

UNITED STATES OF AMERICA 116 FERC ¶62,058  
FEDERAL ENERGY REGULATORY COMMISSION

Flambeau Hydro, LLC

Project No. 9185-009

ORDER ISSUING SUBSEQUENT LICENSE  
(July 24, 2006)

**INTRODUCTION**

1. On April 1, 2005, pursuant to Part I of the Federal Power Act (FPA),<sup>1</sup> Flambeau Hydro, LLC (Flambeau) filed an application for a subsequent license to continue to operate the existing 1,200-kilowatt (kW) Clam River Project No. 9185. The project is located on the Clam River in Burnett County, Wisconsin.<sup>2</sup> The project does not occupy federal land. As discussed below, I am issuing a subsequent license for the project.

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<sup>1</sup> 16 U.S.C. §§ 791a – 825r (2000).

<sup>2</sup> The project is located on the Clam River, which is tributary of the St. Croix River, a navigable waterway; it is connected to the interstate distribution grid; and was constructed in 1940. Since the project is located on a stream over which Congress has Commerce Clause jurisdiction, it affects interstate commerce, and it includes post-1935 construction, it is required to be licensed under section 23(b)(1) of the FPA. 16 U.S.C. § 817(1) (2000).

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## BACKGROUND

2. The Commission issued the original license for the project on March 31, 1987, effective April 1, 1987,<sup>3</sup> for a period expiring on March 31, 2007.<sup>4</sup>
3. Notice of the application was published in the Federal Register on June 27, 2005. A timely notice of intervention (which did not include any comments) was filed by the Wisconsin Department of Natural Resources (Wisconsin DNR).<sup>5</sup> Wisconsin DNR does not oppose issuance of a subsequent license.
4. On December 2, 2005, the Commission issued public notice that the project was ready for environmental analysis and solicited comments, recommendations, terms and conditions, and prescriptions. In response, the U.S. Department of the Interior (Interior) and the U.S. Environmental Protection Agency filed letters stating they had no comments.
5. An environmental assessment (EA) was prepared by Commission staff and issued on May 5, 2006. The EA contains background information, analysis of impacts, support for related license articles, and the basis for a finding that issuance of the license is not a major federal action significantly affecting the quality of the human environment. No comments were filed on the EA.

## PROJECT DESCRIPTION

6. The Clam River Project consists of: a 46-foot-high concrete dam; a 54-foot-wide spillway; two earthen dikes, one 898-feet-long and the other 223-feet-long, connecting the left and right sides of the dam that impounds a 360-acre reservoir, and two

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<sup>3</sup> 38 FERC ¶ 62,334 (1987). The original license was issued to the Northwestern Wisconsin Electric Company. In 2001, the license was transferred to Flambeau. 94 FERC ¶ 62,059.

<sup>4</sup> This project was required to have been licensed as of 1940, when post-1935 construction of the project commenced. Therefore, when the Commission licensed the project in 1987, it backdated the license to 1957, consistent with Commission practice, thus allowing the maximum possible license term (50 years), as the Commission typically grants for an original license, but giving the licensee 20 years to operate under the license before it expired. 38 FERC ¶ 62,334 at 63,597.

<sup>5</sup> The motion was timely, unopposed, and therefore automatically granted. 18 C.F.R. § 385.214(c)(1) (2006).

powerhouses. The powerhouses, which are adjacent to each other, are integral to the dam and contain a total of three 400-kW turbine generating units with a total installed capacity of 1,200 kW. Project power is transmitted to the regional grid via a 100-foot-long transmission line. A more detailed project description is contained in ordering paragraph (B)(2).

7. The project boundary encloses the facilities described above as well as the reservoir up to a pool elevation of 900.0 feet mean sea level (msl).

8. The current license requires Flambeau to operate in a combination run-of-river and peaking mode with a 3.5-foot spring drawdown between March 15 and April 15 each year to protect properties surrounding the reservoir from flooding, and allows peaking during power shortage periods with a 1.5-foot daily impoundment fluctuation. Since 2001, Flambeau has voluntarily operated the project in a run-of-river mode, with a maximum pool elevation of 898.9 feet msl, a normal pool elevation of 898.6 feet msl, and a minimum pool elevation of 898.3 feet msl.

9. Flambeau proposes to continue to operate the project in a run-of-river mode, and maintain the reservoir elevation at 898.6 feet  $\pm$  0.3 feet msl without a spring reservoir drawdown. No new capacity or construction is proposed.

## **WATER QUALITY CERTIFICATION**

10. Under section 401(a)(1) of the Clean Water Act (CWA),<sup>6</sup> the Commission may not issue a license authorizing the construction or operation of a hydroelectric project unless the state water quality certifying agency either has issued water quality certification (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 certification shall become a condition of any federal license that authorizes construction or operation of the project.<sup>7</sup>

11. On March 30, 2005, Flambeau requested certification from the Wisconsin DNR. Wisconsin DNR received Flambeau's request on April 5, 2005, and issued certification for the project on March 31, 2006. The certification contains 23 conditions including requirements for run-of-river operation, water level and quality monitoring, collecting aquatic species information, woody debris management, establishing a shoreline buffer, exotic species monitoring, and sediment monitoring. The certification also requires plans

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<sup>6</sup> 33 U.S.C. § 1341(a)(1) (2000).

<sup>7</sup> 33 U.S.C. § 1341(d) (2000).

for operation outage response, reservoir drawdown management, and hazardous substance spill prevention. Article 401 requires the licensee to file these plans for Commission approval.

12. The EA did not recommend four of the certification conditions: (1) collect information on aquatic species found on the trashrack and in the tailrace; (2) monitor reservoir water quality; (3) monitor the shoreline of the project reservoir and tailrace for erosion, and (4) establish a shoreline buffer on licensee-owned land adjacent to the project reservoir and tailwater, because these measures do not address identified project effects. The shoreline buffer condition is addressed further below in the other issues section of this order. The certification conditions are, however, mandatory and are set forth in appendix A of this order and incorporated into the license by ordering paragraph D.

### **COASTAL ZONE MANAGEMENT ACT**

13. Under section 307(c)(3)(A) of the Coastal Zone Management Act (CZMA),<sup>8</sup> the Commission cannot issue a license for a project within or affecting a state's coastal zone unless the state CZMA agency concurs with the license applicant's certification of consistency with the state's CZMA program, or the agency's concurrence is conclusively presumed by its failure to act within 180 days of its receipt of the applicant's certification.

14. By electronic mail (email) filed on January 19, 2006, the Wisconsin Department of Administration stated that the Clam River Project would not be reviewed for consistency because it is not within a Wisconsin county that is contiguous with Lakes Michigan or Superior.<sup>9</sup> Therefore, no consistency certification is required.

### **SECTION 18 FISHWAY PRESCRIPTIONS**

15. Section 18 of the FPA<sup>10</sup> provides that the Commission shall require the construction, maintenance, and operation by a licensee of such fishways as may be prescribed by the Secretary of the Interior or the Secretary of Commerce, as appropriate. Neither Interior nor Commerce filed a fishway prescription or reserved its authority to prescribe fishways.

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<sup>8</sup> 16 U.S.C. § 1456(3)(A) (2000).

<sup>9</sup> Email from Michael Friis, Program Manager and Non-point Source Pollution/Public Access Programs Coordinator, Wisconsin Coastal Program.

<sup>10</sup> 16 U.S.C. § 811 (2000).

## THREATENED AND ENDANGERED SPECIES

16. Section 7(a)(2) of the Endangered Species Act of 1973,<sup>11</sup> requires federal agencies to ensure 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 designated critical habitat.

17. The federally endangered Karner blue butterfly and the federally threatened bald eagle and gray wolf are known to occur in the project area. The EA recommended operating the project in a run-of-river mode, and preparing and implementing a land management plan that includes protection of threatened and endangered species habitat at the project. The EA concluded that relicensing the project with these measures would not be likely to adversely affect the Karner blue butterfly, bald eagle, and gray wolf. In a letter filed on July 3, 2006, Interior concurred with this determination. Article 406 requires Flambeau to file the land management plan as recommended by the EA.

## NATIONAL HISTORIC PRESERVATION ACT ISSUES

18. The National Historic Preservation Act (NHPA)<sup>12</sup> requires federal agencies to manage cultural resources under their jurisdiction and authorizes the Secretary of Interior to maintain the National Register of Historic Properties. Section 106 of the NHPA and its implementing regulations,<sup>13</sup> require federal agencies to take into account the effect of any proposed undertaking on properties listed or eligible for listing in the National Register (defined as historic properties) and to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking.

19. To satisfy these responsibilities, on December 30, 1993, the Commission executed a Programmatic Agreement (PA) with the Wisconsin State Historic Preservation Officer, the Michigan State Historic Preservation Officer, and the Advisory Council on Historic Preservation for managing historic properties that may be affected by relicensing projects in the state of Wisconsin and adjacent portions of Michigan. The PA requires the licensee to prepare and implement a historic properties management plan (HPMP) for the term of any subsequent license issued for the project. Execution of the PA demonstrates the Commission's compliance with section 106 of NHPA. Article 407

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<sup>11</sup> 16 U.S.C. § 1536(a) (2000).

<sup>12</sup> 16 U.S.C. § 470 *et seq* (2000).

<sup>13</sup> 36 C.F.R. Part 800 (2005).

requires Flambeau to implement the PA and file its HPMP with the Commission within one year of license issuance.

## **RECOMMENDATIONS OF FEDERAL AND STATE FISH AND WILDLIFE AGENCIES**

20. Section 10(j)(1) of the FPA<sup>14</sup> requires the Commission, when issuing a license, to include conditions based on recommendations by federal and state fish and wildlife agencies submitted pursuant to the Fish and Wildlife Coordination Act,<sup>15</sup> to “adequately and equitably protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat)” affected by the project. No section 10(j) recommendations were filed for the Clam River Project.

## **OTHER ISSUES**

### Operation Compliance Monitoring Plan

21. Flambeau proposes to continue to operate the project manually, with operators increasing or decreasing flows through the turbines and/or over the spillway to ensure that the target reservoir elevation is maintained.

22. The certification requires Flambeau to demonstrate compliance with run-of-river operation by installing and maintaining automatic water level sensors that continuously measure and record headwater and tailwater elevations, as well as maintain staff gages that are visible to the public in the impoundment and tailwaters (condition E). The certification also requires a 3-year test period to determine Flambeau’s ability to maintain compliance with the operational conditions (condition T). After the 3-year test period, if Wisconsin DNR determines that Flambeau has not been able to document operational compliance and Flambeau has not proposed an acceptable alternative to monitor compliance, the certification requires that Flambeau consult with the U.S. Geological Survey (USGS) to install and maintain two USGS-type gages in the Clam River, one upstream of the project reservoir and one in the project tailrace (condition E), and keep the gages in serviceable condition (condition G).

23. The EA found that, although the monitoring measures that the certification requires would help ensure compliance with the required mode of project operation, additional measures would help ensure compliance and avoid disagreements on

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<sup>14</sup> 16 U.S.C. § 803(j)(1) (2000).

<sup>15</sup> 16 U.S.C. §§ 661, *et seq* (2000).

appropriate procedures during emergency situations. These measures include specifying: the location of the headwater and tailwater sensors and staff gages, the frequency of required maintenance or calibration of this equipment, and a procedure for releasing flows during emergency shutdowns. Accordingly, Article 402 requires an operation compliance monitoring plan.

#### Woody Debris Management Plan

24. Certification condition I requires that Flambeau pass woody debris downstream of the project in a reasonably safe manner, but does not specify a method or frequency for this action. The EA notes that passing woody debris can enhance aquatic habitat downstream of projects and recommends a woody debris management plan that specifies the frequency and methods used to pass the woody debris to ensure that the debris is handled in a safe and effective manner. Accordingly, Article 403 requires a woody debris management plan.

#### Fish Stranding Prevention Plan

25. When flow into the project is less than its maximum hydraulic capacity, the southern channel of the river below the spillway only receives flow that is provided by leakage through the spillway bays, estimated to be between 5 and 10 cfs because the project's wingwall, located downstream of the dam, separates tailrace flows into a northern and southern channel. During times of low flow, leakage results in a shallow and narrow channel of water in this reach. Fish could become stranded in isolated pools in this reach, particularly in the deeper pools located immediately downstream from the spillway, if flow through this reach is decreased rapidly.

26. Flambeau proposes to develop a plan, in consultation with Wisconsin DNR, to prevent fish stranding in this reach. The plan would include: (1) a ramping rate for decreasing flows in the southern channel at the onset of low flow events in the Clam River; (2) measures to ensure an unrestricted channel for fish to move into the main river channel downstream of the powerhouse during low flows in the southern channel; and (3) relocating fish trapped in isolated pools in the bypassed channel to the main river channel downstream of the powerhouse during low flow.

27. The EA recommends a fish stranding prevention plan, as proposed by Flambeau, to ensure the protection of fishery resources during periods of low flow in the southern channel. Accordingly, Article 404 requires a fish stranding prevention plan.

### Recreation Plan

28. Flambeau proposes recreation facility improvements including: (1) additional signage and modification of the slope of the ingress and egress locations at an existing canoe portage at the project; and (2) \$5,000 in funding for repairing or replacing a boat ramp on the east side of the project impoundment and for clearing the channel at the ramp to improve boat passage. The EA recommends these improvements to maintain and improve access to project waters. Accordingly, Article 405 requires Flambeau to document that the proposed facility improvements have been completed.

29. The EA also notes that the boat ramp, which is owned and operated by Burnett County, is the only formal point of access for boats on the project impoundment and that it is important that it be maintained and available for public use. As such, the boat launch facility is needed to provide public access to project water. Article 203 requires the revised project boundary to include the boat launch facility to ensure the facility is maintained over the license term.

### Land Management

30. The certification requires several land management related measures including: (1) a shoreline buffer extending at least 200 feet landward from the ordinary high water elevation on all Flambeau-owned lands adjacent to the project impoundment to protect water quality, aesthetics, and ecological functions (condition L);<sup>16</sup> (2) annual inspection of the project shoreline for the presence of purple loosestrife (condition M); (3) decontamination of barges, tools, boats, construction equipment, or other items capable of transferring water containing zebra mussels (condition O); and (4) cooperation with the Wisconsin DNR in controlling exotic populations, restoring endangered or threatened populations, and protecting or enhancing water quality, fish and wildlife populations, and their habitat (condition R).

31. The EA notes that the record does not appear to support the need for protecting additional Flambeau-owned lands adjacent to the project that are currently not enclosed within the project boundary as required by certification condition L because most of the shoreline at the project is wooded and adjacent land is primarily in state or county ownership such that pressure from adjacent development is likely light. However, because certification conditions are mandatory, Article 203 requires revised exhibit G

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<sup>16</sup> Flambeau owns 8.8 acres of land within the project boundary, and another 12.2 acres of land adjacent to and within 200 feet of the ordinary high water elevation of the project impoundment.

drawings to enclose within the project boundary Flambeau-owned lands adjacent to the project. Regarding the other measures, the EA recommends a land management plan to coordinate land management-related activities and avoid potential conflicts. Accordingly, Article 406 requires a land management plan.

### Run-of-River Operation

32. Article 403 of the current license requires Flambeau to draw down the reservoir 3.5 feet between March 15 and April 15 each year to protect properties surrounding the reservoir from flooding. Flambeau proposes to operate the project in a run-of-river mode, and maintain the reservoir elevation at 898.6 feet  $\pm$  0.3 foot msl without the spring reservoir drawdown. Article 301 of this license requires that Flambeau conduct an analysis of the potential for upstream and downstream local flooding from eliminating the annual spring drawdown before operating the project in a run-of-river mode year-round. Further, operating in a run-of-river mode could potentially impact the project's ability to safely pass inflows previously stored in the reservoir. Therefore, the analysis required under Article 301 is also to address the project's ability to safely pass the inflows previously accounted for in the drawdown scheme. Therefore, the licensee is not to eliminate the spring reservoir drawdown stipulated in the original license until the Commission has approved the filing required in Article 301 (see ordering paragraph E).

## **ADMINISTRATIVE CONDITIONS**

### **A. Annual Charges**

33. The Commission collects annual charges from licensees for administration of the FPA. Article 201 provides for the collection of funds for administration of the FPA. Under the regulations currently in effect, projects, such as this, with authorized installed capacity of less than or equal to 1,500 kW are not assessed an annual charge.

### **B. Exhibit F Drawings**

34. The Commission requires licensees to file sets of approved project drawings on microfilm and in electronic file format. Article 202 requires the filing of these drawings.

### **C. Exhibit G Drawing**

35. The exhibit G-1 drawing filed with the license application delineates the project boundary with three latitude and longitude control points, and is stamped by a Registered Land Surveyor as required. However, the exhibit G-1 drawing does not show within the project boundary the location of the 100-foot-long transmission line needed to deliver

project power to the interconnected grid.<sup>17</sup> The 100-foot-long transmission line is shown on the exhibit G-2 drawing.<sup>18</sup>

36. The Commission's test for a primary line is that the line is used solely to transmit power from the licensed project to a load center, and that without the line there would be no way to transmit all the project power to market. Under this test, the line leading from a project ceases to be a primary line at the point it is no longer used solely to transmit power from the project to the interconnected grid.<sup>19</sup> Whether the primary transmission line is owned by someone other than the licensee does not eliminate this requirement. Consequently, I am including the transmission line in this license and requiring Flambeau to file an appropriately revised exhibit G. Standard license Article 5 requires Flambeau to obtain sufficient rights in the line to operate and maintain it in accordance with the license.

37. As noted above, the certification requires Flambeau to establish a shoreline buffer extending at least 200 feet landward from the ordinary high water elevation on all Flambeau-owned lands adjacent to project. Article 203 requires Flambeau to file revised exhibit G drawings to enclose within the project boundary the shoreline buffer required by the certification and the transmission line, and remove the transmission line ownership label. The exhibit G drawings filed on April 1, 2005, are therefore not approved and are not made part of the license (see ordering paragraph (C)).

#### **D. Use and Occupancy of Project Lands and Waters**

38. Requiring a licensee to obtain prior Commission approval for every use or occupancy of project land would be unduly burdensome. Therefore, Article 408 allows the licensee to grant permission, without prior Commission approval, for the use and occupancy of project lands for such minor activities as landscape planting. Such uses

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<sup>17</sup> The original license for the project includes a 100-foot-long, 2.4-kilovolt transmission line. 38 FERC ¶ 62,334.

<sup>18</sup> Exhibit G-1 shows a regional distribution power line in the project area connecting to and traversing through the sub-station. Exhibit G-2 shows a transmission line connecting the powerhouse and sub-station labeled "Transmission Line Owned By Northwestern Wisconsin Electric Company".

<sup>19</sup> See, e.g., *Vermont Electric Generation & Transmission Cooperative, Inc. and North Hartland, LLC*, 104 FERC ¶ 61,151 at P 8 (2003) and the orders cited there.

must be consistent with the purposes of protecting and enhancing the scenic, recreational, and environmental values of the project.

### **STATE AND FEDERAL COMPREHENSIVE PLANS**

39. Section 10(a)(2)(A) of the FPA,<sup>20</sup> 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.<sup>21</sup> Staff identified and reviewed 11 comprehensive plans that are relevant to this project.<sup>22</sup> No conflicts were found.

### **APPLICANT'S PLANS AND CAPABILITIES**

40. In accordance with section 10 of the FPA,<sup>23</sup> and the Commission's regulations, staff have evaluated Flambeau's record as a licensee with respect to the following: (A) need for power; and (B) safe management, operation, and maintenance of the project.<sup>24</sup> I accept the staff's finding in each of the following areas.

#### **A. Need for Power**

41. The Clam River Project is located in the Midwest Reliability Organization region of the North American Electric Reliability Council (NERC). According to NERC, summer peak demand in the region is expected to increase at an average rate of 2 percent per year during the period from 2005-2014. Staff concludes that the project's power, low

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<sup>20</sup> 16 U.S.C. § 803(a)(2)(A) (2000).

<sup>21</sup> Comprehensive plans for this purpose are defined at 18 C.F.R. § 2.19 (2005).

<sup>22</sup> The list of applicable plans can be found in section IX of the environmental assessment for the project.

<sup>23</sup> 16 U.S.C. § 803 (2000).

<sup>24</sup> In order No. 513, the Commission exempted licenses of minor projects, such as Flambeau, whose licenses waive sections 14 and 15 of the FPA, from the information requirements of 18 C.F.R. § 16.10 (2000). See *Hydroelectric Relicensing Regulations Under the Federal Power Act*, 54 *Fed. Reg.* 23756 (June 2, 1989) and 55 *Fed. Reg.* 10768 (March 23, 1990), FERC Statutes and Regulations, Regulations Preambles 1986-1990 ¶ 30,854 at 31,445 (May 17, 1989).

cost, displacement of nonrenewable fossil-fired generation, and contribution to the region's diversified generation mix will help meet the need for power in the region.

### **B. Safe Management**

42. Staff have reviewed Flambeau's management, operation, and maintenance of the Clam River Project and the project's operation reports and concludes that the dam and other project works are safe, and concludes that there is no reason to believe that Flambeau cannot continue to safely manage, operate, and maintain these facilities under a subsequent license.

### **PROJECT ECONOMICS**

43. In determining whether to issue a subsequent license for an existing hydroelectric project, the Commission considers a number of public interest factors, including the economic benefit of project power. Under the Commission's approach to evaluating the economics of hydropower projects, as articulated in *Mead Corp.*,<sup>25</sup> the Commission 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 Commission's economic analysis is to provide a general estimate of the potential power benefits and the costs of a project, and of reasonable alternatives to project power. The estimate helps to support an informed decision concerning what is in the public interest with respect to a proposed license.

44. In applying this analysis to the Clam River Project, we have considered two options: Flambeau's proposal and the project as licensed herein. As proposed by Flambeau, the levelized annual cost of operating the Clam River Project is \$156,830, or \$32.30/megawatt-hours (MWh). The proposed project would generate an estimated average of 4,856 MWh of energy annually. When we multiply our estimate of average generation by the alternative power cost of \$34.47/MWh,<sup>26</sup> we get a total value of the project's power of \$167,370 in 2006 dollars. To determine whether the proposed project is currently economically beneficial, staff subtract the project's cost from the value of the project's power.<sup>27</sup> Therefore, in the first year of operation, the project would cost \$10,550, or \$2.17/MWh, less than the likely alternative cost of power.

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<sup>25</sup> 72 FERC ¶ 61,027 (1995).

<sup>26</sup> The alternative power cost of \$34.47/MWh is based on information posted on the Midwest Independent System Operator web site at <http://www.midwestiso.org>.

<sup>27</sup> Details of staff's economic analysis for the project as licensed herein and for  
(continued)

45. As licensed herein with mandatory conditions and staff measures,<sup>28</sup> the levelized annual cost of operating the project would be about \$159,680, or \$32.89/MWh. The value of power and the annual generation would be the same as Flambeau's proposal. Therefore, in the first year of operation, the project would cost \$7,690, or \$1.58/MWh, less than currently available alternative power.

46. In considering public interest factors, the Commission takes into account that hydroelectric projects offer unique operational benefits to the electric utility system (ancillary service benefits). These benefits include their capability to provide an 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.

### **COMPREHENSIVE DEVELOPMENT**

47. Sections 4(e) and 10(a)(1) of the FPA,<sup>29</sup> require the Commission to give equal consideration to 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.

48. The EA for the Clam River Project contains background information, analysis of impacts, and support for related license articles. I conclude, based on the record of this proceeding, including the EA and comments thereon, that licensing the Clam River Project as described in this order would not constitute a major federal action significantly affecting the quality of the human environment. The project will be safe if operated and maintained in accordance with the requirements of this license.

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various alternatives are included in the EA.

<sup>28</sup> The staff environmental measures include developing plans for compliance monitoring, woody debris passage, land management, and implementing the programmatic agreement.

<sup>29</sup> 16 U.S.C. § 797(e) and 803(a)(1).

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49. Based on my independent review and evaluation of the project, recommendations from resource agencies, and the no-action alternative, as documented in the EA, I have selected the proposed Clam River Project, with the staff-recommended measures including the certification conditions because they are mandatory, and find that it is best adapted to a comprehensive plan for improving or developing the Clam River.

50. I selected this alternative because: (1) issuance of the subsequent license will serve to maintain a beneficial, dependable, and inexpensive source of electric energy; (2) the required environmental measures will protect fish and wildlife resources, water quality, recreational resources, and historic properties; (3) the 1,200 kW of electric energy generated from this renewable resource would continue to offset the use of fossil-fueled generating plants, thereby conserving nonrenewable resources and reducing atmospheric pollution.

### LICENSE TERM

51. The Commission's general policy is to establish 30-year terms for projects with little or no redevelopment, new construction, new capacity, or environmental measures; 40-year terms for projects with a moderate amount of such activities; and 50-year terms for projects with extensive measures. This license authorizes no new construction or new capacity, and only a minor amount of new environmental measures. Consequently, a 30-year license term for the Clam River Project is appropriate.

#### The Director orders:

(A) This license is issued to Flambeau Hydro, LLC (licensee), for a period of 30 years, effective April 1, 2007, to operate and maintain the Clam River Project. This license is subject to the terms and conditions of the FPA, 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 lands, to the extent of the licensee's interests in those lands, enclosed by the project boundary shown by exhibit G drawings filed April 1, 2005:

<u>Exhibit G Drawings</u>	<u>FERC No. 9185-</u>	<u>Description</u>
1	1001	Project Boundary Map
2	1002	Facilities Location

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(2) Project works consisting of: (1) a 46-foot-high buttress-type concrete dam with a 54-foot-wide spillway with four sections, three sections equipped with 8-inch-high stoplogs, and one section equipped with a 4-foot-high slide gate; (2) an 898-foot-long earthen dike and a 223-foot-long earthen dike connecting the left and the right sides of the concrete dam, respectively; (3) a 360-acre reservoir with a net storage capacity of 3,575 acre-feet at a water surface elevation of 898.9 feet msl; (4) two powerhouses integral to the dam containing three 400-kW turbine generating units with a total installed capacity of 1,200 kW; (5) a 4-foot-high, 155-foot-long concrete and timber wingwall; (6) a 100-foot-long, 2.4-kilovolt transmission line; and (7) appurtenant facilities.

The project works generally described above are more specifically shown and described by those portions of exhibits A and F shown below:

Exhibit A: Pages A-1 through A-6 filed on April 1, 2005.

The following exhibit F drawings filed on April 1, 2005:

<u>Exhibit F Drawings</u>	<u>FERC No. 9185-</u>	<u>Description</u>
1	1003	Spillway and Powerhouse Plan
2	1004	Spillway and Powerhouse Elevation
3	1005	Sections "A-A" and "B-B"
4	1006	Section "C-C"

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

(C) The exhibits A and F described above are approved and made part of the license. The exhibit G drawings filed on April 1, 2005, do not conform to Commission regulations and are not approved.

(D) This license is subject to the conditions submitted by the Wisconsin Department of Natural Resources under section 401(a)(1) of the Clean Water Act, 33 U.S.C. § 1431(a)(1), as those conditions are set forth in appendix A to this order.

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(E) The licensee shall not operate the project run-of-river year-round until the Commission has approved the filing required in Article 301.

(F) The following sections of the FPA are waived and excluded from the license for this minor project:

4(b), except the second sentence; 4(e), insofar as it relates to approval of plans by the Chief of Engineers and the Secretary of the Army; 6, insofar as it relates to public notice and to the acceptance and expression in the license of terms and conditions of the FPA that are waived here; 10(c), insofar as it relates to depreciation reserves; 10(d); 10(f); 14, except insofar as the power of condemnation is reserved; 15; 16; 19; 20; and 22.

(G) This license is also subject to the articles set forth in Form L-12 (October 1975), entitled "Terms and Conditions of License for Constructed Minor Project Affecting the Interests of Interstate or Foreign Commerce" (*see* 54 FPC 1799 *et seq.*), and the following additional articles:

Article 201. Administrative Annual Charges. The licensee shall pay the United States annual charges, effective April 1, 2007, as determined in accordance with the provisions of the Commission's regulations in effect from time to time, for the purpose of 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 1,200 kilowatts. Under the regulations currently in effect, projects with authorized installed capacity of less than or equal to 1,500 kilowatts will not be assessed annual charges.

Article 202. Exhibit Drawings. Within 45 days of the effective date of this license, the licensee shall file the approved exhibit F drawings in aperture card and electronic file formats.

a) Three sets of the approved exhibit drawings shall be reproduced on silver or gelatin 35mm microfilm. All microfilm shall be mounted on type D (3-1/4" X 7-3/8") aperture cards. Prior to microfilming, the FERC Project Drawing Number (*i.e.*, P-1234-#### through P-1234-####) shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number shall be typed on the upper right corner of each aperture card. Additionally, the Project Number, FERC Exhibit (*i.e.*, F-1, etc.), Drawing Title, and date of this license shall be typed on the upper left corner of each aperture card.

Two of the sets of aperture cards shall be filed with the Secretary of the Commission, ATTN: OEP/DHAC. The third set shall be filed with the Commission's Division of Dam Safety and Inspections Chicago Regional Office.

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b) The licensee shall file two separate sets of exhibit drawings in electronic raster format with the Secretary of the Commission, ATTN: OEP/DHAC. A third set shall be filed with the Commission's Division of Dam Safety and Inspections Chicago Regional Office. Exhibit F drawings must be identified as critical energy infrastructure information (CEII) material under 18 CFR §388.113(c). Each drawing must be a separate electronic file, and the file name shall include: FERC Project-Drawing Number, FERC Exhibit, Drawing Title, date of this license, and file extension in the following format [P-1234-#####, F-1, Description, MM-DD-YYYY.TIF]. Electronic drawings shall meet the following format specification:

IMAGERY - black & white raster file  
FILE TYPE – Tagged Image File Format, (TIFF) CCITT Group 4  
RESOLUTION – 300 dpi desired, (200 dpi min)  
DRAWING SIZE FORMAT – 24” X 36” (min), 28” X 40” (max)  
FILE SIZE – less than 1 MB desired

Article 203. Exhibit G Drawings. Within 60 days of the effective date of this license, the licensee shall file, for Commission approval: (1) a revised exhibit G-1 project boundary drawing enclosing licensee-owned land adjacent to and within 200 feet of the project reservoir, the transmission line, and the boat launch on the eastern side of the impoundment; and (2) a revised exhibit G-2 drawing without the transmission line ownership label. The exhibit G drawings shall be filed electronically pursuant to 18 CFR sections 4.39 and 4.41.

Article 301. Safety Report. Within 60 days of the effective date of this license, the licensee shall submit one copy to the Division of Dam Safety and Inspections – Chicago Regional Engineer and two copies to the Commission (one of these shall be a courtesy copy to the Director, Division of Dam Safety and Inspections), of a report evaluating the effects of operating the project in a run-of-river mode year-round without an annual spring drawdown.

The report shall evaluate whether there would be an increased likelihood of low-lying structures located upstream and downstream of the reservoir being inundated under the new operating scenario. The report shall also address the project's ability to safely pass inflows previously accounted for with a spring drawdown. The report shall include a plan and schedule for performing any remedial measures necessary to ensure the continued safe operation of the project during high flows.

The licensee shall not implement run-of-river operation between March 15 and April 15 for the project until the Division of Dam Safety and Inspections' Chicago

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Regional Engineer determines that these altered project operations have no adverse impact on project safety and issues a letter indicating such.

Article 401. Commission Approval and Reporting.

(a) Requirement to File Plans for Commission Approval

The Wisconsin Department of Natural Resources (Wisconsin DNR) water quality certification filed on April 3, 2006 (issued March 31, 2006), requires the licensee to develop certain plans without reference to prior Commission approval. Each such plan shall also be submitted to the Commission for approval. These plans are listed below.

WQC Condition No. (appendix A of this license order)	Plan Name	Due Date
F	Outage response plan	Within 90 days of the effective date of the license
J	Reservoir drawdown management plan	60 days in advance of all non-emergency reservoir drawdowns beginning April 1, 2007
Q	Hazardous substance spill prevention, control, and countermeasures plan	Within one year of the effective date of the license

The licensee shall submit to the Commission documentation of its consultation, copies of comments and recommendations made in connection with the plan, and a description of how the plan accommodates the comments and recommendations. 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 make changes to any plan submitted. Upon Commission approval the plan becomes a requirement of the license, and the licensee shall implement the plan or changes in project operations or facilities, including any changes required by the Commission.

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## (b) Requirement to File Documentation of Completion

The licensee shall file with the Commission the following reports or notifications according to the schedule set forth below.

WQC Condition No. (appendix A of this license order)	Report Name	Due Date
H	Annual summary report on entrainment and impingement	By December 31 of each year beginning April 1, 2007
M	Annual purple loosestrife monitoring report	By December 31 of each year beginning April 1, 2007
N	Erosion monitoring report	By December 31 of each inspection year (3-year intervals) beginning April 1, 2007
T	Annual operation compliance report	Annually beginning April 1, 2007

Article 402. Operation Compliance Monitoring Plan. Within six months of the effective date of this license, the licensee shall file for Commission approval an operation compliance monitoring plan that has been prepared in consultation with Wisconsin Department of Natural Resources (Wisconsin DNR) and the U.S. Fish and Wildlife Service (FWS). The plan shall include how compliance with the run-of-the-river operation mode, required under water quality certification (certification) condition C in appendix A of this order, will be documented by the licensee, including measuring inflows and outflows from the project and how this information will be provided to the resource agencies, if requested.

The operation compliance monitoring plan shall include provisions to monitor: (1) reservoir water surface elevations; and (2) all continuous flows according to certification conditions C and D in appendix A of this order. The plan shall detail the mechanisms and structures that would be used, including any periodic maintenance and calibration necessary for any installed devices or gages, to ensure that the devices work properly, and shall specify how often reservoir and continuous flow releases will be recorded and reported to the Wisconsin DNR. The plan shall specify: (1) the location of the headwater and tailwater sensors; (2) the frequency of required maintenance or calibration of these sensors; (3) the frequency of reporting of water levels to Wisconsin DNR and FWS; and (4) procedures for releasing flows during emergency shutdowns.

The plan shall also include documentation of agency consultation, including copies of agency comments and recommendations on the plan, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for agencies to comment and 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. The operation compliance monitoring plan shall not be implemented until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 403. *Woody Debris Passage Plan.* Within six months of the effective date of this license, the licensee shall file for Commission approval, a plan to pass woody debris according to water quality certification condition I in appendix A of this order. The plan shall be prepared after consultation with the Wisconsin Department of Natural Resources and specify the frequency and methods to be used for woody debris passage.

The licensee shall include with the plan documentation of agency consultation, including copies of agency comments and recommendations on the draft plan, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 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. The woody debris passage plan shall not be implemented until the licensee is notified that the plan is approved. Upon approval, the licensee shall implement the plan according to the approved schedule, including any changes required by the Commission.

Article 404. *Fish Stranding Prevention Plan.* Within six months of the effective date of this license, the licensee shall file for Commission approval, a plan to prevent fish stranding in the southern channel below the project spillway. The plan shall be prepared after consultation with the Wisconsin Department of Natural Resources and U.S. Fish and Wildlife Service.

The fish stranding prevention plan shall include: (1) a ramping rate for decreasing flows in the southern channel at the onset of low flow events in the Clam River; (2) measures to ensure an unrestricted channel for fish to move into the main river channel downstream of the powerhouse during low flows in the southern channel; and (3)

relocating fish trapped in isolated pools in the southern channel to the main river channel downstream of the powerhouse during low flow.

The licensee shall include with the plan documentation of agency consultation, including copies of agency comments and recommendations on the draft plan, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 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. The fish stranding prevention plan shall not be implemented until the licensee is notified that the plan is approved. Upon approval, the licensee shall implement the plan according to the approved schedule, including any changes required by the Commission.

Article 405. Recreation Facilities. Within one year of the effective date of this license, the licensee shall document implementation of the recreation enhancement measures described on page E-12 of its license application, and in its additional information filing of December 22, 2005. These measures include: (1) improving the ingress and egress routes at the project canoe portage; (2) additional recreational signage; and (3) repairing the ramp and clearing the channel to improve boat passage at the boat launch facility on the east side of the project impoundment.

Article 406. Land Management Plan. Within six months of the effective date of this license, the licensee shall file for Commission approval, a plan to coordinate land-management activities at the project. The plan shall be prepared after consultation with the Wisconsin Department of Natural Resources and the U.S. Fish and Wildlife Service.

The plan shall address management of licensee-owned land within the project boundary including the additional licensee-owned land added pursuant to water quality certification condition L and Article 203.

At a minimum, the plan shall include:

- (1) measures for protecting federally listed threatened and endangered species and their habitat;
- (2) annual inspection of the project shoreline and water for the presence of purple loosestrife; and

- (3) guidelines for managing vegetation, habitat, ground-disturbing activities, and maintenance activities consistent with certification conditions L, O, and R.

The plan shall also include documentation of agency consultation, including copies of agency comments and recommendations on the plan, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for agencies to comment and 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. The land management plan shall not be implemented until the licensee is notified that the plan is approved. Upon approval, the licensee shall implement the plan according to the approved schedule, including any changes required by the Commission.

Article 407. Programmatic Agreement and Historic Properties Management Plan. The licensee shall implement the "Programmatic Agreement Among the Federal Energy Regulatory Commission, the Advisory Council on Historic Preservation, and 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, and include but not limited to the historic properties management plan (HPMP) for the project. Pursuant to the requirements of this Programmatic Agreement, the licensee shall file, for Commission approval, a HPMP within one year of the effective date of this license. The Commission reserves the authority to require changes to the HPMP at any time during the term of the license. If the Programmatic Agreement is terminated prior to Commission approval of the HPMP, the licensee shall obtain approval from the Commission and the Wisconsin State Historic Preservation Officer, 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 408. Use and Occupancy. (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, such action includes, as 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 types 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, 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 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 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 report on recreational resources of an exhibit E; or, if the project does not have an 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; and (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 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 drawings would be filed for approval for other purposes.

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

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(I) 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

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Form L-12  
(October, 1975)**FEDERAL ENERGY REGULATORY COMMISSION****TERMS AND CONDITIONS OF LICENSE FOR CONSTRUCTED  
MINOR PROJECT AFFECTING THE INTERESTS OF  
INTERSTATE OR FOREIGN COMMERCE**

**Article 1.** The entire project, as described in this order of the Commission, shall be subject to all of the provisions, terms, and conditions of the license.

**Article 2.** No substantial change shall be made in the maps, plans, specifications, and statements described and designated as exhibits and approved by the Commission in its order as a part of the license until such change shall have been approved by the Commission: Provided, however, That if the Licensee or the Commission deems it necessary or desirable that said approved exhibits, or any of them, be changed, there shall be submitted to the Commission for approval a revised, or additional exhibit or exhibits covering the proposed changes which, upon approval by the Commission, shall become a part of the license and shall supersede, in whole or in part, such exhibit or exhibits theretofore made a part of the license as may be specified by the Commission.

**Article 3.** The project area and project works shall be in substantial conformity with the approved exhibits referred to in Article 2 herein or as changed in accordance with the provisions of said article. Except when emergency shall require for the protection of navigation, life, health, or property, there shall not be made without prior approval of the Commission any substantial alteration or addition not in conformity with the approved plans to any dam or other project works under the license or any substantial use of project lands and waters not authorized herein; and any emergency alteration, addition, or use so made shall thereafter be subject to such modification and change as the Commission may direct. Minor changes in project works, or in uses of project lands and waters, or divergence from such approved exhibits may be made if such changes will not result in a decrease in efficiency, in a material increase in cost, in an adverse environmental impact, or in impairment of the general scheme of development; but any of such minor changes made without the prior approval of the Commission, which in its judgment have produced or will produce any of such results, shall be subject to such alteration as the Commission may direct.

**Article 4.** The project, including its operation and maintenance and any work incidental to additions or alterations authorized by the Commission, whether or not conducted upon lands of the United States, shall be subject to the inspection and supervision of the Regional Engineer, Federal Energy Regulatory Commission, in the region wherein the project is located, or of such other officer or agent as the Commission may designate, who shall be the authorized representative of the Commission for such purposes. The Licensee shall cooperate fully with said representative and shall furnish him such information as he may require concerning the operation and maintenance of the project, and any such alterations thereto, and shall notify him of the date upon which work with respect to any alteration will begin, as far in advance thereof as said representative may reasonably specify, and shall notify him promptly in writing of any suspension of work for a period of more than one week, and of its resumption and completion. The Licensee shall submit to said representative a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of any such alterations to the project. Construction of said alterations or any feature thereof shall not be initiated until the program of inspection for the alterations or any feature thereof has been approved by said representative. The Licensee shall allow said representative and other officers or employees of the United States, showing proper credentials, free and unrestricted access to, through, and across the project lands and project works in the performance of their official duties. The Licensee shall comply with such rules and regulations of general or special applicability as the Commission may prescribe from time to time for the protection of life, health, or property.

**Article 5.** The Licensee, within five years from the date of issuance of the license, shall acquire title in fee or the right to use in perpetuity all lands, other than lands of the United States, necessary or appropriate for the construction maintenance, and operation of the project. The Licensee or its successors and assigns shall, during the period of the license, retain the possession of all project property covered by the license as issued or as later amended, including the project area, the project works, and all franchises, easements, water rights, and rights or occupancy and use; and none of such properties shall be voluntarily sold, leased, transferred, abandoned, or otherwise disposed of without the prior written approval of the Commission, except that the Licensee may lease or otherwise dispose of interests in project lands or property without specific written approval of the Commission pursuant to the then current regulations of the Commission. The provisions of this article are not intended to prevent the abandonment or the retirement from service of structures, equipment, or other project works in connection with replacements thereof when they become obsolete, inadequate, or inefficient for further service due to wear and tear; and mortgage or trust deeds or judicial sales made

thereunder, or tax sales, shall not be deemed voluntary transfers within the meaning of this article.

**Article 6.** The Licensee shall install and thereafter maintain gages and stream-gaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative. The Commission reserves the right, after notice and opportunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may be mutually agreed upon. The Licensee shall keep accurate and sufficient records of the foregoing determinations to the satisfaction of the Commission, and shall make return of such records annually at such time and in such form as the Commission may prescribe.

**Article 7.** The Licensee shall, after notice and opportunity for hearing, install additional capacity or make other changes in the project as directed by the Commission, to the extent that it is economically sound and in the public interest to do so.

**Article 8.** The Licensee shall, after notice and opportunity for hearing, coordinate the operation of the project, electrically and hydraulically, with such other projects or power systems and in such manner as the Commission may direct in the interest of power and other beneficial public uses of water resources, and on such conditions concerning the equitable sharing of benefits by the Licensee as the Commission may order.

**Article 9.** The operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be controlled by such reasonable rules and regulations as the Commission may prescribe for the protection of life, health, and property, and in the interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes, and the Licensee shall release

water from the project reservoir at such rate in cubic feet per second, or such volume in acre-feet per specified period of time, as the Commission may prescribe for the purposes hereinbefore mentioned.

**Article 10.** On the application of any person, association, corporation, Federal agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and opportunity for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

**Article 11.** The Licensee shall, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities, and comply with such reasonable modifications of the project structures and operation, as may be ordered by the Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the fish and wildlife agency or agencies of any State in which the project or a part thereof is located, after notice and opportunity for hearing.

**Article 12.** Whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the Licensee shall permit the United States or its designated agency to use, free of cost, such of the Licensee's lands and interests in lands, reservoirs, waterways and project works as may be reasonably required to complete such facilities or such improvements thereof. In addition, after notice and opportunity for hearing, the Licensee shall modify the project operation as may be reasonably prescribed by the Commission in order to permit the maintenance and operation of the fish and wildlife facilities constructed or improved by the United States under the provisions of this article. This article shall not be interpreted to place any obligation on the United States to

construct or improve fish and wildlife facilities or to relieve the Licensee of any obligation under this license.

**Article 13.** So far as is consistent with proper operation of the project, the Licensee shall allow the public free access, to a reasonable extent, to project waters and adjacent project lands owned by the Licensee for the purpose of full public utilization of such lands and waters for navigation and for outdoor recreational purposes, including fishing and hunting: Provided, That the Licensee may reserve from public access such portions of the project waters, adjacent lands, and project facilities as may be necessary for the protection of life, health, and property.

**Article 14.** In the construction, maintenance, or operation of the project, the Licensee shall be responsible for, and shall take reasonable measures to prevent, soil erosion on lands adjacent to streams or other waters, stream sedimentation, and any form of water or air pollution. The Commission, upon the request or upon its own motion, may order the Licensee to take such measures as the Commission finds to be necessary for these purposes, after notice and opportunity for hearing.

**Article 15.** The Licensee shall clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. All clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

**Article 16.** If the Licensee shall cause or suffer essential project property to be removed or destroyed or to become unfit for use, without adequate replacement, or shall abandon or discontinue good faith operation of the project or refuse or neglect to comply with the terms of the license and the lawful orders of the Commission mailed to the record address of the Licensee or its agent, the Commission will deem it to be the intent of the Licensee to surrender the license. The Commission, after notice and opportunity for hearing, may require the Licensee to remove any or all structures, equipment and power lines within the project boundary and to take any such other action necessary to restore the project waters, lands, and facilities remaining within the project boundary to a condition satisfactory to the United States agency having jurisdiction over its lands or the Commission's authorized representative, as appropriate, or to provide for the continued operation and maintenance of nonpower facilities and fulfill such other obligations under the license as the Commission may prescribe. In addition, the Commission in its

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discretion, after notice and opportunity for hearing, may also agree to the surrender of the license when the Commission, for the reasons recited herein, deems it to be the intent of the Licensee to surrender the license.

**Article 17.** The right of the Licensee and of its successors and assigns to use or occupy waters over which the United States has jurisdiction, or lands of the United States under the license, for the purpose of maintaining the project works or otherwise, shall absolutely cease at the end of the license period, unless the Licensee has obtained a new license pursuant to the then existing laws and regulations, or an annual license under the terms and conditions of this license.

**Article 18.** The terms and conditions expressly set forth in the license shall not be construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.

## APPENDIX A

WISCONSIN DEPARTMENT OF NATURAL RESOURCES  
CERTIFICATION UNDER SECTION 401 OF THE  
FEDERAL CLEAN WATER ACT ISSUED MARCH 31, 2006,  
AND FILED ON APRIL 3, 2006

- A. The licensee shall comply with all federal, state, and local permit requirements.
- B. The licensee shall meet the most current water quality standards adopted under s. 281.15, Wis. Stats. and 33 USC 1313, as well as any revised water quality standards that may be adopted over the term of the license.
- C. The licensee shall operate the Clam River Hydroelectric Project in a run-of-river mode. The licensee shall act at all times to minimize fluctuation of the reservoir surface elevation by maintaining a discharge from the Project so that, at any point in time, flows, as measured immediately downstream from the tailrace, approximate the sum of inflows to the project reservoir. Project operation may be temporarily modified if required by operating emergencies beyond the licensee's control or for short periods with the Department's approval. If project operation is temporarily modified due to circumstances beyond the licensee's control, the licensee must make all reasonable attempts to return to authorized operation as soon as possible.
- D. The licensee shall maintain a target reservoir elevation of  $898.60 \pm 0.3$  feet mean sea level (MSL) at all times. The licensee shall act at all times to minimize fluctuations in headwater elevation, and the allowable range of reservoir level should not be used on a daily basis. If the reservoir elevation is temporarily modified due to uncontrollable circumstances, the licensee shall notify the Department's office in Park Falls, Wisconsin as soon as possible, but no later than 5 days after each incident.
- E. The licensee shall demonstrate compliance with the requirements in Paragraphs C and D in the following manner. The licensee shall install and maintain automatic water level sensors that continuously measure and record headwater and tailwater elevation. The licensee shall also maintain staff gauges that are visible to the public in the impoundment and tailwaters along with a daily log record of project operation. Operators should record in the project log daily staff gauge readings, generation, flow releases through the powerhouse and spillway updated whenever changes are made, the daily minimum and maximum discharge through the project as calculated from accurate measurements of gate openings and the ratings curves

for all outlets, comments to explain circumstances for equipment adjustments (e.g. snow melt, heavy precipitation, etc.), and a detailed description of the duration and circumstances of unexpected outages that interrupt flow through the turbines. All project log records, including comments, should be keypunched into electronic spreadsheet format. The electronic data should be permanently archived and provided to the resource agencies upon request.

Performance standards to demonstrate compliance with run-of-river operation will follow a phased approach, first by using operational data (i.e. headwater elevation, tailwater elevation, generation, tailrace discharge, spillway discharge) and descriptive definitions, then if necessary, by comparing inflow and discharge measurements from gage stations. The objective of run-of-river operation is to maintain a stable reservoir elevation and to match discharge as closely as possible to inflow at each project. In managing reservoir levels operators should strive to minimize variations from the target elevation within the allowable range. The allowable band of  $\pm 0.3$  feet around the target reservoir level should not be used on a daily basis. Similarly, under run-of-river operation, changes in discharge through the turbines and spillway should follow the rate of changing inflow. Operators should adjust turbine and gate settings to achieve smooth transitions when inflow increases and decreases. Small adjustments made more often are generally preferred over larger adjustments made less frequently. Minimizing the percent change in discharge during periods of stable inflow is also important. Cycling a turbine on and off in response to changing reservoir level would not meet the Department's expectations for run-of-river operation at these projects. Because individual turbines can pass a substantial proportion of the streamflow in the system, cycling a unit on and off would cause unacceptable fluctuations in discharge. Run-of-river operation that closely mimics the natural hydrograph will minimize adverse impacts of project operations on aquatic resources and recreation.

If the Department determines, at the end of the 3-year test period required by Condition T below, that the licensee has not documented its ability to meet the descriptive compliance standard outlined in the preceding paragraph, and that the licensee has not proposed acceptable alternatives to achieve the compliance standard, then the licensee shall consult with the U. S. Geological Survey (USGS) to install and maintain two USGS-type gages in the Clam River, one upstream of the project reservoir and one in the riverine tailwaters immediately downstream from the tailrace. The gages must be operational within one year from the end of the 3-year test period. The gages shall be equipped with the "telemark" type system, with sufficient memory to allow instantaneous and short-term data retrieval via phone lines or the Internet. Discharge from the Clam River Hydro Project shall differ no more than  $\pm 10\%$  from inflow to the Project reservoir in concurrent measurements

after appropriate corrections for travel time, gains and losses between the gages, and measurement error. Appropriate corrections shall be determined in consultation with the Department and USGS within one year following activation of the new gages.

- F. Within six months of license issuance, the licensee shall prepare an Outage Response Plan in consultation with the Department to ensure that discharge is promptly restored following unexpected outages that interrupt flow through the turbines.
- G. The licensee shall maintain all operational monitoring equipment in serviceable condition and calibrate, repair, or replace it as necessary. The licensee shall retain all electronic and paper records of project operations for the life of the project. The licensee shall allow the Department to access the project and its operational records at any time to monitor compliance with certification conditions.
- H. The Licensee shall collect detailed information on all aquatic species (fish, reptiles, amphibians, waterfowl, furbearers, etc.) found on the trash rack and in the tailrace pool immediately below the powerhouse. Records should include species, size (length), date, time, and general condition of the organism (i.e. alive, injured, freshly dead, or decomposed). The trash rack and tailrace pool should be visually inspected at least weekly. The licensee shall compile all records in a summary report submitted to the Department by December 31 each year.
- I. To the extent practicable the licensee shall pass downstream all woody and organic debris that accumulates near the trash racks. For the purposes of this condition, large wood is defined as any natural woody material greater than 3 feet long by 4 inches in diameter. Smaller wood and other organic material can be deposited in the tailrace. Wood and organic debris should be conveyed downstream on a regular basis similar to the rate of accumulation to avoid depositing large volumes at one time. All trash and other synthetic materials shall be removed before organic material is transported downstream, and all trash shall be disposed by approved methods.
- J. The licensee shall submit to the Department a reservoir drawdown management plan at least 60 days in advance of all non-emergency reservoir drawdowns scheduled for any activity which requires that the reservoir elevation is lowered below 898.0 feet MSL, including maintenance, inspection, renovation, resource management, etc. The drawdown management plan shall include detailed information on the objectives of the drawdown, seasonal timing, scheduled dates for drawdown and refill, drawdown and refill rates, minimum pool elevation, duration at drawdown level, minimum discharge during reservoir refill, agency and public

notification procedures, and a discussion of the alternatives that the licensee evaluated to avoid a reservoir drawdown.

- K. The licensee shall monitor water quality of the reservoir three times annually within 3 weeks of ice-out and in July and August. A profile of dissolved oxygen concentration and temperature shall be recorded at one-meter intervals from surface to bottom in the deepest portion of the reservoir. Water samples should be collected at a depth of 1.0 meter at the same site. Secchi disk depth should be measured with each sample collection, and water samples should be analyzed for total phosphorus, chlorophyll a, and true color (Pt-Co units) using procedures approved by the U.S. Environmental Protection Agency. The limit of detection for the total phosphorus analysis should not exceed 7 micrograms per liter.
- L. The licensee shall establish a shoreline buffer extending at least 200 feet landward from the ordinary high water elevation on all licensee-owned lands adjacent to the reservoir and tailwaters the Clam River Hydroelectric Project. The primary objective of the shoreland buffer is to protect water quality, aesthetics, and ecological functions of the river corridor. The recommended and preferred management approach is to maintain the buffer zones in a natural state, leave the land wild, and allow natural vegetative succession to determine the composition of the plant community. Limited management activity can take place for control of invasive species. No timber harvest should occur within the buffer zone, and any trees that fall into project waters should be anchored to shore and left in the water, unless they conflict with project or recreational uses. Recreational activities, which do not conflict with those objectives, should be permitted within the buffer zone.
- M. The licensee shall annually inspect the entire shoreline of the project waters for purple loosestrife (*Lythrum salicaria*) and map its distribution and relative abundance. Inspections should be scheduled in August while plants are flowering so purple loosestrife can be readily identified. The licensee should submit a report of the monitoring results to the Department by December 31 each year. If the Department deems it necessary to initiate or expand efforts to control purple loosestrife in the Clam River, the licensee shall provide reasonable cooperation in those efforts.
- N. The licensee shall monitor the shoreline of the project reservoir and tailrace for erosion, and if necessary, prepare an erosion control plan in consultation with the Department. Inspections should be conducted at three-year intervals in spring before vegetation develops, so eroded areas can be readily identified. The licensee shall submit to the Department a report of monitoring results by December 31 in the year of each inspection.

- O. Before engaging in any activity that may introduce zebra mussels into project waters, the licensee shall provide or demand (through contract clause or other binding agreement) evidence of effective decontamination of barges, tools, boats, construction equipment, or other items capable of transferring water containing larval or adult zebra mussels. Effective decontamination may include steam-cleaning, chemical treatment, physical treatment, or other suitable procedures.
- P. To continue the current practice of introducing cinders to seal leakage at project structures, the licensee must request and obtain a conditional grant of exemption to permit beneficial use of low hazard substances under Section 289.43(8) of Wisconsin Statutes. Within six months of license issuance, the licensee should initiate consultations with staff in the Waste Management Program at the Department's Service Center in Superior, Wisconsin on procedures to request an exemption from regulation. The licensee shall not deposit into the Clam River any deleterious substances and materials, such as plastic sheeting, carpeting, carpet padding, weighted feed sacks, and manure, for sealing leakage or for any other purpose.
- Q. Within one year of license issuance, the licensee shall prepare a Hazardous Substance Spill Prevention, Control, and Countermeasures Plan for the Clam Hydroelectric Station.
- R. The licensee shall cooperate with the Department to implement reasonable resource management practices, including but not limited to measures for controlling exotic populations, restoring endangered or threatened populations, and protecting or enhancing water quality, fish and wildlife populations, and their habitat.
- S. The licensee shall notify the Department and the public at least two weeks in advance of any scheduled activity that will substantially change reservoir elevation or discharge from normal project operations, including the full-range gate tests that FERC requires.
- T. A three-year test period shall be used to determine the licensee's ability to maintain compliance with the above conditions. The licensee shall prepare and submit annual reports to the Department documenting its ability to maintain operational compliance standards and, if necessary, its proposals to achieve the compliance standards.
- U. At least 60 days before undertaking any proposed change to the project or its operation, which would have a significant or material effect on the findings,

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conclusions, or conditions of this certification, the licensee shall submit the proposal to the Department for review and written approval.

- V. The Department may request, at any time, that FERC consider modifications to the license to assure compliance with Wisconsin Water Quality Standards.
- W. On the date of submittal to the Commission, the licensee shall provide to the Department a complete copy of any application to transfer this license, including all attachments and schedules.