97 FERC ¶ 62, 205
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Wisconsin River Power Company — Project No. 1984-056
Wisconsin

ORDER ISSUING NEW LICENSE
(Major Project)

(Issued December 7, 2001)

INTRODUCTION

On January 25, 1996, the Wisconsin River Power Company (WRPC) filed a license application under Sections 15 and 4(e) of the Federal Power Act (FPA)[1] to continue to operate and maintain the existing 35-megawatt (MW) Petenwell and Castle Rock Hydroelectric Project, consisting of two developments located on the Wisconsin River, a navigable waterway of the United States,[2] in Wood, Juneau, and Adams Counties, Wisconsin. WRPC proposes no construction or new capacity at the project. WRPC proposes project boundary changes that would remove a net of 371 acres of lands from the project. The project occupies 3.71 acres of federal lands.[3] This order issues a new license for the project.

BACKGROUND

The original license for the project was issued on December 12, 1950. The license expired on January 25, 1996, and since then, WRPC has operated the project under successive annual licenses pending the disposition of the application for a new license.

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[1]16 U.S.C. §§ 797(e) - 808.

[2]9 F.P.C. 1323 (1950).

[3]The project occupies three separate parcels of federal lands managed by the U.S. Bureau of Land Management. The parcels total 3.71 acres and are submerged in the Castle Rock Reservoir. The licensee pays annual land use charges therefor pursuant to Section 10(e) of the FPA, 16 U.S.C. § 803(e). Nothing in the record of this proceeding suggests that these federal lands are "reservations", as defined in FPA Section 3(2), 16 U.S.C. § 794(2).

Notice of the application was published on April 29, 1996. The U.S. Department of the Interior (Interior), the State of Wisconsin Department of Natural Resources (WDNR), the River Alliance of Wisconsin (RAW), and the Petenwell and Castle Rock Property Owners Association filed timely motions to intervene; none were in opposition. A late motion to intervene was filed with the Commission on August 20, 2001, which the Commission granted. This is discussed under "OTHER ISSUES". The motions to intervene and comments received from interested agencies and individuals have been fully considered in determining whether and under what conditions to issue this license.

A draft environmental assessment (DEA) for the Petenwell and Castle Rock Project was issued on June 23, 1998. The staff analyzed and considered all the comments filed on the DEA in preparing the final environmental assessment (FEA). Staff issued an FEA on November 8, 2000.

PROJECT DESCRIPTION

The Petenwell and Castle Rock Project consists of two developments on the Wisconsin River. The Petenwell Development, furthest upstream, is located at river mile 171.9, and the Castle Rock Development is at river mile 156.7. The Petenwell Development consists of an impounding structure comprising a series of dams and dikes, a reservoir with a surface area of 25,180 acres at the normal pool elevation, a powerhouse containing four generating units with a total installed capacity of 20 MW, and appurtenant facilities. The Castle Rock Development consists of an impounding structure comprising a series of dams and dikes, a reservoir with a surface area of 14,900 acres at the normal pool elevation, a powerhouse containing five generating units with a total installed capacity of 15 MW, and appurtenant facilities. A more detailed project description is contained in ordering paragraph (B)(2).

The project developments are proposed to operate in tandem. The upstream Petenwell Development would operate in a full peaking mode subject to seasonal minimum impoundment elevation restrictions and seasonal restrictions on allowable impoundment fluctuations. These seasonal fluctuation restrictions would vary from 1 foot during spring up to 4 feet in winter. The downstream Castle Rock Development would operate in a modified peaking mode with a 2,000-cubic-feet-per-second (cfs) minimum flow and would be subject to impoundment elevation restrictions, flow ramping rates, and an allowable impoundment fluctuation of 0.5 feet.

APPLICANT'S PLANS AND CAPABILITIES

In accordance with Sections 10 and 15 of the FPA, the staff evaluated WRPC's record as a licensee for these areas: (1) conservation efforts; (2) compliance history and ability to comply with the new license; (3) safe management, operation, and maintenance of the project; (4) ability to provide efficient and reliable electric service; (5) need for power; (6) transmission system; (7) cost effectiveness of the plans; and (8) actions affecting the public. I accept the staff's finding in each of these following areas.

1. Consumption Efficiency Improvement Program (Section 10(a)(2)(C))

Section 10(a)(2)(C) of the FPA requires the Commission to consider the electricity consumption improvement program of the applicant, including its plans, performance, and capabilities for encouraging or assisting its customers to conserve electricity cost-effectively, taking into account the published policies, restrictions, and requirements of state regulatory authorities. WRPC's parent company, Consolidated Papers, Inc., consumes almost 99 percent of the energy generated at the project. Consolidated Papers employs an energy manager who is responsible for energy matters at all its facilities. Consolidated Papers also has an energy coordinator and an energy committee at each of its pulp and paper mills.

Since the early 1970's, Consolidated Papers has made capital improvements associated with energy conservation projects and has implemented policies to buy only high-efficiency electric motors and convert to high-efficiency lighting where possible.

Consolidated Papers prepared and distributed an energy handbook to its employees and to Consolidated Water's 1,000 retail customers to promote saving energy at home and on the road. The booklet "Energy Tips from Consolidated Papers, Inc." contains 168 energy conservation ideas.

Based on this information, staff concludes that WRPC is making a good faith effort to conserve electric energy and promote energy conservation. Staff concludes that the applicant has and will continue to comply with Section 10 (a)(2)(C) of the FPA.

2. Compliance History, and Plans and Abilities to Comply with the New License (Sections 15(a)(2)(A) and 15(a)(3)(A))

Staff has reviewed WRPC's compliance with the terms and conditions of the existing license. Staff finds that WRPC's overall record of making timely filings and

compliance with its license is satisfactory. Staff concludes WRPC can satisfy the conditions of a new license.

3. Plans and Abilities of the Applicant to Manage, Operate, and Maintain the Project Safely (Section 15(a)(2)(B))

Staff reviewed WRPC's safety record for the Petenwell and Castle Rock Project. Based on this review, staff concludes the project would be safe and adequate for continued operation during the new license term, and would pose no threat to public safety if WRPC continues to operate and maintain the project according to good engineering practices, the license conditions, and the regulations governing our hydroelectric licenses.

4. The Plans and Abilities of the Applicant to Operate and Maintain the Project in a Manner Most Likely to Provide Efficient and Reliable Electric Service (Section 15(a)(2)(C))

Staff reviewed WRPC's plans and its ability to operate and maintain the project in a manner most likely to provide efficient and reliable electric service. WRPC has been operating the project in an efficient manner within the constraints of the existing license and is likely to continue to do so under a new license.

5. The Need of the Applicant Over the Short and Long Term for the Electricity Generated by the Project to Serve Its Customers (Section 15(a)(2)(D))

The Petenwell and Castle Rock Project has historically generated an annual average of 199.7 gigawatt-hours of power which assists in meeting reserve margins in the MAIN (Mid-America Interconnected Network). The power displaces nonrenewable fossil-fired generation and contributes to diversification of the generation mix in the MAIN.

Since 1950, the long operating history of the Petenwell and Castle Rock Project shows that there are short term and long term needs for the electricity generated by the project to serve the applicant's customers. WRPC can claim over 50 years of operating history and customer service. Staff finds the 50 years of operating history, when considered alongside the projected compound annual growth rates for summer and winter season peak-hour demands, support the applicant's short and long term needs for the electricity generated by the project.

Staff concludes that there is a need for power from the project.

6. The Impact of Receiving or Not Receiving the Project License on the Operation, Planning and Stability of Applicant's Transmission System (Section 15(a)(2)(E))

WRPC proposes no changes or additions to its transmission facilities. WRPC's transmission grid is flexible and has enough capacity to meet all demands of WRPC's retail customers. If it were not to receive a license for the project, it would continue to supply power to its customers by purchasing replacement power, which would have no detrimental effects on line loading, line losses, or requirements of new transmission facilities or upgrades of existing facilities.

7. Whether the Plans of the Applicant will be Achieved, to the Greatest Extent Possible, in a Cost Effective Manner (Section 15(a) (2) (F))

WRPC proposes no new construction or major changes in project operation. The mode of operation of the project would not change under a new license and the existing project which has had it's debt significantly reduced over the previous license would continue to be a very valuable source of economical electric power. The project with all of the proposed enhancement and mitigation measures would produce about 199.7 gigawatt-hours of power at a cost of about 28.1 mills per kilowatt hour. Staff concludes that the project, as presently configured and operated, fully develops and uses the economical hydropower potential of the site.

8. Actions Affecting the Public (Section 15(a)(3)(B))

Staff has no reason to doubt that WRPC will implement the various environmental and recreational enhancement measures proposed in the application and approved in this license. These measures, discussed elsewhere herein and in the EA, as well as the power to be generated by the project, will benefit the public.

PROJECT BOUNDARY

WRPC proposes changes to the project boundary that would remove a total of 389 acres of out-of-water lands from the project at six sites and would add 18 acres to the project at a seventh site for a net decrease of 371 acres.[4] As noted in the FEA, the lands

[4]The application for new project license states that: (1) 10 acres would be added to the project at the seventh site instead of 18 acres; and (2) the proposed boundary

(continued...)

the licensee intends to convey in connection with these boundary changes would result in only minimal effects on land use at the project. The FEA also notes that none of the lands involved in these boundary changes that are currently used for recreation would be converted to other uses.

The 18 acres to be added to the project are part of the existing Petenwell Veteran's Park and Armenia Landing. Considering that these lands are needed for recreation and buffer-zone purposes, the inclusion of these lands in the project is appropriate. Also considering that the 389 acres proposed for removal from the project are not needed for any project purposes and that a 100-foot-wide buffer strip would be retained in the project at four of the six land-removal sites, the exclusion of these lands from the project are appropriate. Article 205 requires the licensee to provide the Commission with revised maps showing the revised project boundary.[5]

CONSIDERATION OF ANCILLARY SERVICE BENEFITS

In analyzing public interest factors, the Commission takes into account that hydroelectric projects offer unique operational benefits to the electric utility system (ancillary benefits). These benefits include their value as almost instantaneous load-following response to dampen voltage and frequency instability on the transmission system, system-power-factor-correction through condensing operations, and a source of power available to help in quickly putting fossil-fuel based generating stations back on line following a major utility system or regional blackout.

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[4](...continued)
changes would result in a total net decrease in project lands of 374 acres instead of 371. By letter to the Commission, dated November 10, 1999, WRPC revised the application to correct these discrepancies, consistent with the above figures.

[5]Subsequent to the filing of the application for new project license, the Commission has issued five orders approving additional proposed changes to the project boundary. 81 FERC ¶ 62,133 (1997); 87 FERC ¶ 62,119 (1999); 87 FERC ¶ 62,308 (1999); 94 FERC ¶ 62,179 (2001); and 97 FERC ¶ 62,005 (2001). None of these orders involve lands associated with the boundary changes proposed in the relicensing application. However, each of the orders requires the licensee to show the approved changes on all future project boundary drawings filed with the Commission. Accordingly, the revised exhibit G drawing for the new project license should also reflect these previous project boundary changes.

Ancillary benefits are now mostly priced at rates that recover only the cost of providing the electric service at issue, which don't resemble the prices that would occur in competitive markets. As competitive markets for ancillary benefits begin to develop, the ability of hydro projects to provide ancillary services to the system will increase the benefits of the projects.

WATER QUALITY CERTIFICATION

Under Section 401(a)(1) of the Clean Water Act (CWA),[6] the Commission may not issue a license for a hydroelectric project unless the state water quality certifying agency either has issued a water quality certification for the project or has waived certification by failing to act on a request for certification within a reasonable period of time, not to exceed one year. Section 401(d) of the CWA provides that the State certification shall become a condition on any Federal license or permit that is issued.[7]

The WDNR received WRPC's request for Section 401 water quality certification for the Petenwell and Castle Rock Project on June 7, 1995, but the WDNR never denied or issued water quality certification. The WDNR failed to act within one year of the request, and therefore, certification was deemed waived.

COASTAL ZONE MANAGEMENT PROGRAM

The Petenwell and Castle Rock Project is not located in the state of Wisconsin's coastal zone boundary designated by the Coastal Zone Management Program. It is our assessment that no coastal zone consistency certification is needed for this project.

SECTION 18 OF THE FEDERAL POWER ACT

Section 18 of the FPA provides that the Commission shall require a licensee, at its own expense, to construct, operate, and maintain such fishways as may be prescribed by the Secretary of the Interior or the Secretary of Commerce, as appropriate.[8] By letter dated February 25, 1997, the Secretary of the Interior requested that a reservation of authority to prescribe the construction, operation, and maintenance of appropriate

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[6] 33 U.S.C. § 1341(a)(1).

[7] 33 U.S.C. § 1341(d)

[8] 16 U.S.C. § 811.

upstream and downstream fishways be included in any license issued for the Petenwell and Castle Rock Project. Article 404 reserves such authority.

RECOMMENDATIONS OF FEDERAL AND STATE FISH AND WILDLIFE AGENCIES UNDER FPA SECTION 10(j)

Section 10(j) of the FPA[9] requires the Commission, when issuing a license, to include license conditions based on the recommendations of the federal and state fish and wildlife agencies, submitted pursuant to the Fish and Wildlife Coordination Act,[10] to "adequately and equitably protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat)" affected by the project.

On February 24, and 25, 1997, the WDNR and FWS, respectively, submitted Section 10(j) recommendations for the project. Of the 66 recommendations that were submitted, staff determined that 18 were not within the scope of Section 10(j).[11] Of the 48 recommendations that properly fall within the scope of Section 10(j), this order includes conditions consistent with 44 of them. Staff made a preliminary determination that the remaining 4 recommendations for: 1) target reservoir elevations; 2) USGS stream flow gages; 3) water quality monitoring; and 4) fish entrainment protection devices were inconsistent with purposes and requirements of the FPA. On October 22, 1998, a 10(j) meeting was held with the WDNR and FWS in attempt to resolve these issues. With the exception of fish entrainment, these issues were resolved and conditions have been included in the license, as appropriate. With respect to fish entrainment, staff determined that there is no need to install the recommended fish protection devices, because there is no evidence that fish entrainment and turbine mortality at the project are adversely affecting the Wisconsin River fishery resources, and the installation of expensive protection devices would unduly affect developmental resources. These issues are addressed in detail in the FEA for the Petenwell and Castle Rock Project.

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[9]16 U.S.C. § 803(j).

[10]16 U.S.C. § 661 et seq.

[11]These recommendations were considered under Section 10(a) of the FPA and were, for the most part adopted as conditions of the license.

ENDANGERED SPECIES ACT

Section 7(a)(2) of the Endangered Species Act of 1973[12] requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of federally-listed threatened and endangered species, or result in the destruction or adverse modification of their critical habitat.

Two federally-listed species, the bald eagle (*Haliaeetus leucocephalus*; threatened) and Karner blue butterfly (*Lycaeides melissa samuelis*; endangered), occur in the vicinity of the project. On January 6, 1999, Commission staff sent a letter to FWS, with the DEA attached, concluding the proposed action will "not likely adversely affect" the listed species. In a letter dated February 2, 1999, FWS concurred with the staff's conclusion. Therefore, no further consultation is required for this licensing action. This license includes measures to protect the bald eagle and Karner blue butterfly and their habitats at the project, consistent with Interior's recommendations (Article 407).

COMPREHENSIVE PLANS

Section 10(a)(2) of the FPA[13] requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project.[14] Of the 66 comprehensive plans filed with the Commission, staff identified and reviewed 9 plans relevant to the Petenwell and Castle Rock Project.[15] No inconsistencies were found.

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[12]16 U.S.C. § 1536(a).

[13]16 U.S.C. § 803(a)(2)(A).

[14]Comprehensive plans are defined at 18 C.F.R. § 2.19 (2001).

[15]The Fish and Wildlife Service's (FWS') Fisheries USA: the Recreational Fisheries Policy of the U.S. Fish and Wildlife Service, undated; the FWS' and Canadian Wildlife Service's (CWS') North American Waterfowl Management Plan, 1986; the FWS' and CWs' North American Wildlife Management Plan, 1986; the National Park Service's The Nationwide Rivers Inventory, 1982; the Wisconsin Department of Natural Resources' (WDNR's) Final Environmental Impact Statement for Proposed Lower Wisconsin State Riverway, 1988; the WDNR's Statewide Comprehensive Outdoor Recreation Plan, 1991-1996, 1991; the WDNR's Upper Wisconsin River Southern Sub-basin Water Quality Management Plan, 1992; the WDNR's Wisconsin Water Quality

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HISTORIC PROPERTIES

Article 412 of this license requires the licensee to implement the "Programmatic Agreement Among The Federal Energy Regulatory Commission, The Advisory Council On Historic Preservation, The State Of Wisconsin, State Historic Preservation Officer, And The State Of Michigan, State Historic Preservation Officer, For Managing Historic Properties That May Be Affected By New and Amended Licenses Issuing For The Continued Operation Of Existing Hydroelectric Projects In The State Of Wisconsin And Adjacent Portions Of The State Of Michigan," executed on December 30, 1993, including but not limited to the Historic Resources Management Plan (HRMP) for the project. For the Petenwell and Castle Rock Project, this agreement serves to satisfy the Commission's responsibilities under Section 106 of the National Historic Preservation Act.[16]

OTHER ISSUES

Kim Kinnas filed a motion for late-intervention which the Commission has granted. Kinnas represents residents, business owners, and recreational users in the Wisconsin River reach downstream of Castle Rock dam and the impoundment created by the Kilbourn Project in an area known as Point Bluff Resort.[17] Kinnas states that in the reach between Castle Rock dam and the Kilbourn impoundment water level fluctuations are extreme and that these fluctuations result in making this area unusable to watercraft and creates unnecessary erosion and flooding.

The Kilbourn dam, located in Wisconsin Dells, Wisconsin, operates in essentially a run-of-river mode except during low-flow periods during the boat tour season in the Wisconsin Dells (Dells) when discharges from the Kilbourn Project are reshaped to provide more flow downstream during daylight hours. WRPC provides a recreational flow release from the Castle Rock dam during low-flow periods to enhance boating in the Dells. Currently, at inflows of less than 1000 cfs WRPC operates one turbine continuously. Between inflows of 1,000 to 2,700 WRPC discharges 1,000 cfs from noon

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[15](...continued)
Assessment Report to Congress, 1994; and the WDNR's Petenwell and Castle Rock Flowages Comprehensive Management Plan, 1996.

[16]16 U.S.C. § 470s.

[17]The Kilbourn project is a non-jurisdictional project owned and operated by Wisconsin Power and Light Company.

to midnight and up to 2,700 cfs from midnight to noon. At inflows greater than 2,700 cfs the minimum flow is increased until 2,700 cfs can be provided at all times and, as flow permits, daytime generation is increased.[18] Because the typical travel time to the Dells from the Castle Rock dam is 8 hours, this operation provides water to the Dells area during the peak boating time of day.[19]

Kinnas provided information taken from a staff gage installed by WRPC at the Point Bluff Resort area. During installation of the gage on July 31, 2001, Kinnas was told by WRPC that water availability was low due to a lack of rain. The staff gage data submitted by Kinnas indicates that from about the morning of August 2 through late-afternoon August 5, 2001, water surface elevations rose 4 feet after 4 inches of rain had fallen. Kinnas asks that the Commission reassess the impacts of the Kilbourn dam and Castle Rock dam in the reach downstream of Castle Rock.

Staff concludes that the FEA adequately assesses flow effects on the river reach between Castle Rock dam and the Kilbourn impoundment. Staff also reviewed flow data for the Wisconsin River during July, August and September 2001, covering the period reported by Kinnas.

Staff notes that the time period leading up to August 2 though 5, was a low-flow period in the Wisconsin River. According to U.S.G.S. stream flow data from the Wisconsin River near Dells, Wisconsin (USGS gage No. 05404000), mean daily flows for the 5 days leading up to August 2 ranged between 3,100 cfs and 3,580 cfs. Flows in this range correspond to a flow that is exceeded approximately 80 to 75 percent of the time. On August 2 the mean daily flow was 5,850 cfs which corresponds to a flow that is exceeded about 50 percent of the time. By August 3 and 4 mean daily flows were 11,700 and 11,100 cfs, respectively.[20] These flows very nearly approach the flow exceeded only 10 percent of the time.

During August, WRPC operates the Castle Rock development project with a 1-foot impoundment fluctuation. At a flow of 10,000 cfs, the 1-foot of storage space in the 14,900-acre Castle Rock impoundment would be filled in about 18 hours. At a flow of 10,000 cfs, the 2,150-acre Kilbourn impoundment would fill in about 2.5 hours.

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[18]FEA at p. 43.

[19]FEA at p. 65.

[20]These are mean daily flows; instantaneous peak flows may have been somewhat greater.

The Final EA discusses recreational boating in the reach of river between Castle Rock dam and the Kilbourn impoundment.[21] As part of the relicensing process an incremental release exercise was conducted by WRPC, WDNR and FWS during the summer of 1994 at the Castle Rock Development; this exercise showed that a discharge of 2,000 cfs was adequate for recreational navigation downstream of Castle Rock dam.

Staff concludes that Kinnas' observations are the result of high flows in the Wisconsin River following an extended dry period, and perhaps to some extent, the operation of the Kilbourn Project. The 4 inches of rain following an extended dry period resulted in greater than normal surface run-off. Consequently, flows in the Wisconsin River increase from about the 80 percent exceedence flow to about the 10 percent exceedence flow over a 48 hour period. This time period and flow rate would be sufficient to quickly overwhelm the storage available in the Castle Rock impoundment and the Kilbourn impoundment during the August period in question. Once the Castle Rock and Kilbourn impoundments were overwhelmed river stages rose at a natural rate due to 4 inches of rain falling in a very short period. In fact, Kinnas' data appears to confirm our conclusion. Kinnas' data from August 7 through 15, when mean daily flows were between 4,030 and 3,310 cfs indicated that water surface elevations fluctuated by only 1.5 feet.

Our required 2,000 cfs minimum flow should alleviate the flow fluctuations in the river reach downstream of the Castle Rock dam. At any given volume, discharging a higher minimum flow would result in lower maximum flows and consequently water surface elevations would fluctuate over a narrower range. However, once the Castle Rock impoundment and Kilbourn impoundment are filled water surface elevations would rise naturally. In conclusion, Kinnas' observations came as a result of a considerable amount of precipitation falling over a very short period of time following a lengthy dry period which resulted in higher than expected surface run-off. Situations such as this are expected to occur infrequently, and modifications of flow releases at Castle Rock under such extreme rainfall events would be expected to have little effect in moderating flows during such an event. Staff concluded that the 2000 cfs minimum flow required in this license would adequately support recreational boating in the reach downstream of Castle Rock dam.

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[21] FEA at p. 64-66.

COMPREHENSIVE DEVELOPMENT

Sections 4(e) and 10(a)(1) of the FPA,[22] respectively, require the Commission to give equal consideration to the power development purposes and to the purposes of energy conservation, the protection, mitigation of damage to, and enhancement of fish and wildlife, the protection of recreational opportunities, and the preservation of other aspects of environmental quality. Any license issued shall be such as in the Commission's judgment will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for all beneficial public uses. The decision to license this project, and the terms and conditions included herein, reflect such consideration.

In determining whether a proposed project will be in the public interest, the Commission considers the economic benefits of project power. As was articulated in Mead Corp.,[23] staff employs an analysis that uses current costs to compare the costs of the project and likely alternative power, with no forecasts concerning potential future inflation, escalation, or deflation beyond the license issuance date. The basic purpose of the analysis is to provide general estimates of the potential power benefits and costs of a project, and reasonable alternatives to project power. The Commission considers the project power benefits both with the applicant's proposed mitigation and enhancement measures and with the Commission's modifications and additions to the applicant's proposal.

The Petenwell and Castle Rock Project, as proposed by WRPC and with staff-recommended measures, would produce a total average of 199.7 GWh of energy annually at an annual cost of about $5,612,600, or 28.10 mills per kilowatt-hour (mills/kWh). Based on the cost of replacing the project's power with combined-cycle gas turbines, which staff considers the most likely alternative power source for these projects, the current annual value of the project's power would be about $ 6,434,900 (about 32.22 mills/kWh). To determine whether the proposed project is currently economically beneficial, staff subtracts the project's cost from the value of the power it produces. Based on current costs, the project over a 30-year license term, would have a positive annual net economic benefit of about $822,300 or 4.12 mills/kWh.

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[22] 16 U.S.C. §§ 797(e) and 803(a)(1)

[23] 72 FERC ¶ 61,207 (1995).

LICENSE TERM

Pursuant to Section 15(e) of the FPA,[24] relicense terms shall not be less than 30 years nor more than 50 years from the date on which the license is issued. Our general policy is to establish 30, 40, or 50-year terms for projects with, respectively, minor, moderate, or extensive redevelopment, new construction, new capacity, or additional environmental measures.[25]

The amount of proposed new investment in environmental measures at the project is relatively modest. Consequently, a 30-year term of license for the Petenwell and Castle Rock Project is appropriate.

SUMMARY OF FINDINGS

The FEA contains background information, analysis of effects, support for related license articles, and the basis for a finding that the project will not result in any major long-term adverse environmental impacts. The design of this project is consistent with the engineering standards governing dam safety. The project would be safe if operated and maintained in accordance with the requirements of this license.

Based on the review and evaluation of the project, as proposed by the applicant, and with the additional staff-recommended environmental measures, I conclude that the continued operation and maintenance of the project in the manner required by the license, will protect and enhance fish and wildlife resources, water quality, recreational, aesthetic, and cultural resources. The electricity generated from this renewable water power resource will be beneficial because it will continue to offset the use of fossil-fueled, steam-electric generating plants, thereby conserving nonrenewable resources and reducing atmospheric pollution. I conclude that the Petenwell and Castle Rock Project, with the conditions and other special license articles set forth below, will be best adapted to the comprehensive development of the Wisconsin River for beneficial public uses.

The Director orders:

(A) This license is issued to the Wisconsin River Power Company (licensee), for a period of 30 years, effective the first day of the month the license is issued, to continue to operate and maintain the Petenwell and Castle Rock Hydroelectric Project. This

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[24] 16 U.S.C. § 808(e).

[25] See Consumers Power Company, 68 FERC ¶ 61,077 at pp. 61,383-84 (1994).

license is subject to the terms and conditions of the Federal Power Act, which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the FPA.

(B) The project consists of:

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

Exhibit G	FERC Drawing No.	Showing
Sheets 1 through 35	1984-1009 through 1984-1043	Project Boundary

(2) The Petenwell and Castle Rock Project consists of the 20-MW Petenwell Development and the 15-MW Castle Rock Development. Together these developments provide average annual generation of about 200,000 megawatt-hours (MWh).

The Petenwell Development consists of (1) a reservoir with a drainage area of 5,800 square miles, a normal surface area of 25,180 acres and a storage volume of 495,000 acre-feet at the normal operating water surface elevation of 923.9 feet national geodetic vertical datum (NGVD), that is controlled by Petenwell dam located at river mile 171.9 on the Wisconsin River; (2) the East dike, which is 7,000 feet long and 20 feet high with a top width of 12 feet at a crest elevation of 933.9 feet NGVD and constructed of compacted sand with a riprapped upstream face; (3) the East dam, which is 8,000 feet long and 50 feet high with a top width of 12 feet at a crest elevation of 933.9 feet NGVD and constructed of compacted sand with riprapped upstream face and gravel toe drains; (4) the West dike, which is 5 miles long and 20 feet high with a top width of 12 feet at a crest elevation of 933.9 feet NGVD and constructed of compacted sand with a riprapped upstream face; (5) the West dam, which is 500 feet long and 50 feet high with top width of 12 feet at a crest elevation of 933.9 feet NGVD and constructed of compacted sand with riprapped upstream face and gravel toe drains; (6) a 525-foot-long concrete overflow spillway with 30-foot-deep sheetpile cutoff and a crest elevation of 905.9 feet NGVD, with 15 radial gates, each 30 feet wide and 18 feet high, operated by individual hydraulic cylinder hoists and separated by concrete piers; (7) a regulating bay containing one electric chain hoist operating a 30-foot by 18-foot radial gate and a stilling basin separated from the rest of the spillway by a concrete wall; (8) a 159-foot-long powerhouse with 110-foot-wide concrete substructure, including intake and draft tubes, a 50-foot-wide masonry superstructure, and a truss-supported roof, containing four turbine/generating units having a total rated capacity of 20 MW and total hydraulic capacity of 6,720 cfs and protected by trashracks with 4.5-inch openings; (9) four S. Morgan Smith 110-inch-diameter four-blade vertical Kaplan turbines with a rated

head of 41 feet and rated output of 7,200 horsepower operating at 163.6 rpm and controlled by Woodward type H.R. governors rated at 60,000 foot-pounds; (10) four vertical General Electric synchronous generators operating at 163.6 revolutions per minute (rpm), with a power factor of 0.8 rated at 6,250 kilovolt-amperes (kVA); (11) a switchyard containing two Westinghouse 6.9/138-kV power transformers rated at 15 megavolt-amperes (MVA); and (12) accessory equipment, including a 50-ton overhead traveling crane in the powerhouse, two gantry cranes, a compressed air system, a spillway bubbler system, and a battery bank.

The Castle Rock Development consists of (1) a reservoir with a drainage area of 6,870 square miles, a normal surface area of 14,900 acres, and a storage volume of 136,000 acre-feet at the normal operating water surface elevation of 881.9 feet NGVD, that is controlled by Castle Rock dam located at river mile 156.7 on the Wisconsin River; (2) the East dike, which is 3.3 miles long and nearly 25 feet high with top width of 12 feet at a crest elevation of 891.4 feet NGVD and constructed of compacted sand with a riprapped upstream face; (3) an earth dam 1,400 feet long and 45 feet high with a top width of 12 feet at a crest elevation of 891.4 feet NGVD and constructed of compacted sand with riprapped upstream face and gravel toe drains; (4) a saddle dike 500 feet long; (5) a 590-foot-long concrete overflow spillway with 35-foot-deep sheetpile cutoff and a crest elevation of 863.4 feet NGVD, with 17 30-foot by 18-foot radial gates operated by individual hydraulic cylinder hoists and separated by concrete piers; (6) a regulating bay containing one electric chain hoist operating a 30-foot by 18-foot radial gate and a stilling basin separated from the rest of the spillway by a concrete wall; (7) a 193-foot-long powerhouse with 107-foot-wide concrete substructure, including intake and draft tubes, a 50-foot-wide masonry superstructure, and a truss-supported roof, containing five turbine/generating units having a total rated capacity of 15 MW and total hydraulic capacity of 7,520 cfs protected by trashracks with 4.5-inch openings; (8) five S. Morgan Smith 110-inch-diameter four-blade vertical Kaplan turbines with a rated head of 28 feet and rated output of 4,370 horsepower operating at 150 rpm; (9) five vertical Allis Chalmers synchronous generators operating at 150 rpm, with a power factor of 0.8 rated at 3,750 kVA; (10) a switchyard containing two 4.2/69-kV power transformers rated at 15 MVA; and (11) accessory equipment, including a 34-ton overhead traveling crane in the powerhouse, two gantry cranes, a compressed air system, a spillway bubbler system, and a battery bank.

The project works described above are specifically shown in exhibit F listed below:

Exhibit F: The following exhibit F filed on January 25, 1996:

Exhibit F Drawing	FERC Drawing No.	Description
Sheet 1 of 8	1984-1001	Petenwell Development Reservoir Area and Profile
Sheet 2 of 8	1984-1002	Petenwell Development General Plan and Sections
Sheet 3 of 8	1984-1003	Petenwell Development Plan of Dams and Sections
Sheet 4 of 8	1984-1004	Petenwell Development Powerhouse Plan and Sections
Sheet 5 of 8	1984-1005	Castle Rock Development Reservoir Area and Profile
Sheet 6 of 8	1984-1006	Castle Rock Development General Plan and Sections
Sheet 7 of 8	1984-1007	Castle Rock Development Plan of Dams and Sections
Sheet 8 of 8	1984-1008	Castle Rock Development Powerhouse Plan and Sections

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

(C) The exhibits G and F described above are approved and made part of the license except as modified by Article 205; exhibit G is approved only to the extent that it shows the general project location.

(D) This license is subject to the articles set forth in Form L-5 (October 1975), entitled "Terms and Conditions of License for Constructed Major Project Affecting Navigable Waters and Lands of the United States," and the following additional articles:

Article 201. The licensee shall pay the United States the following annual charges as determined by the Commission, effective the first day of the month in which this license is issued for the purpose of:

(1) Reimbursing the United States for the cost of administration of Part I of the Federal Power Act. The authorized installed capacity for that purpose is 35,000 kilowatts.

(2) Recompensing the United States for the use, occupancy, and enjoyment of 3.71 acres of its lands (other than for transmission line right-of-way).

Article 202. Within 45 days of the date of issuance of the license, the licensee shall file an original set and two duplicate sets of aperture cards of the approved drawings. The set of originals must be reproduced on silver or gelatin 35mm microfilm. The duplicate sets are copies of the originals made on diazo-type microfilm. All microfilm must be mounted on type D (3-1/4" x 7-3/8") aperture cards.

Prior to microfilming, the FERC Drawing Number (Exhibit G, 1984-1009 through 1044, and Exhibit F, 1984-1001 through 1008) shall be shown in the margin below the title block of the approved drawing. After mounting, the Commission Drawing Number must be typed on the upper right corner of each aperture card. Additionally, the Project Number, Commission Exhibit (e.g., F-1, G-1, etc.), Drawing Title, and date of this license must be typed on the upper left corner of each aperture card.

The original and one duplicate set of aperture cards must be filed with the Secretary of the Commission, ATTN: OEP. The remaining duplicate set of aperture cards shall be filed with the Commission's Chicago Regional Office.

Article 203. Pursuant to Section 10(d) of the Federal Power Act, 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. The licensee shall set aside in a project amortization reserve account at the end of each fiscal year one half of the project surplus earnings, if any, in excess of the specified rate of return per annum on the net investment. To the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year, the licensee shall deduct the amount of that deficiency from the amount of any surplus earnings subsequently accumulated, until absorbed. The licensee shall set aside one-half of the remaining surplus earnings, if any, cumulatively computed, in the project amortization reserve account. The licensee shall maintain the amounts established in the project amortization reserve account until further order of the Commission.

The specified reasonable rate of return used in computing amortization reserves shall be calculated annually based on current capital ratios developed from an average of 13 monthly balances of amounts properly included in the licensee's long-term debt and proprietary capital accounts as listed in the Commission's Uniform System of Accounts. The cost rate for such ratios shall be the weighted average cost of long-term debt and preferred stock 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 204. If the licensee's project was directly benefitted by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement during the term of the original license (including extensions of that term by annual licenses), and if those headwater benefits were not previously assessed and reimbursed to the owner of the headwater improvement, the licensee shall reimburse the owner of the headwater improvement for those benefits, at such time as they are assessed, in the same manner as for benefits received during the term of this new license.

Article 205. The seven proposed land transfers described on pages E6-34 through E6-36 of the exhibit E report E6, land management and aesthetics, contained in the application for license filed January 25, 1996, and resulting in a net withdrawal of approximately 371 acres of lands from the Project, are approved.

Within 45 days of the date of issuance of the license, the licensee shall file revised exhibit G drawings reflecting these project boundary changes. The revised drawings shall conform to the requirements of Article 202.

Article 401. Within 30 days of Commission approval of the operations plan required in Article 402, the licensee shall maintain a 2,000 cubic foot per second (cfs) minimum flow from the Castle Rock Development except during drought conditions, defined as occurring when inflows to the Petenwell impoundment are less than 2,000 cfs.

When Petenwell impoundment inflows are less than 2,000 cfs, the licensee shall maintain a 2,000-cfs minimum flow from the Castle Rock Development until the Petenwell impoundment reaches a minimum trigger elevation of 923.2 feet (NGVD) and the Castle Rock impoundment reaches a minimum trigger elevation of 881.2 feet (NGVD). When the elevation of the Petenwell and Castle Rock impoundments reach a minimum elevation of 923.2 and 881.2 feet (NGVD), respectively, the licensee shall maintain a discharge from the Castle Rock Development that maintains the minimum elevations of 923.2 and 881.2 feet (NGVD) at the Petenwell and Castle Rock

impoundments, respectively. Any reduction in discharge from the Castle Rock Development shall be subject to a down-ramping rate not to exceed 1-inch per hour as measured 0.7 miles downstream of Castle Rock dam.

Following each occurrence of inflows to the Petenwell impoundment of less than 2,000 cfs, and provided that the Petenwell and Castle Rock impoundments are at the minimum elevations of 923.2 and 881.2 feet (NGVD), respectively, the licensee shall restore the 2,000-cfs minimum flow from the Castle Rock Development, prior to restoring the Petenwell and Castle Rock impoundment to their respective normal elevations of 923.6 and 881.6 feet (NGVD). The licensee shall take all reasonable actions to re-establish the 2,000-cfs minimum flow within a few minutes of cessation of the minimum flow.

When average daily flows at the Castle Rock Development exceed 2,600 cfs, the licensee may increase generation at the Castle Rock Development, subject to the 1-inch per hour down-ramping rate.

The licensee shall, at all times, maintain the Petenwell impoundment within the following parameters:

March 15 through June 14, the maximum impoundment elevation shall be 925 feet (NGVD).

June 15 through March 14, the maximum impoundment surface elevation shall be 924 feet (NGVD).

May 1 through December 31, the minimum impoundment surface elevation shall be 923 feet (NGVD).

January 1 through April 30, the minimum impoundment surface elevation shall be 919 feet (NGVD).

In order to decrease flow fluctuations and peak flows downstream of the Castle Rock Development, the licensee may exceed the maximum impoundment surface elevations of the Petenwell impoundment by 0.5 feet for a period of no more than 48 hours following a storm event.

When air temperature is less than 0 degrees Fahrenheit, the licensee shall operate at least one turbine at the Petenwell Development to maintain the tailwater area in an ice-free condition to provide a forage area for bald eagles and waterfowl.

The impoundments' surface elevations, ramping rate, and Castle Rock minimum flow may be temporarily modified if required by operating emergencies beyond the control of the licensee or for short periods upon mutual agreement among the licensee, the Wisconsin Department of Natural Resources, and the U.S. Fish and Wildlife Service. If the impoundments' water surface elevations, ramping rate, or Castle Rock minimum flow are so modified, the licensee shall notify the Commission, the Wisconsin Department of Natural Resources, and the U.S. Fish and Wildlife Service as soon as possible, but no later than 10 days after each such incident.

Article 402. Within 180 days from the date of issuance of this license, in order to monitor the impoundment elevations and Castle Rock minimum flows required by Article 401, the licensee shall develop, in consultation with the Wisconsin Department of Natural Resources and the U.S. Fish and Wildlife Service, an operations compliance monitoring plan, for Commission approval. This plan must include, but is not limited to, an implementation schedule and provisions to: (1) install and maintain staff gages, visible to the public on the Petenwell and Castle Rock dams; (2) maintain water level sensors to continuously record the headpond and tailwater elevations; and (3) record and maintain daily operating records, including headpond and tailwater elevations, hourly powerhouse and spillway discharge, and turbine operations.

The licensee shall include with the operational compliance monitoring plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 60 days for the agencies to comment and to make recommendations before filing the operational compliance monitoring plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission, according to the approved schedule. The licensee shall provide these monitoring data to the Wisconsin Department of Natural Resources, U.S. Fish and Wildlife Service, and the Commission within 30 days of receiving a written request for such information.

Article 403. At least 30 days prior to any planned impoundment drawdown, the licensee shall file with the Commission, for approval, an impoundment drawdown plan and schedule developed in consultation with the Wisconsin Department of Natural Resources and U.S. Fish and Wildlife Service. The licensee shall allow a minimum of 60 days for the agencies to comment and to make recommendations before filing the

drawdown plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information. The licensee shall also include in the drawdown plan a provision to notify the public of any planned impoundment drawdown proposed by the licensee.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission, according to the approved schedule.

Article 404. Authority is reserved to the Commission to require the licensee to construct, operate, and maintain, or to provide for the construction, operation, and maintenance of, such fishways as may be prescribed by the Secretary of the Interior pursuant to Section 18 of the Federal Power Act.

Article 405. Within 180 days of license issuance, the licensee shall file for Commission approval a plan, developed in consultation with the Wisconsin Department of Natural Resources and U.S. Fish and Wildlife Service, for the passage of large woody debris that collects near the project intake into the reach of river below the Castle Rock dam to improve fish habitat downstream of the dam.

The licensee shall allow a minimum of 60 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 406. Within one year of license issuance, the licensee shall file for Commission approval an adaptive management plan, developed in consultation with the Wisconsin Department of Natural Resources and U.S. Fish and Wildlife Service, to implement the Petenwell and Castle Rock Flowage Water Level Plans of Study as described in Volume II, Report E2, Appendix E2-B of Wisconsin River Power Company's Application for New License for the Petenwell and Castle Rock Hydroelectric Project, filed January 25, 1996. The purpose of the plan is to improve game fish populations, aquatic habitat, and the density of rooted aquatic and woody terrestrial plants in the project impoundments.

The plan shall include, but not be limited to: 1) an evaluation of the following water level actions: a) holding Spring water levels high during northern pike spawning,

b) gradual drawing down during Summer, c) holding Fall water levels high, and d) making reduced and/or late-Winter drawdown; 2) a provision for studying the use of water-level manipulation to increase the density of rooted aquatic plants and woody terrestrial vegetation, including a schedule for implementing the study; 3) identification of the licensee's and agencies' responsibilities; 4) a provision to file annual agreements between the licensee and resource agencies to detail each effort for budget and work plans; and 5) development, in consultation with the Wisconsin Department of Natural Resources and U.S. Fish and Wildlife Service, of a final report, for Commission approval, detailing any recommended operational modification resulting from the adaptive management plan

The licensee shall allow a minimum of 60 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 407. Within one year of license issuance, the licensee shall file with the Commission, for approval, a plan to protect the bald eagle (*Haliaeetus leucocephalus*) and the Karner blue butterfly (*Lycaeides melissa samuelis)* in the project area.

The plan shall incorporate state and federal management guidelines. The plan shall also include a schedule for implementing the plan. The plan shall be submitted to the Commission, for approval, along with the wildlife management plan required by Article 409.

The licensee shall prepare the plan in consultation with Wisconsin Department of Natural Resources and U.S. Fish and Wildlife Service. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments and recommendations are accommodated by the plan. The licensee shall allow a minimum of 60 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 408. Within 180 days of license issuance, the licensee shall, in consultation with the Wisconsin Department of Natural Resources and the U.S. Fish and Wildlife Service, develop a plan to monitor purple loosestrife (*Lythrum salicaria*) and Eurasian watermilfoil (*Myriophyllum spicatum*) in project waters. The plan shall include, but is not limited to: (a) the method and frequency of monitoring, (b) a provision to cooperate in the control/elimination of these vegetative species if deemed necessary by the agencies, and (c) documentation of transmission of monitoring data to the agencies.

The licensee shall include documentation of consultation with the agencies before preparing the plan, copies of the agencies' comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments were accommodated by the plan. The licensee shall allow a minimum of 60 days for the agencies to comment and to make recommendations prior to filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan including any changes required by the Commission.

Article 409. Within one year of license issuance, the licensee shall file with the Commission, for approval, a wildlife management plan, along with the plan required by Article 407.

The plan shall include, but not be limited to, the following:

(1) provisions for annual consultation among the licensee, Wisconsin Department of Natural Resources (WDNR), and U.S. Fish and Wildlife Service (FWS) on the status of wildlife habitat and wildlife populations within the project boundaries and the measures to be performed to protect and enhance wildlife populations that include but are not limited to the protection of high quality habitat, retention of these project lands, and modification of timber harvesting practices;

(2) provisions for managing the Pentenwell Wildlife Area for wildlife habitat over the term of the license including providing implementation schedules for the licensee's

general habitat and wildlife management proposals, providing maps designating lands as Managed Open Space and Protected Open Space, and updating the wetlands inventory;

(3) provisions for Federal and state listed threatened and endangered species that shall include, but not be limited to the following: (1) implementing the Bald Eagle Management and Protection Plan; (2) maintaining the bald eagle observation platform at the Pentenwell powerhouse (3) conducting annual monitoring of bald eagle and osprey nest locations, either by land or by funding the WDNR air surveys, the total cost of which should not exceed $2,000; (4) implementing the proposed Karner Blue Butterfly Management and Protection Plan including but not limited to: appropriate timber harvest practices; limiting the use of chain saws; restricting the loader/hauler to a forwarder with a 2-cord capacity; and keeping hardwood slash to 2-foot high piles, or removing the slash from the area; and (5) considering the protection of habitat of threatened and endangered species in the project area by classifying such habitat as protected open space;

(4) provisions to consult with WDNR in following the guidelines of the Wisconsin Osprey Recovery Plan and continuing to provide osprey nesting platforms in the project area; and

(5) provisions to consult and consider WDNR management strategies for canvasback migrational staging habitat.

The licensee shall prepare the plan in consultation with WDNR and FWS. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments and recommendations are accommodated by the plan. The licensee shall allow a minimum of 60 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 410. Within 1 year from the issuance of this license, the licensee shall file with for Commission approval, a land management plan as described in the exhibit E, section 6, report on land management and aesthetics, filed January 25, 1996, as volume VI of the application for license.

The plan shall include, at a minimum, the following:

(1) a description of and provisions for implementing the licensee's shoreline erosion monitoring and stabilization program on both Petenwell and Castle Rocks reservoirs. The shoreline monitoring and stabilization program shall include descriptions of any required permitting steps necessary for shoreline stabilization, including the various consultations, notices, public meetings, etc., that take place during permitting, design, and implementation of stabilization measures; and shall provide for implementing experimental erosion control measures;

(2) a provision for maintaining a 200-foot-wide buffer zone for habitat protection and aesthetics along licensee-owned lands around each of the two project reservoirs, except for those lands affected by the land transfers approved by Article 205 of this license;

(3) a provision for maintaining the generally high aesthetic character of the shorelines, based on the licensee's Forest Practice Guidelines for aesthetics;

(4) a provision for continued forest management under the forest management plan to include practices consistent with sustained yield, maintenance of a vital, healthy forest, and supportive of wildlife and recreation uses;

(5) a provision for continued site maintenance, shoreline regulation, and public access management practices and policies, including: continued permission of general public pedestrian use of the areas specified as shoreline commons areas; installation of additional signs listing permitted pedestrian uses within those areas, as well as the activities permitted of the adjoining residents; and a provision for periodic review of these uses by the licensee, the Commission, the Wisconsin Department of Natural Resources, and other appropriate parties to determine whether there are reasonable means or sensible changes which could be implemented regarding general use of shoreline commons areas by the general public and adjoining private residents; and

(6) a provision for retaining project lands and allowing public access, except in areas that are environmentally sensitive or dangerous to the public.

The licensee shall prepare the land management plan after consultation with the Wisconsin Department of Natural Resources, the U.S. Army Corps of Engineers, the U. S. Fish and Wildlife Service, and Wood, Juneau, and Adams Counties, Wisconsin. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the draft plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 60 days for the agency and county representatives to comment and to make recommendations prior to filing the final plan

with the Commission for approval. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. Upon approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 411. Within 1 year from the issuance of this license, the licensee shall file with for Commission approval a project recreation plan.

The plan shall be based on the proposed recreation plan as described on pages E5-35 through E5-51 of the exhibit E report E5, recreation resources, contained in volume V of the application for license filed January 25, 1996, and shall include, at a minimum, the following:

(1) a list identifying all recreation facilities that are project related;

(2) descriptions of the recreation enhancements identified in the proposed recreation plan: (a) improvements at 28 existing recreation facilities, and (b) development of three new primitive-camping, boat-accessible only sites;

(3) provisions for consultation with the Natural Resources Conservation Service and the Wisconsin Department of Natural Resources in designing and implementing appropriate erosion and sediment control measures to be included in the final plans for recreational site enhancements and new recreation site development;

(4) provisions for implementing guidelines for universal accessibility at appropriate recreational facilities, including a discussion of how the design of the facilities takes into account the national standards established by the Architectural and Transportation Barriers Compliance Board pursuant to the Americans with Disabilities Act of 1990;

(5) a schedule for implementing the recreation site enhancements based on the proposed 5-year schedule contained in the application;

(6) a description of the proposed operation and maintenance of each the licensee’s existing and new recreational facilities, including the responsible entity;

(7) provisions and a schedule for installing additional signs in the shoreline commons areas listing the permitted pedestrian uses for the general public, as well as the permitted uses for the adjoining residents;

(8) provisions for improving the public information system regarding recreational resources on both reservoirs;

(9) provisions for monitoring recreation use of the project area to determine whether existing recreation facilities are meeting future recreation needs, and for consulting with appropriate National Park Service, Wisconsin Department of Natural Resources, Adams County, Juneau County, Wood County, and local government staff and recreational interest groups in preparing a report on the monitoring to filed along with the FERC Form 80, required by Section 8 of the Commission's Regulations (18 CFR 8.11). The report shall describe the results of the monitoring, discuss whether existing recreation facilities are meeting recreation needs, and describe any proposed action necessary to adequately maintain or enhance recreational use;

(10) provisions for setting aside project land for future recreation needs; and

(11) provisions for updating the recreation plan with the Commission in the event of proposals for major recreational enhancements not required by the original license.

The licensee shall prepare the recreation plan after consultation with the Wisconsin Department of Natural Resources, and the Natural Resources Conservation Service. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the draft plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 60 days for the agencies to comment and to make recommendations prior to filing the final plan with the Commission for approval. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. No ground disturbing or land-clearing activities for new or improved recreation facilities shall begin until the licensee is notified the plan is approved. Upon approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 412. The licensee shall implement the "Programmatic Agreement Among The Federal Energy Regulatory Commission, The Advisory Council On Historic Preservation, The State Of Wisconsin, State Historic Preservation Officer, And The State Of Michigan, State Historic Preservation Officer, For Managing Historic Properties That May Be Affected By New and Amended Licenses Issuing For The Continued Operation Of Existing Hydroelectric Projects In The State Of Wisconsin And Adjacent Portions Of The State Of Michigan," executed on December 30, 1993, including but not limited to the Historic Resources Management Plan (HRMP) for the project. In the event that the

Programmatic Agreement is terminated, the licensee shall implement the provisions of any approved HRMP. The Commission reserves the authority to require changes to the HRMP at any time during the term of the license. If the Programmatic Agreement is terminated prior to Commission approval of the HRMP, the licensee shall obtain Commission approval before engaging in any ground disturbing activities or taking any other action that may affect any historic properties within the project's Area of Potential Effect.

Article 413. (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 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 use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the 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, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The type of use and occupancy of project lands and water 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; (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline; and (4) food plots and other wildlife enhancement. 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 use 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 or roads where 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 certification 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 (measured over project waters) 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 project waters at normal 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 60 days before conveying any interest in project lands under this paragraph (d), the licensee must submit a letter to the Director, Office of Energy Projects, 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 paragraph (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 the following covenants running with the land: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; (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; and (iii) the grantee shall not unduly restrict public access to project waters.

(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 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 the order to be consulted on matters relating to that filing. Proof of service on these entities must accompany the filing with the Commission.

(F) This order is final unless a request for rehearing is filed within 30 days from the date of its issuance, as provided in Section 313(a) of the FPA. The filing of a request 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 licensee's failure to file a request for rehearing shall constitute acceptance of this order.

J. Mark Robinson
Director
Office of Energy Projects