

1.0 PURPOSE OF ACTION AND NEED FOR POWER

On July 21, 2003, Idaho Power Company (Idaho Power or Applicant) filed an application for license with the Federal Energy Regulatory Commission (Commission or FERC) for a new license for the Hells Canyon Project,⁸ FERC Project No. 1971, located on the Snake River in Washington and Adams counties, Idaho, and Wallowa and Baker counties, Oregon (figure 1). The current license expired on July 31, 2005, and the project is operating under an annual license.

The Hells Canyon Project consists of three developments (dams, reservoirs, and powerhouses) on the segment of the Snake River forming the border between Idaho and Oregon. The three developments are Brownlee, Oxbow, and Hells Canyon, which, combined, provide 1,167 megawatts (MW) of power generating capacity and 6,562,244 megawatt hours (MWh) of electricity annually. Federal lands within the current Hells Canyon Project boundary equal approximately 5,640 acres, including land managed by the U.S. Bureau of Land Management (BLM) and the U.S. Forest Service (Forest Service).

1.1 PURPOSE OF ACTION

The Commission must decide whether to relicense the Hells Canyon Project and, if so, what conditions should be placed on any license issued. In deciding whether to authorize the continued operation of the hydroelectric project and related facilities in compliance with the Federal Power Act (FPA) and other applicable laws, the Commission must determine that the project 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.

In this final environmental impact statement (final EIS), we, the Commission staff, assess the environmental and economic effects of: (1) continuing to operate the project as it is currently operated (No-action Alternative); (2) operating the project as proposed by Idaho Power (Idaho Power's Proposal); (3) operating the project as proposed by Idaho Power with additional or modified environmental measures (Staff Alternative); and operating the project as recommended under the Staff Alternative with additional mandatory conditions. We also consider federal takeover, issuance of a nonpower license, and project retirement options.

Briefly, the principal issues addressed in the final EIS include: (1) the effects of project operations on the erosion of sand from riverine beaches and terraces and the transport of spawning gravels from the riverbed downstream of Hells Canyon dam; (2) the effects of project operations on reservoir and downstream water quality parameters important to fish and wildlife; (3) the effects of project operations on downstream river navigation; (4) the feasibility of restoring runs of anadromous fish, including Pacific lamprey, to areas upstream of the project; (5) the effects of water level fluctuations within and downstream of the project on aquatic habitat and tributary access for native salmonids; (6) conservation and restoration of populations of white sturgeon; (7) protection and enhancement of wildlife habitat; (8) potential effects on threatened and endangered species; (9) the adequacy of recreational facilities to meet expected demand over the term of a new license; (10) the effects of project operations and potential enhancements on historic and archaeological sites, Native American rock art, traditional cultural properties (TCPs), and historic buildings and structures; (11) the cumulative effects of continued Hells Canyon Project operation in the context of past, present, and reasonably foreseeable water resource development elsewhere in the Snake River basin; and (12) the effects of potential operational changes and the funding of various enhancement measures on the project's electric power output and cost of project power.

⁸ Referred to in Idaho Power's application as the Hells Canyon Complex.

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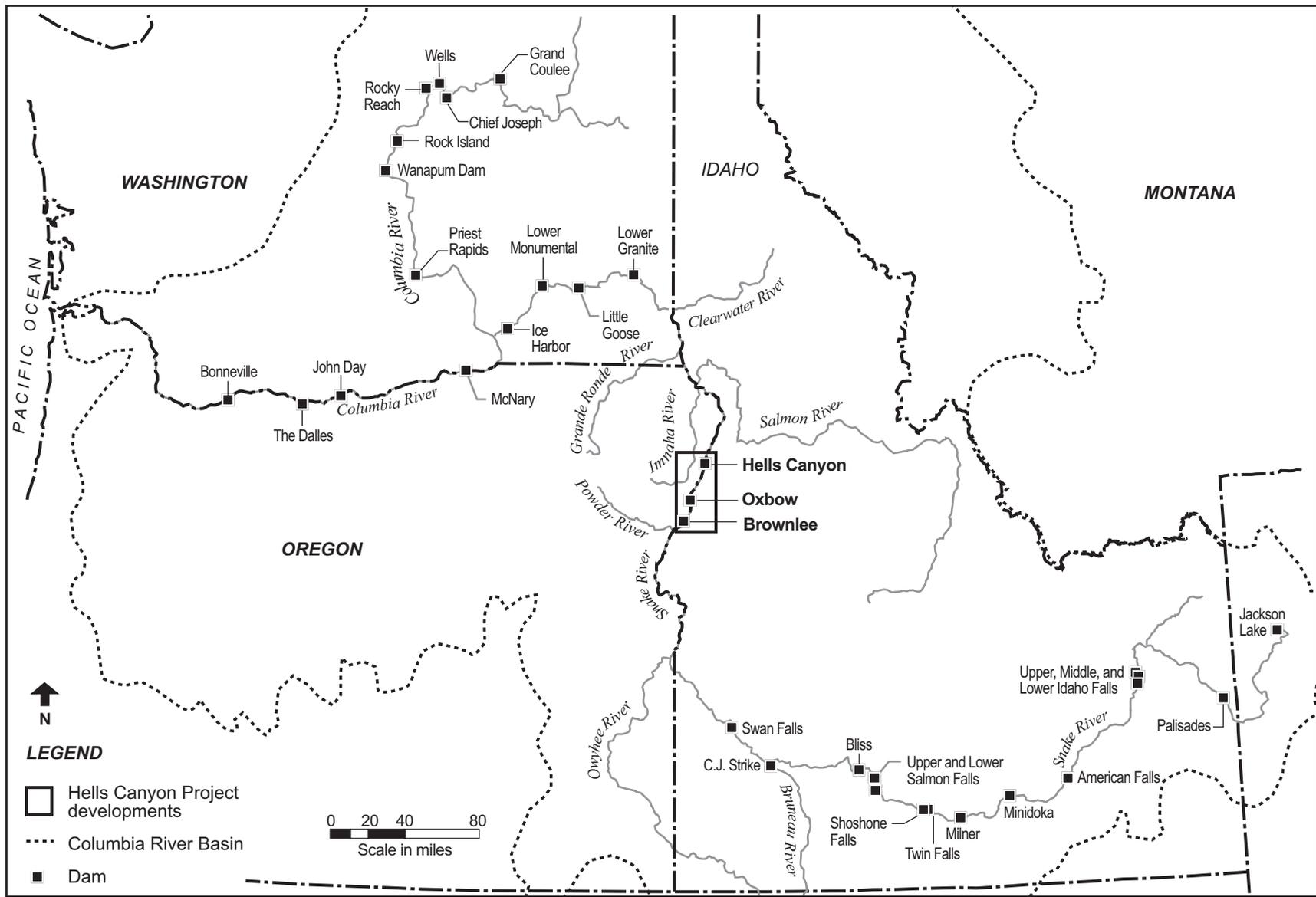


Figure 1. Location of the Hells Canyon Project. (Source: Staff)

1.2 NEED FOR POWER

Idaho Power is an investor-owned utility that serves about 456,000 customers in Idaho and Oregon and anticipates adding 11,000 to 12,000 new retail customers by 2025. As of year-end 2005, Idaho Power's peak electric power resources were 3,085 MW (nameplate), and Idaho Power's historical peak load (occurring in July 2006) was 3,084 MW. Idaho Power's average firm load in 2005 was 1,660 MW. In that year, Idaho Power customers' electrical energy needs were met by thermal generation (42 percent), hydroelectric generation (36 percent), and from power purchases (22 percent) (Idaho Power, 2006a).

Idaho Power owns about 1,379 MW of thermal generating capacity (nameplate). The primary baseload thermal power plants are shares of the Jim Bridger, Valmy, and Boardman coal-fired plants (1,111 MW baseload); the Danskin natural gas-fired plant (90 MW peaking); Bennett Mountain gas fired turbine (173 MW); and the Salmon diesel plants (5 MW emergency). Idaho Power also has more than 90 contracts to purchase power from Qualifying Facilities (cogeneration and small power production projects) with varying contract termination dates through the year 2028 (400 MW nameplate capacity).

Idaho Power's hydroelectric resources consist of 18 generating plants located along the Snake River and its tributaries. The combined nameplate capacity of these plants is 1,708 MW. With a nameplate capacity of 1,167 MW, the Hells Canyon Project is Idaho Power's largest power generating resource. The Hells Canyon Project provides approximately 67 percent of Idaho Power's annual hydroelectric generation and about 40 percent of the company's total annual generation. With extensive reservoir storage capacity at the Brownlee development, the Hells Canyon Project provides the major portion of Idaho Power's peaking and load-following capability.

Every 2 years, Idaho Power produces an Integrated Resource Plan to fulfill regulatory requirements and guidelines established by the Idaho and Oregon Public Utility Commissions. The purpose of the plan is to ensure that there are sufficient power resources to reliably serve Idaho Power's customers over the next 20 years with a portfolio of resources that balances cost, risk, and environmental concerns. Two additional goals include an equal and balanced treatment of both supply-side resources and demand-side measures and a meaningful public involvement program. Demand-side measures included demand response programs in both irrigation and air conditioning sectors. Energy efficiency programs in the residential, commercial, industrial, and irrigation sectors are also evaluated in the Integrated Resource Plan as demand-side measures. Demand-side measures that show positive economic benefits and are considered reasonably feasible for implementation are carried forward into the finalist energy portfolios.

Over the 2005–2025 planning period covered by the 2006 Integrated Resource Plan, Idaho Power forecasts the need for new resources based on an expected average annual growth rate of 2.0 percent in average energy requirements⁹. Idaho Power assumes the continued availability of existing resources under 70th percentile hydrologic conditions, the addition of a 170-MW combustion turbine at the Danskin Project¹⁰ in April 2008, and a 49-MW¹¹ upgrade at Shoshone Falls in 2010. With those assumptions, Idaho Power estimates a need to add about 350 to 400 MW of power generating capacity between now and 2010 in addition to the 170-MW Danskin Project and 49-MW Shoshone Falls upgrade. By 2025, additional capacity needs could approach 1,800 MW¹² under peak hour summer conditions. Additionally,

⁹ Load growth under the 70th percentile scenario would increase from 1,693 aMW in 2005 to 2,515 aMW in 2025.

¹⁰ The project is located northwest of Mountain Home, Idaho.

¹¹ The 49-MW upgrade will increase plant capacity to 62.5 MW.

¹² This computation is based on existing and committed resources and takes into account planned retirements.

an increase in transmission capability is needed to address deficiencies in transmission capacity that are forecast to begin during the summer months in 2009 and increase to 1,550 MW by 2025. Two potential early transmission projects include a 250-MW upgrade of the Borah–West transmission line and a 225-MW upgrade of the McNary–Boise transmission line. These projects would facilitate improved power flows and energy imports in the Idaho Power service area.

In the absence of the Hells Canyon Project, the estimated requirements for new resources would increase to 2,717 MW by 2025. A summary of potential capacity additions, including renewables such as wind and geothermal energy, is included in table 1. The precise location of such facilities will be determined based on the outcome of Idaho Power’s request for proposals (RFP) process or future agency siting decisions in response to Idaho Power’s proposals.

Table 1. Summary of Idaho Power’s preferred portfolio summary and timeline. (Source: Idaho Power, 2006d)

Year	Capacity (MW)	Resource
2008	100	Wind (2005 Request for Proposal)
2009	50	Geothermal (2006 Request for Proposal)
2019	50	Combined Heat and Power
2020	150	Wind
2010	225	Transmission McNary—Boise
2012	250	Wyoming Pulverized Coal
2012	250	Regional IGCC^a Coal
2013	50	Transmission Lolo—Idaho Power
2014	60	Combined Heat and Power
2021	100	Geothermal
2022	50	Geothermal
2023	250	Idaho National Laboratory Nuclear
	1,585	Total

^a Integrated gasification combined cycle.

We conclude there is a continuing need for the power generating capacity of the Hells Canyon Project.

1.3 INTERVENTIONS

On December 3, 2003, the Commission issued a notice accepting Idaho Power’s application and soliciting motions to intervene and protests. This notice set a 60-day period during which interventions and protests could be filed. The notice requesting comments on the draft EIS, issued on July 28, 2006, also solicited interventions to be filed by October 3, 2006. The following entities filed motions to intervene.

Entity	Filed Date
Payette Water Users Association	December 11, 2003
Washington County Board of County Commissioners	December 16, 2003
Pioneer Irrigation District and Settlers Irrigation District	December 16, 2003
Burns Paiute Tribe	December 19, 2003
American Rivers	January 15, 2004
Idaho Rivers United	January 16, 2004
Northwest Professional Power Vessel Association	January 20, 2004
Nez Perce Tribe	January 20, 2004
U.S. Department of Agriculture, Forest Service	January 23, 2004
U.S. Department of the Interior	January 26, 2004
State of Oregon	January 27, 2004
National Oceanic and Atmospheric Administration, National Marine Fisheries Service	January 29, 2004
State of Idaho	January 29, 2004
Columbia River Inter-Tribal Fish Commission	January 30, 2004
Northwest Resource Information Center, Inc.	January 31, 2004
Shoshone-Paiute Tribes (Protest)	February 2, 2004
Hells Canyon Alliance	February 9, 2004 ^a
Shoshone-Bannock Tribes	February 13, 2004 ^a
J.R. Simplot Company	February 2, 2005 ^a
Adams County, Idaho	February 22, 2005 ^a
Idaho Public Utilities Commission	February 23, 2005 ^a
Washington County Board of Commissioners	March 7, 2005 ^a
Committee of Nine	October 7, 2005 ^a
Lower Valley Energy	January 26, 2006 ^a
Nampa and Meridian Irrigation District	August 31, 2006
American Whitewater	September 12, 2006
Industrial Customers of Idaho Power	October 3, 2006

^a Late interventions were granted by notice dated August 18, 2006.

1.4 SCOPING PROCESS

Pursuant to the National Environmental Policy Act of 1969 (NEPA), we held scoping meetings in the project area, including two in Boise, Idaho (November 18, 2003) and one each in Halfway, Oregon (November 19); Weiser, Idaho (November 20); and Council, Idaho (November 20) to provide agencies and interested parties an opportunity to review and provide input concerning our Scoping Document 1, issued on October 20, 2003 (FERC, 2003).

During and immediately after the scoping comment period, the Commission received approximately 36 letters from agencies, tribes, non-governmental organizations (NGOs), and interested

businesses, along with approximately 1,175 letters and postcards from individuals. All comments received are part of the Commission’s official record for the project.

We revised Scoping Document 1 following the scoping meetings and after reviewing the comments filed during the scoping comment period, and we issued Scoping Document 2 on November 24, 2004 (FERC, 2004).

1.5 CONSULTATION

On October 28, 2005, the Commission issued a notice indicating that the project was ready for environmental review and setting a 90-day period (comments due by January 26, 2006) during which terms, conditions, prescriptions, and recommendations could be filed. Appendix A provides a complete listing of the terms, conditions, prescriptions, and recommendations that were filed, giving each an alpha-numeric identifier that is used throughout this EIS. The following entities filed comments, terms, conditions, prescriptions, or recommendations in response to the Commission’s notice.

Entity	Filed Date
Idaho State Historical Society	January 13, 2006 and January 27, 2006
Northwest Professional Power Vessel Association	January 23, 2006
State of Oregon (Oregon Water Resources Department, Department of Environmental Quality, Oregon State Marine Board, Department of Fish and Wildlife, Parks and Recreation Department, State Historic Preservation Office, Department of State Lands)	January 25, 2006
National Oceanic and Atmospheric Administration, National Marine Fisheries Service	January 26, 2006
Burns Paiute Tribe	January 26, 2006
U.S. Department of Agriculture, Forest Service	January 26, 2006
American Rivers and Idaho Rivers United	January 26, 2006
Department of the Army, Corps of Engineers	January 26, 2006
Confederated Tribes of the Umatilla Indian Reservation	January 26, 2006
State of Idaho (Department of Environmental Quality, Department of Fish and Game, Department of Parks and Recreation, Idaho Water Board, Idaho Land Board)	January 26, 2006
Shoshone-Paiute Tribes of the Duck Valley Indian Reservation	January 26, 2006
Lower Valley Energy	January 26, 2006
Nez Perce Tribe	January 26, 2006
U.S. Department of the Interior	January 26, 2006
The Shoshone-Bannock Tribes	January 26, 2006

Idaho Power and the Pioneer Irrigation District, Settler’s Irrigation District, and Payette River Water Users Association filed responses to the comments, terms, conditions, prescriptions, and recommendations on April 11, 2006.

1.6 COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

The Commission issued its draft EIS for the licensing of the Hells Canyon Project on July 28, 2006; initially requested that comments be filed by October 3, 2006; and later amended the due date to November 3, 2006. In appendix B, we summarize the comments received; provide responses to those comments; and indicate, where appropriate, how we have modified the text of the final EIS. We also include a list of the parties who filed comments, along with the filing dates.