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35 FERC ¶61,433

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Anthony G. Sousa, Acting Chairman; Charles G. Stalon, Charles A. Trabandt and C. M. Naeve.

Dennis V. McGrew, Thomas M. McMaster and Kenneth R. Koch) Project No. 4586-001

ORDER ISSUING LICENSE
(Major Project - 5 MW or Less)

SWAMP CR FILES

(Issued June 30, 1986)

Dennis V. McGrew, Thomas M. McMaster, and Kenneth R. Koch have filed a license application under Part I of the Federal Power Act (Act), for the construction, operation, and maintainance of the Swamp Creek Project. The project would be located in Whatcom County, Washington, on Swamp Creek, a tributary to the Nooksack River. The project would occupy lands of the United States within the Mt. Baker National Forest.

Notice of the application has been published. No protests or motions to intervene were filed in this proceeding, and no agency objected to issuance of this license. Comments received from interested agencies and individuals have been fully considered in determining whether to issue this license, as discussed below.

Summary of Findings

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 and support for related license articles are provided in the Safety and Design Assessment attached to this order.

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.

We conclude that the project would not conflict with any planned or authorized development, and would be best adapted to comprehensive development of the waterway for all beneficial public uses.

The Commission orders:

(A) This license is issued to Dennis V. McGrew, Thomas M. McMaster and Kenneth R. Koch (licensees) 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 Swamp Creek 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 provisions of the Act.

(B) The project consists of:

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

Exhibit G-	FERC No. 4586-	Showing
1	5	Project Map
2	6	Transmission Line Alignment

(2) Project works consisting of: (a) an 8-foot-high, 50-foot-long concrete overflow-type diversion structure at elevation 3,073 feet with automatically-operated slide gates; (b) a 36-inch-diameter, 5,280-foot-long steel penstock; (c) a concrete block powerhouse containing one generating unit rated at 3.5 MW at a head of 900 feet; (d) a 50-foot-long rip-rap tailrace; (e) a 400-foot-long road extension and an existing 1,800-foot-long access road; (f) a 4.16/13.8-kV, 3.5/4.375-MVA transformer; (g) a 1,300-foot-long, 13.8-kV underground transmission line; (h) a 0.7-mile-long, 13.8-kV underground transmission line; (i) a 13.8/55-kV switchyard; (j) a 6.1-mile-long, 55-kV transmission line; and (k) 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 a part of the license.

(D) This license is subject to the following articles submitted by the United States Department of Agriculture - Forest Service:

Article 101. Within 6 months following the date of issuance of this license and before starting any activities of a land-disturbing nature, the licensees shall file with the Director, Office of Hydropower Licensing, a special-use authorization approved and enforceable by the Forest Service.

The licensees may not commence activities authorized in the license and Forest Service special-use authorization until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing instructs otherwise.

Article 102. Each year on or about the anniversary date of the license, the licensees shall consult with the Forest Service with regard to measures needed to ensure protection and development of the natural resource values of the project area. Within 2 months following said meeting, the Licensees shall file a report with the Commission of any recommendations made by these agencies. The Commission reserves the right, after notice and opportunity for hearing, to require changes in the project and its operation which may be necessary to accomplish natural resource protection and development.

Article 103. Within 1 year from the issuance of this license and before starting any activities of a land-disturbing nature, the licensees in consultation with the Forest Service, shall file a fish and wildlife habitat mitigation plan approved by the Forest Service with the Director, Office of Hydropower Licensing. This plan shall identify requirements for construction and mitigation measures to meet Forest Service fish and wildlife habitat objectives and standards. The plan also shall include a schedule for accomplishing these objectives and standards and shall identify any needs for additional studies.

The licensees may not commence activities affected by the plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing instructs otherwise.

Article 104. Within 1 year following the date of issuance of this license, and before starting any activities of a land-disturbing nature, the licensees shall file with the Director, Office of Hydropower Licensing, a plan approved by the Forest Service for accommodation of project induced recreation.

The licensees may not commence activities affected by the plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing instructs otherwise.

Article 105. Within 1 year following the date of issuance of this license and prior to the engaging of any activities of a land disturbing nature, the licensees in consultation with the Forest Service, shall complete a water quality study to assess the impact of the project on the water quality of Ruth and Swamp Creeks and file the study with the Director, Office of Hydropower Licensing, along with comments from the above agency. The Director may approve the study or require its modification. If the results of the approved study indicate that changes in project structures or operations are necessary to maintain water quality standards of the State of Washington, the licensees shall file with the Commission a mitigation schedule for implementing the specific changes in project structures or operations. At the same time, the Licensees shall send copies of the schedule to the agencies consulted.

The licensees may not commence activities affected by the plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing instructs othwerwise.

Article 106. Within 1 year following the date of issuance of this license, and before starting any activities of a land-disturbing nature, the licensees shall file with the Director, Office of Hydropower Licensing, a plan approved by the Forest Service for the control of erosion, stream sedimentation, dust, and soil mass movement.

The licensees may not commence activities affected by the plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing instructs otherwise.

Article 107. Within 1 year following the date of issuance of this license and before starting any activities of a land-disturbing nature, the licensees in consultation with the Forest Service shall file a plan for the treatment and disposal of solid waste and waste water generated during construction and operation of the project with the Director, Office of Hydropower Licensing and the Commission's Regional Director in Portland, Oregon, or their authorized representative. The plan shall address, at a minimum, the estimated quantity of solid waste and waste water generated each day; the location of disposal sites and methods of treatment; implementation schedule; areas available for disposal of wastes, design of facilities; comparisons between on-and off-site disposal; and maintenance programs. The plan will also contain evidence of agency concurrence.

The licensees may not commence activities affected by the plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing instructs otherwise.

Article 108. Within 1 year following the date of issuance of this license and at least 60 days before starting any activities of a land-disturbing nature, the licensees shall file a plan for oil and hazardous substances storage and spill prevention and cleanup approved by the Forest Service with the Director, Office of Hydropower Licensing.

The plan shall require, at a minimum, the licensees to maintain in the project area a cache of spill cleanup equipment suitable to contain any spill from the project; periodically inform the Forest Service of the location of the spill cleanup equipment on National Forest System lands and of the location, type and quantity of oil and hazardous substances stored in the project area; and to inform the Forest Service immediately of the nature, time, date, location, and action taken for any spill.

The licensees may not commence activities affected by the plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing instructs otherwise.

Article 109. Within 1 year following the date of issuance of this license and before starting any activities of a land-disturbing nature, the licensees shall file with the Director, Office of Hydropower Licensing a plan approved by the Forest Service for the storage and/or disposal of excess construction/tunnel spoils and slide material. At a minimum, the plan shall address contouring of any storage piles to conform to adjacent land forms and slopes; stabilization and rehabilitation of all spoil sites and borrow pits; and also prevention of water contamination by leachate and runoff. The plan also shall include an implementation schedule and maintenance program.

The licensees may not commence activities affected by the plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing instructs otherwise.

Article 110. If any previously unrecorded archeological or historical sites are discovered during the course of construction or development of the project, the licensees shall stop construction activity and consult the Forest Service and a qualified archeologist.

Prior to starting to excavate or remove any archeological resource located on National Forest System lands, the Licensees shall secure a permit from the Forest Service authorizing such excavation or removal.

Article 111. Within 1 year following the date of issuance of this license and before starting any activities of a land-disturbing nature relative to the construction of the proposed project features or facilities, the licensees shall file with the Director, Office

of Hydropower Licensing a plan approved by the Forest Service for the design and construction of the project facilities in order to preserve or enhance its visual character. The plan shall consider facility configurations and alignments, building materials, color, conservation of vegetation, landscaping, and screening. Project facilities include, among other things, the diversion structure, penstock, powerhouse, transmission lines and corridor, and all access roads.

The licensees may not commence activities affected by the plan until after 60 days following the filing date, unless the Director, Office of Hydropower Licensing instructs otherwise.

Article 112. The licensees shall not use pesticides or herbicides on National Forest System (NFS) lands for any purpose without the prior written approval of the Forest Service. Each year on or about the anniversary date of the license, the licensees shall file a pesticide and herbicide use plan approved by the Forest Service with the Director, Office of Hydropower Licensing. Exceptions to this schedule may be allowed only when unexpected outbreaks of pests require control measures that were not anticipated at the time the annual report was submitted. At that time the Forest Service may grant an emergency approval. The licensees shall, within 1 month, file a copy of this approval with the Director, Office of Hydropower Licensing. Only those materials registered by the U.S. Environmental Protection Agency for the specific purpose planned will be considered for use on National Forest System lands. Label instructions will be strictly followed in the preparation and application of pesticides and disposal of excess materials and containers.

Article 113. Within 2 months following written notice by the Forest Service, the licensees shall at the Licensees' expense, remove the aerial transmission lines to allow timber harvesting by cable logging methods. The transmission lines may be reinstalled after notice by the Forest Service that the logging has been completed.

Article 114. The licensees shall bury the distribution line along Forest Service Road No. 404 from the powerhouse to Silver Fir Campground. The location and depth of burial of the line will be acceptable to the Forest Service.

Article 115. The licensees shall construct road crossing over the pipeline/penstock at locations designated by the Forest Service. Such crossings will be designated to meet standards for carrying a loaded logging truck.

Article 116. Prior to starting construction or the removal of any timber in the project area, the licensees shall develop an agreement with the existing Andersaker Timber Sale purchaser if the sale has

not been closed. The agreement shall stipulate the method of disposal for timber within the project boundary and under the existing sale contract. The agreement must be acceptable to and approved by the Forest Service before timber removal may begin.

(E) This license is subject to the articles set forth in Form L-2, (October 1975), entitled "Terms and Conditions of License for Unconstructed Major Project Affecting Lands of the United States," designated as Articles 1 through 32 and attached to and made part of this license. The license is also subject to the following additional articles:

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

a. 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 4,670 horsepower.

b. For the purpose of recompensing the United States for the use, occupancy, and enjoyment of 11.1 acres of its lands other than for transmission line right-of-way, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time.

c. For the purpose of recompensing the United States for the use, occupancy, and enjoyment of 40.5 acres of its lands for transmission line right-of-way, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time.

Article 202. Pursuant to Section 10(d) of the Act, after the first 20 years of operation of the project under license, a specified reasonable rate of return upon the net investment in the project shall be used for determining surplus earnings of the project for the establishment and maintenance of amortization reserves. One half of the project surplus earnings, if any, accumulated after the first 20 years of operation under the license, in excess of the specified rate of return per annum on the net investment, shall be set aside in a project amortization reserve account at the end of each fiscal year. To the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year after the first 20 years of operation under the license, the amount of that deficiency shall be deducted from the amount of any surplus earnings subsequently accumulated, until

absorbed. One-half of the remaining surplus earnings, if any, cumulatively computed, shall be set aside in the project amortization reserve account. The amounts established in the project amortization reserved account shall be maintained until further order of the Commission.

The annual specified reasonable rate of return shall be the sum of the annual weighted costs of long-term debt, preferred stock, and common equity, as defined below. The annual weighted cost for each component of the rate of return shall be calculated based on an average of 13 monthly balances of amounts properly includable in the licensees' long-term debt and proprietary capital accounts as listed in the Commission's Uniform System of Accounts. The cost rates for long-term debt and preferred stock shall be their respective weighted average costs for the year, and the cost of common equity shall be the interest rate on 10-year government bonds (reported as the Treasury Department's 10-year constant maturity series) computed on the monthly average for the year in question plus four percentage points (400 basis points).

Article 301. The licensees 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 licensees 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 licensees shall review and approve the design of contractor-designed cofferdams and deep excavations prior to the start of construction and shall ensure that construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days prior to start of construction of the cofferdam, the licensees shall submit to the Commission's Regional Director and Director, Division of Inspections, one copy each of the approved cofferdam construction drawings and specifications and the letter(s) of approval.

Article 304. The licensees shall within 90 days of completion of construction file for approval revised Exhibits A, F, and G to describe and show the project as built.

Article 401. The licensees shall include an automatic shut-off feature on the proposed intake structure and, within 6 months from the date of issuance of this license, file with the Commission for

approval, functional design drawings of the structure for the intake of the proposed Swamp Creek Hydroelectric Project. The licensees shall file as-built drawings with the Commission within 3 months after completion of construction.

Article 402. The licensees shall operate the Swamp Creek Project in an instantaneous run-of-river mode for the protection of fish and wildlife resources in Swamp Creek. The licensees, in operating the project in an instantaneous run-of-river mode, shall at all times act to minimize the fluctuation of the reservoir surface elevation, i.e., maintain discharge from the project so that flow in Swamp Creek, as measured immediately downstream from the project tailrace, approximates the instantaneous sum of inflow to the project reservoir. Instantaneous run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the licensees, and for short periods upon mutual agreement between the licensees and the Washington Department of Game.

Article 403. The licensees shall maintain a continuous minimum flow of 5 cubic feet per second, or inflow to the project, whichever is less, as measured immediately downstream from the Swamp Creek Project diversion for the protection of fish and wildlife resources in Swamp Creek. This flow may be temporarily modified if required by operating emergencies beyond the control of the licensees, and for short periods upon mutual agreement between the licensees and the Washington Department of Game.

Article 404. The licensees, after consultation with the Washington Department of Game, the U.S. Fish and Wildlife Service, and the Forest Service, shall develop a mitigative plan that provides for measures to minimize the effect that the above-ground penstock may have on black-tailed deer movements. The plan shall be filed for Commission approval within 1 year from the date of issuance of this license. Agency comments on the plan shall be included in the filing.

Article 405. The licensees, after consultation with the Forest Service, Mt. Baker-Snoqualmie National Forest (FS), shall file a revised plan for project recreational development for Commission approval within 1 year from the date of issuance of this license. The plan shall include, but not be limited to: (a) a description of the facilities to be provided; (b) an indication of responsibility for construction, operation and maintenance of the facilities; and (c) estimates for the construction and continued operation costs to be borne by the licensees. The comments of the FS on the revised plan shall be included in the filing.

Article 406. The licensees, prior to any future construction at the project, shall consult with the Washington State Historic Preservation Officer (SHPO) and the Forest Service, Mt. Baker-Snoqualmie National Forest (FS) about the need for cultural resource survey and salvage work. Documentation of the nature and extent of consultation, including a cultural resources management plan and a schedule to conduct any necessary investigation prior to such construction, and copies of letters from the SHPO and FS accepting the plan, shall be filed with the Commission within 6 months of any construction activity in the location of such investigations. The licensees shall make available funds in a reasonable amount for any such work as required. If any previously unrecorded archeological or historical sites are discovered on National Forest System lands during the course of construction or development of any project works or other facilities at the project, the licensees shall stop construction activity in the vicinity of such archeological or historical sites and consult with the FS, the SHPO, and a qualified archeologist to determine the significance of the sites, and the licensees shall consult with the SHPO and the FS to develop a mitigative plan for the protection of significant archeological or historic resources. Prior to starting to excavate or remove any archeological resource located on National Forest System lands, the licensees shall secure a permit from the FS authorizing such excavation or removal. If the licensees, the SHPO, and the FS cannot agree on the amount of money to be expended on archoelogical or historical work related to the project, the Commission reserves the right to require the licensees to conduct, at its own expense, any such work found necessary.

Article 407. (a) In accordance with the provisions of this article, the licensees 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 licensees 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 licensees shall also have continuing responsibility to supervise and control the uses and occupancies for which they grant permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that they have conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensees 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 licensees 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 licensees 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 water craft 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 licensees shall require multiple use and occupancy of facilities for access to project lands or waters. The licensees shall also ensure, to the satisfaction of the Commission's authorized representative, that the uses and occupancies for which they grant 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 licensees 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 licensees 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 licensees' costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of their standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The licensees 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 licensees 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 licensees 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 licensees 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 licensees to file an application for prior approval, the licensees 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 licensees 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 licensees 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 licensees 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 licensees under this article shall not apply to any part of the public lands and reservations of the United States included within the project boundary.

(F) This order is final unless an application for rehearing is filed within 30 days from the date of its issuance, as provided in Section 313(a) of the Act. The filing of an application for rehearing does not operate as a stay of the effective date of this license or of any other date specified in this order, except as specifically ordered by the Commission. The licensees' failure to file an application for rehearing shall constitute acceptance of this license.

By the Commission.

(S E A L)

Kenneth F. Plumb

Kenneth F. Plumb,
Secretary.

SAFETY AND DESIGN ASSESSMENT
SWAMP CREEK PROJECT
FERC No. 4586-001, WASHINGTON

I. EVALUATION OF DESIGN, CONSTRUCTION AND PERFORMANCE

In response to U.S. Forest Service comments regarding the visual impacts of an overhead transmission line system, the applicants have proposed to bury the 13.8-kV project line to the Silver Fir Campground. A 6.1-mile-long 55-kV aerial line to the Nooksack Falls Project (P-3721) switchyard would complete the project scheme.

The proposed diversion dam would be 8 feet high impounding less than 1 acre-foot of storage in a rural undeveloped area. Failure of the dam and appurtenant structures would not pose a hazard to downstream property or human life.

II. EXHIBITS

The following parts of Exhibit A and the following Exhibit F drawings conform to the Commission's rules and regulations and should be included in the license:

Exhibit A, Section entitled "Description of Project and Proposed Mode of Operation"; subsections (i), (ii), (v), and (vii) of the application filed February 28, 1983. The project includes a 4.16/13.8-kV, 3.5/4.375-MVA tranformer; a 0.95-mile-long 13.8-kV underground transmission line; A 13.8/55-kV switchyard; and a 6.1-mile-long 55-kV aerial transmission line.

Exhibit F Drawing	FERC No. 4586-	Title
1	1	Powerhouse Plans and Sections
2	2	Diversion Structure and Intake Plan and Sections
3	3	Penstock Profile and Details

ENVIRONMENTAL ASSESSMENT 1/
Swamp Creek Hydroelectric Project
FERC No. 4586-001--Washington
April 18, 1986

I. APPLICATION

Dennis V. McGrew, Thomas M. McMaster, and Kenneth R. Koch (applicants) applied on February 28, 1983, for a major license, 5 megawatts (MW) or less, for the Swamp Creek Hydroelectric Project. The application was supplemented on February 24, 1984.

The Swamp Creek Project would be located on Swamp Creek, between 0.45 and 1.5 miles upstream of its confluence with the North Fork Nooksack River. The proposed project site is located approximately 12 miles east of Glacier, Washington, in Whatcom County (Figure 1).

The proposed project would be located entirely within the Mt. Baker-Snoqualmie National Forest. The project boundary would include 51.63 acres of federal land.

II. RESOURCE DEVELOPMENT

A. Purpose

The proposed project would provide an estimated 15 Gigawatt-hours (GWh) of electrical energy per year to Puget Sound Power & Light Company.

B. Need for Power

There is at this time available data to support an opinion that growth in the demand for electric power and energy (due to population growth, continuing demand for additional amenities, etc.) will continue. Given positive load growth and an existing resource base, a reliability need for additional resources can at any time be projected to exist at some time in the future for any power system. Additional resources would have to be obtained for any system at some point in time in order to meet projected additional load requirements with the same degree of reliability established by an existing criterion for the system. Timing of the need would vary in different systems dependent upon, among other things, the rates of load growth, the load characteristics, the available existing power resources, and the reliability criteria established for each system.

1/ "Figures and attachments referenced in the text are omitted from this document due to reproduction requirements."

Installation of a power resource prior to the existence of a reliability need can be justified if early installation of the resource will over its operating life provide benefits relative to operation of the system with the most likely alternative resource installed to meet the reliability need when it occurs. The early installation of a hydroelectric resource and the use of hydroelectric energy to displace more expensive thermal energy generation coupled with the incremental deferral of a thermal capacity alternative can produce economic benefits. Fossil fuel conservation and reduced atmospheric impacts of fossil fuel combustion are additional benefits of hydroelectric displacement and deferral of the thermal generation.

The Northwest Power Planning Council, in the 1985 Northwest Conservation and Electric Power Plan, projects a regional need for additional power resources by 1992 based on a mid-high growth rate forecast, and by 1996 based on a mid-low growth rate forecast (the two equally likely and most probable growth rate scenarios). The Bonneville Power Administration forecast released in December 1984 and the Pacific Northwest Utilities Conference committee forecast issued in March of 1985 show regional energy deficits for mid-range load forecasts in the 1997-1998 and 1995-1996 periods, respectively. Individual systems within the region also indicate resource deficits existing prior to the regional deficits.

The staff's economic analyses show that benefits are possible through installation of the project and, therefore, show a need for the project. From the time the project goes on line until needed to serve load directly, it will be available to off-load existing fossil-fueled electric generating plants located in the Pacific Northwest, California and the Southwest, and thereby, to conserve non-renewable resources and to reduce the emission of noxious by-products caused by the combustion of fossil fuels.

C. Hydroelectric Power and Resource Utilization Evaluation

The staff has made an independent study of the hydropower potential at the Swamp Creek Project site and found that the applicant's proposed installed capacity, estimated average annual generation, and selection of size and type of generation unit are reasonable for adequate development at the site. The cost of construction for the proposed project is estimated to be $5,049,000.

The project would have an installed capacity of 3.5 MW. The powerplant would generate an estimated average 15 GWh annually at a plant factor of 49 percent based on the applicant's proposed minimum instream flow release of 5 cubic feet per second (cfs) or the