

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

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Central Oregon Irrigation District

Project No. 3571-001

ORDER ISSUING LICENSE  
(Major Project - Unconstructed)  
(Issued September 29, 1987)

Central Oregon Irrigation District has filed a license application under Part I of the Federal Power Act (Act) to construct, operate, and maintain the Central Oregon Siphon Power Project, located in Deschutes County, Oregon, on the Deschutes River. The project would affect the interests of interstate or foreign commerce. The project will connect with Pacific Power and Light Company's licensed transmission line Project No. 8810.

Notice of the application has been published and comments have been received from interested federal, state, and local agencies. <sup>1/</sup> The Sunrise Village Homeowners and the Oregon Department of Fish and Wildlife have been granted intervention. The significant concerns of the intervenors are minimum flow, upstream fish passage, and scenic value of the river. These concerns, along with those of the commenting agencies are discussed in the Environmental Assessment.

Recommendations of Federal and State Fish and Wildlife Agencies

Section 10(j) of the Act, as amended by the Electric Consumers Protection Act of 1986 (ECPA), Public Law No. 99-495, requires the Commission to include license conditions, based on recommendations of federal and state fish and wildlife agencies, for the protection, mitigation, and enhancement of fish and wildlife. The environmental assessment for the Central Oregon Siphon Power Project addresses the concerns of the federal and state fish and wildlife agencies, and makes recommendations consistent with those of the agencies.

Comprehensive Plans

Section 10(a)(2) of the Act, as amended by ECPA, requires the Commission to consider the extent to which a project is consistent with comprehensive plans (where they exist) for improving, developing, or conserving a waterway or waterways affected by the project that are prepared by an agency established pursuant to federal law that

<sup>1/</sup> Revisions to the license application were filed on April 13, 1987, after additional consultations with agencies and land owners.

has the authority to prepare such plans or by the state in which the facility is or will be located. The Commission considers plans to be the preparers' own balancing of the competing uses of a waterway, based on their data and applicable policy considerations (i.e., consider and balance all relevant public use considerations). With regard to plans prepared at the state level, such plans are within the scope of Section 10(a)(2) only if they are prepared and adopted pursuant to a specific act of the state legislature and developed, implemented and managed by an appropriate state agency. <sup>2/</sup>

The staff identified one comprehensive plan <sup>3/</sup> of the type referred to in Section 10(a)(2) of the Act relevant to this project. The staff reviewed two resource plans <sup>4/</sup> that address various aspects of waterway management in relation to the proposed project as part of a broad public interest examination under Section 10(a)(1) of the Act. No conflicts were found.

Based upon our review of agency and public comments filed in this proceeding, and our independent analysis as discussed herein, the staff concludes that the Central Oregon Siphon Project is best adapted to a comprehensive plan for the Deschutes River, taking into consideration the beneficial public uses described in Section 10(a)(1) of the Act.

Summary of Findings

An Environmental Assessment (EA) was issued for this project. Background information, analysis of impacts, support for related license articles, and the basis for a finding of no significant impact on the environment are contained in the EA attached to this order. Issuance of this license is not a major federal action significantly affecting the quality of the human environment.

The design of this project is consistent with the engineering standards governing dam safety. The project will be safe if constructed, operated, and maintained in accordance with the requirements of this license. Analysis of related issues is provided in the Safety and Design Assessment attached to this order.

<sup>2/</sup> See Fieldcrest Mills, Inc. 37 FERC 61,264 (1986).

<sup>3/</sup> Northwest Power Planning Council's Northwest Conservation and Electric Power Plan, 1986; Northwest Power Planning Council's Columbia River Basin Fish and Wildlife Program, 1984; and Final Amendment Document, 1987.

<sup>4/</sup> Oregon State Parks and Recreation Division (1983) Oregon Outdoor Recreation, SCORP 1983; Oregon Water Resources Department (1985) State of Oregon Water Use Programs.



The Director, Office of Hydropower Licensing, concludes that the project would not conflict with any planned or authorized development, and would be best adapted to comprehensive development of the waterway for beneficial public uses.

The Director orders:

(A) This license is issued to Central Oregon Irrigation District (licensee), for a period of 50 years, effective the first day of the month in which this order is issued, to construct, operate, and maintain the Central Oregon Siphon Power Project. This license is subject to the terms and conditions of the Act, which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provision of the Act.

(B) The project consists of:

(1) All lands, to the extent of the licensee's interests in those lands, enclosed by the project boundary shown by Exhibit G:

Exhibit G-	FERC No. 3571 -	Showing
G-1	10	General Plan & Location Map
G-2	11	Project Boundary

(2) Project works consisting of: (a) an existing diversion structure containing two 12-foot-wide, 8-foot-high radial gates; (b) an existing 5,996-foot-long, 10-foot-diameter siphon; (c) and existing 1,400-foot-long, 10-foot-wide canal; (d) an 18-foot-high reinforced concrete side canal intake structure; (e) a 16-foot-high check structure, across the canal containing two 6-foot-high, 7-foot-wide sluice gates; (f) two 800-foot-long, 84-inch-diameter penstocks; (g) a powerhouse containing two turbine-generator units with a total rated capacity of 5.5 MW; (h) two 4.16-kV generator leads; (i) a switchyard containing a 4.16/69-kV, 6.15/7.685-MVA, 3-phase step-up transformer; and (j) other appurtenant facilities.

The project works generally described above are more specifically shown and described by those portions of Exhibits A and F recommended for approval in the attached Safety and Design Assessment.

(3) All of the structures, fixtures, equipment or facilities used to operate or maintain the project and located within the project boundary, all portable property that may be employed in connection with the project and located within or outside the project boundary, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) The Exhibit G described above and those sections of Exhibits A and F recommended for approval in the attached Safety and Design Assessment are approved and made part of the license.

(D) This license is subject to the articles set forth in Form L-4, (October 1975), entitled "Terms and Conditions of License for Unconstructed Major Project Affecting the Interests of Interstate or Foreign Commerce," except Articles 14 and 20. The license is also subject to the following additional articles:

Article 201. The licensee shall pay the United States the following annual charge, effective the first day of the month in which this license is issued:

For the purpose of reimbursing the United States for the cost of administration of Part I of the Act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 7,330 horsepower.

Article 202. The licensee shall clear and keep clear to an adequate width all lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which result from maintenance, operation, or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. All clearing of lands and disposal of unnecessary material shall be done with due diligence to the satisfaction of the authorized representative of the Commission and in accordance with appropriate federal, state, and local statutes and regulations.

Article 301. The licensee shall commence construction of project works within two years from the issuance date of the license and shall complete construction of the project within four years from the issuance date of the license.

Article 302. The licensee shall at least 60 days prior to start of construction, submit one copy to the Commission's Regional Director and two copies to the Director, Division of Inspections of the final contract drawings and specifications for pertinent features of the project, such as water retention structures, powerhouse, and water conveyance structures. The Director, Division of Inspections may require changes in the plans and specifications to assure a safe and adequate project.

Article 303. The licensee shall within 90 days of completion of construction file, for approval by the Commission, revised Exhibits A, F and G to describe and show the project as built.

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Article 401. The licensee, after consultation with the U.S. Fish and Wildlife Service, the Oregon Department of Fish and Wildlife, and the Oregon Department of Environmental Quality, shall prepare and file with the Commission for approval before commencing any project-related land-clearing, land-disturbing, or spoil-producing activities, a comprehensive plan to control erosion, dust, and slope stability, and to minimize the quantity of sediment or other potential water pollutants resulting from project construction, spoil-disposal, and project operation and maintenance. The Commission reserves the authority to require changes to the plan. No project-related land-clearing, land-disturbing, or spoil-producing activities shall begin until the licensee is notified that the plan complies with the requirements of this article. The plan shall be based on actual-site geological, soil, slope, and groundwater conditions and the final project design, and shall include detailed descriptions and functional design drawings of control measures, topographic map locations of all control measures, a specific implementation schedule, specific details of monitoring and maintenance programs for the project construction period and for project operation, and a schedule for periodic review of the plan and for making any necessary revisions to the plan. The licensee shall include in the filing documentation of consultation with the agencies before preparing the plan, copies of agency comments or recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how all of the agency comments and recommendations are accommodated by the plan. The licensee shall allow a reasonable time frame, in no case less than 30 days, for agencies to comment and make recommendations prior to filing the plan. If the licensee disagrees with any agency recommendations, the licensee shall provide a discussion of the reasons for disagreeing, based on actual-site geological, soil, and groundwater conditions, and shall also provide written responses from the agencies on the licensee's reasons for disagreement.

Article 402. The licensee shall discharge from the Central Oregon Siphon Power Project a continuous minimum flow of 400 cubic feet per second, as measured immediately downstream from the project diversion, or the inflow to the project, whichever is less, to protect and enhance fish, wildlife, and visual resources in the Deschutes River. This flow may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement between the licensee and the Oregon Department of Fish and Wildlife.

\* Article 403. The licensee, after consultation with the Oregon Department of Fish and Wildlife and the U.S. Fish and Wildlife Service, and within 6 months from the date of issuance of the license, shall file with the Commission for approval, functional design drawings of the project facilities that would automatically release the minimum flow required by article 402. The filing shall include documentation of agency consultation and

any agency comments on the drawings. The Commission reserves the right to require modifications to the drawings. The licensee shall file as-built drawings with the Commission within 3 months after completion of construction.

Article 404. The licensee, in cooperation with the Oregon Department of Fish and Wildlife, the U.S. Geological Survey, and the U.S. Fish and Wildlife Service, shall develop a plan to install a streamflow gage in the Deschutes River to monitor the minimum flow release required by article 402. The plan shall include the location and design of the gage, a schedule for the installation of the gage, the method of flow data collection, and a provision for providing the flow data to the agencies. The Commission reserves the right to require modifications to the plan. The plan shall be filed with the Commission for approval within 6 months from the date of issuance of the license and shall include comments from the consulted agencies on the plan.

Article 405. The licensee, after consultation with the Oregon Department of Fish and Wildlife (DFW) and the U.S. Fish and Wildlife Service (FWS), shall set limits on the maximum rate of change in project-affected river flows (the ramping rate) needed to protect fish and wildlife resources in the Deschutes River. At least 60 days before beginning operation of the project, the licensee shall file for Commission approval recommendations for ramping rates. The filing shall include comments from the DFW and the FWS on the ramping rate. The Commission reserves the right to require specified ramping rates.

- Article 406. The licensee, after consultation with the Oregon Department of Fish and Wildlife and the U.S. Fish and Wildlife Service, and within 6 months from the date of issuance of the license, shall file with the Commission for approval, functional design drawings of the downstream fish passage facilities that include modifications to the bypass metal deflector wall. The filing shall include documentation of agency consultation and any agency comments on the drawings. The Commission reserves the right to require modifications to the drawings. The licensee shall file as-built drawings with the Commission within 3 months after completion of the downstream fish passage facility modification and construction.

Article 407. The licensee, after consultation with the Oregon Department of Fish and Wildlife and the U.S. Fish and Wildlife Service, shall develop a monitoring plan to evaluate the efficiency of the downstream fish passage facility required by article 406 and to quantify associated fish losses. Within 6 months from the date of issuance of the license, the licensee shall file a copy of the monitoring plan, along with comments from the consulted agencies on the plan. The Commission reserves the right to require modifications to the plan.



The results of the monitoring shall be submitted to the Commission within 1 year from the date of issuance of the license, along with comments of the consulted agencies on the results. If the results of the monitoring indicate that modifications to the facility are necessary to minimize adverse effects to fish resources, the licensee also shall provide for Commission approval, recommendations for modifying the facility and a schedule for implementing the measures along with comments of the consulted agencies on the recommended measures. The Commission reserves the right to require modifications to the facility.

Article 408. The part of the revised Report on Fish, Wildlife, and Botanical Resources filed on April 13, 1987, entitled the Mitigation and Enhancement Agreement between the Licensee and the Oregon Department of Fish and Wildlife pertaining to fish mitigation and enhancement for the Deschutes River, is approved.

Article 409. The Commission, upon its own motion or upon the recommendation of federal or state fish and wildlife agencies or affected Indian Tribes, reserves the authority to order alterations of project structures and operations to take into account, to the fullest extent practicable, the regional fish and wildlife program developed and amended under the Pacific Northwest Electric Power Planning Conservation Act.

Article 410. The licensee, after consultation with the National Park Service, the Oregon Parks and Recreation Division, and the Bend Metro Park and Recreation District, shall develop a plan to monitor whitewater boating use in the bypassed reach of the Deschutes River. The plan shall include, but not be limited to: (a) identification of the methodology for determining existing and potential whitewater boating use of the bypass reach; (b) provisions for periodic review of the data with the consulted agencies; (c) provisions for filing a report on the need for measures pursuant to article 17 of the license that may be required to accommodate whitewater boating use of the bypassed reach after consultation with the aforementioned agencies.

The licensee shall file the plan for Commission approval within 1 year from the date of issuance of the license. The plan shall include the comments of the consulted agencies on the plan as filed with the Commission. The consulted agencies shall be provided copies of the plan at the same time it is filed with the Commission.

Article 411. The licensee, after consulting with the Oregon Parks and Recreation Division and the Bend Metro Park and Recreation District, shall construct a 6,400-foot-long foot trail from the intersection of the Pilot Butte Canal, to the Central Oregon Canal and project powerhouse. Further, the licensee shall provide one chemical toilet at the powerhouse and signs and trash receptacles at appropriate points along the trail. These facilities shall become operational at the same time that the project commences

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 No Acknowledged

operation. Within 3 months after the facilities are built, the licensee shall file for Commission approval as-built drawings depicting the layout of the project's recreational facilities.

Article 412. The licensee, before starting any land-clearing or land-disturbing activities within the project boundaries, other than those specifically authorized in the license, shall consult with the Oregon State Historic Preservation Officer (SHPO). Further, if the licensee discovers previously unidentified archeological or historic properties during the course of constructing or developing project works or other facilities at the project, the licensee shall stop all land-clearing and land-disturbing activities in the vicinity of the properties and consult with the SHPO. In either instance, the licensee shall file with the Commission a cultural resource management plan prepared by a qualified cultural resource specialist after having consulted with the SHPO.

The management plan shall include: (1) a description of each discovered property indicating whether it is listed on or eligible to be listed on the National Register of Historic Places; (2) a description of the potential effect on each discovered property; (3) proposed measures for avoiding or mitigating effects; (4) documentation of the nature and extent of consultation; and (5) a schedule for mitigating effects and conducting additional studies. The Commission may require changes to the plan.

The licensee shall not begin land-clearing or land-disturbing activities, other than those specifically authorized in this license, or resume such activities in the vicinity of a property, discovered during construction, until informed by the Director, Office of Hydropower Licensing, that the requirements of this article have been fulfilled.

Article 413. The licensee, in order to ensure the protection of the visual resources of the project area, shall adhere to the Brooks Resources Agreement dated October 18, 1986, including exhibits D, E, F1, F2, and G, as filed with the Commission on March 31, 1987, and shall adhere to the Sunrise Village Association Agreement dated August 5, 1987. These agreements provide narrative and graphic design standards for the powerhouse and tailrace, transformers, powerlines, the existing pool, the siphon, general landscaping, and the minimum streamflow for visual purposes.

Article 414. (a) In accordance with the provisions of this article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain other types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee shall also have continuing responsibility to supervise and control



the uses and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, cancelling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The types of use and occupancy of project lands and waters for which the licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 watercraft at a time and where said facility is intended to serve single-family type dwellings; and (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the uses and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges and roads for which all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead

electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. No later than January 31 of each year, the licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certificates or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from the edge of the project reservoir at normal maximum surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 45 days before conveying any interest in project lands under this paragraph (d), the licensee must submit a letter to the Director, Office of Hydropower Licensing, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked Exhibit G or K map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraphs (c) or (d) of this article:

(1) Before conveying the interest, the licensee shall consult with federal and state fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer.



(2) Before conveying the interest, the licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved Exhibit R or approved report on recreational resources of an Exhibit E; or, if the project does not have an approved Exhibit R or approved report on recreational resources, that the lands to be conveyed do not have recreational value.

(3) The instrument of conveyance must include covenants running with the land adequate to ensure that: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use, and (ii) the grantee shall take all reasonable precautions to ensure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project.

(4) The Commission reserves the right to require the licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised Exhibit G or K drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised Exhibit G or K drawings would be filed for approval for other purposes.

(g) The authority granted to the licensee under this article shall not apply to any part of the public lands and reservations of the United States included within the project boundary.

(E) The licensee shall serve copies of any Commission filing required by this order on any entity specified in this order to be consulted on matters related to that filing. Proof of service on these entities must accompany the filing with the Commission.

(F) This order is issued under authority delegated to the Director and is final unless appealed under Rule 1902 to the Commission by any party within 30 days from the issuance date of this order. Filing an appeal does not stay the effective date of this order or any date specified in this order. The licensee's failure to appeal this order shall constitute acceptance of the license.



Fred E. Springer  
Acting Director, Office  
of Hydropower Licensing