is based on January, 1979 dollars.
5. The Staff compared the current estimates of constructing the proposed facility with the cost projections prepared by the Department of Energy

using its costing model (CONCEPT). An August, 1979 run of the CONCEPT model resulted in a projected cost of the proposed Skagit facility, exclusive of interest costs during construction, to be \$2,368,000,000. (Gittleman, p. 2). Since the CONCEPT estimate is used only as a rough check of an applicant's estimate by the Staff, and the Applicants' estimate is a detailed engineering cost analysis, the Staff determined that it was reasonable to use the Applicants' estimate for its financial analysis. (Id.).

6. Mr. Lazar testified that the Staff and Applicant estimates understated the true cost of the facility. (Lazar, p. 1) Mr. Lazar based this conclusion on a number of factors. The first was that he considered the planned operation dates indicated above to be unachievable. (Id.) However, during cross-examination Mr. Lazar admitted that his conclusion was his own judgment, and that he was neither an engineer nor was he qualified to testify as an expert on engineering matters. (Tr. 14,806)

7. A second factor cited by Mr. Lazar was that certain studies indicated that a nuclear power plant being built for the time period projected by Puget Power would cost much more than Puget had estimated, partly because it would take longer to build the facility than Puget projects, and partly because the cost would escalate faster than Puget had estimated. (Id. at 2, 7) Mr. Lazar relies upon studies performed by the Rand Corporation (Mooz Report), the GAO Report, and a study prepared by WPPSS.

8. Mr. Lazar concluded that the Mooz Report supported a finding that the Skagit facility would not begin operation until October, 1989, or three years longer construction time than that projected by the Applicants. Mr. Lazar arrived at this conclusion by utilizing a regression analysis contained in the Mooz Report. In using this analysis, Mr. Lazar allowed no credit for the experience that Bechtel has in managing such nuclear projects, despite the fact that this experience provides for a significant impact toward reducing the construction time as concluded by the Mooz Report. (Tr. 14,807-09). Although Bechtel is not providing the full architectural and engineering services contemplated by the Mooz Report, it is an experienced firm in providing procurement and management of nuclear construction projects. An additional problem raised by Mr. Lazar's use of the Mooz Report is that Mr. Mooz indicated in his report that one of the supposedly independent variables utilized by the analysis, the effect on the cost of a plant from the inclusion of a cooling tower, may not in fact be an independent variable. (Tr. 14,819-25). Mr. Lazar admitted that if such an "independent" variable in fact turned out to be dependent on other variables in the analysis, the correctness of the model could be in jeopardy. (Tr. 14, 812-13) Furthermore, Mr. Lazar admitted that the Mooz Report did not support the 16 percent inflation figure that he used in estimating the Skagit construction costs. (Tr. 14,818)
9. The Board has not placed much weight on Mr. Lazar's interpretation of the GAO Report, which Mr. Lazar relies upon to conclude that the Skagit

construction schedule will be significantly longer than predicted by the Applicants. (Lazar, pages 3-4) Mr. Lazar admitted that the GAO analysis indicated that after 1974, the average construction time for a nuclear power plant jumped considerably, then leveled off and actually decreased in 1977. (Id., p. 4) Furthermore, Mr. Lazar indicated that he performed no analysis to determine the effect on these construction schedules from stretch-outs resulting from a drop-off of demand for electricity following the Arab oil embargo. (Tr. 14,811) The Applicants, on the other hand, have demonstrated a need for the power to be generated by the facility, and propose to construct the facility in an 84-month period. (Olson, et al., Appendix, p. 1 using interval between LWA date of 9/79 and commercial operation date of Unit 1 of 9/86). The Board finds that the Applicants are not likely to voluntarily stretch out the construction schedule.

10. Mr. Lazar also relies on estimated costs contained in a study performed by WPPSS which, using his own estimate of a 16 percent inflation rate and adding an additional three years to the Applicants' construction schedule for Skagit, would result in a total cost of the facility of 8.9 billion dollars. (Lazar, pages 7, 8) However, the Board chooses not to place heavy reliance on the WPPSS results, in light of the internal inconsistencies in the results of the report. For example, Mr. Lazar indicated that the mid-point of a range of cost escalation found by WPPSS in its five projects was a 16 percent annual rate. (Tr. 14,825) However, Mr. Lazar was unaware as to whether WPPSS had separated out cost increases

due to budget changes resulting in changes in the project itself versus escalation alone, nor whether any of the factors that went into the WPPSS cost escalation might also be applicable to the Skagit facility. (Tr. 14,829-30) Furthermore, despite the fact that Mr. Lazar would rely on the WPPSS study to support his conclusion that the 16 percent cost escalation would continue out to the 1986-88 time-period, he admitted under cross-examination that the actual rate of cost escalation that was expected to occur in the interval between the time that the first and the last WPPSS facilities were to be completed was only 6 percent compounded annually. (Tr. 14,826-27) Mr. Lazar conceded that this rate of escalation, when applied to the WPPSS estimate for its Unit 5, would result in a much lower cost for the Skagit facility than what Mr. Lazar had concluded in his testimony. (Tr. 14,831)

11. For the above reasons, the Board has determined to use Applicants' detailed engineering cost estimate for the financial qualifications analysis. The Board believes this to be a conservative approach since the Staff's CONCEPT estimate arrived at a cost estimate which was substantially lower than that projected by the Applicants, and the CONCEPT model has an excellent track record of predicting the actual cost of nuclear power plants. (Tr. 14,627, 14,687-89) Accordingly, the Board finds the Applicants' estimate to be a reasonable one for the cost of a plant.

B. Financial Qualifications of Applicants

12. The ownership, cost of construction, and electrical output of the proposed facility will be shared by Applicants according to the following percentages:

Puget Sound Power & Light Company	40%
Portland General Electric Company	30%
Pacific Power & Light Company	20%
The Washington Water Power Company	10%

Exh. 175, pp. 12-13. For each of the utilities the commitment to construction of the Skagit project represents only 20% or less of the total construction programs scheduled out to 1990. (Tr. 14,024-25) Applicants are investor-owned, regulated utilities. Exhs. 175, 224, 225, 226, 227. They plan to finance their respective shares of the construction cost of the facility from internally generated funds, bank borrowings, and the sale of debt and equity securities. Olson, et al., pp. 1-19 and attached Table 2, pp. 4-15. The detailed sources of funds for construction estimates presented by Applicants demonstrate that this will be possible within the applicable financial tests and constraints. Id.

13. The NRC Staff conducted an analysis of Applicants' ability to obtain the funds necessary to cover the construction costs and related fuel

cycle costs of the proposed facility. SER, Suppl. No. 1 (Exh. 214), pp. 20-21; Gittleman, pp. 1-6. The Staff found that Applicants' sources of funds estimates and underlying assumptions are reasonable and are consistent with estimated conditions. Gittleman, pp. 5, 6. Based on these findings, the Staff concluded that Applicants have reasonable assurance of obtaining the funds necessary to design and construct the proposed facility, including the related fuel cycle costs. Gittleman, p. 6; Tr. 14,680-682.

14. SCANP witness Lazar claimed that the Applicants will be unable to finance the construction of the proposed facility. Lazar, pp. 14-28. The reasons he stressed included his belief that nuclear-dependent utilities are less able to raise money than non-nuclear utilities, and his opinion that the Three Mile Island accident has made it doubtful that any utility will be able to finance a large nuclear project. Id., pp. 15-16.
15. The Board has reviewed the parties' testimony, and finds unreliable the primary sources upon which Mr. Lazar relies to conclude that nuclear-dependent utilities such as the Applicants will be unable to finance a project such as the Skagit facility. The Board bases this conclusion on the admission of Mr. Lazar that he did not know the experience nor performance record of his sources. (Tr. 14,746-49) Furthermore, under examination Mr. Lazar was forced to admit that certain statements in

his testimony were not, in fact, correct.^{2/} Furthermore, the Board notes that Mr. Lazar was not familiar with 10 CFR § 50.33(f), the Commission's regulation regarding requirements for financial qualifications of applicants for construction permits, and could not render an evaluation as to whether or not these applicants complied with that regulation with regard to the Skagit project. (Tr. 14,843-44)

16. The Board finds that the extensive and experience knowledge of utility financing and the current activities of utilities in the bond market of the Staff's witness, Mr. Gittleman (Tr. 14,626-7, 14,631-6, 14,677) and the representatives of the Applicants (Statements of Qualifications of Olson, et al., following Tr. 14,886) lend great weight to their conclusions that the utilities do have the ability to raise the funds necessary to finance the Skagit facility even though it is a nuclear project. For example, despite Mr. Lazar's claim that the Three Mile Island accident and adverse reaction to nuclear power would eliminate the market for bonds issued by nuclear-dependent utilities, Staff witness Mr. Gittleman testified that several utilities involved in nuclear projects have gone to the bond market since last spring. Mr. Gittleman concluded that all of these utilities were able to sell their issuances,

^{2/} For example, Mr. Lazar corrected his statement that one of his sources, Mr. Knipp, has stopped trading in nuclear stocks (Tr. 14, 751), and also had to correct his statement that it would be impossible for utilities to maintain their debt coverages without construction work in progress allowances by state rate commission (Tr. 14,790).

and that several of these utilities had bond ratings equal to that of the Applicants. (Tr. 14,631-36, 14,638) Mr. Gittleman indicated that one of these successful bond issuances was made by a utility which was committed 100 percent to nuclear power. (Tr. 14,677) In light of this testimony and other testimony indicating that nuclear-related utilities are faring relatively well in the capital market since the Three Mile Island accident, the Board finds no firm evidence that the Three Mile Island accident has created a climate which would preclude the ability of the Applicants to raise the funds necessary to finance the Skagit project. Accordingly, the Board finds that SCANP PSAR Contention 3 and FOB/CFSP Contentions 9 and 10 are without merit, and conclude that the Applicants have demonstrated reasonable assurance within the meaning of 10 CFR § 50.33(f) that they can obtain the necessary funds to cover the estimated construction costs and related fuel cycle costs for the proposed Skagit project.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
)
PUGET SOUND POWER & LIGHT) Docket Nos. STN 50-522
COMPANY, ET AL.) STN 50-523
)
(Skagit Nuclear Power Project,)
Units 1 and 2))

CERTIFICATE OF SERVICE

I hereby certify that copies of a portion of the NRC Staff's proposed findings of fact and conclusions of law entitled "Financial Qualifications" in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class, or, as indicated by an asterisk, through deposit in the Nuclear Regulatory Commission's internal mail system, this 1st day of November, 1979:

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