

**U.S. Department of Energy
Bonneville Power Administration**

**United States Entity
Columbia River Treaty**

**Pacific Northwest Coordination Agreement
Record of Decision**

Summary

The Administrator and Chief Executive Officer (CEO) of the Bonneville Power Administration (BPA), acting for BPA, and as Chairman of the United States Entity [the Administrator and the Division Engineer, Northwestern Division of the United States Army Corps of Engineers (Corps)], acting on behalf of the United States Entity, has decided that the 1964 Pacific Northwest Coordination Agreement (PNCA) should be revised and retained. Specifically, the Administrator has decided that 1997 PNCA Alternative 4 (detailed in section V below), with its unique combination of short and long-term operating procedures (mechanisms to implement the contract and allow parties to adapt to changing circumstances), represents the most effective modification of the 1964 PNCA.

To facilitate the implementation of the 1997 PNCA, BPA, the Regional Director of the Pacific Northwest Regional Office of the Bureau of Reclamation (Reclamation), and the Division Engineer of the Northwestern Division (formerly the North Pacific Division) of the United States Army Corps of Engineers (Corps) have decided to clarify each agency's role and responsibility under the 1997 PNCA in a Memorandum of Agreement (MOA).

Planning and operations of the FCRPS are currently coordinated with non-Federal hydro-generating utilities under the PNCA. By choosing Alternative 4, as detailed in Appendix R of the Columbia River System Operation Review (SOR) Final Environmental Impact Statement (DOE/EIS-0170, November 1995), the FCRPS will continue to be coordinated with the non-Federal hydro-generating utilities.

The current PNCA was executed in 1964 as an important component of regional plans to maximize the Northwest's hydro resource capability. Maximization also included the development of storage projects on the Columbia River in Canada pursuant to the terms of the 1964 Columbia River Treaty between Canada and the United States (Treaty). The Treaty requires the United States to return to Canada half of the power benefits produced downstream in the United States from the storage in Canada. The non-Federal utilities of the region committed to provide a portion of the share of Treaty benefits required to be delivered to Canada. In return, the United States Government agreed to participate in coordinated operation. The Federal and non-Federal allocation was the subject of a separate Record of Decision (ROD), the Canadian Entitlement Allocation Extension Agreement (CEAEA) ROD issued on April 29, 1997.

The 1964 PNCA expires in 2003. The region's obligation to return Columbia River Treaty benefits continues, at a minimum, until 2024. The 1997 PNCA, which revises the 1964 PNCA, extends through 2024.

For Further Information Contact: Mr. Phil Mesa - PG&E, Bonneville Power Administration, at 360-418-2152. Copies of the SOR Final EIS, Appendix R (which presents the environmental review for the PNCA action); the CEAA ROD; and additional copies of this ROD are available from BPA's Public Involvement Office, P.O. Box 12999, Portland, Oregon 97212. Copies of the documents may also be obtained by using BPA's nationwide toll-free document request line, 1-800-622-4520.

Supplementary Information

I. Background

a. Columbia River Treaty and PNCA

In the early 1960s three long-planned and interdependent events converged:

- (1) The Treaty was ratified.
- (2) The 1964 PNCA was signed.
- (3) The Pacific Northwest-Pacific Southwest Intertie was completed in the United States.

The Treaty required the construction of three storage dams (Duncan, Keenleyside, and Mica), totaling 15.5 million acre feet of storage, on the Columbia River in Canada and allowed the United States the option to construct one additional dam in the United States (Libby). The Treaty provides that the Canadian storage is to be used for flood control in both countries and for optimum power generation downstream in the United States. Under the Treaty, Canada and the United States share equally the downstream power benefits resulting from Canadian storage. The Treaty requires the United States to deliver to Canada one-half of these downstream power benefits (known as the Canadian Entitlement).

Canada initially sold the Canadian Entitlement to the Columbia Storage Power Exchange, a consortium of Pacific Northwest utilities, for 30 years. The 30-year sale expires in stages beginning in 1998. At that time, the United States is obligated to deliver the Canadian Entitlement to Canada. The Canadian Entitlement will be delivered to points on the border between Canada and the United States, near Blaine, Washington and Nelway, British Columbia. The delivery of the Canadian Entitlement was the subject of the Delivery of the Canadian Entitlement EIS (DOE/EIS-0197, January 1996) and two subsequent RODs (March 12, 1996 and November 8, 1996).

The Treaty assumes that the operation of the United States hydroelectric projects located in the Pacific Northwest are coordinated in a fashion that maximizes these downstream power benefits. This coordination contemplated by the Treaty has been achieved since 1964 through the 1964 PNCA.

The Canadian Entitlement is generated at six Federal hydroelectric projects (Grand Coulee, Chief Joseph, McNary, John Day, The Dalles, and Bonneville) and five non-Federal hydroelectric projects [Wells-- owned by Douglas Public Utility District (PUD), Rock Island and Rocky Reach-- owned by Chelan PUD, Wanapum and Priest Rapids--owned by Grant PUD], hereafter collectively known as the "Mid-Columbia projects". The Canadian Entitlement Allocation Agreements (CEAA), executed in 1964 by the Mid-Columbia project owners and the Administrator (acting for BPA and the United States Entity) established the Canadian Entitlement allocable to the Federal hydroelectric projects and the Mid-Columbia projects. These agreements expire concurrently with the expiration of the 30-year sale of the Canadian Entitlement.

The 1964 PNCA establishes processes that coordinate the use of the planned Canadian storage operations with Federal and non-Federal project operations within the Pacific Northwest. In addition, the 1964 PNCA provides an opportunity for the region's power producers to maximize the system's reliability and power production while providing priority to non-power objectives. While the PNCA does not dictate the operations of system facilities, it does facilitate the exchange of power to improve reliability and reduce regional power costs. The current 1964 PNCA expires in 2003, however, the Treaty obligations extend at a minimum through September 15, 2024.

In the late 1980s, the three Federal agencies recognized the need to review the FCRPS multiple-use operations and to renew expiring power coordination agreements. As a result the Federal parties initiated the SOR in 1990 to review multiple-use operations of the system and river. The SOR also included analysis of power coordination alternatives. The Federal parties issued the SOR Final EIS in November 1995. 1964 PNCA Parties entered into preliminary negotiations in 1990 for a renewed PNCA and CEAEA in anticipation of the expiration of the CEAA beginning in 1998, and the expiration of the existing PNCA in 2003. Those negotiations concluded in 1997.

Parties to the existing 1964 PNCA include:

1. The United States (Reclamation, the Corps, and BPA).
2. The United States Entity
3. Publicly owned utilities--Chelan County PUD No. 1, Cowlitz County PUD No. 1, Grant County PUD No. 2, Douglas County PUD No. 1, Pend Oreille County PUD No. 1, Snohomish County PUD No. 1, Seattle City Light, Tacoma City Light, and Eugene Water and Electric Board.
4. Investor-owned utilities--The Montana Power Company, PacifiCorp, Portland General Electric Company, Puget Sound Energy, The Washington Water Power Company.
5. The Colockum Transmission Company Inc., which is an aluminum company subsidiary.

b. The SOR Final EIS

The SOR is both a study and an environmental compliance process. The 5 years of analysis and evaluation were conducted by the Corps, Reclamation, and BPA.

The SOR EIS assessed operations at the 14 Federal dams and reservoirs in the Columbia River Basin. Appendix R of the SOR EIS presents the environmental review for the PNCA. With regard to this PNCA, the SOR evaluated five alternatives: 1) Expiration of Existing Agreement, No Replacement (No Action); 2) Agreement to Maximize Regional Power Benefits; 3) Extension of Existing Agreement (Base Case); 4) Modified Agreement Supplemented with Operating Procedures (Preferred Alternative); 5) Power Coordination Agreement to Enhance Nonpower Considerations.

A Notice of Intent to prepare the SOR EIS was issued on July 19, 1990. Fourteen public scoping meetings were held between August 6 and August 23, 1990, in various locations throughout the Columbia River Basin. The comments received during scoping were considered in the preparation of the SOR Draft EIS, which was circulated for review and comment in July of 1994. Comments

on the SOR Draft EIS were incorporated, where applicable, in the SOR Final EIS, which was issued in November of 1995. There were no comments on the SOR EIS regarding the PNCA. The SOR ROD was issued on February 21, 1997.

II. Need

The underlying need for a power coordination agreement is the development of a new power coordination, or the modification or retention of the existing power coordination agreement to facilitate power generation and coordination among the hydro-generating utilities in the Columbia River Basin. BPA believes that a renewed coordination agreement is needed in order to maintain mutually beneficial arrangements among the Federal and non-Federal project owners and operators. Federal and non-Federal projects are both hydraulically and electrically interconnected. The amount of water available for use at downstream projects is determined primarily by operations at upstream projects. Coordinating the planning and operations of these interconnected resources as if they belonged to a single owner accomplishes two things: (1) efficiencies and diversities allow all parties to maximize the use of the coordinated power resources and (2) the availability of information concerning the operations of upstream projects allows downstream parties to make informed decisions about the use of their projects. In addition, coordinated planning and operations also ensure that the potential benefits of Canadian storage are actually developed, and secures long-term non-Federal participation in the return of the Canadian power entitlements.

A power coordination agreement is contemplated to exist under the Treaty as well as agreements concerning Federal and non-Federal obligations to return the Canadian Entitlement. The existing 1964 PNCA will terminate in the year 2003, but the obligations of the United States to return the Canadian Entitlement will continue at a minimum until 2024 (Background on this Canadian Entitlement is discussed in Section IV of this ROD). Since the return obligation extends beyond the termination date of the existing 1964 PNCA, we need to establish a power coordination agreement that will extend at a minimum until 2024.

III. Decision Factors

BPA's basis in reaching this decision is that a power coordination agreement should serve the following purposes:

- a.** Optimize hydropower generation in the Pacific Northwest and reduce the need for additional resources while accommodating Federal and non-Federal multiple-use requirements of the system.
- b.** Enable the coordinated parties to estimate the hydro generation that can be reliably produced from the coordinated system.
- c.** Facilitate the production of the estimated hydro generation of the coordinated system resource through operations for exchanges.
- d.** Assure that anticipated benefits from the Columbia River Treaty are realized; facilitate the return of the Canadian share of the benefits commensurate the benefits received by the parties.

- e. Provide a method of coordination that is acceptable to the parties.

These purposes are the decision factors BPA used to evaluate the PNCA alternatives.

IV. Public Involvement

a. Public presence during SOR and PNCA negotiations

Many parties to the existing 1964 PNCA, including Reclamation, BPA, and the Corps participated in the SOR PNCA Alternatives Analysis Work Group, which explored and developed alternatives to the existing 1964 PNCA. These proceedings were open to the public and were attended by non-power interest groups and other interested organizations and individuals. A list of the members and meeting attendees of the PNCA Alternative Analysis Work Group can be found in Appendix R of the SOR Final EIS. Nonpower interest groups and individuals were also invited and occasionally attended to observe negotiations for developing language and procedures pertaining to accommodating ad-hoc non power requirements.

b. PNCA Briefings

Reclamation provided briefings about the proposed 1997 PNCA to the Confederated Salish & Kootenai Tribal Council in Pablo, Montana and the US Fish and Wildlife Service in Portland, Oregon. In addition, Reclamation offered to brief the National Marine Fisheries Service and the Columbia River Intertribal Fish Commission, both in Portland, Oregon. Additionally, the PNCA was subject to comment at any of the SOR EIS public forums.

V. Alternatives Considered

The SOR PNCA Alternatives Analysis Work Group identified and analyzed five alternatives for regional coordination. These alternatives and their impacts are discussed in detail in chapters 4 and 5 of the SOR Final EIS, Appendix R. The following is a summary of each Alternative, and BPA's analysis of each alternative.

Alternative 1 -- Expiration of Existing Agreement, No Replacement (No Action).

Parties to the 1964 PNCA would coordinate under the terms of the existing agreement until it expires in 2003. It would not be replaced by a similar agreement.

Under this alternative, it is assumed that there is no power coordination after 2003. This alternative has potential for negative impacts on the environment because of reduced reliability, efficiency and flexibility for both nonpower and power purposes because of the increased acquisition and use of nonrenewable resources. In addition, this alternative has potential for adverse economic impacts to the region in terms of reduced power capabilities and increased replacement power costs when compared to a coordinated system

Alternative 2 -- Agreement to Maximize Regional Power Benefits.

This alternative assumes there would be a new agreement that maximizes regional power benefits, both energy and capacity. It calls for a pooling arrangement under which parties plan and operate centrally their pooled resources. The term of the new agreement could extend into 2024 to coincide with the anticipated term of the Columbia River Treaty.

Under this type of coordination agreement, project operators would relinquish their operational autonomy to a central authority that would plan and operate the regional projects to achieve maximum power benefits. This alternative has potential to enhance benefits for both nonpower and power purposes because of increased reliability, efficiency, and flexibility as the system would be operated by one operator. Although this alternative appears to have the best overall regional power benefits, the greatest obstacle to achieving these benefits is the loss of the parties' autonomy and the lack of Federal authority. As a consequence, Federal project operators will not forego their operational autonomy in order to select this alternative. Furthermore, non-Federal project operators are not likely to agree to this alternative.

Alternative 3 -- Extension of Existing Agreement (Base Case).

This alternative contemplates a rollover of the current 1964 PNCA (1) without Operating Procedures or (2) with the existing Operating Procedures (It was analyzed both with and without the current Operating Procedures). The term of the new agreement could extend into 2024 to coincide with the anticipated term of the Columbia River Treaty. This is the base case alternative for PNCA analysis.

Alternative 4 -- Modified Agreement Supplemented with Operating Procedures (Preferred Alternative).

This is the SOR EIS Preferred Alternative and reflects the negotiated settlement reached by the 1964 PNCA parties. It was selected for the reasons discussed below in Section VII. This alternative assumes that the existing 1964 PNCA would be modified and supplemented with Operating Procedures. This alternative retains a coordinated planning process that offers even more improved accommodation of non-power requirements and resolves many power issues related to the existing agreement. In addition, this alternative facilitates the United States obligations under the Treaty for returning the Canadian Entitlement in a manner consistent with Federal operating strategies for multiple purpose objectives, authorities, and responsibilities on the Columbia River Basin.

Alternative 5 -- Power Coordination Agreement to Enhance Nonpower Considerations.

This alternative assumes there would be complete pooling under central authority to which parties can submit requirements for nonpower uses. The central authority would consider those requirements in planning and operating the projects primarily for nonpower uses. The parties in this alternative would include power and nonpower entities, which would increase conflicting nonpower demands on limited resources. This alternative also assumes all power production would be incidental to project operations for nonpower uses.

Although this alternative appears to best accommodate regional nonpower needs, the SOR Final EIS noted that the environmental benefits could be reduced to the extent that the

emphasis on nonpower uses increased the need to acquire and/or operate nonrenewable resources. In addition, the parties would lose their operational autonomy. As a consequence, the Federal project operators will not forego their operational autonomy in order to select this alternative. Furthermore, other and non-Federal project operators are not likely to agree to this alternative.

VI. Impacts To The Environment

The comparison of alternatives in terms of four classes of impacts -- environmental, hydropower system, financial, and contractual -- is described in Chapter 5 on the SOR Final EIS, Appendix R. As discussed on page 3-3 of the SOR Final EIS, Appendix R, power coordination alternatives are subordinate to the System Operating Strategy (SOS), therefore any potential environmental impacts were captured in the SOS analysis. Power coordination allows the parties to coordinate the remaining system flexibility after nonpower requirements of the system are met. Environmental impacts, then, from power coordination are limited to impacts to the power system's use of remaining flexibility available within a given SOS for both Federal and non-Federal hydro projects. Since Federal reservoir operators will be implementing the selected SOS alternative under any of the PNCA alternatives, the environmental analysis for the SOS would apply. In analyzing the individual and cumulative impacts, the SOS determined that the physical or environmental impacts of a coordination agreement are *de minimis* and fall within the impacts resulting from a system operating strategy. Since none of the coordination alternatives have measurable environmental impacts, any of the power coordination alternatives can be considered the environmentally-preferred alternative.

VII. The Administrator's Decision Regarding the Preferred Alternative:

This section explains BPA's selection of the SOR EIS preferred alternative and BPA's decision to participate in hydropower coordination through a renewed hydropower coordination agreement, the 1997 PNCA. The preferred alternative in the SOR Final EIS was Alternative 4 - Modified Agreement Supplemented with Operating Procedures. Furthermore, BPA believes that the 1997 PNCA, is accurately portrayed by Alternative 4. The 1997 PNCA best meets the need and is consistent with the purposes of action:

- a.** The 1997 PNCA is very similar to the existing 1964 PNCA in that after Federal and non-Federal multiple-use requirements of the system are accommodated, the hydropower generation in the Pacific Northwest is optimized. This reduces the need for additional resources.
- b.** The 1997 PNCA retains critical water planning as a tool to determine planned firm hydro resource capability. Hydro resources are a significant portion of the resource base of Northwest utilities, and those utilities need to know with certainty what hydro capability will be generated in a given year.
- c.** The 1997 PNCA will continue to use interchange energy as a mechanism to facilitate power coordination. The distinction between hydro and nonhydro interchange energy will be eliminated to relieve some of the concerns of the all-hydro systems. The exchange in interchange energy facilitates the production of the estimated hydro generation of the Coordinated System resource.

d. The 1997 PNCA extends the established processes which coordinate the use of the planned Canadian storage operations with Federal and non-Federal projects. This assures that anticipated benefits from the Treaty are realized; and secures long-term non-Federal participation in the return of the Canadian share of the benefits commensurate with those received by the parties receiving the benefits.

e. The 1997 PNCA provides a method of coordination that is acceptable to the project operators. Coordination via the PNCA allows parties to maintain autonomy over their own projects, and has proven implementable for almost 30 years. It is presumed that coordination using a PNCA is still acceptable to the parties. In addition, coordination through a PNCA is within the parties' statutory authorities and FERC licenses and would therefore not require statutory or licensing amendments.

VIII. Elements of the 1997 PNCA

The 1997 PNCA has the following elements:

- (1) Operational Control. Federal Agencies continue to have operational control over Federal projects to meet power and authorized multiple purpose requirements, e.g., irrigation and flood control.
- (2) Planned Nonpower Requirements. Federal Agencies continue to operate for power purposes after accommodating nonpower requirements, e.g., Biological Opinion - Reinitiation of Consultation on 1994 - 1998 Operation of the Federal Columbia River Power System and Juvenile Transportation Program in 1995 and Future Years (1995 Biological Opinion).
- (3) Firm Hydro Resource Capability Planning Criteria. BPA continues to use critical water to determine the level for which firm hydro capability can be planned.
- (4) Shifting and Shaping of Power Production. BPA continues to use shifting and shaping for power production consistent with nonpower requirements.
- (5) Secondary Hydro Resource Capability Planning Criteria. BPA continues the use of current practice of estimating secondary hydro resource available without jeopardizing refill.
- (6) In Lieu Energy. The FCRPS operators retain discretion over whether to release project water or deliver the energy equivalent.
- (7) Interchange Energy. BPA continues to have access to interchange energy in order to develop firm resource capability. Under the 1997 PNCA, all interchange energy would be a single price closer to market value.
- (8) Provisional Draft and Provisional Energy. The FCRPS operators retain discretion to draft their reservoirs below PNCA operating guidelines to retain flexibility for power and nonpower needs.
- (9) Flexibility Adjustments. BPA continues to use reservoir flexibility, as long as reservoir refill and nonpower requirements are not impacted, to cover load deviations and resource underperformance.
- (10) Headwater Benefits Payments. Headwater benefits continue to be determined as set forth in the agreement.

IX. Conclusion

I have decided to sign the 1997 PNCA because it best achieves the purposes and needs identified in Appendix R of the SOR Final EIS and summarized in Sections III and VII of this ROD. This decision recognizes that the 1997 PNCA will facilitate coordination of the FCRPS in a manner consistent with FCRPS multiple-use requirements.

Issued in Portland, Oregon on July 18, 1997.

/s/ Randall W. Hardy
Randall W. Hardy
Administrator and Chief Executive Officer,
Bonneville Power Administration, and
Chairman, United States Entity