

# **COVER SHEET**

**FEDERAL ENERGY REGULATORY COMMISSION**

**FINAL ENVIRONMENTAL IMPACT STATEMENT  
FOR THE LEWIS RIVER PROJECTS**

**Docket Nos. P-2071-000, et al.**

**Section 1**

**Purpose and Need for Action**

**Pages 1-1 to 1-10**

**FEIS**

## **1.0 PURPOSE AND NEED FOR ACTION**

### **1.1 PURPOSE OF ACTION**

PacifiCorp and the Public Utility District No. 1 of Cowlitz County (Cowlitz PUD) (the applicants) are seeking new licenses from the Federal Energy Regulatory Commission (Commission or FERC) to continue to own, operate, and maintain four hydroelectric projects on the North Fork Lewis River in Cowlitz, Clark, and Skamania counties, Washington. They include the 240,000-kilowatt (kW) Swift No. 1 (FERC No. 2111), 134,000-kW Yale (FERC No. 2071), and 136,000-kW Merwin (FERC No. 935) projects, owned and operated by PacifiCorp, and the 70,000-kW Swift No. 2 Project (FERC No. 2213), which is owned by Cowlitz PUD and operated by PacifiCorp. Current average annual generation is as follows: Swift No. 1 – 657,514 megawatt-hours (MWh); Yale – 551,250 MWh; Merwin – 506,642 MWh; and Swift No. 2 – 217,299 MWh. The Yale and Merwin projects occupy 84 and 142.15 acres, respectively, of federal land administered by the U.S. Department of the Interior, Bureau of Land Management (BLM). The Swift No. 1 Project occupies 63.25 acres of federal land administered by BLM, and 229 acres of federal lands administered by the U.S. Department of Agriculture, Forest Service (Forest Service). The Swift No. 2 Project occupies 3.79 acres of federal land owned by the Forest Service.

Cowlitz PUD and PacifiCorp filed final license applications for the Swift No. 1, Swift No. 2, and Merwin projects on April 28, 2004, and PacifiCorp filed the final license application for the Yale Project on May 5, 1999. The 2004 applications included a multi-project preliminary draft environmental assessment (PDEA).

On December 3, 2004, the applicants filed a comprehensive settlement agreement (SA) with the purpose of resolving all issues related to the relicensing of the four Lewis River Projects. The applicants' proposed action is to relicense the projects including the terms of the SA. Included with the SA filing was a supplemental PDEA that updated the environmental analysis for the proposed action.

To ensure that the Commission makes an informed decision and to comply with the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321–4347), Commission staff prepared this final environmental impact statement (final EIS). This final EIS uses the information provided in the PDEA and supplemental PDEA, as well as other information available to Commission staff, to assess the potential effects of the proposed action, alternatives to the proposed action, and no action. Important issues that are addressed include the potential effects of the proposed action and alternatives on river flows and water quality in the lower Lewis River; the existing anadromous fish resources in the river, and plans to restore these resources to the upper river; terrestrial resources and plans to manage and enhance these resources; federally listed threatened or endangered species; existing recreational uses and facilities, and plans to improve and

expand these facilities; cultural resources and measures to protect these resources; and socioeconomic factors in the basin.

The existing licenses for the projects expire between 2001 and 2006.<sup>6</sup> The Commission must decide whether to relicense the projects and what conditions should be placed on any licenses issued. In deciding whether to authorize the continued operation of the hydroelectric projects and related facilities in compliance with the Federal Power Act (FPA)<sup>7</sup> and other applicable laws, the Commission must determine that the projects will be best adapted to a comprehensive plan for improving or developing a waterway. In addition to the power and developmental purposes for which licenses are issued (e.g., flood control, irrigation, and water supply), the Commission must give equal consideration to the purposes of energy conservation; the protection of, mitigation of damage to, and enhancement of fish and wildlife (including related spawning grounds and habitat); the protection of recreational opportunities; and the preservation of other aspects of environmental quality. Issuing new licenses would allow PacifiCorp and Cowlitz PUD to continue to generate electric power from a renewable source for their customers.

## **1.2 NEED FOR POWER**

### **1.2.1 PacifiCorp Operations**

PacifiCorp serves more than 1.5 million retail customers in a service area covering more than 136,000 square miles in portions of six Western states (Utah, Wyoming, Idaho, Washington, Oregon, and California). Residential customers account for about 85 percent of PacifiCorp's retail customers; 11 percent are commercial businesses, and 4 percent are industrial users.

PacifiCorp has more than 8,300 megawatts (MW) of generation capacity. Roughly 68 percent of this generation is produced by PacifiCorp's thermal and hydroelectric resources, and 32 percent is purchased generation. PacifiCorp operates two control areas that it designates as east and west. In its 2003 Integrated Resource Plan, PacifiCorp forecasts load on its system to grow by 2.2 percent in the east (Utah, Wyoming, and Idaho) and 2.0 percent in the west (Washington, Oregon, and California) per year, on average, although load growth could vary between 1.4 and 3.4 percent. At the same time, resources available to serve this demand will diminish over time due to

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<sup>6</sup> The Yale Project license expired in 2001, but at the request of PacifiCorp, the processing of that application was delayed so that all four projects could be considered together in a single NEPA document.

<sup>7</sup> 16 U.S.C. §§791(a)-825(r), as amended by the Electric Consumers Protection Act of 1986, Public Law 99-495 (1986) and the Energy Policy Act of 1992, Public Law 102-486.

expiration of supply contracts, potential restrictions from hydroelectric relicensing requirements, and more stringent emissions requirements for thermal plants. PacifiCorp expects it will require an additional 4,000 MW of new resources through 2013.

The operational flexibility of the Lewis River Projects enhances PacifiCorp's ability to reliably perform its function as control area operator. The projects are also operated in conjunction with the Pacific Northwest Coordination Agreement under which hydroelectric projects owned by several utilities and the federal government are operated in a coordinated manner.

As operator of two control areas within the Western Electricity Coordinating Council (WECC), PacifiCorp is required to provide ancillary services for reliability and safety of the regional power grid. The Lewis River Projects play an important role in providing these operational benefits, including flexible capacity, automatic generation control,<sup>8</sup> spinning reserves, and voltage control.<sup>9</sup> WECC requires its members to maintain the following operating reserve: sufficient spinning reserve to provide regulating margin, plus an additional amount of operating reserve equal to the sum of 5 percent of committed hydroelectric generation and 7 percent of committed thermal generation (at least half of which must be spinning reserve).

## **1.2.2 Cowlitz PUD Operations**

Headquartered in Longview, Washington, Cowlitz PUD is a not-for-profit, customer-owned utility in southwestern Washington providing electricity to more than 45,600 residential, commercial, industrial, and street lighting customers, and providing water service to more than 3,500 customers in Cowlitz County. Cowlitz PUD serves a 1,150-square-mile county with a population of more than 94,000.

The 70-MW Swift No. 2 Project is Cowlitz PUD's only owned generating resource. Cowlitz PUD applies all of its Swift No. 2 power to its load; and pursuant to its Partial Requirements Contract with the Bonneville Power Administration (BPA), none may be sold into the market until at least 2011. Between 1998 and 2001, Cowlitz PUD's scheduled delivery from Swift No. 2 averaged 234,724 MWh and ranged from 158,539 to 322,223 MWh.

Cowlitz PUD's total power supply comes from three primary sources. Approximately 5 percent comes from Swift No. 2, close to 90 percent from BPA

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<sup>8</sup> Automatic generation control is the ability to automatically adjust the generation within a control area to maintain power flow between entities and to maintain a given frequency.

<sup>9</sup> Voltage control is the control of voltage on transmission lines through adjusting generator output and transformer operations.

(although the amount has varied somewhat over the last few years), and approximately 5 percent from a contractual share of Grant County PUD's mid-Columbia projects.

Pursuant to the June 4, 1957, *Power Contract between PUD No. 1 of Cowlitz County, Washington, and Pacific Power & Light Company with Provisions for Withdrawal, Swift Project* (Power Contract), as amended on September 1, 1983 (Cowlitz PUD, 1957), Cowlitz PUD has a contractual right to 26 percent of the combined output of Swift No. 2 and Swift No. 1. Pacific Power & Light Company, now known as PacifiCorp, has a right to the remaining 74 percent of the combined output of Swift No. 2 and Swift No. 1. These shares reflect the relative capacity of the two plants and the amounts of investments made by each of the respective project owners. The Power Contract currently entitles Cowlitz PUD to 26 percent of the Swift Creek reservoir inflow and storage capacity and defines the terms under which Cowlitz PUD schedules daily energy delivery from the Swift projects.

Operation of all the North Fork Lewis River Projects is an integral component of the region's Northwest Power Pool (NWPP). The operation of Swift No. 2, in conjunction with PacifiCorp's Merwin, Yale, and Swift No. 1 projects, is coordinated using the guidelines prescribed by the NWPP.

Swift No. 2, as an integral part of the Lewis River system, is operated according to the WECC guidelines, and plays an important role in providing ancillary services, including peaking capacity, automatic generation control, spinning reserves, and voltage control.

### **1.2.3 Regional Demand**

In September 2004, the Northwest Power and Conservation Council (NPCC) issued its Draft Fifth Northwest Conservation and Electric Power Plan, which also includes a 20-year demand forecast (NPCC, 2004). The plan shows that a need for more power is likely to exist in the Pacific Northwest during the 25-year planning horizon (2000 to 2025) with overall average demand increasing by 0.95 percent over that period under the medium growth scenario. Recent forecasts from WECC suggest that winter peak demand and annual energy will grow in the NWPP area at annual compound rates of 1.1 and 1.8 percent respectively over the period 2004 through 2013. Projected energy load under adverse hydro conditions would increase from an estimated 348,094 gigawatt-hours (GWh) in 2004 to 407,203 GWh in 2013 (WECC, 2004).

The western states as a whole are more constrained with respect to capacity during the summer months; however, the colder northwest climate results in the winter peak being more critical for the NWPP. Summer peak load in the NWPP is forecast to rise from 49,631 MW in 2004 to 59,466 MW in 2013. Generation additions totaling 10,091 MW are forecast to come on-line over the same 10-year period. Winter peak load is

estimated to increase from 57,038 MW in winter 2004–05 to 66,065 MW in winter 2013–14 (WECC, 2004).

Firm energy and dependable capacity provided by relicensed projects would be useful in meeting part of the projected need for energy and minimizing the potential for capacity deficits. If project licenses are issued, the projects would meet part of the region's power needs and contribute to system reliability. The projects also would displace fossil-fueled electric power generation the regional utilities now use, thereby conserving nonrenewable fossil fuels and reducing the emission of noxious byproducts that would be released by fossil fuel combustion. We conclude that the projects' power contributes to a diversified generation mix and helps meet a need for power in the area.

### **1.3 SCOPING PROCESS**

The applicants conducted the NEPA scoping process as part of the Alternative Licensing Process (ALP) and formally initiated public scoping on May 17, 2000, with the release of Scoping Document 1 (PacifiCorp and Cowlitz PUD, 2000b). Scoping Document 1 invited the public to provide comments on the projects either through written or oral testimony. Two public scoping meetings were held in Woodland, Washington, on June 22, 2000, and a site tour was offered the following day. In addition to comments offered at these scoping meetings, the following entities provided written comments:

<u>Commenting Entity</u>	<u>Date of Letter or E-mail</u>
Conservation Groups (American Rivers, Trout Unlimited, Native Fish Society, Washington Council Trout Unlimited, Clark-Skamania Fly-Fishers, Friends of the Earth, and Federation of Fly Fishers)	July 14, 2000
Clark County Board of Commissioners	July 17, 2000
James Malinowski, Fish First	July 14, 2000
U.S. Fish and Wildlife Service	July 14, 2000
Washington Department of Fish and Wildlife	July 14, 2000
John Clapp	July 13 and August 12, 2000
Mariah Stoll Reese	July 13, 2000
U.S. Department of Agriculture, Forest Service, Gifford Pinchot National Forest	August 11, 2000
Heidi Cobbs	July 10, 2000
Gerrie Caines	July 17, 2000
James Wooldridge	July 13, 2000

Written and oral comments were summarized and addressed in Scoping Document 2 (PacifiCorp and Cowlitz PUD, 2001), issued on January 10, 2001. Scoping Document 2 presented an expanded list of resource issues to be examined in the NEPA analysis. In particular, the preliminary list of alternatives was expanded to include project removal and settlement alternatives.

## **1.4 AGENCY CONSULTATIONS**

In addition to the formal NEPA scoping described in the previous section, significant opportunities for public involvement were integrated into the Lewis River relicensing process. Opportunities began in 1999 with the Watershed Studies Scoping Process. Interested parties were invited to participate in the identification of “key watershed questions” that would guide study plan development for the four Lewis River Projects.<sup>10</sup> Also in 1999, Cowlitz PUD and PacifiCorp applied for and received Commission approval to initiate an ALP. With the initiation of this collaborative process in April 1999, a Steering Committee and six resource workgroups were established. Meetings of the Aquatics, Terrestrial, Recreation, Cultural, Socioeconomics, and Flood Management workgroups and the Steering Committee have occurred at varying frequencies over a 3-year period, as documented in the applicants’ 6-month reports to the Commission, on PacifiCorp’s Lewis River website ([www.pacificorp.com/Article/Article1153.html](http://www.pacificorp.com/Article/Article1153.html)), and in Cowlitz PUD’s and PacifiCorp’s public files. These meetings gave interested members of the public the opportunity to provide input on what resource studies should be conducted, the scope of these studies, and to comment on the results of the studies.

### **1.4.1 Settlement Agreement**

The applicants and various relicensing stakeholders formed a collaborative team to identify environmental enhancement measures for relicensing alternatives. Called the Resource Enhancement Alternatives Document (READ) (PacifiCorp and Cowlitz PUD, 2002a) process, many relicensing participants identified potential enhancement measures in a series of meetings and workshops throughout 2001. The product of this effort, released in March 2002, was a lengthy list of potential enhancement measures and effects, which was used in refining the preliminary alternatives identified in Scoping Document 2. The stakeholders also collaborated on the preparation of a companion *Resource Interaction Document* (PacifiCorp and Cowlitz PUD, 2002b), which identified the potential positive and negative interactions of each proposed enhancement measure with one another. These collaborative discussions and work products helped the

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<sup>10</sup> To accommodate this basin-wide study approach, the Commission agreed to delay its processing of the Yale license application (PacifiCorp, 1999a) (filed in April 1999) and approved PacifiCorp’s request to accelerate the expiration date of the Merwin license application from 2009 to 2006. These actions enabled the concurrent environmental analysis of all four projects reflected in this final EIS.

participants to focus on and understand the measures of most importance within each resource area to be carried forward into development of alternatives.

Following the READ process, consultation efforts focused on settlement talks. Public and agency participants selected representatives for a negotiating group, which met at least monthly throughout 2002 and 2003 and continued to meet through the first quarter of 2004. These efforts resulted in a comprehensive SA, which was filed with the Commission on December 3, 2004. Signatories to the SA include the following entities:

**Agencies**

- National Marine Fisheries Service (NMFS)
- National Park Service
- BLM
- U.S. Department of the Interior, Fish and Wildlife Service (FWS)
- Forest Service
- Washington Department of Fish and Wildlife (WDFW)
- Washington Interagency Committee for Outdoor Recreation

**Indian Governmental Entities**

- Confederated Tribes and Bands of the Yakama Nation (Yakama Nation)
- Cowlitz Indian Tribe

**Other Governmental Entities**

- Cowlitz County
- City of Woodland
- Clark County
- Skamania County

**Non-Governmental Entities**

- Cowlitz-Skamania Fire District No. 7
- North Country Emergency Medical Service (NCEMS)
- Woodland Chamber of Commerce
- Lewis River Community Council
- Lewis River Citizens At-Large
- Lower Columbia River Fish Recovery Board



## Conservation Groups

- American Rivers
- Fish First
- Rocky Mountain Elk Foundation, Inc.
- Trout Unlimited
- The Native Fish Society

### 1.4.2 Interventions

On December 9, 2004, the Commission issued a *Notice of Settlement Agreement, Applications and Applicant-Prepared EAs Accepted for Filing, Soliciting Motions to Intervene and Protests, and Soliciting Comments, and Final Recommendations, Terms and Conditions, and Prescriptions*. The following entities filed motions to intervene:

<u>Intervenor</u>	<u>Date of Letter</u>
WDFW	January 19, 2005
American Rivers, Trout Unlimited, and Native Fish Society	January 24, 2005
U.S. Department of the Interior (Interior)	January 28, 2005
Forest Service	January 31, 2005
Washington Department of Ecology (WDOE)	January 31, 2005
Cowlitz PUD	February 1, 2005
Cowlitz Indian Tribe	February 2, 2005
NMFS	February 3, 2005
Yakama Nation	February 5, 2005
Fish First	February 11, 2005

### 1.4.3 Comments on the Draft Environmental Impact Statement

On September 23, 2005, the Commission staff issued the draft EIS for the relicensing of the Lewis River Projects. Comments on the draft EIS were due on November 23, 2005.<sup>11</sup>

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<sup>11</sup> The U.S. Environmental Protection Agency issued notice of availability for the draft EIS in the Federal Register on September 23, 2005, Vol. 70, No. 184, p. 55836.

On October 27, 2005, Commission staff held a public meeting in Woodland, Washington, for the purpose of summarizing staff's recommendations in the draft EIS, and discussing and receiving comments on the draft EIS. The meeting was transcribed and is part of the public record; 18 individuals representing the applicants; local, state, and federal agencies; Indian tribes; and other stakeholders attended the meeting.

The applicants; local, state, and federal agencies; Indian tribes; and other stakeholders also filed written comments on the draft EIS, as follows:

<u>Commenting Entity</u>	<u>Date of Letter</u>
American Rivers	November 23, 2005
Cowlitz Indian Tribe	November 23, 2005
Cowlitz PUD	November 22, 2005
National Marine Fisheries Service	November 21, 2005
PacifiCorp	November 23, 2005
Swiftview Owners Group	November 21, 2005
Three Rivers Recreational Area	November 21, 2005
U.S. Department of the Interior	November 17, 2005
U.S. Department of Agriculture – Forest Service	November 21, 2005
U.S. Environmental Protection Agency	November 21, 2005
Washington Department of Fish and Wildlife	November 16, 2005
Washington State Department of Ecology	November 22, 2005
Confederated Tribes and Bands of the Yakama Nation	November 23, 2005

We modified the text of the EIS in response to these comments. Appendix A summarizes the comments that were filed, includes staff's responses to those comments, and indicates where modifications to the EIS were made.

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