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Administrator's Final Record of Decision

Third AC Intertie Non-Federal Participation Rate Proposal

Bonneville
POWER ADMINISTRATION

3ACP-89-A-03
June 1990

ADMINISTRATOR'S FINAL RECORD OF DECISION

THIRD AC INTERTIE NON-FEDERAL PARTICIPATION RATE

No. 3ACP-89

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COMMONLY USED ACRONYMS

AC - Alternating Current

AFUDC - Allowance for Funds Used During Construction

BPA - Bonneville Power Administration

COB - California/Oregon Border

COTP - California-Oregon Transmission Project

DC - Direct Current

DSIs - Direct Service Industries

EIS - Environmental Impact Statement

FCRPS - Federal Columbia River Power System

IDC - Interest During Construction

IS - Southern Intertie Transmission Rate

kV - Kilovolt

kW - Kilowatt

LTIAP - Long Term Intertie Access Policy

MW - Megawatt

O&M - Operation and Maintenance

OTC - Operational Transfer Capability

PCB - Polychlorinated Biphenyl

PGE - Portland General Electric Company

PP&L - Pacific Power & Light Company

PNW - Pacific Northwest

PSW - Pacific Southwest

ROD - Record of Decision

RTC - Rated Transfer Capability

THIRD AC INTERTIE NON-FEDERAL PARTICIPATION RATE PROPOSAL

Final Record of Decision

CHAPTER I

INTRODUCTION

A. Description of PNW-PSW Intertie System

The existing Pacific Northwest (PNW) - Pacific Southwest (PSW) Intertie system is a series of transmission lines and associated facilities stretching from northern Oregon to Los Angeles, California. The present rated transfer capability (RTC) of the Intertie is about 6300 megawatts (MW), 3200 MW on two alternating current (AC) transmission lines, plus part of a third AC transmission line, and 3100 MW on a direct current (DC) transmission line. Within Oregon, BPA owns the entire DC line and shares ownership of the AC transmission lines with Pacific Power & Light Company (PP&L) and Portland General Electric Company (PGE). BPA owns 2100 MW of the AC lines.

A consortium of California entities intends to construct a new 500 kilovolt (kV) AC transmission line and associated facilities. The California-Oregon Transmission Project (COTP) will reach from the middle of California to the Oregon border. It will add a planned 1600 MW of transmission capability to the AC Intertie system in California, increasing north to south RTC from 3200 MW to 4800 MW.

In July of 1984, Congress authorized and directed the Secretary of Energy to participate in the construction of a new AC Intertie transmission line from the PNW to California. 98 Stat. 416 (1984).

BPA (an agency within the Department of Energy), together with PP&L and PGE, are planning to modify existing facilities and construct transmission additions to the PNW portion of the AC Intertie. This project, known as the Third AC Intertie, is planned to upgrade, by 1600 MW, the capacity of the AC Intertie system in the PNW to 4800 MW to match the COTP. A diagram of the PNW-PSW Intertie, with the planned 1600 MW upgrade, is shown in Appendix A. A detailed diagram of the Third AC Intertie is shown in Appendix B.

BPA executed Intertie agreements with co-owners PGE (in 1988; 3ACP-89-E-PS-18; hereafter, citations to pleadings and exhibits in the record will be shortened thus: "E-PS-18") and PP&L (in 1986) that address how each will share the costs of the Third AC Intertie and that allocate the 1600 MW of capacity among the three. Of the 1600 MW RTC increase, BPA will receive 1350 MW; PGE will receive 150 MW (75 MW in the first 800 MW of RTC and 75 in the second 800 MW of RTC); and PP&L will receive 100 MW (in the first 800 MW of RTC).

B. Development of Third AC Non-Federal Participation

On June 22, 1987, BPA received a letter from the Chairman of the U.S. House of Representatives Committee on Energy and Commerce requesting information regarding non-federal utility participation in BPA's share of the Third AC Intertie. Eighteen more members of Congress sent a second letter dated June 25, 1987, asking BPA to begin a formal study of the issues by promptly developing and implementing a public process to describe and evaluate options for participation by PNW non-federal utilities in the expanded capacity. E-BPA-01, Attachment 7, at 8.

In response to those requests, BPA held an exhaustive public involvement process. BPA consulted with the public, potential participants in the Third AC Intertie, and a technical Peer Review Panel consisting of utility, government and interest group representatives from the PNW and California. See E-BPA-01, Attachment 7, at 102, for a listing of the 33 panel members.

An Interim Study was completed and submitted to Congress on August 11, 1987. It sets out five criteria to be used in the evaluation of the options. The criteria are public involvement opportunities; economic impacts on BPA, PNW utilities and the PSW; potential impacts on fish and wildlife; implications for resource development; and implications on use of Intertie facilities and on existing contractual arrangements. See E-BPA-01, Attachment 7. The Interim Study proposes a public involvement process to inform interested parties and elicit their comments. After obtaining public comment on the Interim Study, BPA representatives met several times with the Peer Review Panel.

The Final Study of Non-Federal Participation in the Northern Portion of the Third AC Intertie was issued in March of 1988 (1988 Study). Using the five criteria, the Study examines options for non-federal participation in the Third AC Intertie. The options include existing federal ownership; full and partial non-federal utility ownership; leasing; and other types of participation by PNW non-federal utilities. E-BPA-01, Attachment 7.

The 1988 Study is a comprehensive document that evaluates and balances the five criteria, for which BPA has statutory responsibilities, in light of the participation options identified. The

first criterion is public involvement. Northwest Power Act § 4(g) imposes significant public involvement duties on BPA. 16 U.S.C. § 839b. BPA reviewed and compared the amount and type of public input opportunities available under each option for using the Third AC Intertie. E-BPA-01, Attachment 7, at 33-37.

Second, the Study evaluates the economic impacts each option might have on BPA, PNW utilities and the PSW. Id. at 37-66. The Northwest Power Act gives BPA authority to allocate and manage Intertie capacity. 16 U.S.C. § 839f(i)(1)(B). BPA's obligation to provide access to its transmission system is expressly limited to providing transmission services which are not in conflict with the Administrator's contractual obligations, obligations under existing law, or other marketing obligations. Id. Moreover, services offered to others must not cause a "substantial interference with [the Administrator's] power marketing program...." 16 U.S.C. § 839f(i)(3). Department of Water and Power of the City of Los Angeles v. Bonneville Power Admin., 759 F.2d 684, 692 (1985) (Dep't of Water & Power).

Next, the Study considers whether, and to what extent, each option would encourage new resource development by participants. E-BPA-01, Attachment 7, at 66-69. The independent development of new resources by individual utilities may have a significant impact on BPA owing to BPA's environmental responsibilities and its statutory duty to meet loads of its preference customers, and, under certain circumstances, the loads of PNW investor-owned utilities. Northwest Power Act § 5(b)(1), 16 U.S.C. §§ 839c(b)(1).

Fourth, the Study looks at the environmental impacts that increased transmission opportunities might have on the PNW and PSW regions. Id. at 69-75. Finally, the Study considers the effect of the options on the planning, construction, operation and maintenance (O&M) and scheduling of new and existing resources. Id. at 76-77.

The 1988 Study also examines the comments submitted by interested parties. Id. at 82-100. It does not, though, contain a proposal for participation.

On September 27, 1988, BPA issued its Record of Decision (ROD) for the Third AC Intertie project. The ROD explains that BPA had decided to construct, operate and maintain the Third AC Intertie.

Three months later, in December of 1988, BPA published its Proposal for Non-Federal Participation in the Northern Portion of the Third AC Intertie (1988 Proposal). The Proposal uses information from the 1988 Study as well as information from further consultation with interested parties to evaluate key issues such as the type of participation, the amount of capacity available, third-party wheeling, arbitrage and reassignment, environmental protections, and pricing and economics of non-federal participation.

The 1988 Proposal reserves to BPA its share of the first 800 MW increment for its own use. BPA proposes to offer its share of the second 800 MW increase (725 MW) for use by PNW non-federal scheduling utilities. BPA would retain physical ownership of all facilities and decision-making authority over all planning, construction and O&M. E-BPA-01, Attachment 8, at 13.

PNW scheduling utilities would be offered contracts for use of shares of the Third AC Intertie through the year 2016. The rights participants would receive are similar to the rights the current co-owners, PGE and PP&L, have. The participating utilities could schedule power over their share of the Intertie, and could, depending upon which of two options they choose, reassign their interests, engage in arbitrage and provide third-party wheeling; or continue to have rights to BPA Intertie capacity under BPA's Long Term Intertie Access Policy (LTIAP). Id. at 21-22.

The proposed rate for participation would be calculated according to a pricing methodology. Consistent with obtaining scheduling rights for the term of the contract that are similar to rights held by current owners, participants would make an estimated payment upon execution of participation contracts, rather than periodically pay a levelized rate over the term of the participation contracts. Id. at 16-20.

C. Scope of the Proceeding

The scope of this proceeding is limited to developing a rate for non-federal participation in the Third AC Intertie. The ratesetting directives found in the Pacific Northwest Electric Power Planning and Conservation Act § 7(a), 16 U.S.C. § 839e (1982) (Northwest Power Act) generally assume costs as a given, and deal with matters of cost allocation and recovery. Section 7(i) rate hearings do not admit debate over the underlying determinations of policy that led to the incurrence of the costs to be recovered through rates. That is the function of other BPA processes.

The Northwest Power Act directs in § 4(g) that BPA establish a comprehensive public involvement program to formulate regional power policies. 16 U.S.C. § 839b. Through the forums established under that program, matters of policy may be properly debated. It was in such a forum that BPA developed its proposal that if participation is offered, BPA would allocate up to 725 MW RTC of Third AC Intertie to participants in the form of contractual scheduling rights. E-BPA-01, Attachment 8, at 4, 15. This rate proceeding, then, is not the appropriate forum to debate the underlying policy determination of the amount of access allocated.

Likewise, this proceeding is not the proper forum to consider policy decisions concerning participation, ownership or other options. Debates over those matters occurred during the drafting of the 1988 Study and the 1988 Proposal. Indeed, BPA will provide the public with yet another opportunity to address ownership during the development of the environmental impact statement (EIS) on non-federal participation, as discussed in greater detail in Chapter IV.

Parts of the testimony of one of Puget Sound Power & Light Company's (Puget's) witnesses (E-PS-01) and one of City of Seattle, City Light Department's (Seattle's) witnesses (E-SL-01) were stricken by the Hearing Officer on the grounds that they contained matters beyond the scope of this hearing. O-06; O-07. Puget contends that the stricken material should have been admitted. B-PS-01 at 52-56; R-PS-01 at 64-68.

The stricken matter in E-SL-01 contains a discussion of BPA's policy decision to offer participation in, rather than ownership of, the Third AC Intertie. For the reasons described above, the

Order (O-07) correctly concludes that the ownership issue is neither relevant nor material to the development of a participation rate methodology. See M-07.

Puget's witness offered a lengthy critique of BPA's LTIAP, BPA's use of Intertie transmission capacity and of the public and environmental processes used to develop the 1988 Proposal. E-PS-01. None of this material is relevant or material to a consideration of a participation rate methodology. The Order correctly excludes testimony of this nature. O-06; see M-06.

D. Organization of Final Record of Decision

The ROD contains six chapters. This Introduction is the first chapter; the second chapter describes BPA's proposed pricing methodology.

Specific issues raised by the parties are addressed in Chapter III. The discussion of each issue is divided into three sections. First, the issue is stated. Second, the parties' and BPA's positions are evaluated. Third, the Administrator's decision on each issue is presented.

Non-rate related matters raised by the parties are addressed in Chapter IV. Participants' comments are considered in Chapter V. Finally, Chapter VI presents the Administrator's conclusions on the rate proposal.

E. Procedural History of the Rate Proceeding

On November 22, 1989, BPA published a Federal Register notice announcing a transmission rate proceeding for Third AC Intertie Non-Federal Participation. 54 Fed. Reg. 48,299. The proposed effective date for the participation rate is upon approval by the

Federal Energy Regulatory Commission (Commission) of a pricing methodology.

In accordance with Northwest Power Act § 7(i), 16 U.S.C. § 838e(i), evidentiary hearings on BPA's proposed pricing methodology were conducted by Dean F. Ratzman, Hearing Officer. Eighteen interventions were filed (a list of intervenors appears in Appendix C). Judge Ratzman commenced the proceeding with a prehearing conference on January 3, 1990, wherein matters of interventions and scheduling were ruled upon. The conference covers 10 pages of transcript, TR 3-13. On January 3, Judge Ratzman also issued his "Special Rules of Practice to Govern This Proceeding". O-02.

BPA's direct testimony, sponsored by four witnesses, was filed on December 22, 1989. E-BPA-01. Three parties filed direct and answering cases on February 14, 1990. E-SL-01, E-SL-02 (Intervenor City of Tacoma adopted the testimony Seattles's witnesses); E-PS-01, E-PS-02; E-WA-01. BPA and one party filed rebuttal testimony on March 8, 1990. E-BPA-02; E-WA-02. Motions to strike portions of parties' written testimony were filed and ruled upon in February and March.

During the course of discovery, BPA responded to 137 data requests. Two days of oral discovery sessions, comprising some 168 pages of transcript, were conducted between January 24 and February 28, 1990.

Cross-examination was held on March 19, 20 and 26. The transcript of this portion of the hearing consists of 213 pages, TR 171-384.

Initial briefs were filed by five parties on April 2, 1990. B-PS-01; B-SL-01; B-WA-01; B-DS-01; B-WP-01. In addition, BPA received written comments from seven members of the public.

The Administrator released a Draft ROD on June 5, 1990. A-01. On June 15, three parties filed reply briefs. R-SL-01; R-PS-01; B-WP-02. On that date, parties also presented oral arguments to a panel consisting of the Administrator; the Senior Assistant Administrator for Power Management; the Deputy Assistant Administrator for Power Sales; and the Assistant Director for the Division of Contracts and Rates. Oral arguments were offered by attorneys for the Direct Service Industries (DSIs); Western Public Agencies Group (WPAG); The Washington Water Power Company (Water Power); and Puget. The transcript of the argument consists of 67 pages, TR 386-453.

F. Legal Guidelines Governing Establishment Of Rates

1. Statutory Guidelines

Ratemaking standards governing BPA's transmission rates are found exclusively in the Northwest Power Act and the Federal Columbia River Transmission System Act, 16 U.S.C. §§ 838g, h (1974) (Transmission System Act). The directives contained in each of these statutes are described below.

Section 7(a) of the Northwest Power Act directs the Administrator to establish, and periodically review and revise, rates for the sale and disposition of electric energy and capacity and for the transmission of non-federal power. Rates are to be set to recover collectively, over a reasonable period of years, in accordance with sound business principles, the costs associated

with the acquisition, conservation and transmission of electric power, including the amortization of the federal investment in the Federal Columbia River Power System (FCRPS) (including irrigation costs required to be repaid by power revenues). 16 U.S.C. § 839e(a)(1).

Northwest Power Act § 7(a) also directs that these rates be set in accordance with both §§ 9 and 10 of the Transmission System Act. Section 9 of that Act requires, among other things, that BPA's power as well as transmission rates be established with a view to encouraging the widest possible diversified use of federal power at the lowest possible rates to consumers consistent with sound business principles, while having regard to recovery of costs and repayment of the U.S. Treasury. 16 U.S.C. § 838g. See also 16 U.S.C. § 839e(a)(2)(C). Transmission System Act § 10, 16 U.S.C. § 838h, provides that the recovery of transmission system costs be equitably allocated between federal and non-federal power utilizing the system.

The Northwest Power Act provides, in § 7(i), procedural guidelines to develop rates, including publication of notice in the Federal Register of the proposed rates, a hearing before a hearing officer, an opportunity to submit oral and written comments, and an opportunity to rebut material submitted into the record. 16 U.S.C. § 839e(i). BPA has expanded on these statutory directives by promulgating rules of agency procedure to aid in the conduct of these hearings. 51 Fed. Reg. 7611 (1986).

Puget lists § 7(g) of the Northwest Power Act, 16 U.S.C. § 839e(g), as a ratemaking standard requiring that power rates, not

transmission rates, be equitably allocated costs resulting from BPA's inability to sell its excess power. B-PS-01 at 8. (BPA does not propose to include such costs in its participation pricing methodology; see Chapter III, Issue 1, below.)

Puget claims that BPA's transmission rates are required to be cost-based, giving the impression that transmission rates may not take into account value-based factors. B-PS-01 at 8, 46. This argument is inapposite because the methodology results in a price that is cost-based. See Chapter III, Issue 1, below. In any event, cost is not the only basis on which BPA's rates may be computed. Pacific Power & Light Co. v. Duncan, 499 F. Supp. 672, 683 (D. Ore. 1980) (Duncan).

Finally, Puget suggests that § 6 of the Preference Act, 16 U.S.C. § 837e (1964), is a ratemaking standard to be used by the Commission in determining whether BPA's transmission rates equitably allocate costs. B-PS-01 at 8. Northwest Power Act § 7(a), however, does not refer to § 6 of the Preference Act as governing BPA's rates any longer. The existing "equitable allocation" standards are those set forth in the Transmission System Act (16 U.S.C. § 838h) and the Northwest Power Act (16 U.S.C. § 839e(a)(2)(C)).

Seattle asserts that § 2(b) of the Bonneville Project Act, 16 U.S.C. § 832a(b) (1937), creates a "widespread use" ratemaking standard for transmission rates. B-SL-01 at 3. Section 2(b) clearly applies only to the Administrator's authority applicable to making electric energy from the Bonneville Project available to existing and potential markets. 16 U.S.C. § 832a(b). Indeed, both

§§ 6 and 7 of the Bonneville Project Act, which speak of cost allocation and of rates that encourage "widest possible diversified use", apply solely to rates for the sale of federal power. 16 U.S.C. §§ 832e, f.

In their brief, the DSIs cite Flood Control Act § 5, 16 U.S.C. § 825s (1944), as yet another ratemaking standard. B-DS-01 at 3. The language of this section concerns simply the disposal of surplus power. At oral argument, the attorney for the DSIs acknowledged that it is not a transmission ratemaking directive. TR 391, line 25, through TR 392, line 8.

2. Ratemaking Discretion Vested In The Administrator

The Administrator has broad discretion to interpret and implement statutory standards applicable to ratemaking. These standards focus on cost recovery and do not restrict the Administrator to any particular rate design method or theory. See Duncan, 499 F. Supp. 672. Accord, City of Santa Clara v. Andrus, 572 F.2d 660, 668 (9th Cir. 1978) ("widest possible use" standard is so broad as to permit "the exercise of the widest administrative discretion"); Electricities of North Carolina v. Southeastern Power Admin., 774 F.2d 1262, 1266 (4th Cir. 1985).

The United States Court of Appeals for the Ninth Circuit has specifically recognized the Administrator's ratemaking discretion. Central Lincoln Peoples' Util. Dist. v. Johnson, 735 F.2d 1101, 1116, 1120-1129 (9th Cir. 1984) (upheld BPA on the merits of every rate issue and declared that "[b]ecause BPA helped draft and must administer the Act, we give substantial deference to BPA's statutory interpretation"); PacifiCorp v. Federal Energy Regulatory

Comm'n, 795 F.2d 816, 821 (9th Cir. 1986) ("BPA's interpretation is entitled to great deference and must be upheld unless it is unreasonable"); Atlantic Richfield Co. v. Bonneville Power Admin., 818 F.2d 701, 705 (9th Cir. 1987) (BPA's rate determination upheld as a "reasonable decision in light of economic realities"); cf. Aluminum Co. of America v. Central Lincoln Peoples' Util. Dist., 467 U.S. 380, 389 (1984) ("[t]he Administrator's interpretation of the Regional Act is to be given great weight"); Dep't of Water & Power, 759 F.2d at 690 ("[i]nsofar as agency action is the result of its interpretation of its organic statutes, the agency's interpretation is to be given great weight").

G. Confirmation And Approval of Rates

BPA's rates become effective upon confirmation and approval by the Commission. 16 U.S.C. § 839e(a)(2). The Commission's review is appellate in nature, based on the record developed by the Administrator. United States Dep't of Energy - Bonneville Power Admin., 13 F.E.R.C. ¶61,157, 61,339 (1980). The Commission may not modify rates proposed by the Administrator, but may only confirm, reject or remand them. United States Dep't of Energy - Bonneville Power Admin., 23 F.E.R.C. ¶61,378, 61,801 (1983) See also 18 C.F.R. § 300.21(e).

With respect to proposed transmission rates, the Commission determines whether the rates (1) would provide sufficient revenues to BPA to recover its costs and, together with BPA's other rates, repay the federal investment within a reasonable period of time; and (2) are based on an equitable allocation of the cost of the federal transmission system between federal and non-federal power

using the system. Northwest Power Act § 7(a)(2), 16 U.S.C. § 839e(a)(2).

The Commission requires BPA to provide an accounting of the costs and revenues of its transmission system apart from the accounting of the costs and revenues of the generating system. The Commission ordered BPA to provide this separate accounting to assist the Commission in determining that the statutory standards of §§ 9 and 10 of the Transmission System Act (16 U.S.C. §§ 838g, h) are met and that BPA rate schedules provide sufficient levels of revenues to BPA to recover its capital costs and to repay the federal investment in the system over a reasonable period of time. United States Dep't of Energy, Bonneville Power Admin., 26 F.E.R.C. ¶61,096, 61,238 (1984). See also United States Dep't of Energy - Bonneville Power Admin., 20 F.E.R.C. ¶61,142, 61,314-61,315 (1982).

Pursuant to Northwest Power Act § 7(i)(6), 16 U.S.C. § 839e(i)(6), the Commission has promulgated rules establishing procedures for the approval of BPA rates. 18 C.F.R. 300 (1984). The Commission adopted a final rule amending these procedures effective July 6, 1987. 52 Fed. Reg. 20,704 (1987).

CHAPTER II

BPA'S PROPOSED PRICING METHODOLOGY

The pricing methodology described in the 1988 Proposal is based on BPA's cost of the second 800 MW increment of the Third AC Intertie project, plus a share of the the depreciated replacement cost of those existing facilities (separately owned by BPA or PP&L) currently used solely for local load but needed to achieve the second 800 MW increment. A credit would be given, using depreciated replacement cost for both existing facilities and the Third AC Intertie project, to account for the fact that participants' contract rights would extend through 2016 rather than for the life of the facilities.

The proposed pricing methodology BPA announced in the Federal Register notice, and under consideration here, differs in two material respects from that in the 1988 Proposal. First, instead of depreciated replacement cost, book value (depreciated original cost) is used for both pricing existing facilities and making an adjustment for contract rights extending through 2016. Second, the 1988 Proposal includes interest during construction (IDC) as a component of the pricing methodology. BPA uses allowance for funds used during construction (AFUDC) in determining the interest on funds used during the construction period of capital facilities. Consequently, in determining the total costs of the facilities, the proposed pricing methodology uses AFUDC rather than IDC.

According to the proposed methodology, BPA's costs of the new facilities and the book value of existing facilities, as required

for the second 800 MW increment of the Third AC Intertie, are determined. Next, the AFUDC associated with the costs of the new facilities is added. Then, in computing the rate, a credit is given to compensate for a contract term less than the estimated average service lives of the facilities.

Following is a more detailed discussion of the components of the proposed pricing methodology. Most of them were contested at the hearing.

A. New Facilities

The new facilities associated with the Third AC Intertie project consist of two separate items: (1) Third AC Intertie system reinforcement (which includes modifications to the existing AC Intertie plus a new substation (Captain Jack) and related facilities), and (2) the Alvey-Meridian transmission line and related facilities.

Costs associated with the reinforcement are assigned to both the first and second 800 MW increments of the Third AC Intertie. These reinforcements will be made to the existing AC Intertie and to existing network facilities that will become part of the Third AC Intertie.

The assignment of the costs of new facilities to each increment has two components. First, the new facilities needed solely for the second 800 MW increment are determined through engineering studies. From these studies, BPA determined which facilities are needed for the AC Intertie to operate reliably at 4000 MW RTC. See Chapter III, Issues 5, 6 and 7. Costs of the facilities necessary for that transfer level were assigned to the first 800 MW increment.

The proposal assigns all of BPA's costs associated with the new Alvey-Meridian transmission line to the second 800 MW increment. The line will be jointly owned by BPA and PP&L. BPA's portion will be dedicated solely to the Third AC Intertie. PP&L's portion will be used to serve its local load obligations in southern Oregon and northern California. Chapter III, Issue 10.

Second, those facilities required to achieve 1600 MW additional RTC, and shared by the first and second 800 MW increment, are assigned using a contract path approach. The transmission line from the Captain Jack substation to the California/Oregon border (COB) is assigned on this basis. See Chapter III, Issue 9.

B. Existing Support Facilities

The next component of BPA's proposed pricing methodology involves assigning a portion of the book value of certain existing facilities to the second 800 MW increment. The facilities consist of part of two existing BPA transmission lines and related substations (now dedicated to serve BPA loads and wheeling obligations in the Willamette Valley) and part of an existing PP&L transmission line and related substations (now dedicated to serve PP&L's local loads in southern Oregon and northern California), all of which will become part of the Third AC Intertie upon completion of the project.

The expanded AC Intertie is planned to be operated as a single system, so the existing AC Intertie system must be electrically interconnected with the Third AC Intertie system on both the northern and southern ends. The facilities providing this support are in place today and are currently used solely for service to PNW

loads. The proposal to assign costs of existing facilities to the second 800 MW increment is based on an 800 MW contract path between the Third AC Intertie and the existing AC Intertie. See Chapter III, Issues 3 and 8.

C. Allowance for Funds Used During Construction

The costs used in the proposed methodology include AFUDC. For purposes of calculating the estimated price, AFUDC is estimated. When the Third AC Intertie project is completed and all costs accounted for, AFUDC would be calculated and capitalized consistent with the Commission's Uniform System of Accounts, 18 C.F.R. Part 101 at 313 (Apr. 1, 1989).

D. 2016 Adjustment

If participation is offered, the contract rights will extend through calendar year 2016. BPA proposes to make an adjustment to compensate for a contract term of less than the estimated average service lives of the facilities by deducting from the costs the present value of the estimated remaining book value of the new facilities and the existing support facilities associated with the second 800 MW at the end of 2016. The remaining book value is discounted back to the year of completion (currently expected to be 1993) using BPA's weighted average interest rate on bonds outstanding with the U.S. Treasury. See Chapter III, Issue 4, and Chapter IV, § B.

E. Application of Proposed Pricing Methodology

For purposes of estimating the price resulting from an application of the proposed methodology, BPA assumes participants' payments would be made to BPA when participation contracts are

signed (estimated as late 1991 or early 1992, if BPA decides to offer participation). BPA would provide a credit to reflect the receipt of payment prior to the completion date.

Using BPA's mid-1989 program planning estimates of the cost of the Third AC Intertie project, including adjustments shown in BPA's rebuttal testimony (E-BPA-02), the estimated price for participation is $223/kilowatt (kW) (in 1993 dollars), as follows:

Third AC Intertie Participation
Estimated Price in 1993 1/

	Cost Item	Cost (Millions of $)	Price per kW 2/
1.	New Facilities	$ 158 3/	
2.	New Facilities Needed for First 800 MW of 1600 MW	- 40 3/	
3.	Cost of Second 800 MW	$ 118	
4.	AFUDC on Second 800 MW	19	
5.	Existing Support Facilities	+ 32	
6.	Subtotal	$ 169	
7.	2016 Adjustment	- 7	
8.	Total Price	$ 162	$ 223

1/ Based on mid-1989 program planning levels.

2/ The "Price per kW" is derived by dividing the "Total Price" by 725 MW.

3/ The estimated price for "New Facilities" and for "New Facilities Needed for First 800 MW of 1600 MW" have been updated to reflect the removal of certain series capacitor costs from Third AC Intertie project costs. See Chapter III, Issue 6. All of the series capacitor costs except for a total of $12 million have been removed from the Third AC Intertie costs. The $12 million is assigned entirely to the first 800 MW increment.

A discount to the estimated price of $223/kW would be computed for the time between the date of the up-front payment and the expected energization date for the Third AC Intertie. The discount would be based on BPA's weighted average interest rate on bonds outstanding with the U.S. Treasury ("weighted average interest rate"). Assuming that participants' payments are made in December of 1991, that the energization date is April of 1993, and that the weighted average interest rate is 9.75%, the discount would be approximately $28/kW. This reduces the estimated participation price to $195/kW.

When contracts are executed, participants would make a lump sum payment to BPA for their share of the estimated costs of the second 800 MW increment. After construction of the Third AC Intertie is completed and all costs accounted for, an adjustment (a true-up) to the payment would be made to reflect the actual costs of construction; the final assignment of facilities and costs between the first and second 800 MW increments; the project energization date; and the timing of the estimated payment. Participants would then either receive a refund with interest from BPA or make an additional payment with interest to BPA.

Payment provisions for annual costs, including O&M, replacements and renewals, would be contained in participation contracts. These items will be addressed during contract negotiations.

F. Summary of Parties' Positions

The parties' positions on individual issues are contained in the following chapter. WPAG generally supports BPA's proposal but is concerned that the estimated price for participation will result in

the subsidization of participants by other BPA customer classes. B-WA-01 at 3. The DSIs advocate a higher rate based on inclusion of lost opportunity costs. B-DS-01 at 5-6. PGE supports the estimated price shown in BPA's direct testimony ($252/kW), and agrees with BPA's proposed methodology but not necessarily with the components of, or adjustments to, the costs. W-GE-01. Puget recommends a method that results in a price not exceeding $143/kW for full participation rights for the life of the facilities. B-PS-01 at 45-51 and R-PS-01 at 58-62. Seattle's witness urges adoption of a calculation resulting in a price of $111/kW. E-SL-02 at 29, line 23, through 30, line 2; E-SL-02, Attachment 3. Puget's and Seattle's proposed methodologies compute a participation price based on BPA's share (1350 MW) of the entire 1600 MW project. Water Power, while not suggesting an alternate methodology, claims that BPA's proposal is arbitrary and seeks parallel negotiation of the terms and conditions of participation. B-WP-01 at 8.

CHAPTER III

ISSUES

Issue 1

What overall costing methodology should be used to develop the price for participation?

Evaluation

As Seattle's witness points out, a number of approaches exist for pricing participation in the Third AC Intertie. TR 364, lines 6-10. One option, not proposed by any party, is to use a completely rolled-in method. The costs of the Third AC Intertie could be combined with all other BPA Southern Intertie costs, and spread over all Intertie users, including participants. BPA offers long-term wheeling (20 years) over the Southern Intertie at rolled-in rates (currently the IS-89 rate). Participants, however, would receive broader services than do wheeling customers. See TR 185, line 5, through TR 186, line 25; TR 338, line 22, through TR 340, line 11; TR 357, lines 11-17; and B-DS-01 at 7. Participation in an upgraded Intertie, at a rate based on completely rolled-in costs, would raise rates for existing users, including BPA and its wheeling customers. TR 189, line 21, through TR 190, line 9.

A second alternative, advocated by Seattle, is to base the price solely on the cost of new facilities. E-SL-02 at 29, line 15, through 30, line 2. The new facilities, however, do not form a complete Intertie of either 800 or 1600 MW. A complete Intertie is formed only when existing facilities support the new facilities. E-BPA-01 at 18, line 1, through 19, line 6. Under Seattle's

approach, participants would be able to use existing facilities without paying for their use. TR 358, lines 5-8.

A third alternative, proposed by BPA, is to identify the facilities, new and existing, needed to achieve the increased transfer capability and to charge the accounting costs for those facilities. E-BPA-01 at 11, lines 11-15. This vintaged accounting cost method charges participants for all facilities used, yet allows participants to share in the benefits of low-cost older facilities to the extent they are needed to achieve the additional transfer capability. This method also has the advantages of being based on costs actually incurred (E-BPA-01 at 26, lines 9-20) and will recover the revenue requirement for the facilities identified (see TR 364, lines 6-10).

In its Brief on Exceptions, Seattle re-asserted four reasons for opposing BPA's approach. R-SL-01 at 4-5. First, Seattle argues that BPA's proposal will act as a barrier to participation, claiming that the estimated price is too high to allow economic transactions. R-SL-01 at 4. This appears to be a value-of-services argument that Seattle criticizes as irrelevant. R-SL-01 at 4. As the DSIs and WPAG note, BPA's proposal is below the cost of a new facility and below the opportunity cost of providing the services. See TR 404, lines 19-21; TR 394, lines 5-8. WPAG's attorney represented in oral argument that some WPAG members would consider participation at BPA's estimated price. TR 412, lines 11-20.

Second, Seattle argues that BPA performed no studies to determine the economic acceptability of its proposal. The only purpose in this rate case for a study of economic acceptability

would be if BPA intended to base the price on value of service. Instead, BPA has proposed a cost-based pricing methodology. Seattle seems to be proposing that BPA adopt the lesser of a cost- or value-based price. It sometimes may be appropriate to lower the price below cost in order to meet the perceived market, as when the alternative to a nonfirm energy sale is to spill water. However, in this case, there is no evidence that BPA's price is above the market for participation. In addition, all analyses of the Third AC Intertie have shown that, in the absence of participation, the Third AC Intertie will be used by BPA and by non-federal utilities for wheeling under BPA's LTIAP. See Record of Decision, Third AC Intertie Project, Bonneville Power Administration (BPA), DOE, dated September 27, 1988.

Seattle's third and fourth arguments (specific criticisms of the proposed pricing methodology) are addressed in Chapter III, Issue 2.

A fourth costing approach is to identify the cost of a new Intertie. This could be accomplished by including depreciated replacement costs for existing facilities (the method used in BPA's 1988 Proposal) or by examining the cost of a wholly different, new Intertie. This method has the advantage of sending the correct price signal to participants about the long-run cost of building a new Intertie. TR 364, lines 1-15. On the other hand, this method would overrecover the costs actually incurred by BPA and would likely be speculative if based on a different Intertie. See E-SL-02 at 15, lines 3-6. While BPA does not advocate this alternative, it forms a useful benchmark to measure the reasonableness and competitiveness of BPA's estimated participation price. As the DSIs

note, that estimate is far below the cost of a wholly new Intertie ($364/kW). B-DS-01 at 6.

A fifth alternative is to base the price on the value or opportunity cost of providing participation. WPAG urges that the methodology result in a price that compares favorably with a value-based rate (which is between $250 and $624/kW). E-WA-01 at 9, lines 6-15. Indeed, participation will impose on BPA a significant potential for lost opportunity costs. E-WA-01 at 9, lines 11-14; E-BPA-01, Attachment 8, at 16, 45. (This comparison forms yet another benchmark to gauge the reasonableness of BPA's estimated price.) WPAG does not, though, recommend adoption of a value-based rate. E-WA-01 at 11, lines 1-12.

The DSIs add that a methodology should account for operational or monetary mitigation; the cost that non-federal utilities would incur to construct new transmission facilities; the wheeling charges that non-federal utilities would have to pay if they purchased participation rights; mitigation for the monetary loss that participation will cause power customers; and the amount by which participation rights exceed Assured Delivery rights under BPA's LTIAP. B-DS-01 at 5-6. The DSIs have not quantified any of these costs, nor have they offered any rationale for implementing a value-based rate.

Decision

The price for participation in the Third AC Intertie should be based on a vintaged accounting cost approach. Such a methodology appropriately charges the cost of new and existing facilities needed for the Third AC Intertie. Seattle's method would permit partici-

pants to use existing facilities without paying for them. A value-based approach would be speculative and would overrecover costs.

Issue 2

Should the price for participation be based on the unit cost of BPA's share of the entire Third AC Intertie (1350 MW) or on the unit cost of BPA's share of the second 800 MW increment (725 MW)?

Evaluation of Positions

The proposed methodology distinguishes between the first and second 800 MW increments of the Third AC Intertie project. The estimated costs ($162 million) of certain facilities are assigned to the second 800 MW increment. These costs are then divided by 725 MW, BPA's share of the second 800 MW increment, to determine the estimated price for participation.

Bifurcation of the 1600 MW RTC increase into two increments raises an issue central to the development of BPA rates. Such rates must equitably allocate transmission costs between federal and non-federal users of the transmission system. Northwest Power Act § 7(a)(2)(C), 16 U.S.C. § 839e(a)(2)(C); Transmission System Act § 10, 16 U.S.C. § 838h. Bifurcation is consistent with an equitable allocation of costs on several grounds.

BPA reasons that it is appropriate to recover from participants the costs associated with BPA's share (725 MW) of the second 800 MW increment since participants would receive rights in only BPA's share of the second increment. E-BPA-01 at 12, lines 8-10. Put another way, if an upgrade of 800 MW or less is built, there will be no participation. Participation is dependent upon the completion of

a second 800 MW increment. Therefore, the participation rate is based on the costs of achieving the second 800 MW increment.

In addition, based on technical engineering studies, the first 800 MW increment requires minor modifications to the existing system and is therefore less expensive to build than is the second 800 MW increment. E-BPA-01 at 12, lines 17-21. BPA reasons that from the standpoint of the type of product offered, it is logical and reasonable that the cost of participation (in the second 800 MW increment) be relatively more than the cost of wheeling (in the first 800 MW increment) (see E-SL-02 at 15, line 18, through 16, line 5). The nature of participation is close to that of ownership and thus is superior in many respects to wheeling. For example, BPA limits wheeling services to contract-specific transactions between utilities. Transmission rights conferred by participation, on the other hand, would not be tied to particular transactions. TR 185, line 5, through TR 186, line 25; see also E-BPA-01, Attachment 7, at 21-22; TR 338, line 22, through TR 340, line 11; TR 357, lines 11-17; and B-DS-01 at 7. Acknowledgement of the distinctions between the services, through a different price for participation, is an allocation of transmission costs that is equitable to non-federal participants.

BPA's transmission rates are generally developed based on an analysis of the cost of the facilities associated with providing a particular type of service. BPA segments its transmission system according to an identification of the embedded cost of the facilities which provide specific services. Costs either are assigned by direct identification of specific facilities to a particular

service, or, in the case of common facilities which perform multiple services, are assigned to more than one type of service on a pro rata basis according to usage. 1987 Final Rate Proposal, Segmentation Study, WP-87-FS-BPA-02, at 1-9; see also 1987 Final Rate Proposal, Documentation and Appendices for the Revenue Requirement Study, WP-87-FS-BPA-01A, at 9-10; Wholesale Power Rate Development Study, WP-FS-BPA-06, at 24-26. The proposed methodology uses the same general theory in developing the participation rate. The costs of the three primary types of facilities were assigned to each 800 MW increment as follows: (1) the cost of new facilities needed solely for the second 800 MW increment, determined by technical engineering studies; (2) a pro rata share of the cost of new facilities required for 1600 MW that are shared by the first and second 800 MW increments, determined by a contract path approach; and (3) a pro rata share of the remaining book value of existing facilities that are needed to complete the second 800 MW increment, determined using a contract path approach, but that are also used for non-Intertie purposes.

Bifurcation is also consistent with the 725 MW of access allotment developed in another forum and described in the 1988 Proposal, E-BPA-01, Attachment 8, at 14-15. Therein, BPA proposes to offer up to 725 MW of capacity to participants. Bifurcation for cost assignment purposes results in a participation price based on the cost of that capacity. This is not to say that the pricing methodology was improperly pre-decided when the access allocation was determined, as Puget contends (R-PS-01 at 24-25). Indeed, the methodology contained in the 1988 Proposal differs in two material

aspects from the methodology announced in BPA's Federal Register notice (see ROD at 15, above), and the proposed methodology was further altered during the course of this proceeding (see Issue 6, below).

Because the costs of the Third AC Intertie project are equitably allocated between federal and non-federal users of the transmission system, BPA's recovery of those transmission costs will be equitably allocated between federal and non-federal use. This will be demonstrated through the separate accounting analyses that will accompany the general rate filings made after the Third AC Intertie is completed and participation, if offered, is implemented. E-BPA-01 at 25, line 24, through 26, line 7.

WPAG and the DSIs support BPA's position. E-WA-02 at 4, lines 20-25; B-DS-01 at 4.

Three parties take exception to the bifurcation. Puget, Seattle and Water Power all point out that the expansion of the PNW-PSW AC Intertie is but a single project, the planned capacity of which (1600 MW) is not dependent upon the existence of participation. They assert that bifurcating the 1600 MW increase into two increments is done solely as a means to increase the price. They urge that the denominator of the equation be 1350 MW, BPA's share of the entire 1600 MW upgrade, rather than 725 MW. See B-PS-01 at 14-15, 49; R-PS-01 at 19, 21-22; B-SL-01 at 9, 11, 20-21; E-SL-02 at 18, lines 16, 19; R-SL-01 at 5-7; B-WP-01 at 2; R-WP-01 at 2.

It is true that, as currently planned, the expansion is a 1600 MW project in both the PNW and the PSW. It should be noted, however, that final agreements have not been reached that assure the

final project will be 1600 MW. While BPA remains committed to 1600 MW Third AC Intertie, a staged development is possible, with facilities needed for the first 800 MW being constructed prior to BPA exercising its option on the Alvey-Meridian line. Moreover, as explained above, participation is dependent upon the completion of a second 800 MW increment.

Seattle suggests that the 1600 MW expansion will provide stability and better service to the entire AC Intertie. Other Intertie users, though, would not share in the costs of the expensive second 800 MW increment, so participants would be subsidizing them. B-SL-01 at 6; R-SL-01 at 7-8. By the same token, the first 800 MW increment, as well as the remainder of the AC Intertie, provide stability and service to the second 800 MW increment. Yet no one proposes to assign costs of those parts of the Intertie to participants.

BPA has long applied a two-increment concept of the Third AC Intertie for allocation purposes. Dr. Peseau, Seattle's witness, acknowledges BPA's reliance on the concept for those purposes. In a discussion of the BPA/PP&L Intertie Agreement, he points out that two features of the Agreement are that PP&L will receive 100 MW of capacity upon completion of the first 800 MW increment, and that BPA will receive the use of certain of PP&L's facilities when BPA elects to make certain investments in the second 800 MW increment. E-SL-02 at 6, lines 13-16. This is not to engraft an endorsement or validation of BPA's rationale onto Dr. Peseau's testimony, but to demonstrate that BPA did not cook up a two-increment concept as a

"charade to cover the shift of a major part of the cost ...to ... participants." R-SL-01 at 6.

If the 1600 MW RTC increase is bifurcated, Seattle recommends that an "economies of scale" adjustment (reduction in price) be made. E-SL-02 at 18, line 21, through 21, line 19. The theory is that the cost to increase the RTC of the system by the first 800 MW is low because the existing AC Intertie is "overbuilt". Present users would receive the benefits of the low cost. In fairness, BPA should provide a similar benefit to participants by lowering their cost of the second 800 MW increment in recognition of the same type of economies of scale. Seattle would apply the economies of scale adjustment to the Alvey-Meridian, Captain Jack-California/Oregon border (COB) and Slatt-Marion transmission lines. E-SL-02 at 9, line 18, through 11, line 2; E-SL-02 at 19, line 11, through 20, line 19.

Justification is lacking for adjusting the cost of any of those lines. Seattle's witness admits that installing a new line of lower than 500 kV between the Alvey and Meridian substations is simply impractical. TR 359, line 22, through TR 361, line 2. The new Captain Jack-COB line will provide a direct connection between the Captain Jack substation and the new 500 kV COTP line and therefore cannot be built in increments. See E-BPA-01 at 5, lines 12-13. Seattle argues that a credit should be given for the cost of the second of two circuits on the existing Slatt-Marion line, presumably on the grounds that only one circuit was needed at the time of construction. This contradicts Seattle's assertion that rates should be based on the cost of projects as actually built, not the

cost of projects as they might have been built. TR 358, line 1, through TR 359, line 21. Moreover, Seattle's witness acknowledges that the existing "overbuilt" system was prudently built. TR 358, lines 1-12.

Water Power speculates that bifurcation results in such a high price that no PNW generating utility will participate. If there is no participation, the IS-B rate will increase. B-WP-01 at 3. BPA did acknowledge that its IS rate would increase by about seven- to eight-tenths of a mill if the Third AC Intertie is completed and there is no participation. TR 189, line 21, through TR 190, line 9. (BPA also pointed out that it has no forecast of the IS rate assuming there is participation. TR 189, lines 16-17.) From this limited statement, the conclusion cannot be drawn that the absence of participation would be the sole reason for an increase in the IS rate.

If the number of megawatts participated in is held constant, then a lower price for participation would increase the IS rate. Water Power's argument that bifurcation will result in an increased IS rate rests on the assumptions that (1) little or no participation will occur at BPA's estimated price; (2) much participation would occur at a lower price as recommended by Water Power; and (3) the additional revenues from participation would offset the reduction in usage of BPA's Intertie (the denominator of the IS rate) caused by participation. None of these assumptions are supported by any evidence. TR 425, line 8, through TR 426, line 4.

Puget and Water Power allege that BPA is unfairly depriving participants of the opportunity of benefiting from the low cost of

the first 800 MW increment. They claim that BPA is unjustly reserving for itself and its preference customers facilities whose costs have been contributed to, through rates, by other BPA customers, including potential participants. B-PS-01 at 16-17; R-PS-01 at 20; B-WP-01 at 2; TR 418, line 21, through TR 219, line 23.

Puget and Water Power may have misinterpreted, through no error on their part, exactly which customers BPA believes will benefit from the lower cost of the first 800 MW increment. In direct testimony, BPA witnesses declared that BPA's customers who have been paying for the AC Intertie facilities through their rates should bear only the lower cost of the first 800 MW increment. E-BPA-01 at 12, lines 17-21. Upon cross examination, one of BPA's witnesses testified, somewhat tentatively, that the "customers" referred to means "preference customers." TR 183, lines 1-9. This statement cannot be altogether accurate. BPA explains that a portion of the participants' up-front payments will be recognized as wheeling revenues each year and will offset the revenue requirement for the Southern Intertie transmission segment. E-BPA-01 at 26, line 21, through 27, line 5. Thus all customers (including Puget, Water Power and Seattle) who use BPA's wheeling services under the IS rate, as well as customers who purchase federal power over the PNW-PSW Intertie, will benefit from the relatively lower cost of the first 800 MW increment. And, as Puget urges (R-PS-01 at 21), those customers will continue to pay for the benefits of the first 800 MW increment, including the costs of existing facilities assigned to that increment. See E-BPA-01, Attachment 8, at 49. BPA is not,

therefore, depriving PNW generating utilities of the opportunity to share in the less expensive first 800 MW increment, as Puget fears. R-PS-01 at 21.

In any event, mere usage of BPA's transmission system, including the PNW-PSW Intertie, does not result in the establishment in users of a proprietary interest to the facilities. Transmission rates paid by customers are in exchange for contemporaneous wheeling services. All customers, including participants, who obtain BPA wheeling services will continue to pay transmission rates based on the cost of the facilities associated with providing the services. See E-WA-02 at 9, line 18, through 10, line 2.

Finally, Puget objects to BPA's comparison of wheeling services with participation services on the grounds that the testimony of one of its witnesses, relating to BPA wheeling policy, was improperly stricken. R-PS-01 at 23. That testimony was stricken as irrelevant and immaterial because it consists of a lengthy exegesis assailing BPA's LTIAP, expressing dissatisfaction with the limitations the LTIAP imposes. See M-06; O-06. The testimony does not, as Puget claims, "compare ... participation and BPA wheeling service under the [LTIAP]". R-PS-01 at 23.

Decision

For purposes of assigning costs, the 1600 MW RTC increase in the AC Intertie will be divided into two 800 MW increments, as proposed by BPA. Bifurcation is justified because participation, if offered, will occur in only the second 800 MW increment and because it results in an equitable allocation of costs. Seattle has not

justified an "economies of scale" adjustment to the cost of certain transmission lines.

Issue 3

Should a portion of the book value associated with PP&L's existing Meridian-Malin transmission line and related facilities, to which BPA has contract rights, be assigned to the second 800 MW increment of the Third AC Intertie?

Evaluation of Positions

Since BPA plans to operate the expanded AC Intertie as a single system, the existing system must be integrated with the expanded system on both the northern and southern ends. E-BPA-02 at 2, lines 7-11. The northern interconnection will be accomplished by dedicating a portion of BPA's existing Buckley-Marion-Alvey facilities to the Third AC Intertie. See Issue 7 below. The southern interconnection will be made by dedicating a portion of the existing PP&L-owned facilities (the Meridian-Malin transmission line and related facilities) to the Third AC Intertie. E-BPA-02 at 2, lines 14-18. BPA proposes to assign to the second 800 MW increment certain costs associated with the portion of the Meridian-Malin facilities to which BPA has contract rights as a result of the BPA/PP&L Intertie Agreement.

That agreement resolved several disputes between the parties and set the stage for cooperation in the construction and operation of the Third AC Intertie. E-BPA-01, Attachment 7, at 21-22. The parties made a number of exchanges relating solely to Intertie transmission rights. No dollar value was assigned to the exchanges resulting from the negotiations. E-BPA-01 at 20, line 18,

through 21, line 13. The agreement gives PP&L rights to deliver 300 MW of firm power to Malin over its Midpoint-Malin line and to deliver an additional 100 MW once the AC Intertie achieves 4000 MW RTC. One right BPA received was the use of PP&L's Meridian-Malin facilities in order to construct the Third AC Intertie line. E-BPA-01, Attachment 7, at 21-22.

The rationale for the assignment of the costs of PP&L's facilities to the second 800 MW increment is that if participation occurs, BPA will give up the right to use those facilities. Participants should therefore compensate BPA for using them. The proposed methodology charges participants PP&L's book value of those PP&L-owned facilities over which BPA obtained a transmission path. The book value is a proxy for BPA's cost of the trade, and that cost is passed on to participants. E-BPA-01 at 21, lines 11-21.

The DSIs and WPAG support BPA's position on the grounds that the costs of all facilities to be used by participants be assigned to the second 800 MW increment. B-WA-01 at 5, B-DS-01 at 8-9.

Puget objects for two reasons. First, participation will occur in only BPA's share of the expanded system. Therefore none of PP&L's costs should be borne by participants. B-PS-01 at 12; R-PS-01 at 13-16. Second, if the three owners and their customers are entitled to retain the benefits of the first 800 MW increment, they should pay the costs of all existing facilities (including PP&L's facilities). B-PS-01 at 16.

Seattle objects on the grounds that no revenue requirement is imposed on BPA for the dollars represented by PP&L's book value of the facilities. B-SL-01 at 7.

Neither Puget's nor Seattle's arguments are persuasive. BPA made a trade in kind, rather than a payment of a sum certain, to use the facilities. BPA will be giving up its right to full use of the facilities and will be giving to participants a right to use them. It is appropriate that BPA be compensated (in effect, charge a rental fee) by those to whom BPA gives a right of use. Moreover, neither Puget nor Seattle quantified the costs of the exchanges that were made in kind in an attempt to offer an alternate valuation.

Puget contends that BPA's right to use certain PP&L facilities "was part of the agreement by which [PP&L] received an additional 100 MW of AC Intertie capacity." R-PS-01 at 14. Hence PP&L's costs should be allocated to the additional Intertie capacity received by PP&L. There are two problems with this proposal. First, the BPA/PP&L Intertie Agreement involves many exchanges, so it is an oversimplification to conclude that PP&L's 100 MW increase was traded specifically for BPA's use of PP&L's facilities. See E-BPA-01 at 21, lines 1-11. Second, the PP&L facilities are needed to achieve the second 800 MW increment, whereas PP&L's 100 MW increase comes from the first 800 MW increment. Thus, Puget's proposal would result in the participants using the PP&L facilities with no compensation to BPA for the 100 MW of capacity that PP&L received from BPA, since that capacity is contained wholly in the first 800 MW increment.

BPA asserts that PP&L's book value is a reasonable proxy for the cost of what BPA obtained in the trade and of what BPA would be giving up to participants. E-BPA-01 at 21, lines 14-21. No party disputes that. Indeed, in a letter sent a member of Congress, the

Mayor of Seattle complained that BPA proposed to charge the replacement cost of existing facilities required to support the Third AC Intertie. E-BPA-04. BPA's 1988 Proposal did value the PP&L facilities at replacement cost. The pricing methodology under consideration here does not.

Puget disputes not the valuation of the proxy, but the existence of the proxy. Puget does so on the theory that BPA obtained an interest in PP&L's existing Meridian-Malin transmission line in exchange for BPA's agreement to pay half of the cost of the new Alvey-Meridian transmission line. Since the Alvey-Meridian line cost is already included in those assigned to the second 800 MW increment, Puget reasons that assigning costs of PP&L's Meridian-Malin line will amount to double recovery of costs. R-PS-01 at 16-18.

The error in Puget's theory lies in the fact that BPA's right to use the Meridian-Malin line was not obtained specifically in exchange for BPA's promise to pay for half the cost of the Alvey-Meridian line. Puget itself supplies evidence of this by its earlier, contrary assertion that BPA received rights to use PP&L's existing facilities in exchange for giving PP&L an additional 100 MW of AC Intertie capacity. R-PS-01 at 14. Moreover, as BPA's witnesses explain, the BPA/PP&L Intertie Agreement is a total package, with no specific prices being ascribed to the rights being traded. E-BPA-01 at 21, lines 1-11. The conclusion cannot be drawn that BPA's right to use the Meridian-Malin line was the result of BPA's obligation to pay half the costs of the Alvey-Meridian line.

Decision

BPA's right to use the existing Meridian-Malin facilities, owned by PP&L, was obtained in a bilateral exchange of various Intertie transmission rights with PP&L. In light of the lack of quantification of the costs of the exchanges between BPA and PP&L, and in view of BPA's obligation to recover costs, PP&L's book value is a reasonable proxy for BPA's cost of obtaining the right to use the facilities. If participation is offered, participants, who will gain the right to use those facilities, should pay for the use. A portion of the book value will be assigned to the second 800 MW increment of the Third AC Intertie.

Issue 4

How should an adjustment for a contract term through 2016, rather than for the life of the Third AC Intertie facilities, be made?

Evaluation of Positions

Because the BPA/PP&L Intertie Agreement terminates at the end of 2016, BPA proposes that participants' scheduling rights in BPA's share of the second 800 MW increment, if offered, extend only through 2016. E-BPA-01 at 8, lines 19-20. The proposed pricing methodology is therefore designed to recover from the participants only those costs associated with the use of the facilities attributable to the period extending through 2016. E-BPA-01 at 22, lines 12-14. (The following evaluation deals with the method by which a credit for termination is calculated. A discussion of the termination date itself appears in Chapter VI, § B.)

BPA's proposed pricing methodology is based on the cost of the facilities BPA provides for the second 800 MW increment of the Third AC Intertie project (new facilities, reinforcements to existing facilities, and the book value of existing support facilities dedicated to the Third AC Intertie upon its completion). E-BPA-01 at 11, lines 8-18. The estimated service lives of these facilities extend beyond 2016. The 2016 adjustment excludes from the participation price the cost that BPA will have to recover beyond 2016, as determined by the remaining book value of the facilities at the end of 2016. E-BPA-01 at 22.

The 2016 adjustment is calculated as the present value of the estimated remaining book value of the facilities associated with the second 800 MW increment at the end of 2016. The remaining book value at the end of 2016 is the undepreciated portion of capital costs remaining at the end of 2016, where depreciation is computed on a straight line basis using estimated service lives of 37 years for substations and 45 years for transmission lines. E-BPA-01 at 20, lines 12-17, and 22, lines 4-7. The remaining book value is then discounted to the expected in-service year (1993) using BPA's weighted average interest rate on bonds outstanding with the U.S. Treasury. E-BPA-01 at 22, lines 7-9, 18-20. The 2016 adjustment represents a reduction in determining the total price to be paid up-front by participants.

Puget argues that "BPA's proposed credit is less than 5% of the total participation rate and is totally inadequate, particularly in light of the fact that the proposed term for participation is in all probability less than half of the life of the facilities." E-PS-02

at 20, line 19, through 21, line 5; B-PS-01 at 44 and R-PS-01 at 48; emphasis in original.

Puget also objects to the 2016 adjustment on the basis that "non-federal participants pay in present value dollars and yet only receive a credit calculated in discounted future dollars." R-PS-01 at 48. Puget's description of the 2016 adjustment seems contrary to their objection in that "discounted future dollars" are the same as present value dollars. Since the payment would be made in 1993, it is appropriate that both the pre-2016 costs as well as the post-2016 costs be represented in 1993 dollars. Indeed, Seattle acknowledges the fact that since the payment is being made in 1993, reimbursement for post-2016 costs should also be in 1993 dollars. R-SL-01 at 12. (However, as discussed below, Seattle objects to BPA's use of its weighted average cost of bonds outstanding with the U.S. Treasury as the discount rate used in computing the 2016 adjustment.) Puget offers no evidence that BPA's proposed method of determining the 2016 adjustment is incorrect nor does it provide an alternate method of determining such an adjustment.

Seattle also opposes BPA's 2016 adjustment. First, Seattle claims that the lifetimes of the facilities used by BPA are for depreciation accounting purposes only and that the expected life is actually longer. B-SL-01 at 14-15. Seattle believes that the use of a 22-year remaining life after 2016 is incorrect and that it should be over 30 years. E-SL-02 at 26, lines 24-28. In addition, Seattle claims that BPA has ignored the fact that BPA has used longer transmission lifetimes in other studies. B-SL-01 at 14-15; R-SL-01 at 12. BPA agrees that it is "probably true there were some

facilities built with the original Bonneville project that are probably still in service", that properly maintained facilities "could have a long life", and that BPA intends to properly maintain the Third AC Intertie. TR 301, lines 3-5 and 9-16. Seattle apparently believes that this provides sufficient evidence to support an increase in the estimated average service life of the Third AC Intertie. B-SL-01 at 14-15; R-SL-01 at 11.

That argument is not convincing. The fact that particular transmission facilities may exceed an estimated average service life is to be expected in light of the fact that the estimates represent the average composite service lives of individual components, not the specific lives of individual facilities. It is reasonable to assume that with proper maintenance, which generally includes replacement of individual components, facilities will continue to provide service beyond an average life cycle.

With regard to Seattle's claim that BPA has used longer transmission lives in other studies, Seattle does not provide persuasive evidence demonstrative that use of a longer average service life is appropriate or warranted. While there may be examples of longer lives used, the example alluded to by Seattle was a marginal cost study used for purposes of rate design as opposed to a determination of the costs to be included in revenue requirements. TR 300, lines 17-18, 24. In determining revenue requirements, BPA has consistently relied upon the average service lives determined by BPA's depreciation study as the basis upon which to calculate capital recovery requirements for its investments. 1985 Final Rate Proposal, Documentation for Revenue Requirement Study, WP-85-FS-BPA-07A,

Chapter 12; 1985 Final Rate Proposal, Functionalization Study, WP-85-FS-BPA-10 at 3; 1987 Final Rate Proposal, Documentation and Appendices for the Revenue Requirement Study, WP-87-FS-BPA-01A at 405; 1989 Rate Proposal, Documentation for the Revenue Requirement Study - Volume 1, WP-89-E-BPA-01A1, Chapter 3. Accordingly, the estimated lives used in the Third AC Intertie non-federal pricing methodology (37 years for substations and 45 years for transmission lines) result from BPA's depreciation studies used in determining the annual depreciation charges for those facilities, based on the lives of individual components of transmission facilities. TR 300, lines 15-16; TR 304, lines 9-15. These studies incorporate the lives of the facilities actually taken out of service. TR 304, line 25, through TR 305, line 5. The assumptions, reasoning, and results of the depreciation study as applied in the pricing methodology are by no means arbitrary, but rather are based on a systematic, detailed analysis of both historical and forecasted transmission service life characteristics and trends. 1985 Final Rate Proposal, Documentation for Revenue Requirement Study, WP-85-FS-BPA-07A, Chapter 12. Balanced against the weight of the depreciation study, Seattle's arguments do not sufficiently demonstrate that use of a longer average service life is appropriate or warranted.

Second, Seattle opposes the 2016 adjustment on the grounds that BPA has improperly used a nominal discount rate in discounting the estimated remaining book value to present terms. Seattle claims that it is methologically wrong to apply a nominal interest rate to these kinds of fixed costs and that the only appropriate interest rate to use is a "real" interest rate which does not have inflation

embedded in it. B-SL-01 at 11-13. Seattle argues that because the costs do not include inflation beyond 1993, the only discount rate that should be used is a rate that does not include inflation, that is, a real discount rate. B-SL-01 at 12-13; R-SL-01 at 12.

The fact that the remaining book value in 2016 has not been inflated to 2016 dollars before applying a nominal discount rate does not make BPA's methodology incorrect. The 2016 adjustment is analogous to an early payment to participants for the cost of the facilities associated with the post-2016 period. It represents the amount of money that BPA would otherwise have to set aside in 1993 and earn interest on through 2016 in order to reimburse participants at the end of 2016 for the costs of the facilities remaining to be recovered after 2016. TR 333, lines 1-7; TR 335, line 23, through TR 336, line 4. The rate at which the funds set aside would accumulate interest would be a nominal rate as BPA has used in determining the 2016 adjustment.

Third, Seattle objects to calculating the adjustment on a cost-based method using accounting depreciation. Seattle favors a value-based approach for the reason that historical cost and accounting depreciation have little relationship to the economic value of the facilities in 2016. E-SL-02 at 22, line 2, through 23, line 10; B-SL-01 at 11-12. Seattle believes that the question of whether to use its economic carrying charge method or to use BPA's cost-based approach is a cost allocation issue. While Seattle agrees that BPA's proposal is correct in the sense that it will recover costs, Seattle contends that BPA's proposed method does not allocate those costs appropriately. TR 364, lines 6-12.

Alternatively, Seattle claims that the real, or economic, carrying charge method should be used to determine the remaining value after 2016. E-SL-02 at 24, lines 6-11; B-SL-01 at 22-23. Using Seattle's approach, the 2016 credit would be $48/kW compared to BPA's adjustment of $10/kW. E-SL-02 at 30, lines 2-7.

The DSIs oppose Seattle's approach. They assert that were BPA to determine the 2016 adjustment based on economic depreciation, then BPA would underrecover actual revenue requirement for the Third AC Intertie. TR 374, lines 21-24. Dr. Peseau admits that the economic carrying charge method is always lower than actual revenue requirements in the early years. TR 374, line 25, through TR 375, line 2. Moreover, in two other rate hearings, Dr. Peseau testified that the economic carrying charge method results in lower annual charges in the early years of an asset's life. E-BPA-06 at 4; E-BPA-07 at 3. Indeed, testimony prepared by Dr. Peseau for BPA's 1982 general rate case asserts that economic carrying charges "provide a very poor indication of annual revenue requirements associated with new investment." E-BPA-06 at 4. In testimony presented in 1985 to the District of Columbia Public Service Commission (DCPSC), Dr. Peseau objected to the use of the economic carrying charge, favoring instead a more "stable levelized fixed charge", characterizing it as a "good approximation of the average economic charge". E-BPA-07 at 4. BPA's proposed use of straight-line accounting depreciation to apportion the costs of the Third AC Intertie on an annual basis to determine the remaining cost in the post-2016 period represents the use of such a "stable levelized fixed charge". BPA's proposed cost-based method using

accounting depreciation results in recovery of costs in a manner consistent with the way in which costs are actually included in BPA's annual revenue requirements.

WPAG agrees with BPA's use of remaining book value. WPAG asserts that Seattle has not strictly adhered to a value-based approach because Seattle ignores factors which could reduce, if not negate, the hypothetical value of the facilities in 2016. Such factors include technological advances in superconductivity or isolated generation that could render the Third AC Intertie obsolete, or current controversy over electromagnetic fields that could result in both litigation and legislation. These factors might substantially reduce the estimated value of the Third AC Intertie in 2016. E-WA-02 at 7, line 8, through 8, line 6. In fact, Dr. Peseau expressed his concern to the DCPSC about using economic carrying charges precisely because this approach requires an assessment of the annual rate of technological progress. His concern was great enough that he recommended that the economic carrying charge method not be used. E-BPA-07 at 3.

Finally, based on the observation that BPA's method for computing the 2016 adjustment was changed from replacement value in the 1988 Proposal to remaining book value in this proceeding, Seattle claims that "BPA staff is apparently purposely exaggerating the non-federal participants' investment price for participation from 1993-2016 in order to minimize the price at which BPA will pay for reversion of the facility after 2016." B-SL-01 at 22. This assertion is unsubstantiated and exaggerates the effect on the participation price of BPA's changing from a depreciated replacement

value approach to a book value approach. While it is correct that the 1988 Proposal used depreciated replacement value to calculate the 2016 adjustment, the cost basis of the existing facilities allocated to the second 800 MW increment was also determined using depreciated replacement value. E-BPA-01, Attachment 8, at 5, 16. Both of these components must be examined in order to determine the effect on the estimated price of using either of the two methods.

Without adjusting for the differences in price level representations and accepting the minimal import of these differences, the effect on the estimated participation price resulting from BPA changing from depreciated replacement value in the 1988 Proposal to book value in this proceeding is an increase of only about $6 million, or $8/kW higher than in the 1988 Proposal. E-BPA-01, Attachment 8, at 48, 52; E-BPA-02 at 7, lines 15, 17. The overall effect on the estimated price caused by this change is much less than implied by Seattle's claim.

Decision

BPA's proposal for the 2016 adjustment is consistent with a cost-based approach to the pricing methodology. The design of the adjustment charges participants for only those costs attributable to the 1993-2016 period, will recover those costs, and is not subject to uncertainties of estimating the expected economic value of the Third AC in 2016. For the reasons mentioned in Chapter IV, § B, below, the adjustment will apply to a termination date of either 2016 or 2025.

Issue 5

Should the cost of the loop of the John Day-McNary transmission line into the Slatt substation be assigned to the Third AC Intertie, and, if so, to the second 800 MW increment?

Evaluation of Positions

The plan of service for the Third AC Intertie project changes the existing John Day-McNary tap into the Slatt substation to a loop by adding one breaker at Slatt. The proposed methodology assigns the cost of the loop-in (connection of each end of a transmission line to a substation with a breaker) to the second 800 MW increment. BPA claims that the Slatt loop-in is not needed to meet reliability criteria until the Third AC Intertie reaches 4800 MW RTC. For this reason, the costs of the loop-in are assigned to the Third AC Intertie. TR 207, lines 5-17.

The assignment of the costs of the Slatt loop-in (as well as the assignment of the costs of those facilities mentioned in Issues 6, 7 and 10) to the second 800 MW increment resulted from BPA's March 14, 1990, draft report (E-PS-12, hereafter referred to as "draft report"). That report demonstrates which new facilities are required to operate the AC Intertie reliably at 4000 MW RTC. Costs of new facilities required solely to increase the RTC from 4000 MW to 4800 MW were assigned to the second 800 MW increment. The draft report uses the same reliability criteria for analyzing the system at 4000 MW RTC as was used to develop the Third AC Intertie plan of service for a 4800 MW RTC system. E-BPA-01 at 15, lines 4-9.

Puget argues that the addition of the loop-in provides a desirable improvement to the present system at 3200 MW RTC. Thus

the cost should not be assigned to either the Third AC Intertie or the second 800 MW increment. B-PS-01 at 19-20 and R-PS-01 at 28-29.

It is true that the Slatt loop-in would eliminate not only the present complex relaying scheme, but also a breaker failure condition at Slatt substation in the present system that can take out both the McNary-Slatt-John Day and Ashe-Slatt lines. E-PS-06. Nevertheless, BPA would not construct the loop-in solely for these purposes since the operation of the existing 3200 MW system is adequate without it. TR 207, lines 6-10. On the other hand, the system would not perform adequately without the Slatt loop-in at 4800 MW RTC. TR 207, lines 11-23. BPA's studies (E-PS-07 at 3, Item 1) show that the system is stable without the Slatt loop-in before the Third AC Intertie is added (swing T210) and that the system would be unstable after the Third AC Intertie is added without the Slatt loop-in (swing T209).

Likewise, the draft report used to assign costs between the first and second 800 MW increments shows that the system at 4000 MW RTC is stable without the Slatt loop-in (swings T962 and T963). TR 204, line 23, through TR 205, line 7.

Decision

BPA has shown that the system at both 3200 MW and 4000 MW RTC is stable without the Slatt loop-in, but unstable at 4800 MW RTC without it. Therefore, costs associated with the Slatt loop-in will be assigned to the Third AC Intertie, and specifically to the second 800 MW increment.

Issue 6

Should the costs of replacements for series capacitor banks being retired on account of polychlorinated biphenyl (PCB) content be assigned to either the Third AC Intertie or the second 800 MW increment?

Evaluation of Positions

BPA is embarking on a program to replace series capacitor banks containing PCBs at the Sand Springs, Sycan and Fort Rock substations. E-PS-02 at 22, line 21, through 25, line 20. Puget urges that BPA not assign the costs of the replacement capacitors to the Third AC Intertie, and certainly not to the second 800 MW increment, because they are needed for operation of the existing Intertie at 3200 MW RTC. B-PS-01 at 24 and R-PS-01 at 48-51.

BPA's witnesses testified (E-BPA-02 at 4, line 26 through 5, line 20) that the costs of capacitors needed to support the first 4000 MW increment would not be assigned to the second 800 MW increment. Based on the BPA's draft report, the cost of all capacitors to be replaced were removed from the second 800 MW increment. No capacitor costs were assigned to the second 800 MW increment in BPA's rebuttal testimony.

Puget's argument is persuasive. The cost of capacitors needed to maintain 3200 MW RTC on the existing system should be removed from Third AC Intertie costs. A recent study (completed after cross-examination) shows that at 3200 MW RTC, the two series capacitor banks are needed at both Sand Springs and Sycan at a rating which equals about 90% of the rating required for the Third AC Intertie, while one series capacitor bank at Ft. Rock (in the

Buckley-Summer Lake transmission line) would be needed at its full rating. This would result in a cost reduction of approximately $41 million to both the total cost of the Third AC Intertie and to the costs assigned to the first 800 MW increment. See E-BPA-02, Attachment 2. In the columns labeled "BPA's Costs" and "BPA's Costs of First 800 MW," the following changes should be made: Line 6 is reduced from $10,541 to $1,236; line 7 is reduced from $9,850 to $1,155; line 9 is reduced from $6,473 to $0; line 10 is reduced from $10,833 to $1,270; and line 11 is reduced from $8,550 to $1,273.

Puget has not had an opportunity to review the new studies and they were not completed in time to be included in the record of this rate proceeding. The results of these studies, however, do not change the assignment of costs to the second 800 MW increment, and do not affect the estimated price.

Decision

BPA's witnesses testified that the costs of series capacitors needed to support the first 4000 MW increment would not be assigned to the second 800 MW increment. Therefore the cost of capacitors to be replaced due to PCB content, and that are required for operation at 4000 MW RTC and below, will not be included in Third AC Intertie costs. The costs associated with uprating the Sand Springs and Sycan capacitor banks and the cost of one Ft. Rock capacitor bank, all of which will be needed for reliable operation of the Third AC Intertie at 4000 MW RTC, will be assigned to the first 800 MW increment.

Issue 7

Should BPA's cost of additional breakers at the Grizzly substation be assigned to the Third AC Intertie, and, if so, to the second 800 MW increment?

Evaluation of Positions

The purpose of the Grizzly breakers is to loop in the Buckley-Summer Lake line to the Grizzly substation, splitting the line into Buckley-Grizzly and Grizzly-Summer Lake sections.

Puget believes that the Grizzly breakers are desirable with or without the Third AC Intertie, so the costs should not be assigned to either the Third AC Intertie or the second 800 MW increment. B-PS-01 at 21-22; R-PS-01 at 30-32.

Puget appears to ignore BPA's draft report which demonstrates that the Grizzly loop-in, with all six breakers, is not needed at 4000 MW RTC, and to ignore an update to the Third AC Intertie Plan of Service Requirements, dated July 19, 1988, (E-PS-07) which demonstrates that the Grizzly loop-in is required for the system to be stable at 4800 MW RTC. Puget did not offer any studies of its own to counter BPA's conclusions.

Puget also claims that only three breakers are required to loop in the Buckley-Summer Lake transmission line to the Grizzly substation. B-PS-01 at 21 and R-PS-01 at 30. Puget cites BPA's testimony (TR 195, lines 11-15) to support this claim, but evidently did not consider other BPA testimony showing the need for six breakers. TR 276, line 17, through TR 281, line 21.

BPA included the Grizzly breakers in the Third AC Intertie plan of service, and assigned their costs to the second 800 MW increment,

because the draft report shows they are not needed for reliable operation at 4000 MW RTC. E-PS-12 at 3, Items 2c, 3. The draft report shows that the system is stable at 4000 MW transfer without the Grizzly loop for the critical Buckley-Summer Lake contingency (swings T966 and T967 shown in E-PS-12, summary page 4).

Puget asserts that the BPA draft report does not demonstrate that the Grizzly loop-in is not needed at 4000 MW because BPA did not look at all reasonable contingencies. R-PS-01 at 31. Puget's example is that BPA failed to examine a three-phase fault at John Day with the loss of both John Day-Grizzly lines. BPA did not examine that specific contingency in the draft report, but did examine a number of double line outages. The contingencies examined were considered to be the worst cases based on previous experience. The loss of both Grizzly-Malin lines was examined and the system was found to remain stable (swings T936 and T941, E-PS-12 at 3). This contingency is similar to the loss of both John Day-Grizzly lines without the Grizzly loop-in, for either outage effectively opens the John Day-Grizzly-Malin path.

In a preliminary plan of service for the Third AC Intertie, BPA determined that Grizzly should use a breaker and one-half configuration at 4800 MW RTC. E-PS-05 at 2, Item 8.4. Many technical considerations entered into this decision. The critical factor was part 3 of Item 8.4 (E-PS-05), which shows that a breaker and one-half scheme limits loss of both John Day-Grizzly or Grizzly-Malin lines to only those lines. This is required for stable operation at 4800 MW. TR 280, line 14, through TR 281, line 22. The Grizzly loop-in adds two new line terminations at the Grizzly substation for

a total of seven line terminations. This number of line terminations requires a breaker and one-half configuration to meet Third AC Intertie reliability requirements. BPA must therefore add a total of six new breakers at the Grizzly substation.

Puget claims that a breaker and one-half configuration for seven line terminations is "contrary to BPA's own reliability criteria." R-PS-01 at 32. This is not true. As Puget notes, the criteria "allow a modified ring bus configuration," but does not demand it. R-PS-01 at 32 (emphasis added). The criteria also states that special reliability considerations, such as line crossovers and similarity of critical circuits, shall be taken into account, which was done with respect to the Grizzly substation.

PGE, at its own expense, will replace one breaker at Grizzly because the existing breaker has an inadequate rating, with or without construction of the Third AC Intertie. TR 269, line 20, through TR 281, line 21.

Decision

BPA has shown that the Buckley-Summer Lake loop into the Grizzly substation (with six new breakers) is needed at 4800 MW RTC, but not at 4000 MW RTC. Therefore, the cost of all six new breakers at the Grizzly substation will be assigned to the Third AC Intertie, and specifically to the second 800 MW increment.

Issue 8

Should the costs of BPA's existing Buckley-Marion-Alvey transmission line and associated facilities be assigned to the Third AC Intertie, and, if so, to the second 800 MW increment?

Evaluation of Positions

For the same reasons that the southern interconnection is needed over existing, PP&L-owned facilities, an interconnection is needed to electrically interconnect the Alvey-Meridian line with the northern portion of the existing AC Intertie system. The interconnection would be made over part of the existing, BPA-owned Buckley-Marion-Alvey transmission line and associated facilities. E-BPA-01 at 18, lines 10-17, and 18, line 24, through 19, line 1. (This is the "northern interconnection" referred to in Issue 3.) BPA proposes to assign a portion of the book value of the Buckley-Alvey-Meridian line and facilities to the second 800 MW increment. The assignment of costs is based not on power flow studies, but on the contract path and on the interconnection of the new Third AC Intertie to the existing AC Intertie. E-BPA-02 at 2, line 7, through 3, line 4.

Seattle appears to agree that it is "logical to charge for a portion of the existing facilities". E-BPA-04 at 2.

Water Power does not disagree with BPA's proposal to charge participants for existing facilities used to support the Third AC Intertie. Water Power recommends that discussion of the appropriate compensation should not occur in this rate proceeding, but rather in contract negotiations. B-WP-01 at 6-8. At oral argument, Water Power's attorney acknowledged that a charge for use of existing facilities is an integral component of a participation rate, and suggested that BPA hold a subsequent § 7(i) proceeding to incorporate the results of the negotiations. He also acknowledged, and BPA heartily agrees, that yet another § 7(i) hearing would make

the participation rate process cumbersome. TR 430, line 10, through TR 431, line 2. BPA believes that the issues of compensation for existing facilities' costs should be determined in this proceeding, along with all other participation rate issues. Fractionalizing rate issues in the manner suggested by Water Power will only make the process unwieldy and lengthy. The two benefits perceived by Water Power (B-WP-01 at 7) as accompanying negotiation and a subsequent § 7(i) hearing are illusory. First, no more "flexibility" in price could result than already has during the public input process that began in the summer of 1987 and that culminated in this § 7(i) hearing. Second, the record is not "insufficient" to assign specific existing facilities to each 800 MW increment. It is not clear how private negotiations could cure an "insufficient" record, in any event.

Puget asserts that BPA cannot explain why the Third AC Intertie must be connected at its northern and southern ends. R-PS-01 at 38-40. Puget claims that "[c]onnection (by a "contract path" or otherwise) of the NW Third AC with the existing AC Intertie on both the northern and southern ends certainly is not necessary for the expanded Intertie to operate at the same frequency--as a single system." R-PS-01 at 39. From this, Puget argues that inclusion of costs for the Buckley-Marion line is not appropriate.

There must be an electrical <u>inter</u>connection between the existing AC Intertie transmission lines on the east side of the Cascade mountains and the new Alvey-Meridian transmission line on the west side for the two systems to be electrically integrated and to operate as a single system. E-BPA-02 at 2, lines 7-18.

Participants will receive 725 MW of scheduling rights in a 4800 MW AC Intertie system.

Further, BPA does not dispute the fact that existing facilities in place today provide that interconnection. There are many existing facilities that contribute to this electrical interconnection between the east and west side. It is clear that existing facilities that interconnect the east and west side are necessary to achieve the second 800 MW increment. Use of a contract path approach to assign costs is both reasonable and appropriate. Use of the Buckley-Marion facilities is also appropriate since these facilities are geographically and electrically closely tied to a direct path between John Day and Marion.

Puget contends that BPA should not assign any costs of existing facilities to the second 800 MW increment. This is in part because BPA's proposed methodology excludes the benefits of existing facilities from the second 800 MW increment. Puget notes that BPA engineering studies used to assign facilities between the two 800 MW increments did not remove the existing Buckley-Marion-Alvey transmission lines when determining facilities to be assigned to the first 800 MW increment. B-PS-01 at 29-30. Puget seems to contend that BPA should assign the cost of these facilities to the first 800 MW increment because the facilities were not removed from the engineering studies.

BPA did not remove the existing facilities from the studies because the studies were used simply to assign new facilities, that is, to determine which facilities must be added to achieve a capacity increase of 800 MW. The existing facilities would remain

in place even if the Third AC Intertie is not completed, but they would not be used for Intertie purposes without the completion of the Alvey-Meridian line in the second 800 MW increment. Moreover, it would be difficult to remove a part of a line from a power flow study, since only a part of the Buckley-Marion-Alvey line is assigned to the second 800 MW increment.

Next, Puget argues that BPA has not justified the assignment of existing facilities to either the Third AC Intertie or the second 800 MW increment. The reason given is that BPA included costs of the Buckley-Marion-Alvey transmission line without regard to actual power flow studies evaluating the need for that transmission line to support the Third AC Intertie. B-PS-01 at 30-32 and R-PS-01 at 45-47. Indeed, Puget asserts that because flows on the Buckley-Marion line do not increase with increases in Intertie transfer, the line cannot be assigned to the Third AC Intertie. B-PS-01 at 33 and R-PS-01 at 45-46. Puget presented power flow studies, with the AC Intertie schedule at 3200 MW and at 4800 MW, purporting to show that flow on the Buckley-Marion line did not increase between the two cases. E-PS-03.

BPA did not use power flow studies as the basis for assigning the costs of existing facilities. BPA does not believe that power flow studies are appropriate for this purpose. Although a power flow study shows the flow on a line for a specific condition, it does not show whose power is using the line. The flow on any line is a function of the system conditions and will change with assumed load and resource distributions and schedules. In a network, the load to which power is flowing on a particular line cannot be

identified. E-BPA-02 at 3, lines 20-21. The power flowing on the line could be serving local load or it could be Intertie power. In other words, power flows, in this case, are not good indicators of the purpose or use of a line for cost assignment purposes.

Incremental power flow (the difference in flow under different conditions) on a line does not indicate the ownership of the power on the line. There are many such cases that could be compared, and Puget did not select an appropriate comparison. E-BPA-02 at 3, lines 13-17. Puget's comparison is inappropriate because flow at the 3200 MW capacity level should be compared with flows at the 4800 MW capacity level. The facilities for the 4800 MW level were in place in the case with 3200 MW actual flow. The additional facilities have the effect of increasing flow over the Buckley-Marion line at the lower level, which decreases the change in flow between the two levels. Puget acknowledges this. R-PS-01 at 46. In Puget's cases, even though there was no increase in flow on the Buckley-Marion line, the flow on the line was still substantial. E-PS-03; E-BPA-02, Attachment 1.

Puget contends that the Marion substation should be a northern terminus of the Third AC Intertie because the flow from Pearl to Marion increases by 350 MW. R-PS-01 at 46-47. Taking Puget's argument to its extreme, increased flow on any line indicates that it should be included in the Third AC Intertie facilities. Following this logic, then, all lines with an increased flow should be part of the Third AC Intertie, including all facilities connecting the AC Intertie with the generation Puget increased to expand Intertie flow from 3200 MW to 4800 MW. This would encompass a large

portion of BPA's network, depending on generation assumptions. It seems clear that no party would embrace this result.

Moreover, the value or usefulness of a line is not always indicated by the flow on the line for a given condition. For example, some lines load heaviest for contingency conditions. As BPA's witnesses noted (E-BPA-02 at 1, line 17, through 2, line 18), all the lines into Marion provide support for the Intertie use on the Marion-Alvey-Meridian line as well as service to local load.

Finally, Puget complains that the Buckley-Marion line does not provide a direct path to John Day, the northern terminus of the AC Intertie. B-PS-01 at 34, line 10. Puget proposes that the cost of the John Day-Marion line should be assigned to the second 800 MW increment used instead because it is a direct link to John Day. However, applying Puget's power flow method, it is inappropriate because the flow also decreases on this line (E-PS-03).

A path from the existing AC Intertie to the Alvey substation must be provided to allow the Alvey-Meridian line to be used for Intertie purposes. The Buckley-Marion double-circuit line is the logical choice since it was the last line to add capacity to Marion. E-BPA-02 at 3, lines 1-14.

Decision

Costs of the existing Buckley-Marion-Alvey line and associated facilities will be assigned, on the basis of contract path, to the Third AC Intertie, and specifically to the second 800 MW increment. This is consistent with the basis for BPA's proposed treatment of the Meridian-Malin facilities discussed in Issue 3, and the Captain Jack-COB transmission line discussed in Issue 9.

Issue 9

Should one-half of the costs of the Captain Jack-COB transmission line be assigned to the second 800 MW increment?

Evaluation of Positions

This transmission line will connect the new Captain Jack substation to the new 500 kV COTP line at COB. Both Seattle and Puget dispute BPA's proposed method of assigning the cost of the line to the second 800 MW increment.

Seattle urges that an "economies of scale" adjustment be made to the cost of the line. This proposal is discussed in Issue 2, above.

Puget proposes that none of the costs of the line be assigned to the second 800 MW increment since the line is needed to operate the Intertie at 4000 MW RTC. B-PS-01 at 26-27 and R-PS-01 at 36-38.

BPA's witnesses disagree. The cost of the Captain Jack-COB line should be shared equally by both 800 MW increments, because it will be used by both increments equally. E-BPA-01 at 16, lines 2-11; TR 234, line 23, through TR 235, line 7. BPA's position on the assignment of costs of the Captain Jack-COB line is similar to its position on the assignment of the costs of existing BPA and PP&L facilities to the second 800 MW increment (see Issues 3 and 8). Participants should pay the costs of facilities required for the contract path associated with the second 800 MW increment to deliver power over the AC Intertie to COB.

Puget and Seattle claim that the assignment of Captain Jack-COB is inconsistent with BPA's methodology for assigning costs of new facilities to the first and second 800 MW increments and that the costs of other new facilities should also therefore be split in half

for assignment purposes. R-PS-01 at 36; R-SL-01 at 7. This criticism is without merit. BPA's studies for the 4000 MW RTC level are used to determine the facilities for 4000 MW of capacity to Captain Jack. The facilities from Captain Jack to COB are needed for any level of capacity increase, but can only be added in one increment. The other new facilities can be added or not as a unit to reach the 4000 MW capacity level. The second 800 MW increment should not have free use of the Captain Jack-COB line simply because it must be in place for the first 800 MW increment. Each increment uses the line for 800 MW, so each increment should be assigned one-half of the cost.

BPA's witnesses describe the proposed methodology as "based on the cost of the facilities BPA provides for the second 800 MW increment of the Third AC Intertie Project." E-BPA-01 at 11, lines 8-11. It is also based on a vintaged accounting cost approach. See Chapter III, Issue 1. The proposed methodology recognizes that the Third AC Intertie requires different levels of reinforcement on different parts of the system. Some of the system needs no additions; parts of it can achieve an additional 800 MW RTC with minor reinforcement; and some new facilities are needed to achieve the total 1600 MW RTC increase. The methodology consists of three costing components described in this ROD at 29, above. The costs associated with the Captain Jack-COB transmission line are assigned by a pro rata sharing of the cost of new facilities required for 1600 MW that are shared by the first and second 800 MW increments, determined by a contract path approach.

Decision

One-half of the costs of the Captain Jack-COB transmission line will be assigned to the second 800 MW increment on the basis of the contract path required to connect the Third AC Intertie with the COTP line.

Issue 10

Should all of BPA's costs of the Alvey-Meridian transmission line be assigned to the second 800 MW increment?

Evaluation of Positions

BPA's proposal assigns all of BPA's cost of the Alvey-Meridian transmission line to the second 800 MW increment. E-BPA-01, Attachment 10; E-BPA-02, Attachment 2. Puget urges that the line, or at least the Alvey-Dixonville portion, be assigned to the first 800 MW increment, for the line is required to serve PP&L's local load. B-PS-01 at 27-29 and R-PS-01 at 35. Puget maintains that part of Alvey-Meridian should not be assigned to the second 800 MW since it is needed to serve PP&L load. R-PS-01 at 35.

Puget claims that the Alvey-Dixonville line, included in BPA's draft report, is needed to support the first 800 MW increment. The Alvey-Dixonville portion of the line is required for local load and its costs should not be assigned to the second 800 MW increment. B-PS-01 at 27-29 and R-PS-01 at 33-34.

Puget is correct that the Alvey-Meridian line is required in part for PP&L's local load and that the Alvey-Dixonville portion of the line is expected to be in place by 1992, before the Third AC Intertie is completed. The load that the Alvey-Dixonville line will be serving before completion of the Third AC Intertie is PP&L's

local load, not a BPA load. If the Alvey-Dixonville line were not in service for BPA's draft report, it would not affect the facilities required for 4000 MW operation. This portion of the Alvey-Meridian line, since it is not completed to Meridian and does not have series capacitors, would not affect flow on the AC Intertie significantly. Studies showing this have been completed and will be included in the final report. TR 232 at lines 8-21.

BPA will be obligated for none of the costs of the Alvey-Dixonville portion unless BPA exercises its option, under the BPA/PP&L Intertie Agreement, to acquire 50% of the Alvey-Meridian line. The reason the Alvey-Dixonville line is included in BPA's draft report is that PP&L has declared that the line must be built to serve local load. BPA and PP&L have agreed that if the Third AC Intertie project proceeds, then the cost of the line will be shared equally, with BPA using its portion for Intertie use and PP&L using its portion for local load. TR 232, lines 3-7. The costs included in the second 800 MW increment are those costs BPA would be obligated to pay when and if it exercises its option. Costs associated with the 50 percent of the Alvey-Meridian line that will be used to serve PP&L local load are not assigned to the Third AC Intertie. The costs are assigned to the second 800 MW increment because that line is required to achieve 4800 MW RTC, and is not required to achieve 4000 MW RTC.

Decision

Costs associated with BPA's share of the entire Alvey-Meridian transmission line, including BPA's share of the Alvey-Dixonville

portion, will be assigned to the second 800 MW increment because it is required to achieve the second 800 MW RTC.

Issue 11

Should AFUDC for new facilities, at BPA's rate, be included as a component of a participation rate?

Evaluation of Positions

The proposed methodology includes an AFUDC component in the price. E-BPA-01 at 16, line 24, through 17, line 11. Seattle does not oppose including AFUDC, but does oppose the AFUDC rate used in the calculation because it is higher than Seattle's rate. B-SL-01 at 19.

Inasmuch as BPA will retain ownership of the Intertie facilities, AFUDC (at BPA's rate) will be capitalized as part of BPA's utility plant, consistent with the Commission's Uniform System of Accounts. E-BPA-01 at 16, line 24, through 17, line 11. To recover costs fully, AFUDC at BPA's rate must be included in the price paid by participants. If the price did not include AFUDC at the appropriate rate, BPA would have to recover the participants' share of AFUDC from other customers. E-BPA-02 at 9, lines 15-20.

Puget proposes participants make progress payments as costs are incurred in order to avoid AFUDC charges. B-PS-01 at 49; R-PS-01 at 62.

Progress payments would not fully compensate BPA in a timely manner for expenditures because payments would not be received until contracts are executed. It is currently expected that participation contracts may be executed in early to mid-1992. Major expenditures are expected to be made before contracts are executed. E-BPA-02

at 9, lines 25-26. Furthermore, since BPA will retain ownership of facilities, BPA will accrue AFUDC on the facilities whether payments take the form of progress payments or one-time, up-front payments. See E-BPA-02 at 9, line 21, through 10, line 2.

Decision

BPA will retain ownership of the new facilities and must recover the resulting AFUDC, capitalized at BPA's rate, on them. Progress payments will not obviate the need to accrue AFUDC. AFUDC for new facilities, at BPA's rate, will therefore be included as a component of the pricing methodology.

Issue 12

The proposed methodology imposes on participants the cost of new facilities as well as the cost of existing facilities. Does the methodology therefore "improperly mix marginal and embedded costing"?

Evaluation of Positions

Seattle's witness argues that economic theory requires existing users to continue to pay the embedded costs of all existing facilities, while new users (participants) pay the marginal costs of new facilities. Dr. Peseau alleges that by assigning to the second 800 MW increment embedded costs (of the existing Meridian-Malin and Buckley-Marion-Alvey facilities) as well as marginal costs (of the new Third AC Intertie facilities), the proposed methodology improperly mixes embedded and marginal costing. The result is that existing users, who continue to enjoy full benefit of the existing system, receive a windfall. E-SL-02 at 13, line 19, through 14, line 19.

The DSIs claim that charging only marginal cost transfers to participants the benefits of existing facilities without compensating BPA for the use of those facilities. B-DS-01 at 5. Indeed, Seattle's recommended method of pricing participation (marginal costing) excludes the cost of existing facilities. TR 358, lines 1-8. The DSIs assert that Seattle's pricing methodology ignores the fact that the Third AC Intertie could not exist without the extensive existing AC Intertie system. A cost-based participation rate would include not only the full marginal cost of the second 800 MW increment, but also a pro rata share of the cost of all other facilities without which the last incremental capacity could not be achieved. B-DS-01 at 8-9.

WPAG points out that mixing marginal and embedded costing is not unusual: rates consisting of both marginal and embedded costs are charged for line extensions at the retail level; and BPA itself uses a mix of marginal and embedded costs in classifying generation costs. E-WA-02 at 5, line 1, through 6, line 18.

The telling point is that strict adherence to marginal cost theory results in the overcollection of revenue requirement, because all users, existing and new, pay marginal cost rates. E-SL-02 at 15, lines 3-6. BPA's proposed methodology does not suffer from that defect. Even Dr. Peseau acknowledges that the methodology results in a price that will recover BPA's revenue requirement. TR 364, lines 6-10. Indeed, it may be said that the methodology does not contain marginal costs at all in the classic rate design sense, for the costs of the Third AC Intertie are (or soon will be) embedded. The costs are (or soon will be) known, measurable and

will be incurred. It is these known and incurred costs that will be paid by participants upon true-up of their prepayments.

Decision

BPA's methodology does not improperly mix marginal and embedded cost principles.

Issue 13

Should the proposed methodology include a "nonownership" adjustment as a credit to the price?

Evaluation of Positions

Seattle characterizes scheduling rights as inferior to ownership, and therefore believes that BPA should allow a "credit equal to the amount of BPA's overhead costs to new participants to compensate for the lack of actual ownership and control of the Third AC Intertie." E-SL-02 at 26, lines 20-22 and R-SL-01 at 13. Seattle believes that BPA should bear these overhead costs because BPA will retain ownership of the facilities. E-SL-02 at 28, lines 12-16. Seattle recommends including a credit of $12/kW as part of the pricing methodology. E-SL-02 at 28, lines 20-25. A "nonownership" credit would reduce the participation price.

Seattle reasons that certain restrictive conditions on participation have value to BPA and should reduce the participants' rate. The conditions include BPA retaining decision-making capability on operating and maintaining the system; BPA determining the schedules for O&M; third-party wheeling restrictions; and BPA receiving reciprocal rights to participate on comparable terms in similar future interregional connection projects. B-SL-01 at 16, lines 11-16.

While BPA agrees that while some of those restrictions may provide value to BPA (TR 296, line 11, through TR 300, line 3), they are not provisions unique to participation. These restrictions were described in the 1988 Proposal and provide for scheduling rights similar to the scheduling rights of the current owners. E-BPA-01 at 7, lines 8-10 and 21-22. Similar restrictions already exist on those portions of the Intertie owned by PGE and PP&L despite the fact that these utilities are co-owners. For instance, the BPA/PGE Intertie Agreement designates BPA as the operator of the AC Intertie, even though PGE owns a portion of the facilities. E-PS-18 at 10. The parties to the contract agreed "to operate their respective jointly owned and separately owned Northwest and Joint AC Intertie facilities as a single system so as to maximize, consistent with Prudent Utility Practice, the Rated and Operational Transfer Capability of the combined facilities." E-PS-18 at 9. The language in the agreement recognizes that efficiencies inherent in such an arrangement provide value to both parties, not just to BPA. Further, the same agreement also provides PGE with certain rights to access at the Southern Oregon (Captain Jack) substation. In consideration for the right to make deliveries to Captain Jack, the agreement requires that PGE pay BPA for recovery of BPA's investment in and resultant annual costs of the Captain Jack substation, facilities connecting it to the joint AC Intertie, and facilities connecting it to the COTP, while BPA retains responsibility for maintenance of these facilities. E-PS-18 at 13-15. Thus PGE is responsible for full cost recovery proportionate to the rights it received despite

the fact that certain of the facilities are not owned by PGE and that BPA is responsible for the O&M of those facilities.

With respect to third-party wheeling restrictions, BPA's 1988 Proposal would give participants the same option for third-party wheeling that PP&L and PGE have in their Intertie agreements with BPA. TR 297, lines 7-10. Like PGE and PP&L, participants would be given a choice of using their scheduling rights for third-party wheeling, or obtaining access to BPA transmission capacity under BPA's LTIAP. E-BPA-01, Attachment 8, at 6. PP&L opted to confine its transactions on its share of the Intertie to its own resources, so BPA obtained the right to receive PP&L's unused capacity. In exchange for this, PP&L obtained additional rights under BPA's LTIAP. TR 297, lines 12-19. There are trade-offs in each of those options. TR 297, lines 10-11.

Value would be realized to the extent that BPA would have available to it additional capacity at times. On the negative side, BPA would be giving up some of its capacity at times. TR 298, lines 19-25, through TR 299, line 2. Conversely, PGE opted to have the capability of third-party wheeling over its share of the Intertie, but gave up any rights to unused capacity under BPA's LTIAP. TR 297, lines 20-25. The negative value here would be that BPA does not have additional transmission capacity available to it, even if PGE has unused capacity.

BPA's proposed pricing methodology is for scheduling services. The rate is based on the cost of the facilities required to achieve the last 800 MW RTC. Therefore the methodology does not attempt to assign an opportunity cost or other value to the restrictions.

TR 299, line 21, through TR 300, line 3. Moreover, Seattle's witness does not quantify the value of the restrictions. He recommends simply reducing the rate by BPA's overhead costs without explaining how overhead might be a reasonable proxy for any value the restrictions may have to BPA. E-SL-02 at 28, lines 17-25.

WPAG posits that as a general principle, full use requires payment for all costs, including overhead costs incurred to supply the service, regardless of whether transfer of all incidents of ownership occurs. E-WA-02 at 9, lines 9-14. For example, in purchasing long-term power, a utility pays the cost of producing the power and the overhead incurred by the selling utility. The purchaser is not relieved of the responsibility to pay for overhead costs merely because the purchaser does not obtain ownership of the power plant which produced the power. The proposed credit is analogous to renters refusing to pay the overhead portion of their rent because they do not get ownership of the rental unit. E-WA-02 at 9, line 18, through 10, line 2.

Decision

There is no rational basis for Seattle's proposed nonownership credit, and Seattle's quantification of it bears no relationship to the values which it purports to capture. The pricing methodology will not include a nonownership credit.

Issue 14

Should the methodology require a one-time, up-front payment or a levelized rate paid on a periodic basis?

Evaluation of Positions

The proposed methodology would require participants to make a one-time, up-front payment for scheduling rights. Water Power opposes prepayment, alleging that prepayment is consistent only with a pure ownership interest. B-WP-01 at 3; see also R-WP-01 at 3-4. BPA believes that an up-front payment is appropriate because participation is more akin to ownership than to wheeling arrangements, for which periodic payments are made. TR 185, line 25, through TR 186, line 15.

Water Power alleges that by offering mere scheduling services, BPA will separate, in time, performance by the participant (up-front payment in 1991) and performance by BPA (scheduling services from 1993 to 2016). Participants must then rely upon waiver of sovereign immunity through contract remedies under the Tucker Act, 28 U.S.C. § 1346 (1982). B-WP-01 at 3-4. Moreover, prepayment complicates (in a manner Water Power does not specify) the negotiation of the allocation of risks of force majeure interruption of Third AC scheduling services. B-WP-01 at 4.

Water Power's argument that prepayment for scheduling rights is a barrier to participation is without merit. First, it is a thinly veiled debate of the merits of BPA's policy decision in the 1988 Proposal to offer participation in, rather than ownership of, the Third AC Intertie. This subject is beyond the scope of this rate proceeding. See Chapter I, § C, above. Second, the legal authorities Water Power cites do not support the theory that obtaining an ownership interest for prepayment would result in greater rights in

the event of a dispute than would obtaining scheduling rights for prepayment.

Regardless of whether a party possesses ownership or is invested with scheduling rights, that party has a means of seeking judicial review of any alleged dispute. Assuming, arguendo, that different judicial remedies are available to owners than are available to participants, each remedy would nevertheless provide a means of resolving the dispute. Moreover, the Northwest Power Act includes guidelines for judicial review of BPA's actions. Thereunder, exclusive jurisdiction over all challenges to BPA's final actions ("such as contract offers") lies in the United States Court of Appeals for the Ninth Circuit. Central Lincoln Peoples' Util. Dist. v. Johnson, 686 F.2d 708, 709 (9th Cir. 1982). Similarly, challenges to the implementation of a final BPA action also lie in the Ninth Circuit. 16 U.S.C. § 839f(e)(5). These two remedies appear to be available to either a participant or an owner.

Decision

The pricing methodology will require that participants make a one-time, up-front payment for Third AC Intertie scheduling services. This is consistent with the usage of the system on terms largely comparable to what an owner enjoys.

CHAPTER IV

NON-RATE RELATED THIRD AC INTERTIE MATTERS

Some parties raised matters germane to BPA's 1988 Proposal, but not relevant to the proposed pricing methodology. Such matters include ownership options; the timing of contract negotiations; participation contracts' termination date; wheeling to the northern terminus of the Third AC Intertie; allocation of capacity in excess of 4800 MW; participation scheduling rights; the Third AC Intertie plan of service; and cost verification and dispute resolution. These items will be addressed by BPA in its EIS on non-federal participation, in separate public meetings or in contract negotiations. BPA will make final decisions on these non-rate items in its final ROD on whether to offer non-federal participation, which will be issued upon completion of the Final EIS.

BPA will begin preparation of the EIS during the summer of 1990. That EIS will analyze not only the participation option recommended in BPA's 1988 Proposal, but also non-federal ownership, increased Assured Delivery under BPA's LTIAP, as well as a no-action alternative. A Draft EIS is expected to be available to the public in July of 1991, and the Final EIS is expected to be available in mid-1992. The EIS process will provide further opportunity for public comment on participation and ownership options.

BPA's current positions on issues raised by parties in this rate proceeding are discussed in various sections of this chapter. See §§ B, C, D, E, F, G, H, I and J below.

A. Timing of Contract Negotiations

Several parties assert that potential participants will be unable to make final decisions to participate in the Third AC Intertie until both the pricing methodology and complete contract terms and conditions have been established. Seattle, Water Power and Puget recommend that BPA either should conduct negotiations concurrently with this rate proceeding or should not delay contract negotiations any further in order to address some of these items. Water Power believes that BPA ought not close the record in this rate proceeding or issue a final ROD until contracts have been negotiated. B-SL-01 at 17; B-WP-01 at 6; and B-PS-01 at 40-41.

BPA has determined that it is inappropriate to conduct contract negotiations until it has completed and released for public comment at least its Draft EIS. BPA advised its customers of this decision in a June 19, 1989, Update on non-Federal Participation in the Third AC Intertie (June 1989 Update). The logic is that concluding contracts and implementing a rate, before preparing an EIS, will prejudice the decisionmaker. See 40 C.F.R. §§ 1500.1, 1502.22(f), 1502.4(c)(3).

BPA has further determined that it will close the record in this proceeding and submit it to the Commission in order to lend some certainty to BPA and to potential participants regarding the pricing methodology. BPA recognizes that potential participants are concerned with both the methodology and contract terms. As noted above, BPA intends that contract negotiations begin after release of the draft EIS and before BPA's final decision on whether to offer participation. Potential participants will know the terms, and have

the specific information they desire, before they will have to decide whether to participate.

B. Non-Federal Participation Contracts' Termination Date

BPA's witnesses testified that participation contracts would expire in the year 2016, the year that the BPA/PP&L Intertie Agreement terminates. That Agreement gives BPA rights to use certain PP&L facilities in southern Oregon (the Meridian-Malin transmission line) that are required to operate the AC Intertie at 4800 MW. Because BPA does not know what rights will be negotiated between it and PP&L regarding use of those facilities past 2016, it can offer no certainty as to the nature of the Third AC Intertie capacity after 2016. See E-BPA-01 at 22, line 21, through 23, line 5.

Water Power contends that BPA should not limit the term of participation. The uncertainty regarding BPA's rights to use certain PP&L facilities post-2016 is no more of a problem than the uncertainty regarding other parts of BPA's proposed pricing methodology. B-WP-01 at 4-5.

Seattle urges BPA to offer participation over the life of the Third AC Intertie facilities. B-SL-01 at 21-22.

Puget suggests that the rights retained by BPA after termination of the BPA/PP&L Intertie Agreement be made available to participants. Participation should not terminate in 2016. B-PS-01 at 43-44.

In its June 1989 Update, and in its direct testimony (E-BPA-01 at 23, lines 7-11), BPA indicated a willingness to provide participants with a limited, conditional option to participate after 2016.

The parties raised the issue of the BPA/PP&L Intertie Agreement containing a provision that could result in an extension of the agreement to the year 2025. Based on these concerns, BPA has decided to modify further its 1988 Proposal as described in the rest of this section. See B-PS-01 at 43; TR 270, line 11, through TR 272, line 15; TR 341, lines 5-9.

If the termination date for the BPA/PP&L Intertie Agreement is extended to December 31, 2025, as a result of BPA and PP&L executing a comprehensive amendment to the Midpoint-Medford Agreement, BPA will extend participation to December 31, 2025. The cost to participants for those additional nine years would be based an estimate of the on book value of the facilities involved.

Participants would also have a limited, conditional option to participate after the BPA/PP&L Intertie Agreement terminates in either 2016 or 2025. The option would apply only to capacity between 4000 MW and 4800 MW and would be subject to any additional restrictions resulting from the BPA/PP&L negotiations. Such negotiations would be necessary to extend operation of the Third AC Intertie after either 2016 or 2025. Each participant's rights would be capped by the lesser of (1) the actual amount of Third AC Intertie capacity originally contracted for by the participant in the Third AC Intertie; or (2) a percentage of the post-2016/2025 Third AC Intertie capacity above 4000 MW RTC equal to the participant's percentage of the top 725 MW originally contracted for by the participant.

The termination date of any follow-on participation contracts would be determined by the duration of the new contract between BPA

and PP&L. The price for post-2016/2025 participation would be determined through a rate proceeding at that time. Any new legal requirements (statutory, administrative, or judicial) imposed on BPA between now and then would be reflected in the new participation contracts and rates.

C. Wheeling to the Northern Terminus of the Third AC Intertie

BPA's 1988 Proposal provides for participants to have scheduling rights from the John Day substation to COB. Puget argues that John Day should not be the only northern terminus for the Third AC Intertie. B-PS-01 at 35-38.

Discussions regarding points of delivery to the Intertie typically occur during contract negotiations between BPA and customers for main grid wheeling contracts from the customer's system to the PNW-PSW Intertie. BPA anticipates that such discussions would occur during negotiations with potential participants in late 1991 and early 1992.

D. Capacity in Excess of 4800 MW

BPA's 1988 Proposal provides that participants would be entitled to scheduling rights only up to 4800 MW RTC. BPA would have rights to all capacity above 4800 MW RTC. E-BPA-01, Attachment 8, at 5.

Puget feels that BPA does not intend to allow participants to share in any capacity in excess of 4800 MW RTC on the AC Intertie. Puget proposes that BPA allocate any excess over 4800 MW resulting from the Third AC Intertie on a pro rata basis in proportion to the planned 1600 MW Third AC Intertie. B-PS-01 at 42.

Seattle notes that BPA does not address the disposition of any excess capability over 4800 MW after completion of the Third AC

Intertie. Seattle further notes that the BPA/PGE Intertie Agreement contains a provision which addresses sharing any excess capability over 4800 MW. B-SL-01 at 18-19.

Water Power alleges that there is no reason for BPA to exclude subsequent upgrades of Third AC Intertie capacity above 1600 MW RTC from availability to participants. B-WP-01 at 5.

At this point, BPA's 1988 Proposal continues to provide BPA with full rights above 4800 MW. However, BPA will continue to examine this issue in the follow-on process including contract negotiations following the draft EIS.

E. Participants' Scheduling Rights

The 1988 Proposal indicates that participants would begin receiving a share of their scheduling rights when the PNW AC Intertie reaches 4001 MW RTC. Their share of scheduling rights would increase in the ratio of 725/800 for each MW added above 4001 MW until it reached 4800 MW RTC with participants receiving full scheduling rights at 4800 MW RTC.

Seattle argues that participants would be more severely penalized than BPA since they would not begin receiving scheduling rights until the PNW AC Intertie reaches 4001 MW RTC. B-SL-01 at 18.

In its June 1989 Update, BPA declared that it would be willing to negotiate participants' scheduling rights beginning between 3800 MW and 4000 MW of Intertie capacity, rather than participants' rights beginning when capacity exceeds 4000 MW.

Since then, BPA has further refined its 1988 Proposal regarding scheduling rights. Participants would begin receiving scheduling rights on the Third AC Intertie after BPA exercises its option and

when the Alvey-Meridian transmission line is energized and declared commercially operable.

If the RTC of the AC Intertie is less than 4800 MW after the Alvey-Meridian line is energized and declared commercially operable, participants scheduling rights (assuming all 725 MW have been subscribed to) would be calculated as follows:

Between an RTC of 3800 MW to 4000 MW, PP&L would receive .125 MW/MW increase in AC Intertie RTC up to its full 100 MW share of the first 800 MW increase; PGE would receive .09375 MW/MW increase until it receives its full 75 MW share of the first 800 MW increase; and participants would receive .78125 MW/MW increase (the total remaining increase after PP&L and PGE receive their increases).

Between an RTC of 4000 MW and approximately 4630 MW, PGE would receive .09375 MW/MW increase and participants would receive .90625 MW/MW increase up to the full 725 MW being offered for participation. At an RTC above 4630 MW, PGE would continue receiving .09375 MW/MW increase until it has received its full 75 MW share of the second 800 MW increase.

When the Third AC Intertie project is fully energized, if the RTC is less than 4800 MW, BPA would then be taking all of the risk between approximately 4630 MW and 4800 MW; participants would share none of that risk. Participants would only share in the risk of the AC Intertie being less than 4800 MW if the RTC is 4629 MW or less.

F. Bidirectional Transmission Service

BPA's 1988 Proposal and its witnesses' direct testimony (E-BPA-01) were silent on whether the transmission service offered to participants would be bidirectional.

Puget feels that BPA's proposal for participation should specify that BPA will provide firm bidirectional transmission services for the life of the Third AC Intertie. B-PS-01 at 51.

BPA discussed bidirectional transmission service in its June 1989 Update. The following was included in the Update:

> Currently, the rated transfer capability of the AC Intertie system at the California-Oregon border is 3200 megawatts (MW) going south and 2000 MW coming north. BPA's Proposal for Third AC participation focused on the north-to-south scheduling capability and rights. That proposal provided for up to 725 MW of participation in the planned 1600-MW Third AC Intertie. However, the 1600-MW increase is only in the north-to-south direction. It is not yet know how much, if any, the Third AC Intertie will increase the south-to-north rated transfer capability of the AC Intertie system.
>
> BPA's Proposal would provide participants with up to 725 MW of net scheduling capability going south. Net schedules are the difference between the simultaneous schedules going south and coming north. BPA's Proposal did not address net scheduling capability coming north ...

BPA has decided to modify its 1988 Proposal at this time to provide participants with 725/1600 of any incremental increase in the south-to-north AC Intertie transfer capability above that which exists prior to Third AC Intertie energization. Current estimates are that there will be an approximate 1200 MW incremental increase in AC Intertie transfer capability resulting from the Third AC Intertie. Participants would, then, be entitled to approximately 544 MW of south-to-north transfer capability (725/1600 of 1200 MW).

G. Engineering Studies Used to Assign Costs

Puget argues that BPA must not treat its draft report as final and that the draft report should be reviewed by potential participants. R-PS-01 at 26. Puget asserts that BPA has not conducted adequate studies to demonstrate the final assignment of facilities

to each 800 MW increment, and that BPA has changed the assignment of facilities before the studies are complete. R-PS-01 at 25-26.

It is true that BPA's draft report is just that, a draft. The report is complete enough, however, to show the assignment of all major facilities. The changes in assignment of facilities, as shown in E-BPA-02, Attachment 2, from E-BPA-01, Attachment 10, are based on the draft report.

BPA does not expect any significant changes in assignment when the draft report is finalized. BPA witnesses testified that the studies needed to determine the assignment of costs between the two 800 MW increments will be revised before the estimated up-front payment is made and before the true-up of costs occurs. BPA also indicated that those studies will be shared with Puget and other interested parties. E-BPA-02 at 4, lines 7-12. BPA will finalize a draft report and will send it to Puget and other rate case parties for comment in the near future. The final report will be provided to the same group.

Unless the plan of service changes, BPA does not propose to do additional studies that would change the assignment of facilities shown in the draft report. E-BPA-02 at 4, lines 17-18. BPA plans only to finalize its draft report at this time.

Puget also argues that BPA's studies are not adequate to demonstrate which facilities from the 4800 MW Third AC Intertie plan of service could be removed without affecting system reliability below 4000 MW. R-PS-01 at 25. Puget further contends that BPA has not performed studies demonstrating that only minor modifications to the existing system are needed for the first 800 MW increment, and that

the AC Intertie system assumed by BPA in its draft report for the 800 MW increase and for the 1600 MW increase would differ significantly in quality and reliability. R-PS-01 at 26-27.

The quality and reliability of the AC Intertie system at 4000 MW and 4800 MW are comparable because BPA used the same reliability criteria in the draft report to determine the 4000 MW RTC system as used to develop the 4800 MW Third AC Intertie plan of service. E-BPA-01 at 15, lines 3-7. The cost of the facilities needed for the first 800 MW increment is significantly less than those needed for the second 800 MW increment. See E-BPA-02, Attachment 2. This difference is even greater when, as explained in Chapter III, Issue 6, and shown in the table in Chapter II, at 19, most of the series capacitor costs are removed from the Third AC Intertie Project costs.

Puget critiques the assumption in BPA's draft report (which examines facilities needed at 4000 MW RTC) that all Third AC Intertie facilities needed for the full 1600 MW capacity increase were in place in the southern half of the AC Intertie. The basis of Puget's criticism is that the California parties have declared there would be no southern Third AC Intertie at a capacity of only 4000 MW. R-PS-01 at 27-28.

The purpose of BPA's draft report was to determine which facilities in the PNW are needed for 4000 MW of AC Intertie capacity. BPA did not examine requirements for the southern portion of the Third AC Intertie. The power flow and stability studies could not be performed unless the system modeled included a Third AC Intertie transmission line from the Captain Jack substation south into

California. No model of a 4000 MW AC Intertie was available for the southern portion in California.

While BPA realizes it is important to give as much certainty on the price as possible to potential participants, BPA seeks approval of only a pricing methodology. Changes between the draft and final reports will have no impact on the pricing methodology itself.

H. Plan of Service

Puget and WPAG raise questions about the justification for facilities included in the Third AC Intertie plan of service. B-PS-01 at 19-35; B-WA-01 at 5. Puget argues that the proposed methodology is defective in part because neither the Third AC Intertie facilities nor their costs have yet been specified. B-PS-01 at 1-3 and R-PS-01 at 52-55. Puget urges BPA to encourage participation by not subjecting cost assignments to significant revisions due to causes within BPA's control. B-PS-01 at 3 and R-PS-01 at 3 and 55.

The Third AC Intertie plan of service was developed by Intertie owners in both the PNW and the PSW, and was reviewed by Western Systems Coordinating Council (WSCC) committees. Future changes to the plan will be reviewed by WSCC, of which Puget and Seattle are members. The plan of service was explained to PNW utilities in several public meetings as part of the participation process leading up to BPA's 1988 Study. This rate proceeding is not the proper forum to re-examine engineering decisions.

BPA considers the plan of service complete. It will be changed only due to unforeseen events which BPA cannot control. Since the

Third AC Intertie is still in the design stage, BPA cannot guarantee that there will be no changes in facility design or cost.

I. Cost Verification and Dispute Resolution

Seattle notes that BPA's participation proposal makes no provision for an independent audit and verification of the appropriateness of all costs to be paid by participants. The lack of a verification mechanism leaves participants unprotected and in an inequitable position with respect to BPA and PP&L. B-SL-01 at 19.

Puget feels that any proposal must specify that there will be an appropriate and fair dispute-resolution mechanism not only for applying the pricing methodology, but also for issues relating to the construction and operation of the Third AC Intertie. Puget suggests the establishment of a management committee. B-PS-01 at 50-51 and R-PS-01 at 55.

BPA did not address either of these items in its 1988 Proposal. They will be addressed by BPA during contract negotiations.

J. O&M of Existing Facilities

The DSIs complain that potential participants propose to pay nothing to maintain the existing system upon which the Third AC Intertie depends, and that Seattle asked to be excused from paying for maintenance of the new facilities. The DSIs seem to believe that BPA proposes to allow participants to use existing facilities free of charge and without requiring any payment for maintenance of existing facilities. B-DS-01 at 8.

BPA's witnesses testified that payment provisions for annual costs (including O&M, replacements, and renewals) would be included in participation contracts. Those items will be addressed during contract negotiations. E-BPA-01 at 28, lines 4-7.

CHAPTER V

PARTICIPANTS' COMMENTS

A. Washington Utilities and Transportation Commission (WUTC)

The WUTC requests the Administrator to indicate his willingness to enter into discussions on issues other than rates in a separate public process, since the scope of the rate hearing is limited to the pricing methodology. The WUTC feels that ownership-like rights are important to non-federal participants.

As noted in Chapter IV, the Administrator plans to allow additional input and comment on ownership and other matters by potential participants and interested parties. This input will occur as part of the EIS process and contract negotiations.

B. Pacific Gas and Electric Company (PG&E)

PG&E commented on four items. First, BPA should determine the cost of participation by using BPA's 1350 MW share of the 1600 MW Third AC Intertie rather than by bifurcating the incremental capacity into two increments. Second, BPA should provide participants rights for the useful life of the Third AC Intertie rather than have the contracts terminate in 2016. Third, if BPA is unwilling to provide contracts for the life of the Third AC Intertie, the 2016 adjustment should be based upon replacement cost rather than book value. Fourth, BPA should guarantee the participants their full 725 MW share of the Third AC Intertie.

PG&E also urged that no AFUDC be charged after the participants have begun making payments to BPA..

The first three items upon which PG&E commented, and AFUDC, were raised by parties to the rate case. They are discussed in Chapter III, Issues 2, 4 and 11, and Chapter IV, § B.

The fourth item, regarding a guarantee to participants of the full 725 MW share of the Third AC Intertie, was not raised in the hearing. This matter is addressed in Chapter IV, § E.

C. Congress of the United States

Several members of the State of Washington delegation (Senator Slade Gorton and Representatives Norm Dicks, Rod Chandler, John Miller, and Jim McDermott) submitted comments. These members proposed five changes to BPA's methodology:

> 1. Reducing the proposed price by distributing the costs over the full 1600 MW of the Third AC Intertie and by eliminating the two 800 MW increments;
>
> 2. Guaranteeing that participants' rights will extend beyond the year 2016 to the same extent that BPA's AC Intertie rights are extended beyond 2016;
>
> 3. Specifying "that each participant will pay no more than a pro-rata share of any construction cost overrun or annual charges;"
>
> 4. Providing a dispute resolution mechanism for addressing its proposed pricing methodology; and
>
> 5. Establishing a management committee to deal with matters regarding construction and operation of the Third AC Intertie along with a dispute resolution mechanism to resolve any disputes which arise.

The members indicate that Washington utilities must be provided with a fair and reasonable opportunity to participate in the Third AC Intertie. They suggest that BPA's current proposal does not provide that opportunity.

Items 1 and 2 above were raised by parties in this rate proceeding and are addressed in Chapter III, Issue 2, and Chapter IV, § B.

Items 3 through 5 were raised by Puget and Seattle. They are discussed in Chapter IV, § I.

D. Direct Service Industries, Inc.

The DSIs commented that those Third AC Intertie costs that are not paid by participants in the Third AC Intertie will be borne by BPA's customers. Continued downward pressure on the price for participation, then, serves only to result in increased rates to BPA customers.

E. Southern California Edison (SCE)

SCE commented that BPA should allow non-federal participants to own a portion of the Third AC Intertie for the life of the facilities. Chapter IV, § B, discusses this subject. SCE also believes that BPA's price for participation/ownership should be more equitably distributed between BPA and participants. See Chapter III, Issue 2. SCE further commented that participants should know all costs before payment is required. See Chapter IV, § A.

F. Washington Public Utility District Association (WAPUD)

WAPUD and the Non-Generating Public Utilities commented on several items:

1. If BPA adopts the proposals of Puget, Seattle and Tacoma by spreading the cost of the facilities over the full 1600 MW increase in AC Intertie capacity without charging for the

use of the existing system, the existing system (and those ratepayers that pay for that system) would unfairly subsidize the Third AC Intertie participants. This matter is discussed in Chapter III, Issue 2.

2. Participation contracts should be limited to a term ending in 2016 without any guarantee of absolute renewal rights. BPA's proposed 2016 credit is a fair way to treat the contract term. This subject is covered in Chapter III, Issue 4, and Chapter IV, § B.

3. The rates ultimately adopted by BPA for Third AC Intertie participation should be fair to its requirements customers as well as to participants. One group of customers should not subsidize the other. Chapter III, Issue 2, addresses this concern.

G. Snohomish County Public Utility District No. 1 (Snohomish)

Snohomish believes that bifurcating the 1600 MW increase is reasonable; that participants' rights should not impair BPA's ability to market power in the PSW; that participation should not adversely affect BPA's ability to repay the U.S. Treasury; and that non-participants must be held harmless from the cost and revenue impacts of participation. Snohomish supports the balance BPA has struck among the interests of potential participants, the interests of BPA's other customers, and BPA's statutory obligations. These matters are covered in Chapter III, Issue 2.

CHAPTER VI

CONCLUSION

BPA's pricing methodology for participation in the Third AC Intertie, like BPA's other transmission rates, is designed to recover the costs associated with the transmission of electric power, including the amortization of the federal investment in the FCRPS over a reasonable period of years, and other costs and expenses incurred in carrying out the requirements of the Northwest Power Act and other provisions of law. In addition, the methodology is designed to result in a rate that is as low as possible consistent with sound business principles and encourages the widest possible use of electricity. The methodology also equitably allocates costs between federal and non-federal users of the transmission system.

In performing his duties under Northwest Power Act § 7(i), the Hearing Officer has assured that a full and fair evidentiary hearing, open to all interested parties and participants, has been conducted on all issues relevant to this case.

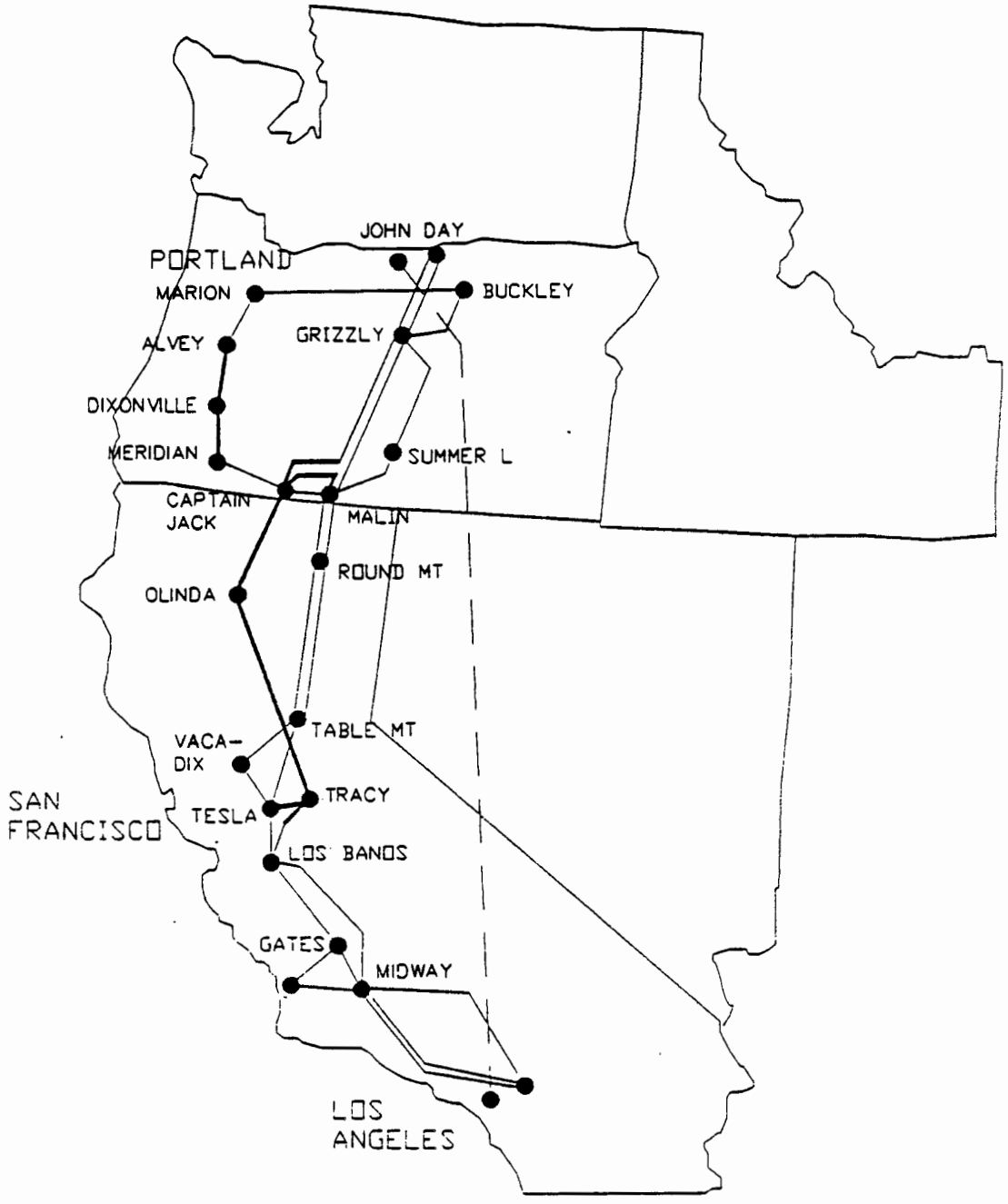
Based upon the record of this proceeding, I adopt the attached transmission rate schedule as BPA's final rate for Non-Federal Participation in the Third AC Intertie.

Issued at Portland, Oregon, June 28, 1990.

Administrator

APPENDIX A

PNW–PSW INTERTIE TRANSMISSION SYSTEM

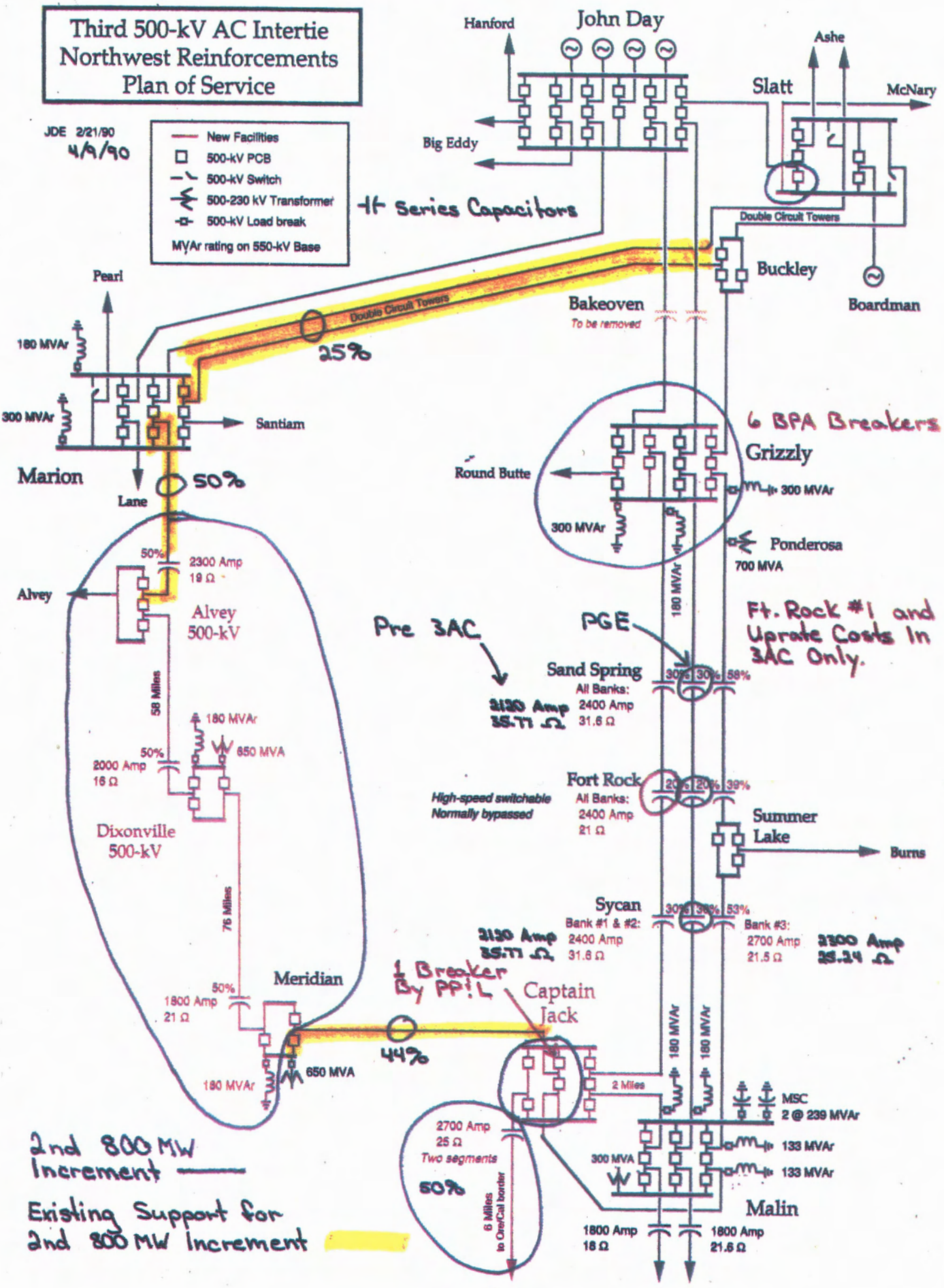


——— EXISTING AC

——— THIRD AC INTERTIE – NEW TRANSMISSION LINES

— — EXISTING DC INTERTIE

4/5/90


Third 500-kV AC Intertie
Northwest Reinforcements
Plan of Service
JDE 2/21/90
4/9/90
New Facilities
500-kV PCB
500-kV Switch
500-230 kV Transformer
500-kV Load break
MVAr rating on 550-kV Base
4 Series Capacitors
Hanford
John Day
Ashe
Slatt
McNary
Big Eddy
Double Circuit Towers
Buckley
Boardman
Pearl
Bakeoven
To be removed
Double Circuit Towers
25%
180 MVAr
300 MVAr
Santiam
Marion
Lane
50%
6 BPA Breakers
Grizzly
Round Butte
300 MVAr
300 MVAr
Ponderosa
700 MVA
180 MVAr
50%
2300 Amp
19 Ω
Alvey
Alvey
500-kV
Ft. Rock #1 and
Uprate Costs in
3AC Only.
Pre 3AC
PGE
Sand Spring
All Banks:
2400 Amp
31.6 Ω
2130 Amp
35.71 Ω
58 Miles
180 MVAr
650 MVA
50%
2000 Amp
16 Ω
Fort Rock
High-speed switchable
Normally bypassed
All Banks:
2400 Amp
21 Ω
Dixonville
500-kV
Summer
Lake
Burns
Sycan
Bank #1 & #2:
2400 Amp
31.6 Ω
Bank #3:
2700 Amp
21.5 Ω
2130 Amp
35.71 Ω
2300 Amp
25.24 Ω
76 Miles
1 Breaker
By PP&L
Meridian
50%
1800 Amp
21 Ω
Captain
Jack
44%
180 MVAr
650 MVA
180 MVAr
180 MVAr
2 Miles
MSC
2 @ 239 MVAr
133 MVAr
133 MVAr
300 MVA
2700 Amp
25 Ω
Two segments
50%
6 Miles
to Ore/Cal border
Malin
1800 Amp
18 Ω
1800 Amp
21.6 Ω
2nd 800 MW
Increment
Existing Support for
2nd 800 MW Increment

APPENDIX C

List of Parties and Abbreviations

Bonneville Power Administration	BPA
California Energy Commission	CC
Cowlitz County P.U.D.	CO
Direct Service Industries	DS
Eugene Water & Electric Board	EW
Portland General Electric Company	GE
Grant County P.U.D. No. 2	GR
Idaho Power Company	IP
Idaho Cooperative Utilities Association	IU
Oregon Public Utility Commission	OP
Association of Public Agency Customers	PA
PacifiCorp	PL
Pacific N.W. Generating Cooperative	PN
Public Power Council	PP
Puget Sound Power & Light Company	PS
City of Seattle, City Light Department	SL
Transmission Agency of Northern California	TC
City of Tacoma	TU
Western Public Agencies Group	WA
The Washington Water Power Company	WP

APPENDIX D

Third AC Intertie Non-Federal Participation Rate Schedule

Section I. Availability

This schedule shall apply to all agreements which provide for non-federal participation in BPA's portion of the second 800 MW of the Third AC Intertie.

Section II. Rate

The one-time payment, with an adjustment to be made after completion of the Third AC Intertie and after all costs have been accounted for, shall be made upon execution of participation contracts. The formula for the participation payment is shown below.

$$\frac{A - B + C + D - E}{725\ MW} = \text{Participation Price in \$/kW}$$

Participation Price in $/kW x number of kW contracted for by participant = Participant's payment to BPA

Section III. Definitions

A. A = BPA's cost of new facilities for the Third AC Intertie, which will increase the transfer capability of the PNW-PSW Intertie by approximately 1600 MW, is the construction costs (including land, BPA's normal allocation of corporate overhead, and indirect expenses) of the facilities associated with the Third AC Intertie System Reinforcement and the Alvey-Meridian Transmission Line (referred to jointly as the Third AC Intertie Project), including the following: new Captain Jack substation and related facilities; a 500-kV single-circuit transmission line from the Captain Jack substation to the California-Oregon border; other required AC Intertie improvements; 50 percent of the construction costs associated with PP&L's proposed Alvey-Meridian 500-kV single-circuit transmission line and related facilities upon BPA's exercising its option to acquire 50 percent of

the incremental capacity of that transmission line; and BPA staff and related costs for all work pertaining to the preparation and review of the Third AC Intertie non-Federal Participation Proposal, Third AC Intertie non-federal participation rate case, contract negotiations, and environmental impact statement (including public involvement activities).

B. B = BPA's cost of new facilities needed for the first 800 MW increment of the 1600 MW Third AC Intertie Project is a portion of the construction costs (including land, BPA's normal allocation of overhead, and indirect expenses) associated with the new Captain Jack substation and related facilities; a 500-kV single-circuit transmission line from the Captain Jack substation to the California-Oregon border; and other required AC Intertie improvements.

C. C = AFUDC constitutes interest on the funds used for the Third AC Intertie Project while it is under construction. AFUDC is calculated and capitalized consistent with the Commission's requirements. The AFUDC is that amount capitalized on the second 800 MW increment of the 1600 MW Third AC Intertie Project, or A - B.

D. D = Book value of existing BPA or PP&L support facilities needed for the second 800-MW increment of the 1600 MW Third AC Intertie is made up of the book value of one-half of one circuit of BPA's Buckley-Marion double-circuit 500-kV transmission line; the book value of one-half of a single circuit of BPA's Marion-Alvey transmission line; one-half of the associated terminals at BPA's Buckley and Marion substations; the book value of a portion of PP&L's single-circuit 500-kV Meridian-Malin transmission line between Meridian and BPA's Captain Jack substation; and the book value of a portion of PP&L's Meridian substation facilities.

E. E = Adjustment for contract termination date, which is the remaining book value, as of the end of the contract term, of the facilities needed for the second 800 MW increment of the Third AC Intertie, consisting of the new facilities determined in A - B plus the AFUDC calculated in C and the existing support facilities in D, discounted at BPA's borrowing rate to the completion of the Third AC Intertie, currently planned for 1993.

F. 725 MW = BPA's share of the second 800 MW of the Third AC Intertie.

DOE/BP-1416
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