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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In The Matter Of Puget Sound)
Power and Light et al.)
Amended Application For Construction)
Permits and Facility Licenses,)
SKAGIT/HANFORD NUCLEAR PROJECT)

Docket Nos.
STN 50-522, 50-523



SUPPLEMENT TO PETITION TO INTERVENE
OF NATIONAL WILDLIFE FEDERATION
AND OREGON ENVIRONMENTAL COUNCIL

Pursuant to Commission Regulations, 10 C.F.R. §2.714(b),
petitioners National Wildlife Federation (NWF) and Oregon Environ-
mental Council (OEC) submit this supplement to their petition to
intervene. This filing lists the contentions which NWF and OEC wish
to litigate in this proceeding, along with specific bases of these
contentions.

LIST OF CONTENTIONS AND BASES

1. Applicants Have Relied On An Inflated Calculation Of Demand For Electrical Power; Reliable Regional Energy Forecasts Demonstrate No Need For The Skagit/Hanford Project

NWF and OEC here incorporate by reference the contentions and bases filed by Natural Resources Defense Council (NRDC) on this matter.

2. There Are Cost-Effective, Environmentally Preferable Alternatives To The Project; The Environmental Report Is Inadequate In Its Discussion Of Those Alternatives

NWF and OEC incorporate by reference the NRDC contentions

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and bases on this matter.

3. The Applicant Has Used An Inaccurately Low Estimate Of The Environmental And Financial Cost Of The Project In Its Benefit/Cost Ratio

The Applicant has calculated a per kilowatt hour cost for its Project of 140 mills in 1991-1992 dollars. This figure is too low for at least the following reasons:

A. Applicant assumes a 70% plant capacity figure, when in fact experience indicates that nuclear projects generally perform at substantially less than 70% capacity. The cumulative average performance of large (approximately 1100 megawatts) Boiling Water Reactors through mid-1981 was 58%. Historical capacity factors for BWR's of approximately 800 megawatts is 56%. Significantly, the Bonneville Power Administration is required by law when calculating resource costs, to rely upon "appropriate historical experience with similar . . . resources." Pacific Northwest Electric Power Planning and Conservation Act, §3(4)(C), 16 U.S.C. §839a (Regional Power Act).

B. Applicants have not included decommissioning costs in their project cost calculations. Environmental Report, Table 8.2-2. Testimony before the Idaho Public Utility Commission has estimated the Skagit decommissioning costs at approximately 2.4 mills/kwh. Testimony of Charles Komanoff, August 10, 1981; In the Matter of the Application of Washington Water Power for an Order Approving Increased Rates, Case No. U-1008-156.

C. Applicants have assumed the cost of money for financing the Skagit/Hanford Project at 10.67%. Environmental Report, Table 8.2-2. Petitioners believe that figure to be unrealistically low.

For instance, Pacific Power & Light, one of the project's co-sponsors, has recently estimated the following capital costs in submissions to the Oregon Public Utility Commission: long-term debt, 15%; preferred stock, 15.5%; common equity, 16.25%. Letter from PP&L to Abraham Kramer, Oregon PUC, December 22, 1981, transmitting PP&L 1982 Electric Utility Construction Budget.

D. Applicant's total cost figures are low compared to other plants owned by the applicants. For instance, PP&L has estimated that the per kilowatt hour cost of its share of the Washington Public Power Supply System Nuclear Unit No. 3 at 191.5 mills in 1987 dollars. That also assumes a 70% plant capacity factor on a 1240 megawatt nuclear plant, comparable in size to the Skagit/Hanford Project.

In addition to these errors, the applicants have failed to include in their benefit cost calculations a significant environmental cost of development of the Project, namely the impact on fish and wildlife from increased use of the Columbia River hydropower system for seasonal and daily peaking needs. See Environmental Report, Table 11.4-1. As is more fully described in discussion of Contention No. 4, the applicants assert that the Skagit/Hanford Project will permit "even greater usage of hydro resources for peaking" Environmental Report at 1.0-3. The significant cumulative fish and wildlife impacts of that choice, pushed by use of large thermal plants such as Skagit/Hanford for baseload, must be incorporated as an environmental cost in the Project's benefit-cost calculus.

4. The Applicants Have Failed To Assess Fully The Environmental Impacts Of Their Proposal And, In Particular, The Impacts Of The Project On Columbia River Fish And Wildlife Resources

The applicants state in their Environmental Report that "the region foresees even greater usage of hydro resources for peaking, with thermal resources, such as the proposed Skagit/Hanford Nuclear Project operating as baseload units at high plant factors" Environmental Report at 1.0-3. Nowhere, however, do the applicants assess the environmental impacts of pushing the system in this direction.

The use of regional hydro projects for peaking is of two types. First, reservoir storage permits use of hydropower to serve seasonal winter peak demands, while the thermal projects, such as Skagit/Hanford, operate to serve annual baseloads. Second, daily reservoir fluctuations permit the hydrosystem to provide power for daily peak loads. In either case, the fish and wildlife impacts are significant. In the first instance, demands for reservoir drawdown in the winter months may limit the water available to provide the high spring flows necessary for juvenile anadromous fish migration. And in both cases, the rapid or increased reservoir and streamflow fluctuations required for peaking can lead to losses of riparian habitat and dependent wildlife. See Final EIS, The Role of Bonneville Power Administration in the Pacific Northwest Power Supply, December, 1980, at IV-22—IV-23. The Bonneville Power Administration has generally described the impacts of increased hydro-peaking when thermal power is used as a baseload resource as "reduced anadromous fish runs, decreased wildlife habitat on islands and riverbanks, conflicts with recreational activities and increased

navigational hazards." Final EIS, BPA Role, supra at IV-283.

Significantly, certain alternatives inadequately assessed by the applicants—conservation and certain renewable energy sources—would have just the opposite effect on fish and wildlife from this "hydro-thermal" mix. Use of conservation to decrease winter peak demands, for instance, would diminish the need to draw down reservoirs to serve those peak loads, and thus assist markedly in retaining sufficient water in the reservoirs to provide spring fish flows. See Romer Associates, Draft Report, Northwest Electric Load Shaping for Fish Enhancement, Appendix A-A of [Agency and Tribal] Recommendations for Fish and Wildlife Program Under The Pacific Northwest Electric Power Planning and Conservation Act, submitted to Northwest Power Planning Council, November 15, 1981.

While Bonneville Power Administration has assessed the general impacts of hydropower peaking in its Role EIS, it did not purport to analyze specific hydro peaking impacts of specific project proposals and their alternatives. The applicants must be required to do so in their Environmental Report and the Commission must do so in its own Environmental Impact Statement.

5. The Acquisition Of Skagit/Hanford By Bonneville Power Administration Is Highly Unlikely; That Unlikelihood Is Crucial To Determining The Financability Of The Project

The Commission requires all license applicants to demonstrate their financial qualifications to construct and operate the plants for which licenses are sought. 10 C.F.R. §50.33(f), 10 C.F.R. §50.40. A critical factor in the financability of the Skagit/Hanford Project is whether or not the output of the project can or will be acquired by Bonneville Power Administration pursuant to the

Regional Power Act. P.L. 96-501. Such acquisition would significantly reduce the interest charges on applicants' debt financing and would move the risk of non-completion or operation of the project from the applicants to BPA and the region. The applicants themselves have recognized the significance of the BPA acquisition option. Their Environmental Report notes that "[I]t is expected that the [Regional] Act will significantly enhance the the ability of the region's utilities to finance new electrical generating project, such as the proposed Skagit/Hanford Project." Environmental Report at 1.0-11.

In fact, acquisition of the Skagit/Hanford Project by BPA is highly unlikely, if not clearly impossible, under the terms of the Regional Power Act.

A. BPA may only acquire resources if it needs the power to meet its obligations. Regional Act, §6(a)(2). As recent Forecasts, including BPA's own draft Forecast issued earlier in April 1982, demonstrate, the region does not need the Skagit/Hanford power. See NWF Contentions 1 and 2, NRDC Contentions 1 and 2. Indeed, on April 19, 1982, the Administrator of BPA called for up to a five year slowdown in construction of WPPSS Unit No. 1, which would put that plant's completion date in 1991-1992.

B. BPA must comply with the resource priorities of the Regional Act in acquiring resources. Section 4(e)(1) of the Act obligates BPA to give priority to cost-effective resources first, and if alternatives are similarly priced, to give priority to resource alternatives in the following order: conservation, renewable, cogeneration, and, finally, conventional. Thus BPA could not

acquire Skagit/Hanford prior to exhausting all higher priority resources with a price no greater than the proposed project. In addition, in fact, conservation is given a 10% cost advantage over all other resources; so, conservation alternatives costing up to 110% of Skagit/Hanford would have priority over that project. Regional Act §3(4)(D). There are ample higher priority, cost-effective resources to serve the loads for which the applicants seek to build Skagit/Hanford. See NWF Contention 2 and NRDC Contentions 1 and 4. Even if BPA found it necessary to turn to conventional resources to serve loads, there are a string of conventional plants that are expected to be operational prior to Skagit/Hanford at cost levels undoubtedly below the Skagit/Hanford predictions, including Valmy 1 and 2 (Northwest share of 242 megawatt capacity), Creston 1, 2, 3 and 4 (2000 megawatts), Colstrip 3 and 4 (Northwest share of 912 megawatts), WPPSS Nos. 4 and 5 (2490 megawatts) and the 30 percent investor owned share of WPPSS No. 3 (370 megawatts).

6. The Commission Should Not Issue Any Construction Permit Or Facility License For Skagit/Hanford Pending Completion Of The Waste-Disposal Confidence Proceeding

Commission regulations provide that when there are unresolved safety questions with respect to a project, a construction permit may only be issued if the Commission determines that:

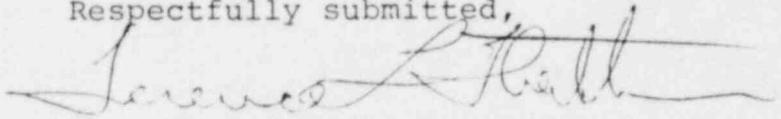
- (i) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facilities, and (ii) . . . the proposed facilities can be constructed and operated at the proposed location without undue risk to the health and safety of the public.

10 C.F.R. §50.35(a)(4).^{*/}

^{*/} The regulations also require an assurance of safety prior to issuing operating licenses. 10 C.F.R. §50.57(a)(3).

The Commission has not yet issued an order in its Waste-Disposal Confidence Proceeding. Until it does, the required assurances with respect to the waste disposal hazards from Skagit/Hanford cannot be made. Until such assurances are available, no permits should issue.

Respectfully submitted,



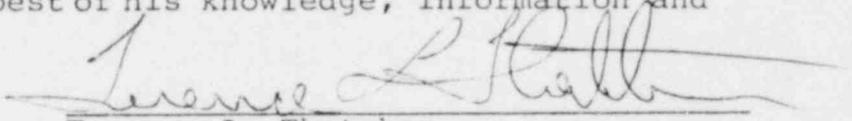
Terence L. Thatcher
Pacific Northwest Resources Center
Law Center, 1101 Kincaid
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Counsel for Appellants

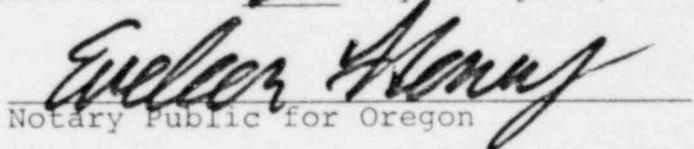
DATED this 20th day of April, 1982

STATE OF OREGON)
)ss.
County of Lane)

Terence L. Thatcher, being first duly sworn, deposes and says that he is an attorney for National Wildlife Federation and Oregon Environmental Council; that is he authorized to make the foregoing Supplement to Petition to Intervene; that he has read the same and knows the contents thereof and that all statements contained therein are true and correct to the best of his knowledge, information and belief.


Terence L. Thatcher

Subscribed and sworn to before me this 20 day of April, 1982.


Notary Public for Oregon

My Commission Expires: 1/7/83

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing Supplement to Petition to Intervene and affidavits of Lawrence L. Sowa, Marguerite Smythe, Barbara Breunig, Ruth Hicks and Willis Hicks, by mail, postage prepaid, upon the following:

Richard L. Black
Executive Legal Director's Office
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

F. Theodore Thomsen
Perkins, Coie, Stone, Olsen & Williams
1900 Washington Building
1325 Fourth Avenue
Seattle, Washington 98101

Coalition for Safe Power
Suite 527, Governor Building
408 S.W. Second Ave.
Portland, Oregon 97204

Dated this 20th day of April, 1982.



Terence L. Thatcher

Counsel for Petitioners

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)	
<u>SKAGIT/HANFORD NUCLEAR PROJECT</u>)	

AFFIDAVIT OF LARRY SOWA

LAWRENCE L.

1. My name is ^{LAWRENCE L.} "Larry" Sowa. I live at 17225 S.E. McLoughlin Boulevard, Milwaukie, Oregon 97222.

2. I buy my electrical power from Portland General Electric, one of the co-sponsors of the Skagit/Hanford Nuclear Project. Construction of those plants may increase my electrical power rates over and above what they would be if more economical means of meeting the electrical needs of Portland General Electric customers were adopted. In addition, use of funds to build the Skagit/Hanford Project will divert funds away from environmentally and economically preferable means of meeting the needs of Portland General Electric customers.

3. I am an associate member of National Wildlife Federation (NWF). I authorize NWF to represent my interests in construction permit and licensing hearings concerning the Skagit/Hanford Nuclear Project before the Nuclear Regulatory Commission and in related proceedings.

4. In particular, I support NWF's position that there are environmentally and economically preferable alternatives to

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)

AFFIDAVIT OF BARBARA BREUNIG

1. My name is Barbara Breunig. I live at 14140 S.E. Rhone Street, Portland, Oregon 97236.

2. I buy my electrical power from Portland General Electric, one of the co-sponsors of the Skagit/Hanford Nuclear Project. Construction of those plants may increase my electrical power rates over and above what they would be if more economical means of meeting the electrical needs of Portland General Electric customers were adopted. In addition, use of funds to build the Skagit/Hanford Project will divert funds away from environmentally and economically preferable means of meeting the needs of Portland General Electric customers.

3. I have boated and fished in the Columbia River and its tributaries. Construction of the Skagit/Hanford Nuclear Power Plant would encourage "greater usage of hydro resources [on the Columbia River] for peaking with thermal resources, such as the proposed Skagit/Hanford Nuclear Project operating as baseload units" Skagit/Hanford Nuclear Project Application for Site Certification/Environmental Report at 1.0-3. Utilization of the Columbia River

to provide peaking capacity for the Pacific Northwest region would adversely affect the Columbia River fisheries resources and, in particular, the salmon and steelhead resources which I use and enjoy. Thus, construction and operation of the Skagit/Hanford Nuclear Power Project would adversely affect my recreational interests.

4. I am an associate member of National Wildlife Federation (NWF). I authorize NWF to represent my interests in construction perm. and licensing hearings concerning the Skagit/Hanford Nuclear Project before the Nuclear Regulatory Commission and in related proceedings.

5. In particular, I support NWF's position that there are environmentally and economically preferable alternatives to construction of the Skagit/Hanford Project to meet the electrical energy needs of the Pacific Northwest. I also agree that the fully environmental costs of the Skagit/Hanford Project should be fully assessed prior to deciding whether or not the project should be licensed and built. These costs include the impacts of the Skagit/Hanford Project operations on the fisheries resources of the Columbia River.

DATED this 16th day of April, 1982.

Barbara Breunig
BARBARA BREUNIG

STATE OF OREGON)
) ss.
County of)

Subscribed and sworn to before me this 16th day of April, 1982.

Susan D. Warner
SUSAN D. WARNER
NOTARY PUBLIC - OREGON
AFFIDAVIT EXPIRES 2/21/83

Susan D. Warner
NOTARY PUBLIC for Oregon

My Commission Expires: January 21, 1983

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)

AFFIDAVIT OF RUTH HICKS

1. My name is Ruth Hicks. I live at 205 Fifth Avenue, Mabton, Washington 98935, which is approximately 33 air miles from the proposed Skagit/Hanford Nuclear Project.

2. I have lived at my current address for approximately five years.

3. My residence is within the geographic zone that might be affected by an accidental release of fission products from the proposed Skagit/Hanford Nuclear Project. In addition, I hike, bird-watch, and travel in and around the area near my home. As a result, I have health, safety, and recreation interest that would be adversely affected by construction of the Skagit/Hanford Project.

4. I buy my electrical power from Pacific Power and Light, one of the co-sponsors of the Skagit/Hanford Nuclear Project. Construction of those plants may increase my electrical power rates over and above what they would be if more economical means of meeting the electrical needs of Pacific Power and Light customers were adopted. In addition, use of funds to build the Skagit/Hanford Project will divert funds away from environmentally

and economically preferable means of meeting the needs of Pacific Power and Light customers.

5. I am an associate member of National Wildlife Federation (NWF). I authorize NWF to represent my interests in construction permit and licensing hearings concerning the Skagit/Hanford Nuclear Project before the Nuclear Regulatory Commission and in related proceedings.

6. In particular, I support NWF's position that there are environmentally and economically preferable alternatives to construction of the Skagit/Hanford Project to meet the electrical energy needs of the Pacific Northwest. I also agree that the full environmental costs of the Skagit/Hanford Project should be fully assessed prior to deciding whether or not the project should be licensed and built. These costs include the impacts of the Skagit/Hanford Project operations on the fisheries resources of the Columbia River.

DATED this 16 day of April, 1982.

Ruth Hicks
RUTH HICKS

STATE OF WASHINGTON)
County of Yakima) ss.

Subscribed and sworn to before me this 16th day of April, 1982.

Rhulda J. Wallace
NOTARY PUBLIC for State of Washington
Residing at Shannon
My Commission Expires: 7-31-85

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AFFIDAVIT OF MARGUERITE SMYTH

1. My name is Marguerite Smyth. I live at 6261 S.W. 47th Place, Portland, Oregon 97221.

2. I buy my electric power from Portland General Electric, one of the co-sponsors of the Skagit/Hanford Nuclear Project. Construction of those plants may increase my electrical power rates over and above what they would be if more economical means of meeting the electrical needs of Portland General Electric customers were adopted. In addition, use of funds to build the Skagit/Hanford Project will divert monies away from environmentally and economically preferable means of meeting the needs of Portland General Electric customers.

3. My husband regularly fishes for steelhead trout on tributaries of the Columbia River; his catch provides an important food source for me and my family. Construction of the Skagit/Hanford Nuclear Power Plant would encourage "greater usage of hydro resources [on the Columbia River] for peaking with thermal resources, such as the proposed Skagit/Hanford Nuclear Project operating as baseload units" Skagit/Hanford Nuclear Project Application for Site Certification/Environmental Report at 1.0-3. Utilization

of the Columbia River to provide peaking capacity for the Pacific Northwest region would adversely affect the Columbia River fisheries resources and, in particular, the steelhead resources upon which my family relies for part of our diet. Thus, construction and operation of the Skagit/Hanford Nuclear Power Project would adversely affect my personal nutritional, health, and economic interests.

4. I am a member of the Oregon Environmental Council (OEC). I authorize OEC to represent my interests in construction permit and licensing hearings concerning the Skagit/Hanford Nuclear Project before the Nuclear Regulatory Commission, and related proceedings.

5. In particular, I support OEC's position that there are environmentally and economically preferable alternatives to construction of the Skagit/Hanford Project to meet the electrical energy needs of the Pacific Northwest. I also agree that the full environmental costs of the Skagit/Hanford Project should be fully assessed prior to deciding whether or not the project should be licensed and built. These costs include the impacts of the Skagit/Hanford Project operations on the fisheries resources of the Columbia River.

DATED this 15th day of April, 1982.

Marguerite Smyth
MARGUERITE SMYTH

STATE OF OREGON)
County of Multnomah) ss.

Subscribed and sworn to before me this 15th day of April, 1982.

Susan R. Price
NOTARY PUBLIC for Oregon

My Commission Expires: 01-03-84

