

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

101 FERC ¶ 62,090

Erie Boulevard Hydropower L.P.

Project No. 2616-004 and  
-022

ORDER ON OFFER OF SETTLEMENT AND APPROVING ISSUING NEW  
LICENSE

(November 6, 2002)

1. This order issues a new license to Erie Boulevard Hydropower, L.P. (Erie or licensee) for the continued operation and maintenance of the 18.5-megawatt (MW) Hoosic Hydroelectric Project No. 2616,<sup>1</sup> located on the Hoosic River in Rensselaer and Washington Counties, New York.<sup>2</sup> This order preserves the benefits of the project's hydroelectric generation, will not result in any major, long-term adverse environmental impacts, and includes enhancements to the existing aquatic and terrestrial environments and recreation resources. Therefore, the issuance of a license for the Hoosic Project, with the conditions attached hereto, will serve the public interest because it is best adapted to the comprehensive development of the Hoosic River Basin.

**BACKGROUND**

2. On December 19, 1991, Erie's predecessor in interest, Niagara Mohawk Power Corporation (Niagara Mohawk)<sup>3</sup> filed an application for new license pursuant to

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<sup>1</sup>An original license was issued for the project in 1969 (41 FPC 77, reh'g denied, 41 FPC 775 (1969)). The original license expired on December 31, 1993, and the project has operated under an annual license since that time. See FPA Section 15(a)(1), 16 U.S.C. § 808(a)(1).

<sup>2</sup>The Hoosic River is navigable from above the project site to the Hoosic River's confluence with the Hudson River. See Niagara Mohawk Power Corp., 83 FERC ¶ 62,202 (1998), and "Navigation Status Report, Hoosic River," Federal Energy Regulatory Commission, April 1997, cited therein. Therefore, Section 23(b)(1) of the Federal Power Act, 16 U.S.C. § 817(1), requires Project No. 2616 to be licensed.

<sup>3</sup>In Niagara Mohawk Power Corp., et al., 88 FERC ¶ 62,082 (1999), aff'd 90 FERC ¶ 61,148 (2000), the project was transferred to Erie, which became the relicense applicant for the project.

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Sections 4(e) and 15 of the Federal Power Act (FPA),<sup>4</sup> authorizing the continued operation and maintenance of the Hoosic Project. In 1992, the New York State Department of Environmental Conservation (NYSDEC) denied without prejudice Niagara Mohawk's application for water quality certification for the project under Section 401 of the Clean Water Act. Niagara Mohawk appealed the denial of certification. Thereafter, Erie and resource agencies and non-governmental organizations entered into settlement negotiations to resolve issues pertaining to the issuance of certification and the new license.

3. The Commission issued public notice of the new license application on February 5, 1993, setting April 8, 1993 as the deadline for filing comments, protests, and motions to intervene. Timely motions to intervene were filed by NYSDEC; the Rensselaer County Conservation Alliance (RCCA); the Adirondack Mountain Club (ADK); the American Whitewater Association, *et al.* (American Whitewater);<sup>5</sup> and the U.S. Department of the Interior (Interior).<sup>6</sup> A late motion to intervene was filed on June 27, 1995, by Valley Falls Associates Limited Partnership, which was granted by a notice of the Secretary issued October 21, 2002.<sup>7</sup>

4. On October 25, 1996, the Commission issued a draft environmental assessment (draft EA) on the application. Comments on the draft EA were filed by the Rensselaer Taconic Land Conservancy (R-TLC), NYSDEC, Interior, ADK, New York Rivers United (NYRU), Niagara Mohawk, and RCCA. Noting that the appeal of the denial of water quality certification was ongoing, the Commission issued the final environmental assessment (EA) on June 30, 2000. The EA contains background information, analysis of impacts, and the basis for a finding that issuance of the license, subject to the conditions recommended in the EA, will not be a major federal action effecting the existing environment.

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<sup>4</sup>16 U.S.C. § 797(e), 808.

<sup>5</sup>American Whitewater Association, American Rivers, New York Rivers United, National Heritage Institutes, National Audubon Society, and Trout Unlimited.

<sup>6</sup>All of these requests for intervention were automatically granted because they were timely and unopposed. 18 C.F.R. § 385.214(c)(1) (2002).

<sup>7</sup>New York State Electric & Gas Corporation filed a late motion to intervene seeking intervenor status only, which was granted by a notice of the Secretary issued August 8, 1995.

5. Subsequent to the issuance of the EA, Erie and the following entities concluded negotiations to resolve issues raised by the license application and water quality certification and, on June 14, 2002, signed an Offer of Settlement (Settlement Offer): ADK, American Rivers, American Whitewater, NYRU, New York State Conservation Council, NYSDEC, RCCA, the Town of Schaghticoke, Trout Unlimited, Interior's U.S. Fish and Wildlife Service (FWS) and the U.S. National Park Service, and the Village of Schaghticoke. Pursuant to Rule 602 of the Commission's Rules of Practice and Procedure,<sup>8</sup> on August 16, 2002, Erie, on behalf of the signatories, filed the Settlement Offer along with an Explanatory Statement requesting that the measures for protection, mitigation, and enhancement of fish and wildlife and recreation resources set forth in specified provisions of Section 3 of the Settlement Offer be approved, without material modification, as articles in the new Hoosic Project license. These measures are described below.

## **PROJECT DESCRIPTION**

6. The Hoosic Project consists of two developments on the Hoosic River east of its confluence with the Hudson River, the Johnsonville Development at River Mile (RM) 13.3 and the Schaghticoke Development at RM 7.1.<sup>9</sup> Both developments are operated in a peaking mode.<sup>10</sup>

7. The Johnsonville Development includes: (1) a 39-foot-high, 529-foot-long concrete gravity dam topped with 2.5-foot-high wooden flashboards; (2) a reservoir with a 450-acre surface area; (3) a sluice gate; (4) a forebay structure; (5) an intake structure equipped with 2-inch clear-spaced vertical trashracks; and (4) a powerhouse containing two turbine generators with a total installed capacity of 2,100 kilowatts (kW).

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<sup>8</sup>18 CFR 385.602 (2002).

<sup>9</sup>The exempted 2.5-MW James H. Thompson Project No. 6411 (26 FERC ¶ 62,193 (1984)), operated by Mercer Companies and Valley Falls Associates is situated in between the two developments at RM 11.

<sup>10</sup>A peaking facility stores water during periods of off-peak power demand and releases water for generation during periods of peak demand. Historically, Erie's peaking operations included reservoir fluctuations at the Johnsonville and Schaghticoke reservoirs of 3.5 feet and 1 foot, respectively. However, currently Erie voluntarily operates the Johnsonville impoundment with a 1 foot drawdown limitation.

8. The Schaghticoke Development includes: (1) a 28-foot-high, 700-foot-long concrete gravity dam topped with 2.5-foot-high wooden flashboards; (2) a reservoir with a 150-acre surface area;<sup>11</sup> (3) a 2,300-foot-long open canal; (4) a forebay; (5) a pipeline intake equipped with 2.5-inch clear-spaced vertical trashracks; (6) an 820-foot-long, 12.5-foot-diameter steel pipeline; (7) a surge tank; (8) five penstocks; and (9) a powerhouse containing four turbine generators with a total installed capacity of 16,400 kW. The canal, forebay, pipeline, and penstocks create a two-mile bypassed reach between the dam and the powerhouse.

9. A detailed description of project facilities is found in ordering paragraph (B)(2).

### **WATER QUALITY CERTIFICATION**

10. Under Section 401(a)(1) of the Clean Water Act (CWA),<sup>12</sup> the Commission may not issue a license for a hydroelectric project unless the state water quality certifying agency has issued a water quality certification for the project or has waived certification. Section 401(d) of the CWA provides that state certification shall become a condition on any federal license or permit that is issued.<sup>13</sup> Only a reviewing court can revise or delete these conditions.<sup>14</sup>

11. Following the filing of the Settlement Offer, on September 19, 2002, NYSDEC issued a certification for this project that includes 21 conditions, which are set forth in Appendix A of this order, and incorporated in the license (see ordering paragraph D). The water quality certification, p. 3, states that it includes the Settlement Offer.<sup>15</sup>

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<sup>11</sup>The Schaghticoke impoundment consists of three connected water bodies (the main impoundment and two side ponds, Electric Lake and Fisherman's Lane Pool) and one unconnected basin. The main impoundment is a long, narrow, slow flowing, riverine habitat. The two connected side ponds are relatively shallow and heavily vegetated.

<sup>12</sup>33 U.S.C. § 1341(a)(1).

<sup>13</sup>33 U.S.C. § 1341(d).

<sup>14</sup>See *American Rivers v. FERC*, 129 F.3d 99 (D.C. Cir. 1997).

<sup>15</sup>As noted, the Settlement Offer, by its terms, includes only certain of its  
(continued...)

## **OFFER OF SETTLEMENT**

12. The Commission encourages settlement agreements that resolve licensing issues in the public interest. The parties are to be commended for their successful effort to reach consensus on the broad range of issues involved in the operation of this project in the public interest. This section discusses the provisions of the Settlement Offer, including the environmental impact of the Settlement Offer's license conditions (contained in Section 3 of the Settlement Offer) compared with that of our license conditions recommendations in the EA. Because the Settlement Offer is also a condition of the water quality certification issued for the project, this section also determines whether, as required by Section 10(a)(1) of the FPA, 16 U.S.C. § 803(a)(1), the project proposal, as conditioned by the Settlement Offer, is best adapted to a comprehensive plan for improving or developing the waterway for beneficial public purposes.

### **A. Section 1.0 Introduction**

13. Section 1 sets out acronyms used in the Settlement Offer, the term of the Settlement Offer, an agreement on incorporating certain of the Settlement Offer's provisions as license conditions, the purposes and goals of the Settlement Offer, and the conventions and definitions used in the Settlement Offer.

14. Section 1.2 of the Settlement Offer states the settlement parties' intent that the license condition provisions of Section 3 of the Settlement Offer be included in numbered license articles. However, Commission policy requires placing provisions (such as the Section 3 provisions) that are mandatory license provisions (here, because of they are included as requirements of the water quality certification for the project) verbatim in appendices, and incorporating the provisions by reference in ordering paragraphs.<sup>16</sup> As described below, certain of the provisions are incorporated in numbered license articles for the purpose of adding basic requirements to enable the Commission to enforce the provisions. However, these articles do not purport to, and

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<sup>15</sup>(...continued)  
provisions as license conditions.

<sup>16</sup>See Avista Corporation, 93 FERC ¶ 61,116 at p. 61,327 (2000).

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indeed cannot, alter or override mandatory conditions, but rather are meant to be complementary to them.<sup>17</sup>

15. The license provisions in Section 3 of the Settlement Offer, along with the Settlement Offer provisions listing acronyms, definitions, and schematic drawings referenced in those provisions, are set forth in Appendix B of this order and incorporated in the license (see ordering paragraph E).

**B. Section 2.0 General Agreements of the Parties**

16. Section 2 contains agreements of the parties on such matters as enforcing and withdrawing from the Settlement Offer, license amendments and reopeners, the term of the license, fishway prescription authority, Erie's withdrawal of provisions of its application that are superceded by the requirements in the Settlement Offer, and the provisions in Section 3 of that are intended to become license conditions.

**C. Section 3.0 Measures which the Licensee will undertake with Respect to License Conditions and other Non-License Provisions of Settlement**

17. As described below, Section 3 of the Settlement Offer sets out the specific protection, mitigation, and enhancement measures proposed for inclusion in the new Hoosic Project license. Aquatic habitat and fisheries needs are met through a combination of limiting impoundment fluctuations (Section 3.1), installing pneumatic flashboards (Section 3.1.1) releasing minimum bypass flows (Section 3.2), developing a stream-flow and water-level monitoring plan (Section 3.3), and installing fish movement and protection measures (Section 3.4). Section 3 also includes requirements for recreation measures (Section 3.5) to be included in the license (Section 3.5.1), and it designates certain recreation measures that are not to be included in the license (Section 3.5.2).

**Impoundment Fluctuations**

18. Erie proposed to change its peaking operations to pulsing operations to reduce the magnitude of impoundment and flow fluctuations.<sup>18</sup> Section 3.1 of the Settlement Offer

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<sup>17</sup>Id., n. 13.

<sup>18</sup>A pulsing facility uses reservoir storage to match turbine discharge with inflow. Inflow is supplemented by storage to operate units efficiently until the storage is used up, (continued...)

would limit fluctuations at the Johnsonville reservoir to three inches from June 1 to September 30 (which is the centrarchid (sunfish and black bass) spawning and nursery period, the growing season for riparian vegetation, and the nesting and nursery period for wildlife that use riparian habitat) and six inches during the remainder of the year. Fluctuations at the Schaghticoke impoundment would be limited to six inches year-round. The EA recommended, for both developments, requiring run-of-river operations (outflow equaling inflow) and limiting reservoir fluctuations to six inches.<sup>19</sup> The Settlement Offer's requirements for limiting impoundment fluctuations, along with its requirements for instream flows (see below), would achieve nearly the same environmental benefits of the EA-recommended run-of-river mode, but allow the project turbines to operate more efficiently by retaining pulsing capabilities.

### **Partial Pneumatic Flashboards**

19. Section 3.1.1 of the Settlement Offer requires Erie, within 15 months of the issuance of the license, to install pneumatic flashboards on the straight section of the Schaghticoke Dam to facilitate pond-level control. Under Section 3.1.1, Erie reserves the right to install pneumatic flashboards at Johnsonville dam, subject to consultation with the other signatories to the Settlement Offer. The pneumatic flashboards will reduce the occurrence of failure of the conventional flashboards that will remain on the rest of the spillway crest and will serve to obviate the need for the EA's recommendation to prohibit replacing failed flashboards until after June, if they have not been reinstalled prior to May 15, to protect spawning centrarchid.

20. Section 3.1.1 does not specify the design or exact location of the pneumatic flashboards to be installed at the Schaghticoke or Johnsonville dams. Article 401 requires Erie to file detailed design plans for the flashboards to be installed pursuant to Section 3.1.1 six months prior to their installation.

### **Instream Flows**

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<sup>18</sup>(...continued)

at which point one or more units are shut off and inflow replenishes storage until the reservoir is full again. A peaking facility does the same thing, but with discharge concentrated during periods of peak electric demand and storage replenished during off-peak periods.

<sup>19</sup>See the EA at pp. 12-15, which lists the recommended measures for each development.

21. The EA's recommendation for run-of-river operations obviated the need for minimum flows in the tailwaters of the two developments. By contrast, Section 3.2 of the Settlement Offer establishes tailwater "base flow" releases of 220 cubic feet per second (cfs) and 240 cfs from the Johnsonville and Schaghticoke impoundments, respectively. These base flows will ensure that much of the Hoosic River channel downstream from the powerhouses is watered at all times, and will enhance habitat for most life stages of game fish, forage fish, and benthic invertebrates (insects on which the fish feed). The requirement of Section 3.2 to release flows of 60-cfs year-round into Schaghticoke's bypassed reach is identical to the corresponding recommendation in the EA.

22. Section 3.2 also requires Erie to "develop appropriate structural designs for the provision of the bypass flow at the Schaghticoke development" and, in consultation with FWS and NYSDEC, to make "a one time minor streambed modification ... near the east end of the Schaghticoke dam to ensure a portion of the bypass flow ... is directed to the vicinity of the west shore of the upper bypass reach." Section 3.2 does not detail the "structural designs" or "streambed modification" it requires. Article 402 requires Erie, within one year of the effective date of this license, to file a plan for providing flows to the Schaghticoke bypassed reach, including details of the required structural designs and the streambed modification, following consultation with FWS and NYSDEC.

### **Flow and Water Level Monitoring**

23. Section 3.3 of the Settlement Offer requires Erie to develop and implement a stream-flow and water-level monitoring plan to assure project operation compliance. The plan must include gages for measuring the flows required under the Settlement Offer, including any necessary gages for measuring headpond and tailwater elevations and appropriate means for on-site visual verification of water levels. Section 3.3 also requires Erie to keep accurate and sufficient records of impoundment elevations and project flows to the satisfaction of NYSDEC. The requirements of Section 3.3 are consistent with similar requirements recommended in the EA.

24. Section 3.3 does not indicate the location or type of gages or records it requires. Therefore, Article 403 requires the filing of the monitoring plan for Commission approval.

### **Fish Protection, Passage and Movement**



25. To prevent entrainment of resident fish, including American eels,<sup>20</sup> Section 3.4 of the Settlement Offer requires Erie to install perforated plates with 1.5-inch diameter openings overlaying the existing 2-inch and 2.25-inch clear-spaced trashrack intakes at Johnsonville and Schaghticoke developments, by the end of 2006 and by 15 months following the issuance of the new license, respectively. In light of the slow approach velocities at the project's intakes, the EA simply recommended that, when the existing 2-inch clear-spaced trashracks at the Johnsonville powerhouse intake need to be replaced, 1-inch clear-spaced trashracks be installed to provide additional protection from turbine mortality for resident fish. The trashrack overlays at Schaghticoke and Johnsonville will provide an increased level of protection for fishery resources.

26. Section 3.4 of the Settlement Offer requires the installation of an upstream eel conveyance system in the vicinity of the east end of the Schaghticoke dam within 15 months of the issuance of the license and installation of an upstream conveyance in the vicinity of the south end of the Johnsonville dam within 3 years of the issuance of the license. Downstream passage would be provided by a 20 cfs "fish friendly" passage flow from the existing sluice gate adjacent to the Johnsonville powerhouse, and a conveyance structure to be installed in the vicinity of the east end of the Schaghticoke dam.

27. The EA recommended requiring Erie to develop a plan to monitor for the presence of eels at 1, 5, and 10 years following the issuance of the license and to design and install an upstream eel passage facility at the Schaghticoke dam when sufficient numbers of eels warranted the facility, and to design and install a downstream passage facility at Schaghticoke dam 5 years thereafter. Owing to the barrier posed by the intervening James H. Thompson project, the EA did not recommend installation of upstream or downstream fish passage facilities at the Johnsonville development.

28. Installation of upstream passage facilities at both project dams would most likely cost less than monitoring for eels as the Schaghticoke dam. Moreover, installation of the downstream passage facilities at Schaghticoke and utilizing the existing sluiceway

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<sup>20</sup>The Hoosic River in the project area supports both warmwater and coldwater fisheries, but the fish community is dominated by warmwater species. See the EA at p. 28. American eel have been observed in the tailwater area of the Schaghticoke Development and, on very rare occasions, as far upstream as the Hoosic Falls Project No. 2487 at RM 28.6. *Id.* at p. 32.

structure at Johnsonville for downstream passage are reasonable measures. They are consistent with New York's fisheries management plan for the Hoosic River.

29. The generalized wording of the requirements in Section 3.4 of the Settlement Offer to install a "conveyance structure" at the Schaghticoke dam and "an upstream eel conveyance system" at each of the developments necessitates their inclusion in special license articles (Articles 404 and 405) requiring the filing of detailed plans for these requirements.

### **Recreation**

30. Section 3.5.1 of the Settlement Offer provides for Erie to continue permitting public access to project lands and waters, except for those lands and facilities specifically related to hydroelectric generation where public safety would be of concern. Erie is required to provide parking areas with boat launches and signage for access to project waters at the Johnsonville dam and the Schaghticoke powerhouse; conduct a whitewater feasibility study at the Schaghticoke Development's bypassed reach followed by annual whitewater release events; and provide a whitewater recreation access path.

31. The EA recommended implementation of two scheduled weekend whitewater releases in the Schaghticoke bypassed reach, one in August and one in September. The EA also concluded that implementing scheduled whitewater flows of approximately 1,200 cfs during the summer could negate the environmental benefits that the recommended 60-cfs minimum flow was expected to provide. The pulsed operation of the Schaghticoke powerhouse that the Settlement Offer allows should enable recreational boating in this reach to take place throughout the summer, rather than just on two weekends. Moreover, the Settlement Offer requires a whitewater boating study that identifies the minimum and optimum flow for whitewater boating. Limited scheduled whitewater releases may mimic natural high flow events, although of much shorter duration.

32. The Settlement Offer fails to specify the design of the recreational improvements and the provisions for conducting the whitewater boating study required under Section 3.5.1, both of which affect public safety. Therefore, Article 406 requires Erie to file a plan specifying these provisions and design plans.

33. Section 3.5.2 Settlement Offer stipulates that certain recreation facilities located within the project's boundary should not be included in the license. Section 3.5.2 requires Erie to develop a Fisherman's Lane Fishing and Boat access facility, including

providing signage, a car-top boat launch, and an Americans with Disabilities Act-compliant fishing platform that Erie will convey to the Town of Schaghticoke for future maintenance.<sup>21</sup> Erie will also ensure public access to the Schaghticoke powerhouse parking area and car-top boat take-out/put-in facility.<sup>22</sup>

34. The Settlement Offer's exclusion from the license of requirements for recreation facilities on project lands may, over the term of the new license, unduly limit licensee's ability to meet increasing demands for recreation that outstrip the recreation facilities required under the new license. Therefore, while this aspect of the Settlement Offer will be approved, Erie is on notice of the Commission's reserved authority to require Erie or any successor to provide public recreation facilities and access to project lands and waters for recreational purposes, should circumstances warrant.<sup>23</sup>

35. The Hossic license, as conditioned herein by the Settlement Offer, will provide for reduced impoundment fluctuation, dependable base flows, protection of fish against turbine entrainment, upstream and downstream fish passage, recreational flow releases, and improved recreation facilities. All of these improvements will enhance the benefits

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<sup>21</sup>Depending on the specific development proposal, Erie may be able to convey the required interests in project lands to the Town of Schaghticoke without prior Commission authorization pursuant to the standard land use article included as Article 410 of this license.

<sup>22</sup>Section 3.5.2(c) includes a dispute-resolution provision for settling disputes among the parties concerning not only recreational enhancements excluded from the license but also those included in the license involving whitewater boating provisions in Section 3.5.1(e) of the Settlement Offer. Since the filing of the Settlement Offer, the Commission has reversed its policy of refusing to incorporate such dispute resolution provisions as license requirements. See *Erie Boulevard Hydropower, L.P., et al.*, 100 FERC ¶ 61,321 at p.62,502 (2002). However, consistent with the wording of Section 3.5.2 of the Settlement Offer, the dispute resolution provision of Section 3.5.2(c) has not been included as a license requirement.

<sup>23</sup>The standard form articles applicable to the Hoosic Project are found in Form L-3, 54 FPC 1817 (October 1975), entitled "Terms and Conditions of License for Constructed Major Project Affecting Navigable Waters of the United States." Standard Article 17 of Form L-3 is the reservation of authority for recreational facilities. 54 FPC at p. 1822. The standard form articles are incorporated into the license in ordering paragraph (F).

of this project to the public.<sup>24</sup> Based on the analysis in the EA, as supplemented here, the Commission concludes that issuance of a new license for the Hoosic Project, as conditioned herein, will not constitute a major federal action significantly affecting the quality of the human environment, and, giving equal consideration to developmental and environmental values, is best adapted to a comprehensive plan for improving or developing a waterway for beneficial public purposes.

## **OTHER LICENSING CONSIDERATIONS**

### **A. National Historic Preservation Act**

36. On July 19, 1996, the New York State Historic Preservation Officer, the Advisory Council for Historic Preservation, and the Commission executed a Programmatic Agreement for managing historic properties that may be affected by the relicensing of the Hoosic Project.<sup>25</sup> Niagara Mohawk, Erie's predecessor, signed as a concurring party. Article 407 requires Erie to implement the Programmatic Agreement, including the Cultural Resources Management Plan for the project. The Programmatic Agreement satisfies the Commission's responsibilities under Section 106 of the National Historic Preservation Act.<sup>26</sup>

### **B. Fishway Prescriptions Under FPA Section 18**

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<sup>24</sup>Based on FPA Section 10(j) discussions concerning the presence of contaminated sediments in project waters, the EA recommended including a license article that would require Erie, prior to dredging within project waters or drawing down the project's impoundments below historical levels, to evaluate sediments and take any necessary remedial actions. The Settlement Offer includes no such requirement. However, section "C. Project Maintenance and Construction," especially condition "C. 10. Sediment Analysis and Disposal," of the water quality certification adequately addresses the issue.

<sup>25</sup>Programmatic Agreement Among The Federal Energy Regulatory Commission, The Advisory Council on Historic Preservation, and The New York State Preservation Officer, For Managing Historic Properties That May Be Affected By Licenses Issuing To Niagara Mohawk Power Corporation, Beebee Island Corporation or Moreau Manufacturing Corporation For The Continued Operation of Fourteen Hydroelectric Power Projects In Upstate New York.

<sup>26</sup>16 U.S.C. § 470s.

37. Section 18 of the FPA<sup>27</sup> provides that the Commission shall require the construction, maintenance, and operation by a licensee of such fishways as the Secretaries of the U.S. Departments of Commerce and of the Interior may prescribe. By letter dated February 14, 1997, Interior requested the Commission to reserve Interior's authority to prescribe fish passage facilities for the project. Consistent with the Commission's policy, Article 408 of this license reserves the Commission's authority to require fishways that may be prescribed by Interior for the Hoosic Project.

### **C. FPA Section 10(j) Fish and Wildlife Recommendations**

38. Section 10(j)(1) of the FPA<sup>28</sup> requires the Commission, when issuing a license, to include conditions based on the recommendations of federal and state fish and wildlife agencies submitted pursuant to the Fish and Wildlife Coordination Act, for the protection and enhancement of fish and wildlife and their habitat affected by the project. The recommendations of the fish and wildlife agencies for the Hoosic River Project, as now reflected in the Settlement Offer, are included in the license.<sup>29</sup>

### **D. Endangered Species Act**

39. Section 7(a) of the Endangered Species Act of 1973 (ESA)<sup>30</sup> requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence

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<sup>27</sup>16 U.S.C. § 811.

<sup>28</sup>16 U.S.C. § 803(j)(1).

<sup>29</sup>The Section 10(j) agencies are signatories to the Settlement Offer. Also, in a comment letter filed on August 29, 2002, the FWS stated that the Settlement Offer supercedes its comments, terms and conditions, and fishway prescriptions, filed on May 24, 1996.

<sup>30</sup>16 U.S.C. § 1536(a).

of federally listed threatened and endangered species, or result in the destruction or adverse modification of their designated critical habitat.<sup>31</sup>

40. The threatened bald eagle has begun to overwinter within the project area. Overwintering bald eagles feed primarily on waterfowl and fish. The proposed operational and recreational measures would not substantially affect the distribution and abundance of these prey species. Therefore, no effects on bald eagles are expected.

41. Since the endangered Karner blue butterfly is not located in the Hoosic River Project area, the EA concluded that measures to protect this species were not warranted. Section 2.11 of the Settlement Offer provides for the licensee to develop and implement an Endangered Species Management Plan to assess the presence of Karner blue butterfly or its plant host, blue lupine, where there is any proposed ground and vegetation disturbance. It is prudent to rule out the presence of this species by surveying for blue lupine prior to proposed vegetation disturbance. The relatively minor cost that licensee would incur is outweighed by the protection of this endangered species. Article 409 includes the relevant requirements.

### **E. FPA Section 10(a)(2) Comprehensive Plans**

42. Section 10(a)(2)(A) of the FPA<sup>32</sup> requires the Commission to consider the extent to which a hydroelectric project is consistent with federal and state comprehensive plans for improving, developing, or conserving waterways affected by the project.<sup>33</sup> Under Section 10(a)(2), federal and state agencies filed a total of 29 qualifying comprehensive plans of which we identified three New York and three United States plans to be applicable (Commission, 1996). In addition, staff identified three other comprehensive plans not filed under Section 10(a)(2), but relevant to comprehensive resource planning within the project region.<sup>34</sup> No inconsistencies were found.

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<sup>31</sup>FWS, the ESA administering agency, is a signatory to the Settlement Offer.

<sup>32</sup>16 U.S.C. § 803(a)(2)(A).

<sup>33</sup>Comprehensive plans for this purpose are defined at 18 C.F.R § 2.19 (1997).

<sup>34</sup>See Section IX of the EA.(1) FWS and Canadian Wildlife Service. 1986. North American Waterfowl Management Plan: A Strategy for Cooperation. U.S. Department of the Interior and Environment Canada. Washington, D.C. May 1986; (2) FWS.

## **F. Applicant's FPA Sections 10(a)(2)(C) and 15(a) Plans and Capabilities**

43. In accordance with Sections 10(a)(2)(C) and 15(a) of the FPA,<sup>35</sup> we have evaluated Erie's record as a licensee with respect to the following: (1) conservation efforts; (2) compliance history and ability to comply with the license; (3) safe management, operation, and maintenance of the project; (4) ability to provide efficient and reliable electric service; (5) need for power; (6) transmission services; (7) cost effectiveness of plans; (8) actions affecting the public; and (9) ancillary services.

### **A. Conservation Efforts**

44. Erie is an independent power producer, not an electric utility, and, as such, is not required to address the energy efficiency improvement programs as required by Section 10(A)(2) of the FPA.

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<sup>34</sup>(...continued)

Undated. Fisheries USA: the Recreational Fisheries Policy of the U.S. Fish and Wildlife Service. Washington, D.C.; (3) National Park Service. 1982. Nationwide Rivers Inventory; (4) Interior. Washington, D.C. January 1982; (4) NYSDEC. 1985. New York State Wild, Scenic, and Recreational River System Act. Albany, New York. March 1985; (5) NYSDEC. 1986. Regulation for administration and management of the wild, scenic, and recreational river systems in New York State excepting the Adirondack Park. Albany, New York. March 26, 1986; (6) New York State Parks, Recreation and Historic Preservation. 1994. People, Resources, Recreation, Statewide Comprehensive Outdoor Recreation Plan. (7) Capital District Regional Planning Commission. 1978. Regional Development Plan, Counties of Albany, Rensselaer, Saratoga, and Schenectady; (8) NYSDEC. 1989. A Fisheries Management Plan for the New York Portion of the Hoosic River; and (9) New York State Parks, Recreation and Historic Preservation. 1989. Final Generic Environmental Impact Statement on the Statewide Snowmobile Trail Plan.

<sup>35</sup>16 U.S.C. §§ 803(a)(2)(C) and 808(a).

**B. Compliance History and Ability to Comply with New License**

45. In accepting the transfer of the license from NMPC, Erie agreed to accept all of the responsibilities, terms, and conditions of the existing license and the FPA. Erie has not been out of compliance with the license since it was transferred from NMPC. We have no reason not to believe that Erie can satisfy the conditions of a new license.

**C. Safe Management, Operation, and Maintenance of the Project**

46. We have reviewed the record of management, operation, and maintenance of the Hoosic Project pursuant to project safety. We conclude that the dams and other project works are safe, and we have no reason not to believe that Erie will safely manage, operate, and maintain these facilities under a new license.

**D. Ability to Provide Efficient and Reliable Electric Service**

47. In accepting the transfer of the license from NMPC, Erie agreed to accept all of the responsibilities, terms, and conditions of the existing license and the FPA.

48. We reviewed Erie's plans and its ability to operate and maintain the project in a manner most likely to provide efficient and reliable electric service. Erie has an ongoing preventative maintenance tracking system. Maintenance personnel routinely perform service and repair tasks to keep the project in good operating condition. Daily checks of the equipment at Erie's projects are made by a traveling operator, who can send maintenance crews to repair and restore operation in a timely manner to reduce down time losses.

49. We have no reason not to believe that Erie will operate the project in an efficient manner within the constraints of the existing license and that the project will continue to provide efficient and reliable electric service in the future.

**E. Need for Power**

50. The EA reviewed the need for power in context of the operating region in which the project is located. Erie sells energy to meet its customer's needs through Niagara Mohawk transmission lines. The Hoosic Project produces about 82.9 gigawatt hours of electricity per year. Operation of the project permits Erie to produce inexpensive and reliable power using a renewable resource.



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51. The project is in the Adirondack Region of the New York Independent System Operator of the Northeast Power Coordinating Council (NPCC) region of the North American Electric Reliability Council (NERC). NERC annually forecasts electrical supply and demand in the nation and the region for a 10-year period. NERC's report on annual supply and demand projections indicates that, for the period 1998 through 2007, the demand for electric energy in the NPCC region will grow at an average rate of 1.14 percent annually. The project could displace existing and planned non-renewable fossil-fueled generation.

52. We conclude that the projects' power, low cost, displacement of nonrenewable fossil-fired generation, and contribution to the region's diversified generation mix will help meet a need for power in the region.

**F. Transmission Services**

53. The project's transmission facilities include the generator leads, station transformers, and buses located at the powerhouse. Erie proposes no changes that would affect transmission facilities.

**G. Cost-Effectiveness of Plans**

54. Erie has no plans for changing project facilities for power development purposes, but is proposing a number of measures for the enhancement of natural resources and recreational opportunities. We conclude, based on the license application, that Erie's plans for implementing these measures, as well as its continued operation of the project, will be achieved in a cost-effective manner.

**H. Actions Affecting the Public**

55. The Hoosic Project generates electricity used to serve the needs of the public. Erie also pays taxes annually to local and state governments and the project provides employment opportunities. Environmental enhancement measures and recreational improvements included in the license will generally improve environmental quality, particularly in aquatic resources, and will have a beneficial effect on public use of project facilities for recreation purposes.

**I. Ancillary Services**

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

### **ECONOMIC BENEFITS OF PROJECT POWER**

57. In determining whether a proposed power project will be best adapted to a comprehensive plan for developing a waterway for beneficial public purposes, the Commission considers a number of public interest factors, including the economic benefits of project power.

58. Under the Commission's approach to evaluating the economics of hydropower projects, as articulated in Mead Corp.,<sup>36</sup> the Commission employs an analysis that uses current costs to compare the costs of the project and likely alternative power, with no forecasts concerning potential future inflation, escalation, or deflation beyond the license issuance date. The basic purpose of the 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. In making its decision, the Commission considers the project power benefits both with the applicant's proposed measures and with the Commission's modifications and additions to the applicant's proposal.

59. As proposed by Erie, and taking into account the estimated costs of the Settlement Offer, the project would produce an average of 70,270 MWh of energy annually at an annual cost of about \$2,840,200 or about 40.42 mills per kilowatt-hour (mills/kWh). Based on the cost to replace the project's power in the New York Independent System Operator region, which the Commission staff considers to be the most likely alternative power source for this project, the staff determined the current annual value of the project's power would be about \$2,952,00 or 42.01 mills/kWh. To determine if the project would be economically beneficial, we subtract the project's cost

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<sup>36</sup>72 FERC ¶ 61,027 (1995).

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from the value of the project's power. Thus, the project's power would cost about \$111,800 or 1.59 mills/kWh less than available alternative power.

60. As licensed with staff recommended measures, the project would produce an average of 70,270 MWh of energy annually at an annual cost of about \$2,842,700 or about 40.45 mills/kWh. The annual power value would be about \$2,952,00 or 42.01 mills/kWh. Thus, the project's power would cost about \$109,300 or 1.56 mills/kWh less than available power.

### **LICENSE TERM**

61. Section 15(e) of the FPA<sup>37</sup> provides that any new license issued shall be for a term of not less than 30 years nor more than 50 years. The Commission's general policy is to establish 30-year terms for projects with little or no redevelopment, new construction, new capacity, or environmental mitigative and enhancement measures; 40-year terms for projects with a moderate amount of such activities; and 50-year terms for projects with extensive measures.

62. The Settlement Offer contemplates a 40-year license term. Because the term of the license was likely an important element in the negotiations that led to the Settlement Offer, and because the applicant proposes moderate environmental measures, we will issue the license for a term of 40 years.

### **SUMMARY OF FINDINGS**

63. The EA, as supplemented here, includes background information, analysis of impacts, discussion of measures, and support for related license articles. The project, with the required measures contained in this license, will not result in any major, long-term adverse environmental impacts.

64. The design of this project is consistent with the engineering standards governing dam safety. The project will be safe if operated and maintained in accordance with the requirements of this license.

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<sup>37</sup> 16 U.S.C. § 808(e).

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65. Review of the agency and public comments, and evaluation of the environmental and economic effects of the proposed project and its alternatives pursuant to FPA Section 10(a)(1), supports the finding that the Hoosic River Project, with the conditions attached hereto, will be best adapted to the comprehensive development of the Hoosic River Basin for all beneficial public purposes.

The Commission orders:

(A) This license is issued to Erie Boulevard Hydropower L.P. (licensee) for a period of 40 years, effective the first day of the month in which this order is issued, to construct, operate, and maintain the Hoosic Hydroelectric Project. This license is subject to the terms and conditions of the Federal Power Act (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, shown by Exhibit G filed December 19, 1991:

<u>Exhibit G Drawing</u>	<u>FERC No. 2616-</u>	<u>Showing</u>
Sheet 1	1001	Project Boundary & Location Map
Sheet 2	1002	Project Boundary & Location Map
Sheet 3	1003	Project Boundary & Location Map

(2) Project works consist of the Johnsonville and the Schaghticoke Developments.

The Johnsonville Development consists of the following existing facilities: (1) a 39-foot-high, 529-foot-long concrete gravity dam topped with 2.5-foot-high wooden flashboards; (2) a 450-acre impoundment with a normal maximum water surface elevation of 346.0 feet National Geodetic Vertical Datum (NGVD); (3) a 47-foot-high, 39-foot-long sluice gate; (4) an 80-foot-long, 54-foot-wide forebay structure; (5) a 48-foot-long, 54-foot-wide intake structure with two 20.5-foot-wide, 33-foot-high bays equipped with 2.0-inch-spacing vertical trashracks; (6) a powerhouse containing two

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turbine generators each rated at 2,400 kW with an installed capacity of 4,800 kW, however, power generation is turbine-limited resulting in an actual capacity of 2,100 kW; and (7) appurtenant facilities.

The Schaghticoke Development consists of the following existing facilities: (1) a 28-foot-high, 700-foot-long concrete gravity dam topped with 2.5-foot-high wooden flashboards; (2) a 150-acre impoundment with a normal maximum water surface elevation of 267.35 feet NGVD; (3) a 34-foot-high, 30-foot-long waste gate; (4) a 19.5-foot-high, 20.5-foot-long canal intake structure equipped with eight gates leading to; (5) a 2,300-foot-long open intake canal; (6) a pipeline intake and ice sluice structure equipped with 2.1-inch-spacing vertical trashracks; (7) an 870-foot-long, 12.5-foot-diameter pipeline; (8) a 50-foot-high, 40-foot-diameter surge tank; (9) four, 320-foot-long, 6.5-foot-diameter penstocks; (10) a powerhouse containing four turbine generators each rated at 4,100 kW with an installed capacity of 16,400 kW; and (11) appurtenant facilities.

The total capacity of the Johnsonville and the Schaghticoke Developments is 18,500 kW.<sup>38</sup>

The project works generally described above are more specifically described in Exhibit A of the application and shown by Exhibit F filed December 19, 1991:

<u>Exhibit F Drawing</u>	<u>FERC No. 2616-</u>	<u>Showing</u>
Sheet 1	1004	Johnsonville Development General Plan, Sections of Dam, Core Wall
Sheet 2	1005	Johnsonville Development Plan, Elevation & Section of Forebay Intake, Sluice Gate
Sheet 3	1006	Johnsonville Development Powerhouse Plan, Elevations & Section

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<sup>38</sup>See Order Amending License determining the project's authorized capacity. 98 FERC ¶ 62,202 (2002).

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<u>Exhibit F Drawing</u>	<u>FERC No. 2616-</u>	<u>Showing</u>
Sheet 4	1007	Schaghticoke Development General Plan, Profile of Pipeline and Penstock, Cross Sections of Canal
Sheet 5	1008	Schaghticoke Development Detail of Canal Intake, Forebay Sluice Way, Penstock, Dam
Sheet 6	1009	Schaghticoke Development Powerhouse Plan, Elevations Incorporating Proposed New Induction Generators
Sheet 7	1010	Schaghticoke Development Powerhouse Sections

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

(C) The Exhibits A, F, and G described above are approved and made part of this license.

(D) This license is subject to the water quality certification conditions submitted by the New York State Department of Environmental Conservation pursuant to Section 401(a) of the Clean Water Act, as those conditions are set forth in Appendix A to this order.

(E) This license is subject to the Settlement Offer conditions set forth in Appendix B to this order.

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(F) This license is subject to the articles set forth in Form L-3, 54 FPC 1817 (October 1975), entitled "Terms and Conditions of License for Constructed Major Project Affecting Navigable Waters of the United States," and the following additional articles:

Article 201. The licensee shall pay the United States annual charges, effective the first day of the month in which the license is issued, for the purposes of reimbursing the United States for the cost of administration of Part I of the Federal Power Act, as determined in accordance with provisions of the Commission's Regulations in effect from time to time. The authorized installed capacity for that purpose is 18,500 kilowatts.

Article 202. Pursuant to Section 10(d) of the Federal Power Act, a specified reasonable rate of return upon the net investment in the project shall be used for determining surplus earnings of the project for the establishment and maintenance of amortization reserves. The licensee shall set aside in a project amortization reserve account at the end of each fiscal year one-half of the project surplus earnings, if any, in excess of the specified rate of return per annum on the net investment.

To the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year, the licensee shall deduct the amount of that deficiency from the amount of any surplus earnings subsequently accumulated, until absorbed. The licensee shall set aside one-half of the remaining surplus earnings, if any, cumulatively computed, in the project amortization reserve account. The licensee shall maintain the amounts established in the project amortization reserve account until further order of the Commission.

The specified reasonable rate of return used in computing amortization reserves shall be calculated annually based on current capital ratios developed from an average of 13 monthly balances of amounts properly included in the licensee's long-term debt and proprietary capital accounts as listed in the Commission's Uniform System of Accounts. The cost rate for such ratios shall be the weighted average cost of long-term debt and preferred stock for the year, and the cost of common equity shall be the interest rate on 10-year government bonds (reported as the Treasury Department's 10-year constant maturity series) computed on the monthly average for the year in question plus four percentage points (400 basis points).

Article 203. The licensee shall file, within 45 days of license issuance, three sets of aperture cards of the approved exhibit drawings. The sets must be reproduced on silver or gelatin microfilm and mounted on type D (3 1/4" X 7 3/8") aperture cards.

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Prior to microfilming, the FERC Drawing Number (2616-1001 through 2616-1010) shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number must be typed on the upper right corner of each aperture card. Additionally the Project Number, FERC exhibit (e.g., F-1, G-1, etc.), Drawing title, and date of this license must be typed on the upper left corner of each aperture card.

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

Article 204. If the licensee's project was directly benefitted by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement during the term of the original license (including extensions of that term by annual licenses), and if those headwater benefits were not previously assessed and reimbursed to the owner of the headwater improvement, the licensee shall reimburse the owner of the headwater improvement for those benefits, at such time as they are assessed, in the same manner as for benefits received during the term of this new license.

Article 301. At least 60 days before starting construction, of the pneumatic flashboard system on the Schaghticoke Dam, the licensee shall submit one copy to the Division of Dam Safety and Inspections - New York 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 the final contract plans and specifications. The Commission may require changes to the plans and specifications to assure the work is completed in a safe and environmentally sound manner. Construction may not commence until authorized by the Regional Engineer.

Article 302. At least 60 days before starting construction of the pneumatic flashboard system on the Schaghticoke Dam, the licensee shall submit one copy to the Division of Dam Safety and Inspections - New York 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 the Quality Control and Inspection Program (QCIP) for the Commission's review and approval. The QCIP shall include a sediment and erosion control plan.

Article 303. Before starting construction of the pneumatic flashboard system on the Schaghticoke Dam, the licensee shall review and approve the design of contractor-



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designed cofferdams and deep excavations. At least 30 days before starting construction of the cofferdams, the licensee shall submit one copy to the Division of Dam Safety and Inspections - New York Regional Engineer and two copies to the Commission (one of these copies shall be a courtesy copy to the Commission's Director, Division of Dam Safety and Inspections), of the approved cofferdam construction drawings and specifications and the letters of approval.

Article 304. At least 60 days before starting construction of the pneumatic flashboard system on the Schaghticoke Dam, the licensee shall submit one copy to the Division of Dam Safety and Inspections - New York 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 the Temporary Emergency Action Plan (TEAP) for the Commission's review and approval. The TEAP shall describe emergency procedures in case failure of a cofferdam, large sediment control structure, or any other water retaining structure could endanger construction workers or the public. The TEAP shall include a notification list of emergency response agencies, a plan drawing of the proposed cofferdam arrangement, the location of safety devices and escape routes, and a brief description of testing procedures.

Article 305. The licensee shall, within 90 days of the completion of construction of the facilities authorized by this license (1.5-inch diameter perforated plate trashrack overlays, upstream eel passage facilities, partial pneumatic flashboards at Schaghticoke dam, minimum flow and downstream fish conveyance structures, recreation facilities), file for Commission approval, revised exhibits A, F, and G, to describe and show those project facilities as built.

Article 401. By six months prior to their installation, the licensee shall file for Commission approval detailed plans for the design and installation of pneumatic flashboards on the straight section of the Schaghticoke spillway and for the design and installation of pneumatic flashboards on the Johnsonville spillway. The plans shall include, at a minimum, the requirements for the Schaghticoke spillway and Johnsonville spillway, as pertinent, of "Section 3.1.1 Partial Pneumatic Flashboards" of the Hoosic River Offer of Settlement filed August 16, 2002 (Appendix B of this order), measures for controlling erosion and sediment, and locations of construction staging areas.

Article 402. Within one year of the effective date of the license, the licensee shall file for Commission approval a plan for providing flows of 60 cubic feet per second (cfs) to the bypassed reach of the Schaghticoke Development within 15 months of the effective date of the license. The plan shall include, at a minimum, the requirements for

providing the 60-cfs flows as stipulated in “Section 3.2 Instream Flows” of the Hoosic River Offer of Settlement filed August 16, 2002 (Settlement Offer) (Appendix B of this order), and detailed descriptions of the "structural designs" and "streambed modification" required by Section 3.2 of the Settlement Offer.

The licensee shall prepare the plan after consultation with the U.S. Fish and Wildlife Service and the New York State Department of Environmental Conservation. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the consulting entities, and, and specific descriptions of how the entities' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the entities to comment and to make recommendations prior to filing the plan with the Commission for approval. If the license 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 the plan.

Article 403. Within one year of the issuance of the license, the licensee shall file for Commission approval a plan to monitor headpond and tailwater elevations, base flows, and minimum flows required under the Hoosic River Offer of Settlement filed on August 16, 2002 (Appendix B of this order). The plan, at a minimum, shall incorporate the plan developed under “Section 3.3 Flow and Water Level Monitoring” of the Settlement Offer, and:

- (1) the planned locations of the flow and elevation measuring devices;
- (1) specific measures that would ensure that the monitoring system would operate under all conditions (including loss of external electric power to the project);
- (3) the design of the flow and water level monitoring devices, including any pertinent hydraulic calculations, technical specifications of proposed instrumentation, erosion and sediment control measures, as appropriate, and design drawings of the system; and
- (4) the method of data collection, and provisions for providing data to the New York State Department of Environmental Conservation and the Commission in a timely manner.

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The licensee shall prepare the plan after consultation with the U.S. Fish and Wildlife Service and the New York State Department of Environmental Conservation. The licensee shall include with the plan documentation of agency consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 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 site-specific information. The Commission reserves the right to require changes to the plan.

Article 404. Within 7 months of the effective date of the license, the licensee shall file for Commission approval a plan for the design and installation, within 15 months of the effective date of the license, of:

- (1) An upstream conveyance system for American Eels at the east end of the Schaghticoke dam; and
- (2) A downstream fish conveyance structure at the east end of the Schaghticoke dam.

The plan shall include, at a minimum, the requirements for the upstream and downstream conveyance systems and structures at the Schaghticoke dam of “Section 3.4 Fish Protection, Passage and Movement” of the Hoosic River Offer of Settlement filed on August 16, 2002 (Settlement Offer) (Appendix B of this order) and site-specific measures to control erosion and sedimentation and, as to part (2) of this article, measures to minimize injury to fish, as well as the fish conveyance flow, and the means that this flow will be measured.

The licensee shall prepare the plan after consultation with the U.S. Fish and Wildlife Service and the New York State Department of Environmental Conservation. The licensee shall include with the plan documentation of agency consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 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 site-specific information. The Commission reserves the right to require changes to the plan.

Article 405. By 8 months prior to the installation, within 3 years of the issuance of the license, or by December 31, 2006, whichever is later, of **the upstream conveyance system for American Eels at the south end of the Johnsonville dam**, required by “Section 3.4 Fish Protection, Passage and Movement” of the Hoosic River Offer of Settlement filed on August 16, 2002 (Settlement Offer) (Appendix B of this order), the licensee shall file, for Commission approval, a plan for the design and installation of **the upstream eel conveyance system and for the provision of year-round flows of 20 cubic feet per second (cfs) through the sluice gate adjacent to the powerhouse for downstream conveyance.** The plan shall include, at a minimum, the requirements for the upstream and downstream conveyance systems for the Johnsonville dam in Section 3.4 of the Settlement Offer, site-specific measures to control erosion and sedimentation, measures to minimize injury **to fish that pass downstream through the sluice gate**, and the means by which the 20 cfs minimum flow will be measured.

The licensee shall prepare the plan after consultation with the U.S. Fish and Wildlife Service and the New York State Department of Environmental Conservation. The licensee shall include with the plan documentation of agency consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 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 site-specific information. The Commission reserves the right to require changes to the plan.

Article 406. Within one year of the effective date of the license, the licensee shall file for Commission approval, a plan to implement the requirements of Section “3.5.1 Recreational Enhancement Commitments (To be Included in the License)” of the Hoosic River Offer of Settlement filed on August 16, 2002 (Settlement Offer) (Appendix B of this order).

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

- (1) final site plans for the formal recreational facilities;
- (2) design drawings of the direction signs and a description of where they will be located;

- (3) provisions for conducting a whitewater feasibility study to determine the minimum acceptable and optimal boating flows;
- (4) proposed ramping rates, developed in consultation with the NYSDEC and U.S. Fish and Wildlife Service (FWS), associated with providing scheduled whitewater releases below the Schaghticoke dam;
- (5) provisions for consultation with the NYSDEC and FWS regarding the scheduling of whitewater releases to ensure minimization of ecological affects;
- (6) specific provisions of how the scheduled whitewater release program will be administered, including: (a) the process by which the scheduled release dates for each year will be determined; (b) the process by which consultation with the NYSDEC and FWS regarding ramping rates and scheduling of releases will occur and documentation of this consultation provided to the Commission; (c) the process by which scheduled releases will be publicized to the boating community and general public; and (d) reporting procedures to keep the Commission informed about the dates and number of the scheduled releases, documented boater use during the release events, and any changes in the release protocols that arise from the proposed 5-year release reevaluations;
- (7) a discussion of how the design of new facilities take into account the needs of disabled persons; and
- (8) appropriate erosion and sediment control measures where ground disturbing activities are proposed, consistent with the conditions of the water quality certificate.

The licensee shall prepare the plan after consultation with the signatory parties to the Settlement Offer. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the consulted parties, and specific descriptions of how the consulted parties' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the consulted parties 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 site-specific information. The Commission reserves the right to require changes to the plan.

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Article 407. The licensee shall implement the "Programmatic Agreement Among The Federal Energy Regulatory Commission, The Advisory Council on Historic Preservation, and The New York State Preservation Officer, For Managing Historic Properties That May Be Affected By Licenses Issuing To Niagara Mohawk Power Corporation, Beebee Island Corporation or Moreau Manufacturing Corporation For The Continued Operation of Fourteen Hydroelectric Power Projects In Upstate New York", executed on July 19, 1996, and filed with the Commission August 5, 1996, including but not limited to the Cultural Resources Management Plan (CRMP) for the project. In the event that the Programmatic Agreement is terminated, the licensee shall implement the provisions of its approved CRMP. The Commission reserves the authority to require changes to the CRMP at any time during the term of the license. If the Programmatic Agreement is terminated prior to Commission approval of the CRMP, the licensee shall obtain approval before engaging in any ground-disturbing activities or taking any other action that may affect any historic properties within the project's area of potential effect.

Article 408. Authority is reserved by the Commission to require the licensee to construct, operate, and maintain, or to provide for construction, operation, and maintenance of, such fish passage facilities as may be prescribed by the Secretaries of the Interior or Commerce under Section 18 of the Federal Power Act.

Article 409. Within six months of the issuance of this license, and sixty days prior to any project-related ground disturbing activities, the licensee shall file an Endangered Species Management plan and schedule to conduct surveys for the Karner blue butterfly or it's obligate host species the blue lupine. The plan shall include, but not be limited to: (1) identification of potential survey sites and areas that could be excluded from the survey, (2) measures to be taken to protect the Karner blue butterfly and blue lupine if found at the survey sites, (3) steps to be taken to insure implementation of appropriate protective measures, and (4) an implementation schedule.

The plan and schedule shall be developed in consultation with the U.S. Fish and Wildlife Service (FWS). The licensee shall include with the filed plan and schedule documentation of consultation and copies of comments and recommendations, and a description of how the plan and schedule accommodate the comments and recommendations. The licensee shall allow a minimum of 30 days for the FWS to make 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 require changes to the plan and schedule. Upon Commission approval, the licensee shall implement the approved plan. No ground-

disturbing or land-clearing activities shall begin, unless in an area that is excluded from the survey in the approved plan, until the licensee is notified that the plan is approved.

A draft report documenting the results of the survey shall be filed with the FWS for review and comment. The licensee shall allow a minimum of 30 days for the FWS to make comments and recommendations before filing the report with the Commission.

Article 410. (a) In accordance with the provisions of this article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee shall also have continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The types of use and occupancy of project lands and waters for which the licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 water craft at a time and where said facility is intended to serve single-family type dwellings; (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline; and (4) food plots and other wildlife enhancement. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licensee shall: (1) inspect the site of the proposed construction, (2) consider

whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges or roads where all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. No later than January 31 of each year, the licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certification or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 water craft at a time and are located at least one-half mile (measured over project waters) from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E; and (7) other uses, if: (I) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from project waters at normal



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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 exhibit R or approved report on recreational resources of an exhibit E; or, if the project does not have an approved exhibit R or approved report on recreational resources, that the lands to be conveyed do not have recreational value.

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

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

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude

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

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

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

(H) 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 Federal Power Act. 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 license.

J. Mark Robinson  
Director  
Office of Energy Projects

## APPENDIX A

### NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION CERTIFICATION UNDER SECTION 401 OF THE FEDERAL POWER ACT

On September 19, 2002, the New York State Department of Environmental Conservation granted water quality certification under Section 401 of the Federal Clean Water Act to Erie Boulevard Power LLC for the Hoosic River Hydropower Project with the following conditions:

#### GENERAL CONDITIONS

##### General Condition 1: Facility Inspection by the Department

The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECI. Such representative may order the work suspended pursuant to ECL 71-0301 and SAPA 401(3).

The permittee shall provide a person to accompany the Department's representative during an inspection to the permit area when requested by the Department.

A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site or facility. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

##### General Condition 2: Relationship of this Permit to Other Department Orders and Determinations

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Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.

### General Condition 3: Applications for Permit Renewals or Modifications

The permittee must submit a separate written application to the Department for renewal, modification or transfer of this permit. Such application must include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing.

The permittee must submit a renewal application at least:

- a) 180 days before expiration of permits for State Pollutant Discharge Elimination System (SPDES). Hazardous Waste Management Facilities (HWMF), major Air Pollution Control (APC) and Solid Waste Management Facilities (SWMF); and
- b) 30 days before expiration of all other permit types.

Submission of applications for permit renewal or modification are to be submitted to: NYSDEC Chief Permit Administrator, 625 Broadway, Albany NY 12233-1750, Telephone (518)402-9167.

### General Condition 4: Permit Modifications, Suspensions and Revocations by the Department

The Department reserves the right to modify, suspend or revoke this permit in accordance with 6 NYCRR Part 621. The grounds for modification, suspension or revocation include:

- a) materially false or inaccurate statements in the permit application or supporting papers;
- b) failure by the permittee to comply with any terms or conditions of the permit;
- c) exceeding the scope of the project as described in the permit application;
- d) newly discovered material information or a material change in environmental conditions, relevant technology or applicable law or regulations since the issuance of the existing permit; and

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e) noncompliance with previously issued permit conditions, orders of the commissioner, any provisions of the Environmental Conservation Law or regulations of the Department related to the permitted activity.

## SPECIAL CONDITIONS

### A. ADMINISTRATION

1. This certificate includes and incorporates the Hoosic River "Offer of Settlement" (Settlement) dated June 14, 2002.
2. Inspections: The Project, including relevant records, is subject to inspection at reasonable hours and intervals, upon reasonable notice to the certificate holder, by an authorized representative of the Department to determine whether the applicant is complying with this certification. A copy of this certification, including the Hoosic River Offer of Settlement dated June, 2002 and the FERC license, including all maps, drawings, and special conditions, must be available for inspection by the Department during such inspections at the Project.
3. Emergencies: With the exception of emergency provisions described in the Settlement, the following procedures shall apply to activities conducted at the Project in response to an emergency.

Prior to commencement of emergency activities, the NYSDEC must be notified and must determine whether to grant emergency authorization. If circumstances require that emergency activities be taken immediately such that prior notice to the DEC is not possible, then the DEC must be notified by the certificate holder within 24 hours of commencement of the emergency activities and be provided sufficient information to make a determination whether to grant emergency authorization. In either case, notification must be by certified mail, telegram, or other written form of communication, including fax and electronic mail. This notification must be followed within 3 weeks by submission of the following information:

- 1) a description of the action;
- 2) location map and plan of the proposed action; and
- 3) reasons why the situation is an emergency.

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All notifications, requests for emergency authorizations and information submitted to support such requests shall be sent to the Chief Permit Administrator at the address listed above.

4. Modifications and Revocations: The DEC reserves the right to modify suspend or revoke this certificate when:

- 1) the scope of the certified activity is exceeded or a violation of any condition of this certificate or provision of the ECL and pertinent regulation is found;
- 2) the certificate was obtained by misrepresentation or failure to disclose relevant facts;
- 3) new material information is discovered; and
- 4) environmental conditions, relevant technology, or applicable law or regulation have materially changed since the certificate was issued.

#### B. OPERATING CONDITIONS

5. Instream Flows: The certificate holder shall maintain instream flows in accordance with the Settlement, in particular, Section 3.2.

6. Flow Monitoring: The certificate holder shall develop a stream flow and water level monitoring plan consistent with the Settlement in particular Section 3.3.

7. Impoundment Fluctuations: The Schaghticoke and Johnsonville reservoirs (Project reservoirs) shall be operated in accordance with the Settlement (see subsection 3.1). Alternate impoundment operating plans must be reviewed and approved by NYSDEC prior to being implemented. Emergencies shall be dealt with in accordance with special conditions #3 of this certificate.

8. Fish Protection, Passage and Movement: Fish protection passage and movement provisions shall be provided in accordance with the Settlement (see Section 3.4).

#### C. PROJECT MAINTENANCE AND CONSTRUCTION

Note: All matters pertaining to Project Maintenance and Construction shall be addressed to: Chief Permit Administrator, New York State Department of Environmental Conservation, 625 Broadway, Albany, NY 12233

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9. Maintenance Dredging: The certificate holder shall install and maintain appropriate turbidity control structures while conducting any maintenance dredging activities in the intake/forebay area of the Project.

10. Sediment Analysis and Disposal: The certificate holder must sample any sediments to be disturbed or removed from the Project waters and test them for contaminants. Sampling and testing shall be accomplished according to a protocol submitted to and approved by the Department prior to sampling.

Prior to dredging or other excavation, the certificate holder must secure Department approval for all disposal or interim holding locations for any sediments to be removed from the Project waters.

11. Erosion and Sediment Control: The certificate holder shall ensure that the following erosion and sediment/contaminant control measures, at a minimum, are adhered to during routine maintenance and construction (including maintenance dredging) that may result in sediments/contaminants entering the Project reservoirs or the Hoosic River.

1. Isolate in-stream work from the flow of water and prevent discolored (turbid) discharges and Sediments caused by excavation, dewatering and construction activities from entering the waters of the Hoosic River.
2. Prohibit heavy construction equipment from operating below the mean high water level of Project reservoirs and the Hoosic River until the work area is protected by a watertight structure and dewatered.
3. Minimize soil disturbance, grade so as to prevent or minimize erosion and provide temporary and/or permanent stabilization of all disturbed areas and stockpiles to minimize the potential for erosion and subsequent sedimentation within Project reservoirs or the Hoosic River.
4. Protect all waters from contamination by deleterious materials such as wet concrete, gasoline solvents, epoxy resins or other materials used in construction, maintenance and operation of the Project.
5. Install and maintain erosion control structures on the down slopes of all disturbed areas to prevent eroded material from entering Project reservoirs or the Hoosic River. Erosion control structures must be installed before commencing any activities involving soil disturbance and all erosion control structures must be maintained in a fully functional condition.
6. Ensure complete removal of all dredged/excavated material and construction debris from the bed and banks of Project reservoirs and the Hoosic River in the vicinity of the Project.

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7. Ensure that all temporary fill and other materials placed in the waters of the river are completely removed, immediately upon completion of construction, unless otherwise directed by the Department.
  
12. Placement of cofferdams, construction of temporary access roads or ramps, or other temporary structures which encroach upon the bed or banks of the Hoosic River or Project Reservoirs: The design of all such structures must be approved by the Department prior to installation.
  
13. River Flow: During any period of maintenance and/or construction activity, the certificate holder shall continuously maintain adequate flows immediately downstream of work sites consistent with the provisions of this certificate.
  
14. Construction Drawdowns: Whenever construction and/or maintenance activities require that the water level of Project reservoirs be lowered, it shall not be drawn down more than 1 foot per hour. During refill, the water level of the impoundment shall not be allowed to rise more than 1 foot per hour.
  
15. Turbidity Monitoring: During maintenance or construction-related activities in or near the Hoosic River or Project reservoirs, the certificate holder will monitor the turbidity of Project waters at a point immediately upstream of the work area and at a point no more than 100 feet downstream from the work area. The certificate holder specifically agrees that if, at anytime, turbidity measurements from the downstream locations exceed the measurements from the upstream locations, all related construction on the Project will cease until the source of the turbidity is discovered and the situation is corrected.
  
16. Notifications: The Chief Permit Administrator must be notified in writing at least two weeks prior to commencing any Project maintenance or construction work performed under the authority of this certificate.

#### D. PUBLIC ACCESS AND RECREATION

17. Public access and recreational opportunities shall be provided in conformance with the Settlement.



## APPENDIX B<sup>39</sup>

### SECTIONS 1.0, 1.9, 3.0, AND SCHEMATICS OF THE SETTLEMENT AGREEMENT

#### 1.0 Introduction

##### The Agreement and The Parties

This agreement (the Settlement Offer) dated as of June 14, 2002, is made and entered into pursuant to Rule 602 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission (FERC) (18 C.F.R. § 385.602) by and among the following entities who shall, except as otherwise noted, be referred to as a Party and collectively as "Parties":

- ! Adirondack Mountain Club (ADK)
- ! American Rivers
- ! American Whitewater (AW)
- ! Erie Boulevard Hydropower, L.P. (Erie) acting through its General Partner, Reliant Energy
- ! New York Rivers United (NYRU)
- ! New York State Conservation Council (NYSCC)
- ! New York State Department of Environmental Conservation (NYSDEC)
- ! Rensselaer County Conservation Alliance (RCCA)
- ! Town of Schaghticoke (Town)
- ! Trout Unlimited (TU)

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<sup>39</sup>The schematic drawings have been omitted from the electronic file.

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- ! U.S. Department of the Interior (DOI), U.S. Fish and Wildlife Service (USFWS)
- ! U.S. Department of the Interior (DOI), U.S. National Park Service (NPS)
- ! Village of Schaghticoke (Village)

## 1.9 Conventions and Definitions

The Parties agree that the following conventions and definitions should have the meanings so noted throughout this Offer of Settlement.

**Base Flow:** The required minimum instantaneous instream flow, measured in cfs, to be continuously released into the river channel below the powerhouse, including, where applicable, dam leakage where an accurate estimate exists, and bypass flows.

**Bypass Flow:** The instream flow intentionally and continuously released into a bypass reach.

**Bypass Reach:** The portion of the original riverbed fully or partially dewatered as a result of the diversion of water.

**Elevation:** Vertical distance, measured in feet, above mean sea level using USGS datum.

**Impoundment Fluctuation:** Defined within this agreement as a specific range of impoundment elevations associated with normal project operation which is measured in the downward direction from a specific reference point.

**Left/Right Bank:** The left or right riverbed as seen looking downstream.

**License Issuance and Acceptance:** For purposes of this Offer of Settlement, "License Issuance and Acceptance" means that the FERC issues a final license consistent with the terms of the Offer of Settlement relative to the particular enhancement being considered.

**Licensee:** Erie Boulevard Hydropower, L.P. and limited partner of Reliant Energy.

**Normal Operation:** The daily operation of the Johnsonville and Schaghticoke developments that may involve utilization of allowable impoundment fluctuations as needed to produce energy.

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### 3.1 Impoundment Fluctuations

Within fifteen (15) months of license issuance and acceptance, the Licensee shall limit impoundment fluctuations within the Johnsonville and Schaghticoke developments as specified in Table 3-1.

Table 3-1: Hoosic River Hydroelectric Project Normal Impoundment Fluctuations			
Development	Permanent Crest of Dam (NGVD)	Flashboards	Normal Impoundment Fluctuation
Johnsonville	346.00 feet	2.5 feet high wooden flashboards	0.25 feet (June 1 - September 30) and 0.5 feet (October 1 - May 31) measured in a downward direction from the permanent crest of dam or the top of flashboards.
Schaghticoke	267.35 feet		0.5 feet (year-round) measured in a downward direction from the permanent crest of dam or the top of flashboards/partial pneumatic flashboards.

Normal impoundment fluctuations specified in Table 3-1 shall be defined as the maximum drawdown limit associated with the operating range necessary to achieve normal operation. The normal impoundment fluctuation limit shall be measured in the downward direction from the permanent crest of each dam or from the top of the flashboards when in place. Water surface elevations higher than the elevation from which any downward fluctuation is measured are considered outside of the normal impoundment fluctuation zone, and variations of same are not considered as a utilization of the normal impoundment fluctuation.

Impoundment fluctuation limitations may be curtailed or suspended if required by operating emergencies beyond the control of the Licensee, including security and for short periods upon mutual agreement between the Licensee and the NYSDEC. If the limitations are so modified, the Licensee shall notify the FERC as soon as possible, but no later than ten business days after each such incident.

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### 3.1.1 Partial Pneumatic Flashboards

Within 15 months of license issuance and acceptance, the Licensee will install pneumatic flashboards on the straight section of the spillway at the Schaghticoke Dam to facilitate pond level control. The pneumatic flashboard section will reduce the occurrence of failure of the conventional flashboards that will remain on the balance of the spillway.

The Licensee reserves the right to install pneumatic flashboards on the spillway of the Johnsonville dam in the future. Prior to pursuing this installation, the Licensee will consult with the other signatories to this agreement as to the scope and timing of this future installation.

### 3.2 Instream Flows

Within fifteen (15) months of license issuance and acceptance, the Licensee shall release the base-flows and minimum bypass flow specified in Tables 3-2 and 3-3.

Table 3-2: Hoosic River Project Base Flow Schedule			
Site	Flow Magnitude	Annual Start Date	Annual End Date
Johnsonville	220 cfs or inflow (whichever is less)	January 1	December 31
Schaghticoke	240 cfs or inflow (whichever is less)		

The base-flow shall be maintained in the river immediately downstream of the developments' powerhouse.

Table 3-3: Hoosic River Project Schaghticoke Development Bypass Flow Schedule		
Flow Magnitude	Annual Start Date	Annual End Date
60 cfs or inflow (whichever is less)	January 1	December 31

These instream flow requirements may be curtailed or suspended if required by operating emergencies beyond the control of the Licensee, including security and for

limited periods upon mutual agreement between the Licensee and the NYSDEC. If the flows are so modified, the Licensee shall notify the FERC as soon as possible, but no later than ten business days after each such incident.

This minimum bypass release flow is considered the minimum allowable flow from the release location near the vicinity of the east end of the Schaghticoke Dam. That is, it is recognized that the actual release at any given time may be slightly above the agreed-upon value. The degree to which a flow will be above the value-indicated is a function of headpond elevation as a result of normal impoundment fluctuations (see Section 3.1). The Licensee shall develop appropriate structural designs for the provision of the bypass flow at the Schaghticoke development.

In addition, the parties agreed to a one time minor streambed modification in consultation with the USFWS and the NYSDEC near the east end of the Schaghticoke dam to ensure a portion of the bypass flow (approximately 5-cfs) is directed to the vicinity of the west shore of the upper bypass reach.

### 3.3 Flow and Water Level Monitoring

The Licensee shall develop a stream-flow and water-level monitoring plan in consultation with the NYSDEC and the USFWS within twelve (12) months of the FERC license issuance and acceptance. The monitoring plan shall include all gages and/or equipment to:

- ! Measure the base-flow releases of the Johnsonville and Schaghticoke developments of the Hoosic River Project at appropriate locations.
- ! Measure the minimum flow release of the Schaghticoke development of the Hoosic River Project at the appropriate location.
- ! Measure headpond and tailwater elevations as needed.
- ! Provide an appropriate means of on-site visual verification of water levels.

All gaging and ancillary equipment required by the monitoring plan, including headpond and tailwater gages, shall be made operational and fully calibrated within fifteen (15) months of license issuance and acceptance.

The monitoring plan will contain provisions for the installation of binary staff gages at selected locations to permit on-site visual verification of headpond, tailwater, or bypass reach water levels to the nearest 0.1-foot. Binary staff gages will be visible to the

general public. Access to staff gages shall be provided to the NYSDEC, the USFWS, and/or their authorized representatives.

The Licensee shall keep accurate and sufficient records of the impoundment elevations and all project flows to the satisfaction of the NYSDEC and shall provide such data in a format and at intervals as required by the NYSDEC. All records will be made available for inspection at the Licensee's principal business office in New York State within five (5) business days or will be provided in written form within 30 days of the Licensee's receipt of a written request for such records by the NYSDEC. Furthermore, the Licensee will provide to the NYSDEC a seven-day-per-week contact person to provide immediate verification of monitored flows and responses to questions about abnormal or emergency conditions.

The Licensee shall keep accurate and sufficient records of any uncontrollable station outage that causes a reduction in the required baseflow at or below the Johnsonville or the Schaghticoke powerhouse and minimum flow at or below the Schaghticoke dam. The Licensee will consult with the NYSDEC to include a plan for reporting these types of incidents within the stream flow and water level monitoring plan.

### 3.4 Fish Protection, Passage and Movement

The Licensee shall implement the fish-protection passage and movement measures as specified in Table 3-4.

Table 3-4: Hoosic River Hydroelectric Project Fish Movement and Protection Measures			
Development	Protection Measure	Downstream Movement Routes	Upstream Eel Conveyance System

Johnsonville	1.5-inch diameter perforated plates installed within three (3) years of license issuance and acceptance or December 31, 2006 (whichever is later)	The sluice gate adjacent to the powerhouse	An upstream eel conveyance system will be field located near the vicinity of the South side of the Johnsonville dam within three (3) years of license issuance and acceptance or by December 31, 2006 (whichever is later). The upstream eel conveyance system will be in place seasonally from June 15 through September 15 of each year.
Schaghticoke	1.5-inch diameter perforated plates installed within fifteen (15) months of license issuance and acceptance	A conveyance structure will be constructed in the vicinity of the east end of the Schaghticoke Dam	An upstream eel conveyance system will be placed the vicinity of the east end of the Schaghticoke dam within fifteen (15) months of license issuance and acceptance. The upstream eel conveyance system will be in place seasonally from June 15 through September 15 of each year.

The Licensee shall be required to provide the following measures and structures to facilitate fish movement at the Johnsonville Development.

The Licensee shall be required to (1) install protective measures no later than 2006 that include 1.5-inch diameter perforated plates to be placed seasonally from May 1 or when control of the river is achieved (whichever is later) until November 30 or when the temperature of the river decreases to 7° C or less (whichever is sooner) as measured at the Johnsonville tailrace, (2) provide a year-round 20-cfs minimum "fish friendly" flow release located at a sluice gate adjacent to the powerhouse, (3) install an upstream eel conveyance system in the vicinity of the south end of the Johnsonville dam within three (3) years of license issuance and acceptance or by December 31, 2006 (whichever is later). This upstream eel conveyance system will be in place seasonally from June 15 through September 15 of each year through the term of the new license.



The Licensee shall not be required to (1) test the effectiveness of any, or all, components of existing and future protection or passage measures and/or structures, (2) make qualitative or quantitative determinations of fish entrainment and/or mortality, or (3) provide compensation for any fish entrainment and/or mortality.

The Licensee shall not be required to increase the level of protection and passage as agreed to by this Settlement Offer for the term of the license, unless prescribed by the U.S. Department of the Interior under Section 18 of the Federal Power Act (see Section 2.7).

The requirements of this commitment may be curtailed or suspended if required by operating emergencies beyond the control of the Licensee, including security and for limited periods upon mutual agreement between the Licensee, USFWS and NYSDEC. If the requirements of this commitment are so modified, the Licensee shall notify the FERC as soon as possible, but no later than ten (10) business days after each such incident.

### 3.5 Recreation

The recreational opportunities provided by this Settlement Offer supplement the existing recreational opportunities on the Hoosic River which provide public access to, and use of, the impoundments, bypass reach, and adjacent lands associated with the Johnsonville and Schaghticoke developments.

Within fifteen (15) months of license issuance and acceptance, the Licensee shall implement all recreation enhancement commitments specified below.

#### 3.5.1 Recreational Enhancement Commitments (To be Included in the License)

The Licensee shall allow free public access to all lands within the FERC project boundary associated with each development covered by this Settlement Offer, with the exception of those lands and facilities specifically related to hydroelectric generation where public safety would be a concern. Lands and facilities where public access will be precluded may include, but are not necessarily limited to, dams, dikes, gates, intake structures, water conveyance structures, powerhouses, substations, transmission lines, and certain access roads leading to such facilities.

(a) Access along Washington County Route 59 Historically, informal access to project waters has been provided via lands between Washington County Route 59 and the Johnsonville impoundment near the Buskirk covered bridge. The Licensee will not

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preclude this informal access and will provide off-road parking for up to five (5) cars and some minimal signage directing users to a fishing and river access point (See Attached Schematic J-1).

(b) Access at the Johnsonville Dam The licensee will provide a parking area for up to five (5) cars, a car-top boat launch and a canoe portage route with put-intake-out locations upstream and downstream of the dam on the south side of the river (See Attached Schematic J-2). The licensee will not preclude access to the north side of the river along the access road to the powerhouse.

(c) Access to Electric Lake The Licensee will neither preclude access at this location nor be required to construct any facilities, provide signage, or otherwise improve this area.

(d) River Access at the Schaghticoke Powerhouse An access point will be designated in the vicinity of the Schaghticoke powerhouse with parking for up to five (5) cars within the FERC project boundary, and a car-top boat put-intake-out location will be provided (See Attached Schematic S-1). Signage will be provided by the licensee strictly enforcing parking limitations to this location as to not impede normal project operation and emergency actions.

(e) Whitewater Flows The Licensee and American Whitewater will conduct a whitewater feasibility study at the Schaghticoke Development of the Hoosic River Project during the spring of 2002 or when safe and appropriate flows for the whitewater feasibility study are available. The purposes of the study shall include determining minimum acceptable and optimal boating flows. Subsequent scheduled whitewater flow releases) from the Schaghticoke Dam only (not Johnsonville), as outlined below, will be based on the results of this whitewater feasibility study. The scope of this study will not entail more than four (4) different releases to be agreed upon by American Whitewater and the Licensee.

The Licensee will provide one (1) three-hour (excluding ramping) whitewater release event as defined by the Whitewater Feasibility Study, starting within one (1) year of license issuance and acceptance and continuing for two (2) years following the first whitewater release to establish familiarity with the whitewater resource and use trends among the paddling community. Flow release days will not be added or subtracted during the initial three (3) years after license issuance and acceptance and will not decrease below one release per year thereafter, unless unacceptable adverse ecological impacts are observed through repeatable scientific study.

Beginning in year four after license issuance and acceptance, the number of annual whitewater releases will be based on boater attendance during the previous year's whitewater release(s). A Boater Attendance Log for each release event will be used to determine whether to add to or subtract from the number of releases from the previous year. For the Boater Attendance Log, a boater is defined as a person with craft using the reach for boating purposes. A boater day is defined as use of the Schaghticoke bypass reach for any part of a given release day. A boat is defined as a kayak, open canoe, or similar craft. The bypass reach from the Schaghticoke dam to the "Big Eddy" (See Schematic S-1) will be open only to these types of crafts during all scheduled whitewater release events.

The number of scheduled whitewater release events will be increased or decreased in accordance with the following provisions. An additional release will be added to the whitewater release event schedule the year following exceedance of twenty-five (25) boaters for each event from the previous year. Should there be less than ten (10) boaters in attendance at any scheduled event in a given year, then the number of events scheduled for the subsequent year shall be decreased by one.

The number of whitewater release events will not increase or decrease by more than one (1) release per year with a minimum of one (1) release and a maximum of five (5) releases in any given year. The initial release will occur on the first Wednesday on or after April 15th following license issuance and acceptance. Each release thereafter will alternate between a Saturday release and a Wednesday release for the term of any new license. Wednesday releases will start at 5:00 PM, excluding tamping. Saturday releases will start at 1:00 PM, excluding tamping. At no time will more than one (1) whitewater release be scheduled in any given week.

Any whitewater release events will terminate at least ½ hour before sunset (for safety reasons). Whitewater release start times will be adjusted to ensure a three-hour release time concluding ½ hour before sunset.

Every five (5) years from license issuance and acceptance, the Licensee and AW will reevaluate, at a minimum, the following aspects of the scheduled whitewater release events) to determine whether to modify annual releases and the release schedule for the succeeding five (5) year period:

1. Amount of whitewater usage and trends;
2. Timing/schedule of releases;
3. Boater conduct;

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4. Types of craft used;
5. Put-in used.

The Licensee shall designate a contact person and AW and ADK shall jointly designate a contact person for any communication regarding whitewater releases on the Hoosic River, the scheduling of the five (5) year evaluation(s), and any other issues that may arise.

Boaters at each whitewater release event will be required to sign a Boater Attendance Log to enable the Licensee and AW to maintain a record of annual whitewater use for the purpose of conducting each five (5) year evaluation indicated above. AW will provide a representative to oversee the Boater Attendance Log.

The whitewater release event(s) will be subject to the ramping rates as agreed upon with the NYSDEC and USFWS following the completion of the whitewater feasibility study. Ramping rates will not overlap with the three-hour whitewater release.

The whitewater release events(s) will equal the optimal flow as defined in the whitewater feasibility study or match inflow to the Johnsonville Development, whichever is less (i.e., Johnsonville and Schaghticoke pond storage will not be used to augment flows for whitewater purposes). Flows in excess of meeting the optimal boating flow as defined in the whitewater feasibility study are available for power generation at the Schaghticoke powerhouse.

If, on the scheduled whitewater release event day, flows in the Hoosic River are below the minimum acceptable boating flow at any time during the event as defined in the whitewater feasibility study, the Licensee will postpone and reschedule the whitewater release event one week from the originally scheduled release, inflows permitting.

If the Hoosic River inflows to the Johnsonville Development from April 15 through November 30 are consistently too low to achieve the minimum acceptable whitewater release boating flows as defined in the whitewater feasibility study, the Licensee will not be required to make up the unachievable whitewater flow release.

Access for any/all whitewater event days shall be subject to the provisions as outlined in the Settlement Offer in Section 3.5.2 (b).

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All boaters will abide by the most current revision of the Safety Code of American Whitewater and American Whitewater's "Leave No Trace Policy" plus the conditions outlined in the Settlement Offer (Sections 3.5.1 (d) and 3.5.2 (c)) regarding access and parking.

(f) Whitewater Access Whitewater recreation access during the scheduled whitewater release events, as described in Section 3.5.1(e), will be accommodated via the existing informal access path on the Licensee's property adjacent to the Hoosic River Gorge Property (See Schematic S-1). This access site will be gated with appropriate signage prohibiting vehicular access during times of the year other than the dates) of the scheduled whitewater release events. The site shall otherwise remain as unimproved informal access in accordance with the provisions of Section 3.5.1, above. Erie will not be required to provide other improvements than those herein described to accommodate whitewater access.

(g) Recreation Monitoring The Licensee shall not be required to monitor the use of recreational facilities included in this Settlement Offer beyond the requirements of the FERC's Form 80 reporting.

(h) Operating Emergencies The Licensee may curtail or suspend recreation measures if required to by operating emergencies beyond the control of the Licensee, including security and for limited periods upon mutual agreement between the Licensee and the NYSDEC. If such suspension of measures occurs under emergency conditions, the Licensee shall notify the NYSDEC as soon as possible, but no later than ten business days after each such incident.