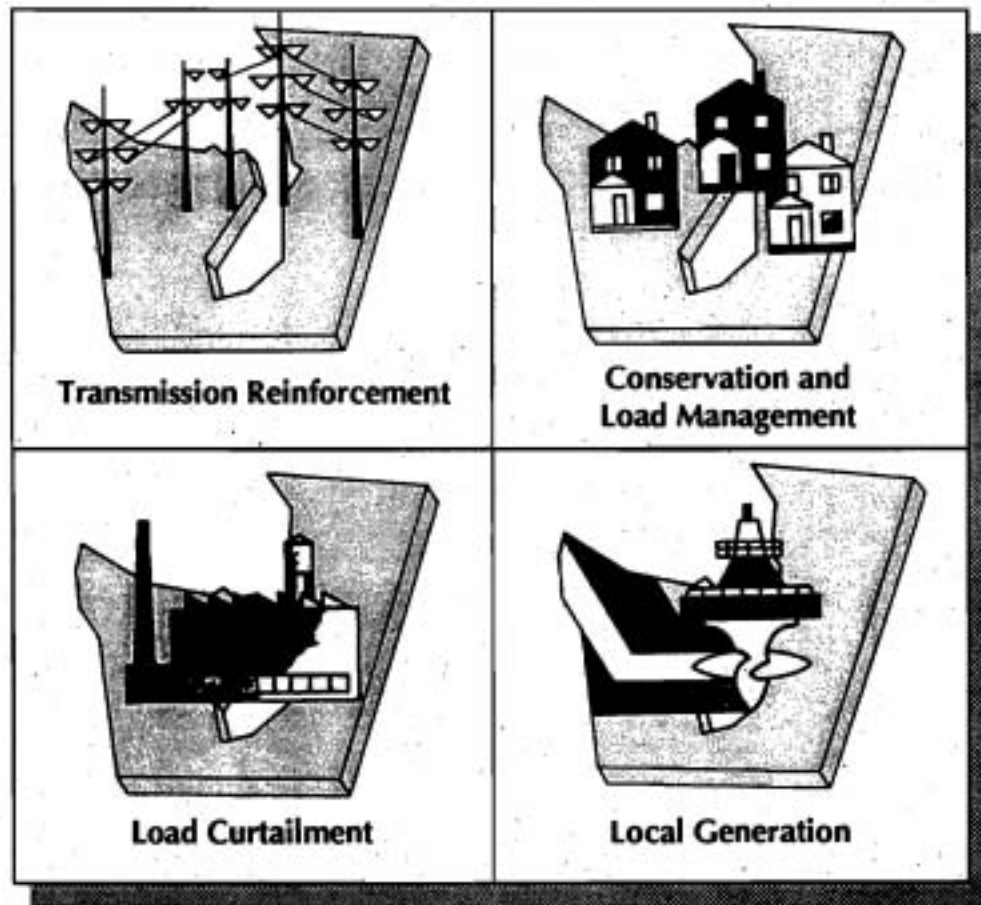


# Puget Sound Area Electric Reliability Plan

## Record of Decision



**RECORD OF DECISION**  
**PUGET SOUND AREA ELECTRIC RELIABILITY PLAN**

Bonneville Power Administration  
U. S. Department of Energy

June 1992

## **Contents**

### **Introduction**

- Description of Action
- Authority
- Affected Area
- Public Involvement
- Alternatives Considered
- Decision Factors

### **Decisions**

- Decision to Adopt the Puget Sound Area Electric Reliability Plan
- Decision to Accelerate Puget Sound Conservation Programs
- Decision to Implement Voltage Support 1
- Decision to Implement Voltage Support 2
- Decision to Begin an EIS for the PSAERP Transmission Line Contingency

### **Rationale for Decisions**

### **Implementation**



## Introduction

### Description of Action

This Record of Decision (ROD) documents my decision to adopt the Puget Sound Area Electric Reliability Plan (PSAERP). The ROD presents my reasons for choosing the alternative strategy in the Final Environmental Impact Statement (EIS). The ROD also describes my decision to implement several actions in the plan. To make these decisions, I balanced the projected environmental, social, and economic consequences of the alternatives described in the EIS.

A Draft Environmental Impact Statement (DEIS) was filed with the Environmental Protection Agency (EPA) on October 25, 1991. A Final EIS was filed with EPA on May 15, 1992. Additional details on public meetings and notices are available in the EIS.

### Authority

The EIS and the PSAERP were prepared under authorities assigned to BPA in the following Federal Laws:

National Environmental Policy Act of 1969, as amended  
Public Law 91-190, January 1, 1970

Bonneville Project Act  
Public Law 329, August 20, 1937

Federal Columbia River Transmission System Act  
Public Law 93-454, October 18, 1974

Pacific Northwest Electric Power Planning and Conservation Act  
Public Law 96-501, December 5, 1980

The PSAERP was developed jointly by BPA, Puget Sound Power and Light, Seattle City Light, Snohomish County Public Utility District (PUD), and Tacoma Public Utilities. The PSAERP provides a vehicle to coordinate utility actions to correct an electrical system problem that exists in the Puget Sound basin. The plan is designed to assure electrical system reliability from 1994-2003.

The Puget Sound utilities were participants in the FEIS process, and agree on the need for the actions described in the PSAERP. Decisions to sponsor one or more of the actions called for in the plan will be made individually by each utility, following appropriate decision processes. This ROD documents BPA's decision to adopt the PSAERP and BPA's decision to implement certain actions in the plan.

### Affected Area

The Puget Sound area lies in the northwest corner of the State of Washington. The Puget Sound area is bounded by the Cascade Mountains on the east, the Canadian border on the north, the Pacific Ocean on the west and the city of Centralia on the south.

Actions proposed in the PSAERP could potentially affect the counties within the Puget Sound basin as well as counties east of the Cascade mountains. Counties where actions may occur are: Chelan, Clallam, Douglas, Grant, Grays Harbor, Island, Jefferson, Lewis, King, Kitsap, Kittitas, Mason, Okanogan, Pacific, Pierce, San Juan, Skagit, Snohomish, Thurston, Whatcom, and Yakima.



## Public Involvement

BPA conducted an extensive public involvement program to develop the DEIS and EIS for the PSAERP. A year-long scoping period defined the range of alternatives and issues to be addressed in the Draft EIS. BPA held public scoping meetings both in the Puget Sound area and in Wenatchee, Washington. A Technical Review Group was formed to help define feasible alternatives. To access the business community, labor, government agencies, key interest groups, and others outside the utility industry, a public involvement group called the Sounding Board was organized. This group provided feedback, suggestions, and opinions on elements of the plan as it progressed. Four newsletters were distributed during completion of the EIS. BPA sent the DEIS to more than 1000 individuals. Seven public meetings were held during a 60-day comment period. Chapter 8 of the EIS lists public comments and BPA's responses. I have used this information to make my decision.

## Alternatives Considered

The following alternatives were considered in reaching this decision:

- Alternative Strategy 1 - Transmission Line
- Alternative Strategy 2 - Voltage Support
- Alternative Strategy 3 - Demand Reduction
- Alternative Strategy 4 - Combustion Turbines
- No Action Alternative

Each of the above alternatives is composed of several measures. Chapter 2.0 of the FEIS describes each in detail.

## Decision Factors

BPA evaluated the alternatives using decision factors. These factors are discussed in Chapter 4.0 of the EIS and are listed below:

### Environmental Factors

- Land Use
- Natural Environment
- Cultural Resources
- Aesthetics
- Health and Safety
- Socio-Economics

### Economic Factors

- Present Value of Total System Costs
- Sensitivity to Load Growth
- Near-Term Revenue Requirements
- Long-Term Revenue Requirements

### Technical Factors

- Reliability
- Deliverability in View of Social and Political Factors



## Decisions

### Decision to Adopt the Puget Sound Area Electric Reliability Plan

I have decided that the Preferred Alternative of both the DEIS and the EIS — Alternative Strategy 2 — presents the best balance of environmental, economic and technical qualities. See Rationale for Decisions on page 4.

### Decision to Accelerate Puget Sound Conservation Programs

One measure proposed in the PSAERP that BPA will sponsor is accelerated conservation. I have authorized an increase of \$3 million for Puget Sound area conservation programs in fiscal year 1992. I also will increase conservation funding in subsequent years through BPA's Resource Programs to accomplish BPA's share of the accelerated conservation element in the PSAERP. BPA's Resource Program and other programs will be discussed at Programs in Perspective, which will be held in July 1992. BPA conservation staff are working with utility customers to develop methods and plans to achieve accelerated conservation called for in the PSAERP. BPA previously reviewed the conservation programs proposed for acceleration in the PSAERP under NEPA. Acceleration of these programs will have minimal or no environmental impacts. This impact is considered in the EIS. No further environmental review is planned.

### Decision to Implement Voltage Support 1

A second measure proposed in the PSAERP that BPA will implement is Voltage Support 1. In Voltage Support 1, electrical devices called shunt capacitors will be installed within BPA's Echo Lake Substation, now under construction east of Seattle. Voltage Support 1 will increase east-west transmission capacity by 600 megawatts. BPA's decision to build Echo Lake Substation was based on a separate environmental analysis which considered the installation of shunt capacitors for voltage support. Voltage Support 1 adds additional capacitors. Voltage Support 1 will have minimal environmental impact. This impact is considered in the EIS.

### Decision to Implement Voltage Support 2

BPA will sponsor and implement Voltage Support 2. As in Voltage Support 1, increased cross-Cascades transfer capability results from adding electrical devices to the existing transmission system. In Voltage Support 2, devices called series capacitors will be installed within a new substation constructed north of Ellensburg, Washington. This location is where four existing 500-kV lines converge and share a common corridor. The four 500-kV lines will be looped into the substation, creating eight operationally independent line sections. This reduces the impact of a transmission line failure because only half of the line is lost rather than the entire line.

Four substation sites were considered in the Draft EIS. I have selected Site 3 (identified in the DEIS and EIS as the preferred site) as the location for this substation. The substation siting and design were coordinated with adjoining landowners to minimize visual impact on a residence, as well as physical disruption of a surrounding cattle operation by the substation access road. The new substation will be named Schultz Substation in memory of Sol Schultz, BPA's first Chief Engineer.

Environmental impacts predicted to result from Schultz Substation are few and minor. BPA has prepared a mitigation action plan. This plan defines specific actions to be taken by BPA or its construction contractors to minimize environmental impacts. I have decided that, as a minimum, the following mitigation techniques will be used at Schultz Substation:



- Fill material brought in to create a level substation grade will be obtained only from environmentally approved sites.
- Excavated material unsuitable for use at the site will be disposed of in accordance with applicable regulations.
- Construction activity will be conducted in a manner to minimize impacts to adjoining properties.
- Construction equipment will be operated and maintained to minimize noise impacts.
- Dust created by construction will be minimized.
- BPA will appoint a public contact person who will respond to public concerns during construction.
- Procedures to prevent oil or gas spills during construction equipment fueling will be defined in the construction contract.
- Construction equipment entering or departing the site will be thoroughly washed to prevent the spread of noxious weeds.
- If archaeological artifacts are uncovered during construction, construction will be halted pending consultation with the Washington Historic Preservation Office.
- All waste materials created during construction will be disposed of at an approved sanitary landfill.
- No electrical equipment containing PCB's will be installed at the site.
- To prevent erosion, disturbed soils will be seeded following construction.

About two years after Schultz Substation is completed, BPA will complete an environmental audit and appraisal to provide assurance that the mitigation commitments are fulfilled.

### **Decision to Begin an Environmental Impact Statement for the PSAERP Transmission Line Contingency.**

Accurately predicting future events is difficult and uncertainties can significantly alter the magnitude and timing of future capacity needs. The PSAERP identifies contingency measures that would be undertaken if greater than anticipated needs occur. I have decided that BPA should begin preliminary planning and environmental studies on a new cross-Cascades transmission line so if conditions change, the lead-time for building a line will be shorter. Construction of a cross-Cascade transmission line will not be undertaken unless need is clearly established. EIS scoping activities will start in late 1992 or early 1993. Opportunities for public involvement will be provided throughout the EIS process.

## **Rationale for Decisions**

BPA, because of its unique role in regional transmission of power, took a leadership role in planning, defining solutions, evaluating alternatives and completing environmental studies for the PSAERP. BPA staff who were involved in conducting the studies have explained the alternatives to me. I had an opportunity to meet with the Sounding Board on February 19, and hear the individual comments of members present at this meeting.

On the basis of these inquiries, I find Alternative Strategy 2 to be clearly superior to all other strategies. Alternative Strategy 2 ranks first considering cost and technical factors. While Alternative Strategy 3 is environmentally preferred, Strategy 2 ranks second and has only slightly greater predicted environmental impact. Considering that only slight differences in impact are predicted between Alternative Strategy 2 and the environmentally preferred strategy, economic and technical factors influenced my decision to select Alternative Strategy 2. The No Action Alternative does not meet BPA's established reliability standards which were last updated in 1989 after customer and public reviews. Public comments on the DEIS supported taking action to maintain the reliability of the power system. High health and safety impacts and socio-economic impacts are attributed to the no action alternative and it is the lowest ranked environmentally



My decision to increase conservation funding in 1992 was based on three considerations: strong public support, the economic value of conservation investments, and the minimal environmental impact of conservation programs.

I decided to proceed with both Voltage Support 1 and 2 as they are cost effective and create low environmental impacts. Both measures make more efficient and effective use of existing BPA transmission lines. I find strong public support for these actions in the comments received on the DEIS, another reason to proceed with implementation.

My rationale to begin an Environmental Impact Statement for a new cross-Cascades transmission line is based on several factors. The EIS (Section 1.4.6) identifies a list of future events that, if they occur, would significantly increase demands on the cross-Cascades transmission system. To provide flexibility to respond to such events and reduce the lead-time for building a line, the PSAERP recommends beginning planning, environmental, and permit work on a new cross-Cascades transmission line. I support the PSAERP's concept of providing the flexibility to meet greater than anticipated capacity needs. A new cross-Cascades transmission line would provide ample capacity to meet greater than anticipated demands or other uncertainties.

BPA's traditional role and authorities to provide transmission services are well established in the region. It is appropriate that BPA take a leadership role in planning and environmental analysis of the contingency line. As no adverse environmental impacts would result from environmental studies, and since the cost of these studies is relatively small, especially compared with the benefits if a line is needed, I authorized BPA staff to begin work on an Environmental Impact Statement for a new cross-Cascades transmission line. I anticipate that this work will be a cooperative effort among BPA, Puget Sound utilities, involved federal agencies, state and county organizations, environmental groups and interested private citizens.

I will not make a decision to proceed with construction of the transmission line until need is clearly established, and unless a separate EIS and Record of Decision for such a line have been completed.





## Implementation

Implementation of decisions is planned as follows:

Accelerate Puget Sound Conservation Programs.....1992 - 2003  
Completion of Voltage Support 1 (Echo Lake Capacitors)..... Fall 1993  
Voltage Support 2:  
    Begin Site Development.....Summer 1992  
    Energize Substation ..... Fall 1994  
Prepare EIS on cross-Cascades Transmission Line Contingency:  
    Begin Scoping.....late 1992 or early 1993  
    Complete Final EIS.....1996

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Date