

149 FERC ¶ 62,048  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Green Mountain Power Corporation

Project No. 2558-029

ORDER ISSUING NEW LICENSE

(Issued October 23, 2014)

**INTRODUCTION**

1. On March 31, 2010, Vermont Marble Power, Division of Omya, Inc. (Vermont Marble) filed, pursuant to sections 4(e) and 15 of the Federal Power Act (FPA),<sup>1</sup> an application for a new license to continue operation and maintenance of the Otter Creek Hydroelectric Project No. 2558 (Otter Creek Project or project). On November 23, 2010, the Commission issued an order approving the transfer of the license and substitution of applicant for the project from Vermont Marble to Central Vermont Public Service Corporation (Central Vermont).<sup>2</sup> On September 13, 2012, the Commission issued an order approving the transfer of the license and substitution of applicant for the project from Central Vermont to Green Mountain Power Corporation (Green Mountain).<sup>3</sup> Because transferees step into the shoes of the prior licensee, the filings of the previous licensees are referred to as filings by the licensee or Green Mountain.
2. The project has three developments located on Otter Creek in Addison and Rutland counties, Vermont. The project does not occupy federal land.<sup>4</sup>
3. As discussed below, this order issues a new license to Green Mountain for the Otter Creek Project. As previously licensed, the project's authorized installed capacity

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<sup>1</sup> 16 U.S.C. §§ 797(e) and 808 (2012).

<sup>2</sup> 133 FERC ¶ 62,171 (2010).

<sup>3</sup> 140 FERC ¶ 62,191 (2012).

<sup>4</sup> The three project developments are located on Otter Creek at river miles 64.2, 23, and 21, which is within a stretch of Otter Creek that the Commission found to be a navigable waterway of the United States. *See Vermont Marble Company*, 34 F.P.C. 541 (1965). Therefore, the project is required to be licensed pursuant to section 23(b) of the FPA. *See* 16 U.S.C. § 817 (2012).

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was 14.349 megawatts (MW). The project's installed capacity authorized under this new license is 22.807 MW.

## BACKGROUND

4. The Commission issued the original license for the project on February 23, 1976, with an effective date of April 1, 1962, and terminating December 31, 1993.<sup>5</sup> On October 15, 1981, the Commission extended the license term by 18 years.<sup>6</sup> The license for the project expired on March 31, 2012, and since then, the project has operated under annual licenses pending the disposition of the new license application.<sup>7</sup>

5. On May 2, 2011, the Commission issued a public notice that was published in the *Federal Register* accepting the relicense application for filing, soliciting motions to intervene and protests, indicating the application was ready for environmental analysis, and soliciting comments, recommendations, preliminary terms and conditions, and preliminary fishway prescriptions.<sup>8</sup> The notice set August 30, 2011, as the deadline for filing motions to intervene, protests, comments, recommendation, terms and conditions, and prescriptions. The Vermont Agency of Natural Resources (Vermont ANR) filed a timely motion to intervene.<sup>9</sup> Vermont ANR does not oppose the project.

6. On August 1, 2011, the licensee amended the pending relicense application, proposing physical improvements and operational changes to the project. The proposed changes included, among other things, realignment of the intake at the Proctor

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<sup>5</sup> See *Vermont Marble Company*, 55 F.P.C 762 (1976). Pursuant to Commission policy, the license was backdated to 1962, because the project was operating but unlicensed, and backdating the license allowed the Commission to recoup a portion of the annual charges that the licensee should have been paying during the time that the project was not, but should have been, licensed.

<sup>6</sup> 17 FERC ¶ 62,044 (1981).

<sup>7</sup> 16 U.S.C. § 808(a)1 (2012).

<sup>8</sup> 76 *Fed. Reg.* 26280 (May 6, 2011).

<sup>9</sup> Timely, unopposed motions to intervene are granted by operation of Rule 214(c)(1) of the Commission's Rules of Practice and Procedure. 18 C.F.R. § 385.214(c)(2014).

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Development and removal of inoperable generating equipment from the Proctor powerhouse.<sup>10</sup>

7. On May 14, 2012, the Commission issued a public notice of the amended relicense application that was published in the *Federal Register* soliciting motions to intervene and protests, indicating the application was ready for environmental analysis, and soliciting comments, recommendations, preliminary terms and conditions, and preliminary fishway prescriptions.<sup>11</sup> No comments or motions to intervene were filed.

8. Rather than waiting for authorization under a relicense, in March 2013, Green Mountain asked for authorization under its annual license to undertake some of the work it had proposed in its August 2011 amendment application, including the realignment of the intake at the Proctor Development and removal of inoperable generating equipment from the Proctor powerhouse. On June 20, 2013, Commission staff issued an order approving Green Mountain's request.<sup>12</sup>

9. A draft Environmental Assessment (EA) was prepared by Commission staff and issued on December 21, 2012, analyzing the impacts of the proposed project and alternatives to it. Vermont ANR, Green Mountain, and the Vermont State Historic Preservation Officer (Vermont SHPO) filed comments on the draft EA. On July 26, 2013, Commission staff issued a final EA, on which no comments were filed. References and citations in this order are to the final EA, unless otherwise noted.

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<sup>10</sup> The August 2011 application included a proposal to construct a permanent access bridge at the Proctor Development to improve station access for operation, maintenance, repair, and safety. In April 2012, the licensee asked for authorization to construct the bridge under its annual license, which Commission staff approved on May 10, 2012. 139 FERC ¶ 62,113 (2012). The bridge was completed in 2012.

<sup>11</sup> 77 *Fed. Reg.* 29625 (May 18, 2012).

<sup>12</sup> 143 FERC ¶ 62,207 (2013). The order authorized: (1) the removal of inoperable generating equipment from the Proctor powerhouse, including the unit 1 runner (1,680 kilowatts (kW)), generating units 2 through 4 (750 kW each), and associated control and electrical equipment; (2) the widening, deepening, and smoothing of the forebay; (3) demolition of the existing headgates and southern retaining wall; (4) demolition and reorientation of the eastern training wall; (5) construction of a new wall on the west side at the trashrack; (6) demolition and reorientation of the trashrack (the existing 1-inch clear bar spacing would be retained); (7) a new minimum flow structure and sluice gate; and (8) provisions for a future fish passage gate.

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10. The intervention and comments have been fully considered in determining whether, and under what conditions, to issue this license.

## **PROJECT DESCRIPTION AND OPERATION**

### **A. Project Area**

11. The Otter Creek Project is located on Otter Creek in west-central Vermont within Addison and Rutland counties, near the communities of Proctor, New Haven, and Weybridge. Otter Creek is approximately 100 miles long and flows northeasterly from the headwaters of Emerald Lake to its confluence with Lake Champlain. The Otter Creek watershed drains an area of 1,106 square miles and is located in the Champlain Valley, which is a sub-unit of the larger Lake Champlain Basin.

### **B. Project Facilities**

12. The Otter Creek Project consists of three developments: Proctor, Beldens, and Huntington Falls (listed from upstream to downstream). The hydroelectric facilities at each development were developed in the early twentieth century to provide power to the marble mills in Proctor, Middlebury, and Weybridge, Vermont. In the early twentieth century, the Vermont Marble Company expanded production capacity and converted from hydro-mechanical power to hydroelectric generation at each of the three project developments.

#### *Proctor Development*

13. The Proctor Development consists of a 128-foot-long, 13-foot-high masonry, concrete-capped dam with a 3-foot-high inflatable flashboard system. The dam is located at river mile (RM) 64.2 and impounds a reservoir with a surface area of 95 acres and a usable storage capacity of 275 acre-feet at a normal maximum water surface elevation of 469.5 feet above mean sea level (msl).

14. Inflow from the reservoir passes through a 17-foot-deep by 45-foot-wide by 115-foot-long gated forebay-intake structure that contains trashracks with 1-inch clear bar spacing. Two steel penstocks convey water from the forebay to the powerhouse: (1) a 9-foot-diameter penstock that extends 354 feet from the dam to a surge tank and continues as an 8-foot-diameter penstock for an additional 96 feet from the surge tank to the powerhouse; and (2) a 7-foot-diameter, 500-foot-long penstock that extends directly from the dam to the powerhouse. The 33-foot by 100-foot concrete masonry powerhouse has an attached 28-foot by 48-foot steel structure that contains one vertical Francis turbine-

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generator unit with an authorized capacity of 3,000 kilowatts (kW). The Proctor Development also includes a 1,200-foot-long access road and a 265-foot-long access bridge that is used to access the powerhouse.

15. The Proctor Development creates a 680-foot-long bypassed reach (i.e., Sutherland Falls), which drops approximately 100 feet in elevation from the base of the Proctor dam to the tailrace. There are no project recreation facilities at this development; however, there are two informal recreation sites that provide access to the Proctor impoundment and tailrace. The informal impoundment access site, which can be accessed via the Main Street Marble Bridge located less than one mile upstream of the Proctor dam provides opportunities for bank fishing, an access site for canoes and kayaks, and a pull-off that can accommodate two vehicles. The informal tailrace access site, which is accessible via the Proctor Development's access road, provides opportunities for bank fishing, an access site for canoes and kayaks, sightseeing opportunities (of Sutherland Falls and the powerhouse), and an informal pull-off area that can accommodate two vehicles.

#### Beldens Development

16. The Beldens Development consists of a concrete dam with 2.5-foot-high wooden flashboards. The dam comprises two sections on either side of a bedrock island: a 15-foot-high, 56-foot-long section on the west side (Beldens west dam) and a 24-foot-high, 57-foot-long section on the east side (Beldens east dam). The dam is located at RM 23 and impounds a reservoir with a surface area of 22 acres and a usable storage capacity of 253 acre-feet at a normal maximum water surface elevation of 283 feet msl.

17. Inflow from the reservoir passes through two intakes: (1) a 20-foot-high by 35 foot-wide intake with 13-foot-high by 26-foot-wide trashracks with bar spacing of 1.125 inches on center; and (2) a 34.5-foot-high by 40-foot-wide intake with 13-foot-high by 40-foot-wide trashracks with 3-inch clear bar spacing. Water is conveyed to the powerhouses through two penstocks: (1) a 12-foot-diameter steel penstock that bifurcates into two 10 foot-diameter, 30 foot-long sections, each leading to a 40-foot by 44-foot concrete and masonry powerhouse containing two horizontal Francis turbine-generator units with a combined authorized capacity of 1,749 kW; and (2) a 12-foot-diameter, 45-foot-long concrete penstock that leads to a 40-foot by 75-foot concrete powerhouse containing one horizontal Kaplan turbine-generator unit with an authorized capacity of 4,100 kW.

18. The Beldens Development has two separate bypassed reaches: (1) a 150-foot-long bypassed reach extending from the base of the Beldens east dam to the tailrace;<sup>13</sup> and

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<sup>13</sup> The bypassed reach below the Beldens east dam contains an area known as

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(2) a 450-foot-long bypassed reach extending from the base of the Beldens west dam to the tailrace. Existing project recreation facilities at this development include a:

(1) canoe/kayak put-in and take-out; (2) canoe/kayak portage; (3) viewing platform; and (4) picnic area.

### Huntington Falls Development

19. The Huntington Falls Development consists of a 31-foot-high, 187-foot-long concrete dam with a 2.5-foot-high inflatable flashboard system. The dam is located at RM 21 and impounds a reservoir with a surface area of 23 acres with a storage capacity of 234 acre-feet at a normal maximum water surface elevation of 217.8 feet msl.

20. Inflow from the reservoir passes through two intakes, including: (1) a 20-foot-high by 40-foot-wide intake with 13-foot-high by 26-foot-wide trashracks with bar spacing of 1.125 inches on center; and (2) a 38-foot-high by 40-foot-wide intake with 16-foot-high by 30-foot-wide trashracks with 2-inch clear bar spacing. Water is conveyed to the powerhouses through three penstocks: (1) two, 10-foot-diameter, 30-foot-long steel penstocks that lead to a 42-foot by 60-foot concrete and masonry powerhouse containing two horizontal Francis turbine-generator units with a combined authorized capacity of 1,400 kW; and (2) a 12-foot-diameter, 75-foot-long concrete penstock that leads to a 40-foot by 75-foot concrete powerhouse containing one horizontal Kaplan turbine-generator unit with an authorized capacity of 4,100 kW.

21. The Huntington Falls Development creates a 215-foot-long bypassed reach. Existing project recreation facilities at this development include a: (1) canoe/kayak put-in and take-out; (2) canoe/kayak portage; and (3) picnic/overlook area.

22. A more detailed project description is contained in Ordering Paragraph (B)(2).

### **C. Project Boundary**

23. The existing project boundary for the Proctor Development encompasses the Proctor impoundment, following the floodplain contour elevation of 482.1 feet msl, and extends approximately 6 miles upstream of the dam. The project boundary also extends downstream from the Proctor dam to include the bypassed reach, 240 feet of Otter Creek downstream of the powerhouse, and all project facilities, including the dam, penstocks, powerhouse, a 265-foot-long bridge located 760 feet downstream of the Proctor dam that is used to access the Proctor powerhouse, and a 1,200-foot-long access road. A total of approximately 608 acres of lands and waters, including those lands surrounding project

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Beldens Falls.

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structures and the impoundment shoreline, are currently included within the project boundary.

24. The existing project boundary for the Beldens Development encompasses the Beldens impoundment, following a contour elevation of 286.5 feet msl, and extends approximately 1.8 miles upstream of the dam. The project boundary also extends approximately 550 feet downstream of the dam, enclosing all project structures and recreation facilities, encompassing a total of approximately 82 acres.

25. The existing project boundary for the Huntington Falls Development encompasses the Huntington Falls impoundment, following a contour elevation of 230 feet msl, and extends approximately 1.3 miles upstream of the dam. The project boundary also continues for approximately 500 feet downstream of the powerhouse, enclosing all project structures and recreation facilities, except for a section of the portage trail from the canoe/kayak take-out to its intersection with Morgan Horse Farm Road as discussed later in this order. The Huntington Falls Development project boundary encompasses a total of approximately 74 acres.

#### **D. Current Project Operation**

##### Proctor

26. The Proctor Development operates in what Green Mountain refers to as a “modified run-of-river mode.” During normal operation, Green Mountain maintains the impoundment water surface elevation at or near the top of the inflatable flashboards (469.5 feet msl). Inflow to this development is either released through the powerhouse or passed over the dam. The current license authorizes Green Mountain to periodically draw down the Proctor impoundment up to 4 feet (i.e., to an elevation of 465.5 feet msl), if such drawdowns are needed to perform maintenance activities or repairs, create additional reservoir storage in anticipation of high flows, or to supply additional water to the powerhouse to meet Independent System Operator (ISO)-New England or local power demands. On average, 4-foot drawdowns of the Proctor impoundment occur infrequently (once or twice annually), while 1-foot drawdowns occur more frequently (approximately 10 times annually). Typically, the average duration of these drawdowns is approximately 24 hours.

27. River flows between 70 and 325 cfs are used for power generation. Flows less than 70 cfs and in excess of 325 cfs are spilled over the dam crest and into the bypassed reach.

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28. The current project license requires that Green Mountain provide 50 percent of project inflow downstream of the Proctor powerhouse during the months of April and May, and the first two weeks of June, and 100 cfs, or inflow (whichever is less), at all other times to protect fishery and aquatic resources.

Beldens

29. The Beldens Development operates in a run-of-river mode. During normal operation, Green Mountain maintains the impoundment water surface elevation at or near the top of the wooden flashboards (283 feet msl). Inflow from the Beldens Development is either released through the powerhouse or passed over the spillway. The current project license requires that Green Mountain provide a continuous flow of 5 cfs, or inflow to the reservoir (whichever is less), to the Belden's bypassed reach to protect fishery and aquatic resources.<sup>14</sup>

30. River flows between 80 and 2,000 cfs are used for power generation. Flows less than 80 cfs and in excess of 2,000 cfs are spilled over the dam crest and into the bypassed reaches.

Huntington Falls

31. The Huntington Falls Development operates in a run-of-river mode. During normal operation, Green Mountain maintains the impoundment water surface elevation at or near the top of the inflatable flashboards (217.8 feet msl). Inflow from the Huntington Falls Development is either released through the powerhouse or passed over the spillway. The current project license requires that Green Mountain provide a continuous flow of 15 cfs, or inflow to the reservoir (whichever is less), to the Huntington Fall's bypassed reach to protect fishery and aquatic resources.

32. River flows between 100 cfs and 2,010 cfs are used for power generation. Flows less than 100 cfs and in excess of 2,010 cfs are spilled over the dam crest and into the bypassed reach.

**E. Proposed Project Facilities**

33. At the Proctor Development, Green Mountain proposes to: (1) install a new runner at turbine-generator unit 1 and install new turbine-generator units 2 through 4, resulting in an increase in the development's authorized capacity from 3,000 to

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<sup>14</sup> The existing 5-cfs minimum flow requirement for the Beldens development is released from the Beldens west dam.



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10,233 kW and an increase in the maximum hydraulic capacity from 325 to 1,188 cfs; and (2) install new electrical switchgear, breakers, controls, and relays.

34. At the Huntington Falls Development, Green Mountain proposes to: (1) install new turbine-generator units 1 and 2, resulting in an increase in the development's authorized capacity from 5,500 to 6,725 kW and an increase in the maximum hydraulic capacity from 2,010 to 2,250 cfs; (2) install new switchgear, breakers, control, and relays; and (3) construct a new minimum flow gate at the southern end of the Huntington Falls dam.

#### **F. Proposed Project Operation**

35. At the Proctor Development, Green Mountain proposes to eliminate the existing 4-foot drawdown of the Proctor reservoir (except during infrequent emergency operations and maintenance activities) and operate the development in a run-of-river mode from July 1 through April 30, when inflow is less than 200 cfs, and from May 1 through June 30, when inflow is less than 400 cfs. At all other times, Green Mountain proposes to operate the Proctor Development in a 1.5-foot drawdown/refill cycle (i.e., peaking mode). During peaking operations, Green Mountain proposes to implement the following maximum powerhouse discharges to protect aquatic resources within Otter Creek:

- from May 1 through June 30, 1.5 times inflow when inflow is equal to or greater than 400 cfs;
- from July 1 through July 15, 1.5 times inflow when inflow is between 200 and 400 cfs, and 2 times inflow when inflow is equal to or greater than 400 cfs;
- from July 16 through December 15, 2.5 times inflow when inflow is between 200 and 400 cfs, and 3 times inflow when inflow is equal to or greater than 400 cfs;
- from December 16 through March 15, 2.5 times inflow when inflow is between 200 and 400 cfs, and 3 times inflow when inflow is equal to or greater than 400 cfs; and
- from March 16 through April 30, 2.5 times inflow when inflow is between 200 and 400 cfs, and 3 times inflow when inflow is greater than or equal to 400 cfs.

36. Green Mountain proposes to continue to operate the Beldens and Huntington Falls developments in a run-of-river mode.

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### **G. Proposed Environmental Measures**

37. In addition to the project design and operational measures discussed above, Green Mountain proposes the following.
38. To minimize soil erosion and sedimentation into Otter Creek, Green Mountain proposes to implement erosion and sediment control measures during construction of the proposed recreational enhancements at the Proctor and Beldens developments.
39. To prevent the introduction of hazardous materials into project waters, Green Mountain proposes to file a spill prevention control and countermeasures plan for Commission approval.
40. To reduce debris loading and ice buildup, Green Mountain proposes to replace the existing turbine-generator unit 3 trashracks at the Huntington Falls Development with trashracks that have 2-inch clear-spaced bars, a maximum approach velocity of 2 feet per second, and an orientation parallel to river flow.
41. To improve aesthetics and habitat conditions for aquatic species, Green Mountain proposes to provide a continuous minimum flow of: (1) 60 cfs to the Proctor bypassed reach; (2) 25 cfs to the Beldens west bypassed reach; (3) 10 cfs to the Beldens east bypassed reach; and (4) 66 cfs to the Huntington Falls bypassed reach.
42. To improve accessibility to the tailrace access site at the Proctor Development, Green Mountain propose to: (1) construct a gravel parking lot for two to three vehicles; and (2) install directional signage.
43. To improve boater safety, Green Mountain proposes to add signage and clear brush at the Beldens Development's canoe/kayak take-out and portage, and modify the location of the boat barrier at the Huntington Falls Development.
44. To protect historic properties, Green Mountain proposes to implement the Historic Properties Management Plan (HPMP), filed on March 18, 2013.

### **SUMMARY OF LICENSE REQUIREMENTS**

45. As summarized below, this license, which authorizes 22.807 MW of renewable energy, requires a number of measures to protect and enhance aquatic, terrestrial, recreation, cultural, and aesthetic resources at the project.

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46. To protect geology and soils, aquatic resources, and recreation, the license requires the conditions of the Vermont Department of Environmental Conservation (Vermont DEC) water quality certification (discussed further below).
47. The license requires Green Mountain to develop its proposed spill prevention control and countermeasures plan with site-specific provisions to minimize the potential for hazardous material spills and procedures to minimize the extent and adverse effects of spills that may occur.
48. The license requires Green Mountain to replace the existing turbine-generator unit 3 trashracks at the Huntington Falls development with its proposed trashracks.
49. To protect terrestrial resources, the license requires Green Mountain to develop a terrestrial monitoring and management plan with provisions to prevent the spread of invasive plants, revegetate disturbed areas, and ensure the protection of federally-protected wildlife species during project construction activities.
50. To enhance recreation and improve boater safety, the license requires Green Mountain to develop a recreation plan that includes the recreation enhancements and safety measures proposed by Green Mountain, with additional provisions to: (1) ensure recreationists' safety during construction activities at the Proctor Development; and (2) develop interpretive signage at the Proctor Development.
51. To protect cultural resources, the license requires Green Mountain to implement a programmatic agreement (PA) that requires the HPMP, filed on March 18, 2013, to be revised to include emergency procedures that will be implemented if an emergency occurs and properties eligible for or listed on the National Register of Historic Places (historic properties) are affected.

## **WATER QUALITY CERTIFICATION**

52. Under section 401(a)(1) of the Clean Water Act (CWA),<sup>15</sup> the Commission may not issue a license authorizing the construction or operation of a hydroelectric project unless the state water quality certifying agency either has issued water quality certification (certification) for the project or has waived certification by failing to act on a request for certification within a reasonable period of time, not to exceed one year.

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<sup>15</sup> 33 U.S.C. § 1341(a)(1) (2012).

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Section 401(d) of the CWA provides that the certification shall become a condition of any federal license that authorizes construction or operation of the project.<sup>16</sup>

53. The licensee originally applied to Vermont DEC for certification for the Otter Creek Project on August 26, 2011, which Vermont DEC received on August 27, 2011. Upon filing its amended relicense application on August 1, 2011, the licensee filed an amended certification application with Vermont DEC on September 7, 2011, which was received by Vermont DEC on September 8, 2011, and subsequently withdrawn and refiled by the licensee on June 6, 2012. Green Mountain withdrew and resubmitted requests for certification for the project on March 22, 2013, and January 23, 2014, respectively, which were received by Vermont DEC on March 26, 2013, and January 24, 2014, respectively. On May 30, 2014, Vermont DEC issued certification for the project that includes conditions, which are set forth in Appendix A of this order and incorporated into the license by Ordering Paragraph (D).

54. The certification includes requirements for the maximum powerhouse discharges proposed by Green Mountain at the Proctor Development, run-of-river operation at the Beldens and Huntington Falls developments, target impoundment elevations, minimum flows, impoundment refill procedures, a flow management and water level plan, future upstream or downstream fish passage facilities if determined to be needed by U.S. Fish and Wildlife Service (FWS) or Vermont Fish and Wildlife Department, a debris management plan, and a recreation plan.

55. In Appendix A, there are certain certification conditions that either: (1) do not require the licensee to file plans with the Commission for approval; (2) do not require the licensee to file some reports with the Commission that are needed to demonstrate compliance with license requirements; (3) require agency, but not Commission, notification of emergencies and other activities; or (4) contemplate unspecified long-term changes to project operations or facilities for the purpose of mitigating environmental impacts. Therefore, Article 401 requires the licensee to: (1) consult with other agencies during plan development and file the plans with the Commission for approval; (2) file reports with the Commission; (3) notify the Commission of emergencies and other activities; and (4) file any amendment application(s), as appropriate.

## **SECTION 18 FISHWAY PRESCRIPTIONS**

56. Section 18 of the FPA<sup>17</sup> provides that the Commission shall require the construction, maintenance, and operation by a licensee of such fishways as may be

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<sup>16</sup> 33 U.S.C. § 1341(d) (2012).

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prescribed by the Secretary of the Interior or the Secretary of Commerce, as appropriate. No fishway prescriptions or reservations of authority were filed under section 18 of the FPA.

### **THREATENED AND ENDANGERED SPECIES**

57. Section 7(a)(2) of the Endangered Species Act<sup>18</sup> requires federal agencies to ensure their actions are not likely to jeopardize the continued existence of federally listed threatened and endangered species, or result in the destruction or adverse modification of their designated critical habitat.

58. The endangered Indiana bat (*Myotis sodalis*) is the only federally listed species with the potential to occur in the project area. Indiana bats are known to occur in both Rutland and Addison counties, though there is no information in the project record indicating that Indiana bats exist in the immediate project vicinity.

59. In the EA,<sup>19</sup> staff determined that with its recommended measures, relicensing the project is not likely to adversely affect the Indiana bat or its habitat. FWS concurred with this finding by letter filed on February 21, 2013. Article 404 includes staff's recommended measures.

### **NATIONAL HISTORIC PRESERVATION ACT**

60. Under section 106 of the National Historic Preservation Act and its implementing regulations, federal agencies must take into account the effect of any proposed undertaking on properties listed or eligible for listing in the National Register (defined as historic properties) and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking. This generally requires the Commission to consult with the State Historic Preservation Officer (SHPO) to determine whether and how a proposed action may affect historic properties, and to seek ways to avoid or minimize any adverse effects.

61. To satisfy these responsibilities, the Commission executed a PA with the Vermont SHPO, and Green Mountain concurred with the stipulations of the PA. The PA requires

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<sup>17</sup> 16 U.S.C. § 811 (2012).

<sup>18</sup> 16 U.S.C. § 1536(a) (2012).

<sup>19</sup> See EA at 10, and 83-85.

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Green Mountain to implement the HPMP, filed on March 18, 2013, along with a modification that requires Green Mountain to implement emergency procedures if an emergency occurs and historic properties are affected. Execution of the PA demonstrates the Commission's compliance with section 106 of the NHPA. Article 406 requires Green Mountain to implement the PA.

### **RECOMMENDATIONS OF FEDERAL AND STATE FISH AND WILDLIFE AGENCIES PURSUANT TO SECTION 10(j) OF THE FPA**

62. Section 10(j) of the FPA<sup>20</sup> requires the Commission, when issuing a license, to include conditions based on recommendations submitted by federal and state fish and wildlife agencies pursuant to the Fish and Wildlife Coordination Act,<sup>21</sup> to "adequately and equitably protect, mitigate damages to, and enhance fish and wildlife (including related spawning grounds and habitat)" affected by the project.

63. No agency filed section 10(j) recommendations for the Otter Creek Project.

### **SECTION 10(a)(1) OF THE FPA**

64. Section 10(a)(1) of the FPA<sup>22</sup> requires that any project for which the Commission issues a license be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce; for the improvement and utilization of waterpower development; for the adequate protection, mitigation, and enhancement of fish and wildlife; and for other beneficial public uses, including irrigation, flood control, water supply, recreation, and other purposes.

#### **A. Spill Prevention Control and Countermeasures Plan**

65. Green Mountain proposes to file, for Commission approval, a spill prevention control and countermeasures plan to prevent the introduction of hazardous materials into project waters during construction related to upgrades of the turbine-generator units and enhancement of recreation facilities, and operation and maintenance of the project. In the EA,<sup>23</sup> staff concluded that Green Mountain's proposed construction activities, and

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<sup>20</sup> 16 U.S.C. § 803(j)(1) (2012).

<sup>21</sup> 16 U.S.C. § 661 *et seq.* (2012).

<sup>22</sup> 16 U.S.C. § 803(a)(1) (2012).

<sup>23</sup> *See* EA at 54 and 55.

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operation and maintenance of the project, could result in hazardous material spills, which could degrade water quality and negatively affect aquatic resources. Because Green Mountain did not provide any details regarding the spill prevention control and countermeasures plan, staff recommended the plan include site-specific measures to minimize the potential for hazardous material spills and procedures to minimize the extent and adverse effects of spills that may occur. Article 402 requires this plan.

### **B. Fish Entrainment at the Huntington Falls Development**

66. The existing trashracks for turbine-generator unit 3 at the Huntington Falls Development have 2-inch clear bar spacing and are oriented 45 degrees to river flow. To reduce debris loading and ice buildup, Green Mountain proposes to replace these trashracks with trashracks that have 2-inch clear bar spacing, a maximum approach velocity of 2 feet per second, and an orientation parallel to river flow.

67. In the EA,<sup>24</sup> Commission staff determined that orienting the new turbine-generator unit 3 trashracks parallel to inflow could subject a greater number of fish to entrainment in comparison to the existing trashracks that are angled to inflow at 45 degrees, which may help some fish avoid entering the project intakes. However, with a maximum approach velocity of 2 feet per second, staff concluded that the escape speeds of most adult game fish present within the Huntington Falls impoundment would allow them to avoid impingement and entrainment at the turbine-generator unit 3 trashracks. In addition, staff concluded that smaller fish, which would have a higher likelihood of entrainment at the Huntington Falls Development due to their slower swimming speed, have been shown to exhibit a high rate of survival (90 percent) when passing through Kaplan turbines. Due to these findings, staff concluded that the proposed trashrack with 2-inch clear bar spacing, a maximum approach velocity of 2 feet per second, and an orientation parallel to flow would adequately protect fish from entrainment and impingement at the Huntington Falls Development. Therefore, Article 403 requires the licensee to file with the Commission for approval, design drawings for a trashrack that meets these specifications.

### **C. Terrestrial Monitoring and Management Plan**

68. Green Mountain's proposal to install new turbine-generator units and enhance recreation facilities would require the use of heavy equipment. The use of heavy equipment could temporarily disturb wildlife in and around project lands, including

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<sup>24</sup> See EA at 73-77.

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Indiana bats and bald eagles. Ground-disturbing activities related to proposed recreational facility upgrades could also allow invasive plant species to become established. Further, although likely to be an infrequent occurrence during the license term, the removal of trees within the project area for safety or project access purposes could negatively affect Indiana bats which require roosting trees for breeding and shelter outside of the hibernation period. In the EA,<sup>25</sup> staff recommended that Green Mountain develop and implement a terrestrial monitoring and management plan with specific provisions to re-vegetate areas disturbed by construction activities authorized under this license, prevent the spread of invasive plants, and protect federally-protected wildlife species and their respective habitats within the project area. Therefore, Article 404 of this license requires Green Mountain to file, for Commission approval, a terrestrial monitoring and management plan that contains the staff-recommended provisions.

#### **D. Recreation Plan**

69. Green Mountain proposes to formalize the tailrace access site by adding a parking lot at the Proctor Development and improve boater safety by installing signage that clearly identifies the location of the existing canoe/kayak take-out and portage at the Beldens development and modifying the location of the boat barrier at the Huntington Falls development; however, Green Mountain did not provide details on the lot design or its proposed measures for improving boater safety. Also, the installation of the turbines at the Proctor Development would adversely affect recreationists at the tailrace because the tailrace access road would be used during the installation and portions of the tailrace site would be closed to recreational use during construction.

70. In the EA,<sup>26</sup> staff recommended that Green Mountain develop a recreation plan that contains conceptual drawings of the parking lot, a schedule for installing signage and moving the boat barrier to improve boater safety, and measures to ensure recreationists' safety during installation of the turbines at the Proctor Development. Staff also recommended that the recreation plan contain a provision to install interpretive signage at the Proctor Development to provide information on how the project was integral in the development of the marble industry in the Otter Creek Valley. Certification condition H requires a recreation plan for the construction and maintenance of recreational facilities at the project, and Article 405 expands the required plan to include the staff-recommended provisions discussed above.

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<sup>25</sup> See EA at 130 and 131.

<sup>26</sup> See EA at 131 and 132.



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**ADMINISTRATIVE CONDITIONS****A. Annual Charges**

71. The Commission collects annual charges from licensees for administration of the FPA. Article 201 provides for the collection of funds for administration of the FPA.

**B. Exhibit F and G Drawings**

72. The Exhibit F drawings filed on August 1, 2011 (sheets 2 through 13) and March 29, 2013 (sheet 1), are approved and made part of the license (ordering paragraph (C)). The Commission requires licensees to file sets of approved project drawings in electronic file format. Article 202 requires the filing of these drawings.

73. The Exhibit G drawings filed on May 11, 2012, are not approved. The Huntington Falls Development's existing portage trail from the take-out to the Morgan Horse Farm Road, which is a project-related recreation facility and needed for project purposes, is not included within the project boundary. Moreover, the Commission's regulations require that a project boundary generally be no more than 200 feet from the exterior margin of a reservoir, unless additional lands are "necessary for project purposes, such as recreation, shoreline control, or protection of environmental resources."<sup>27</sup> However, in certain locations the project boundary for the Proctor Development is upwards of approximately 2,000 feet from the exterior margin of the Proctor impoundment. Article 203 requires Green Mountain to file revised Exhibit G drawings to include the portion of the portage trail described above within the project boundary for the Huntington Falls Development. Article 203 also requires Green Mountain to specify the project purposes that are served by the lands in the current project boundary along the shoreline of the Proctor impoundment, specify whether any lands currently in the project boundary are not serving a project purpose, and revise the Exhibit G drawings accordingly.

**C. Amortization Reserve**

74. The Commission requires that for new major licenses, non-municipal licensees must set up and maintain an amortization reserve account upon license issuance. Article 204 requires the establishment of the account.

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<sup>27</sup> 18 C.F.R. § 4.41(h)(2)(i)(B) (2006).

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**D. Headwater Benefits**

75. Some projects directly benefit from headwater improvements that were constructed by other licensees, the United States, or permittees. Article 205 requires the licensee to reimburse such entities for these benefits if they were not previously assessed and reimbursed.

**E. Use and Occupancy of Project Lands and Waters**

76. Requiring a licensee to obtain prior Commission approval for every use or occupancy of project lands or waters would be unduly burdensome. Therefore, Article 407 allows the licensee to grant permission, without prior Commission approval, for the use and occupancy of project lands and waters for such minor activities as landscape planting. Such uses must be consistent with the purposes of protecting and enhancing the scenic, recreational, and environmental values of the project.

**F. Review of Final Plans and Specifications**

77. Article 301 requires the licensee to provide the Commission's Division of Dam Safety and Inspection's New York Regional Office (D2SI-NYRO) with licensee-approved cofferdam and deep excavation construction drawings, should construction require cofferdams or deep excavations.

78. Because the new license will modify project operation at the Proctor Development, Article 302 requires the licensee to assess the effects of modifying project operation on flood routing and the project's flashboard system, and to develop a plan, if necessary, to ensure the continued safe operation of the project during high flows.

79. Article 303 requires the licensee to submit one copy of its plans and specifications and supporting design document to the Commission's D2SI-NYRO for review and approval. The submittal must also include: a Quality Control and Inspection Program, a Temporary Construction Emergency Action Plan, and Soil Erosion and Sediment Control Plan.

80. Where new construction or modifications to the project are involved, the Commission requires licensees to file revised drawings of project features as-built. Article 304 provides for the filing of these drawings.

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81. Article 305 requires the licensee to coordinate any modifications that would affect project works or operation resulting from environmental requirements with the Commission's D2SI-New York Regional Office.

## **STATE AND FEDERAL COMPREHENSIVE PLANS**

82. Section 10(a)(2)(A) of the FPA,<sup>28</sup> requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project.<sup>29</sup> Under section 10(a)(2)(A), federal and state agencies filed 39 comprehensive plans that address various resources in Vermont. Of these, staff identified and reviewed 11 comprehensive plans that are relevant to this project.<sup>30</sup> No conflicts were found.

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

83. In accordance with sections 10(a)(2)(C) and 15(a) of the FPA,<sup>31</sup> Commission staff evaluated Green Mountain's record as a licensee for these areas: (A) conservation efforts; (B) compliance history and ability to comply with the new license; (C) safe management, operation, and maintenance of the project; (D) ability to provide efficient and reliable electric service; (E) need for power; (F) transmission services; (G) cost effectiveness of plans; and (H) actions affecting the public. This order adopts staff's analysis and conclusions.

### **A. Conservation Efforts**

84. Section 10(a)(2)(C)<sup>32</sup> of the FPA requires the Commission to consider the electricity consumption improvement program of the applicant, including its plans, performance, and capabilities for encouraging or assisting its customers to conserve electricity cost-effectively, taking into account the published policies, restrictions, and

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<sup>28</sup> 16 U.S.C. § 803(a)(2)(A) (2012).

<sup>29</sup> Comprehensive plans for this purpose are defined at 18 C.F.R. § 2.19 (2014).

<sup>30</sup> The list of applicable plans can be found in section 5.5 of the EA for the project.

<sup>31</sup> 16 U.S.C. §§ 803(a)(2)(C) and 808(a) (2012).

<sup>32</sup> 16 U.S.C. § 803(a)(2)(C) (2012).

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requirements of state regulatory authorities. The Otter Creek Project will become a component of the resource portfolio of Green Mountain and continue providing hydroelectric generation to meet part of Vermont's power requirements, resource diversity, and capacity needs. The Otter Creek Project is located within the jurisdiction of the New England Independent System Operator (ISO-New England), which is a subregion of the Northeast Power Coordinating Council Inc., a region of the North American Electric Reliability Council (NERC). ISO-New England is a regional transmission organization that coordinates the movement of wholesale electricity in the New England states, and provides opportunities for end-use customers to realize the value for reducing their demand for electricity.

85. Staff concludes that, given the limits of their ability to influence users of the electricity generated by the project, Green Mountain will comply with section 10(a)(2)(C) of the FPA.

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

86. Because the project was only recently transferred to Green Mountain, the licensee's compliance history at the project is limited. Green Mountain, as a licensee at its other hydroelectric projects, has an overall record of making timely filings and compliance with its licenses is satisfactory.<sup>33</sup> Because the licensee has a satisfactory record of compliance at its other projects and has filed with the Commission adequate plans and schedules to comply with the new Otter Creek license, staff believes that Green Mountain can satisfy the conditions of a new license.

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

87. Staff has reviewed Green Mountain's plans for management, operation, and maintenance of the project in its license application. The project is subject to the requirements of 18 C.F.R. Part 12 and evaluated according to the criteria provided in the Commission's Engineering Guidelines. Staff concludes that there is no reason to believe that Green Mountain cannot safely manage, operate, and maintain the dam and other project works in accordance with the Commission's standards and oversight.

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<sup>33</sup> Green Mountain is also a licensee for the following hydroelectric projects: Waterbury (P-2090); Bolton Falls (P-2879), Center Rutland (P-2445), Taftsville (P-2490), Cavendish (P-2489), Gage (P-2397), Arnold Falls (P-2399), Pierce Mills (P-2396), Passumpsic (P-2400), Exxex No. 19 (P-2513), Vergennes (P-2674), Weybridge (P-2731), Middlebury Lower (P-2737), P-Lamoille (P-2205), Clay Hill Road Line 66 Transmission (P-12766), Carver Falls (P-11475), and Silver Lake (P-11478).

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

88. Staff has reviewed Green Mountain's plans and its ability to operate and maintain the project in a manner most likely to provide efficient and reliable electric service. Staff's review indicates that Green Mountain plans to regularly inspect the project turbine-generator units to ensure they continue to perform in an optimal manner, schedule maintenance to minimize effects on energy production, and undertake the necessary initiatives to ensure the project is able to operate reliably into the future. Staff concludes that Green Mountain is capable of operating the project to provide efficient and reliable electric service in the future.

**E. Need for Power**

89. To assess the need for power, staff looked at the needs in the operating region in which the project is located. The Otter Creek Project is a component of the resource portfolio of Green Mountain and will continue providing hydroelectric generation to meet part of Vermont's power requirements, resource diversity, and capacity needs. The project currently produces about 52,800,000 (kilowatt-hours) kWh per year. Green Mountain is proposing to increase the generating capacity of the existing project by 8.458 MW and generate about 69,000,000 kWh per year. The NERC annually forecasts electricity supply and demand nationally and regionally for a 10-year period.

90. The ISO-New England is a summer-peaking region, and the winter peaks are normally less than those experienced in the summer. According to NERC's 2011 forecast, summer peak demand requirements for the ISO-New England region are projected to grow at a compound annual growth rate of 0.84 percent from 2014 through 2023. The capacity margins are forecasted to decrease from about 13.85 percent in 2014 to about 12.07 percent in 2023 (NERC, 2013). Staff concludes that power from the Otter Creek Project would help meet a need for power in the ISO-New England region in both the short- and long-term.

**F. Transmission Services**

91. The Otter Creek Project is an existing facility that is already integrated into Green Mountain's electrical system. The system features numerous interconnections along its length, which are used to deliver energy to other systems or directly to power consumers. Power from the Proctor Development is transmitted to a 46-kV step-up transformer before being distributed to the Green Mountain transmission and distribution systems. At the Beldens and Huntington Falls developments, power is transmitted to 46-kV step-up transformers before going to the Green Mountain transmission system. Green Mountain

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considers these transformers to be the point of interconnection of the hydroelectric developments with the Green Mountain grid system.

### **G. Cost Effectiveness of Plans**

92. Green Mountain plans to make a number of facility and operational modifications to both improve project generating capability and enhance environmental resources affected by the project. Based on Green Mountain's record as an existing licensee at its other hydroelectric projects, staff concludes that these plans are likely to be carried out in a cost-effective manner.

### **H. Actions Affecting the Public**

93. Green Mountain provided extensive opportunity for public involvement in the development of its applications for other licenses. Green Mountain anticipates using the project to help meet local power needs, provide employment opportunity, and provide recreational opportunities.

## **PROJECT ECONOMICS**

94. In determining whether to issue a new license for an existing hydroelectric project, the Commission considers a number of public interest factors, including the economic benefits of project power. Under the Commission's approach to evaluating the economics of hydropower projects, as articulated in *Mead Corp.*,<sup>34</sup> the Commission uses current costs to compare the costs of the project and likely alternative power with no forecasts concerning potential future inflation, escalation, or deflation beyond the license issuance date. The basic purpose of the Commission's economic analysis is to provide a general estimate of the potential power benefits and the costs of a project, and of reasonable alternatives to project power. The estimate helps to support an informed decision concerning what is in the public interest with respect to a proposed license.

95. In applying this analysis to the Otter Creek Project, staff has considered three options: the no-action alternative, Green Mountain's proposal, and the project as licensed herein. Under the no-action alternative, the project would continue to operate as it does now. The project has an installed capacity of 14.349 MW and generates an average of 52,800 MWh<sup>35</sup> of electricity annually. The average annual project cost is about

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<sup>34</sup> 72 FERC ¶ 61,027 (1995).

<sup>35</sup> Commission staff estimated this value.

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\$3,630,528, or \$68.76/MWh. When staff multiplied its estimate of average generation by the alternative power cost of \$31.32/MWh,<sup>36</sup> staff gets a total value of the project's power of \$1,653,696 in 2013 dollars. To determine whether the proposed project is currently economically beneficial, staff subtracted the project's cost from the value of the project's power.<sup>37</sup> Therefore, the project costs \$1,976,832, or \$37.44/MWh, more to produce power than the likely alternative cost of power.

96. As proposed by Green Mountain, the levelized annual cost of operating the Otter Creek Project is \$5,585,550, or \$80.95/MWh. The proposed project would have an installed capacity of 22.807 MW, and generate an estimated average of 69,000 MWh of energy annually. When staff multiplied its estimate of average generation by the alternative power cost of \$31.32/MWh, staff gets a total value of the project's power of \$2,161,080 in 2013 dollars. To determine whether the proposed project is economically beneficial, staff subtracted the proposed project's cost from the total value of the alternative power. Therefore, in the first year of operation, the project would cost \$3,424,470, or \$49.63/MWh, more than the likely alternative cost of power.

97. As licensed herein, the levelized annual cost of operating the proposed project (as modified by staff) would be about \$5,589,690 or about \$81.01/MWh. The proposed project would generate an estimated average of 69,000 MWh of energy annually. When staff multiplied its estimate of average generation by the alternative power cost of \$31.32/MWh, staff gets a total value of the project's power of \$2,161,080 in 2013 dollars. To determine whether the proposed project is economically beneficial, staff subtracted the proposed project's cost from the total value of the alternative power. Therefore, in the first year of operation, project power would cost \$3,428,610 or \$49.69/MWh more than the likely alternative cost of power.

98. In considering public interest factors, the Commission takes into account that hydroelectric projects offer unique operational benefits to the electric utility system (ancillary service benefits). These benefits include the ability to help maintain the stability of a power system, such as by quickly adjusting power output to respond to rapid

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<sup>36</sup> The alternative power cost of \$31.32 per MWh is based on information obtained from a sales contract, U.S. Energy Information Administration (EIA) fuel cost data, and regional bid prices for year 2013.

<sup>37</sup> Details of staff's economic analysis for the project as licensed herein and for various alternatives are included in the EA issued on July 26, 2013. This analysis was revised to reflect Green Mountain's revised generating capacity for the Proctor Development and EIA's 2013 fuel cost data.

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changes in system load; and to respond rapidly to a major utility system or regional blackout by providing a source of power to help restart fossil-fuel based generating stations and put them back on line.

99. Although staff's analysis shows that the project as licensed herein would cost more to operate than the estimated cost of alternative power, it is the applicant who must decide whether to accept this license and any financial risk that it entails.

100. Although staff does not explicitly account for the effects inflation may have on the future cost of electricity, the fact that hydropower generation is relatively insensitive to inflation compared to fossil-fueled generators is an important economic consideration for power producers and the consumers they serve. This is one reason project economics is only one of the many public interest factors the Commission considers in determining whether or not, and under what conditions, to issue a license.

## **COMPREHENSIVE DEVELOPMENT**

101. Sections 4(e) and 10(a)(1) of the FPA<sup>38</sup> require the Commission to give equal consideration to the power development purposes and to the purposes of energy conservation; the protection, mitigation of damage to, and enhancement of fish and wildlife; the protection of recreational opportunities; and the preservation of other aspects of environmental quality. Any license issued shall be such as in the Commission's judgment will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for all beneficial public uses. The decision to license this project, and the terms and conditions included herein, reflect such consideration.

102. The EA for the project contains background information, analysis of effects, and support for related license articles. Based on the record of this proceeding, including the EA and comments thereon, issuing a new license for the Otter Creek Project as described in this order will not constitute a major federal action significantly affecting the quality of the human environment. The project will be safe if operated and maintained in accordance with the requirements of the license.

103. Based on an independent review and evaluation of the Otter Creek Project, recommendations from the resource agencies and other stakeholders, and the no-action alternative, as documented in the EA, the proposed Otter Creek Project, as licensed herein, is selected and found to be best adapted to a comprehensive plan for improving or developing Otter Creek.

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<sup>38</sup> 16 U.S.C. §§ 797(e) and 803(a)(1) (2012).



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104. This alternative was selected because: (1) issuance of a new license will serve to maintain a beneficial and dependable source of electrical energy; (2) the required environmental measures will protect and enhance fish and wildlife resources, water quality, terrestrial resources, recreational resources, and historic properties; and (3) the 22.807 MW of authorized electric capacity comes from a renewable resources that does not contribute to atmospheric pollution.

## LICENSE TERM

105. Section 15(e) of the FPA<sup>39</sup> provides that any new license issued shall be for a term that the Commission determines to be in the public interest, but not less than 30 years or 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 mitigation and enhancement measures; 40-year terms for projects with a moderate amount of such activities; and 50-year terms for projects with extensive measures.<sup>40</sup>

106. This license requires a moderate amount of new construction and environmental measures, including installation of a new runner (turbine-generator unit 1) and three new turbine-generator units (2 through 4) at the Proctor Development to increase generating capacity from 3.0 to 10.233 MW; installation of two new turbine-generator units (1 and 2) at the Huntington Falls Development to increase generating capacity from 5.5 to 6.725 MW; enhanced minimum flows to improve aesthetics and habitat conditions for aquatic species; and various resource protection plans. Consequently, a 40-year license for the Otter Creek Project is appropriate.

### The Director orders:

(A) This license is issued to Green Mountain Power Corporation (licensee), for a period of 40 years, effective the first day of the month in which this order is issued, to operate and maintain the Otter Creek Hydropower 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:

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<sup>39</sup> 16 U.S.C. § 808(e) (2012).

<sup>40</sup> See *Consumers Power Co.*, 68 FERC ¶ 61,077 at 61,383-84 (1994).

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(1) All lands, to the extent of the licensee's interests in these lands, described in the project description and the project boundary discussion of this order.

(2) Project works that include the following three hydropower developments:

The Proctor Development consisting of: (1) a 13-foot-high, 128-foot-long masonry, concrete-capped dam with a 3-foot-high inflatable flashboard system; (2) a 95-acre reservoir with a usable storage capacity of 275 acre-feet at a normal maximum water surface elevation of 469.5 feet above mean sea level (msl); (3) a 100-foot-long by 17-foot-high by 45-foot-wide gated-forebay intake structure that contains trashracks with 1-inch clear bar spacing; (4) two penstocks, including (a) a 9-foot-diameter, riveted steel penstock which extends 345 feet from the dam to a surge tank and decreases to 8 feet in diameter for an additional 96 feet beyond a surge tank; and (b) a 7-foot-diameter, 500-foot-long spiral welded steel penstock; (5) a 33-foot by 100-foot concrete and brick masonry powerhouse containing four vertical Francis turbine-generator units rated at 2,245 kW (kilowatts), 1,715 kW, 1,719 kW, and 1,714 kW, respectively, and an attached 28-foot by 48-foot steel structure containing one 2,840-kW vertical Francis turbine-generator unit for a total authorized installed capacity of 10,233 kW; (6) generator leads; (7) three banks of 0.48/2.4-kilovolt (kV) single-phase transformers; (8) a 0.48/46-kV step-up transformer; (9) a 265-foot-long, 14-foot-wide bridge located 760 feet downstream of the Proctor dam that is used to access the Proctor powerhouse; (10) a 1,200-foot-long access road; and (11) appurtenant facilities.

The Beldens Development consisting of: (1) a concrete dam with 2.5-foot-high wooden flashboards, including (a) a 15-foot-high, 56-foot-long dam section (Beldens west dam); and (b) a 24-foot-high, 57-foot-long dam section (Beldens east dam); (2) a 22-acre reservoir with a usable storage capacity of 253 acre-feet at a normal maximum water surface elevation of 283 feet msl; (3) two intakes, including (a) a 20-foot-high by 35-foot-wide intake with 13-foot-high by 26-foot-wide trashracks with bar spacing of 1.125 inches on center; and (b) a 34.5-foot-high by 40-foot-wide intake with 13-foot-high by 40-foot-wide trashracks with 3-inch clear bar spacing; (4) two penstocks, including (a) a 12-foot-diameter steel penstock that bifurcates into two 10-foot-diameter, 30-foot-long sections, each leading to a 40-foot by 44-foot concrete and masonry powerhouse containing a 800-kW horizontal Francis turbine-generator unit and a 949-kW horizontal Francis turbine-generator unit; and (b) a 12-foot-diameter, 45-foot-long concrete penstock that leads to a 40-foot by 75-foot concrete powerhouse containing one 4,100-kW horizontal Kaplan turbine-generator unit for a total authorized installed capacity of 5,849 kW; (5) generator leads; (6) a 2.4/46-kV step-up transformer bank; and (7) appurtenant facilities.

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The Huntington Falls Development consisting of: (1) a 31-foot-high, 187-foot-long concrete dam with a 2.5-foot-high inflatable flashboard system; (2) a 23-acre reservoir with a storage capacity of 234 acre-feet at a normal maximum water surface elevation of 217.8 feet msl; (3) two intakes, including (a) a 20-foot-high by 40-foot-wide intake with 13-foot-high by 26-foot-wide trashracks with bar spacing of 1.125 inches on center; and (b) a 38-foot-high by 40-foot-wide intake with 16-foot-high by 30-foot-wide trashracks with 2-inch clear bar spacing; (4) two, 10-foot-diameter, 30-foot-long steel penstocks leading to a 42-foot by 60-foot concrete and masonry powerhouse containing two horizontal Francis turbine-generator units with a combined installed capacity of 2,625 kW; (5) a 12-foot-diameter, 75-foot-long concrete penstock leading to a 40-foot by 75-foot concrete powerhouse containing one 4,100-kW horizontal Kaplan turbine-generator unit for a total authorized installed capacity of 6,725 kW; (6) generator leads; (7) a 2.4/46-kV step-up transformer bank; and (8) appurtenant facilities.

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

Exhibit A: The following sections of exhibit A filed on August 1, 2011, April 11, 2012, and April 28, 2014:

Exhibit A, filed on August 1, 2011, including Section 2.0, pages A-3 through A-10, entitled "Project Structures;" Section 3.0, page A-11, entitled "Impoundment Data;" Section 4.0, pages A-12 through A-13, entitled "Transmission Lines;" and Section 5.0, page 14, entitled "Additional Equipment."

Pages 1 through 5, entitled "Exhibit A," filed on April 11, 2012, except for the subsections entitled "Proctor Unit Upgrades," and "Huntington Falls Unit Upgrades" on pages 3 and 4.

Attachment 1, entitled "Proctor Redevelopment-Turbine and Generator Specifications," filed on April 28, 2014, superseding the August 1, 2011 capacities of the turbines and generator units at the Proctor Development.

Exhibit F: The following Exhibit F-2 through F-13 drawings filed on August 1, 2011, and Exhibit F-1 drawing filed on March 29, 2013:

<u>Exhibit F</u> <u>Drawing</u>	<u>FERC</u> <u>No.</u>	<u>Description</u>
Sheet F-1	2558- 1001	Site Plan & Profile

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Sheet F-2	1002	Proctor - Plan, Section, & Elevation of Powerhouse
Sheet F-3	1003	Proctor - Plan, Elevation, and Section of Dam
Sheet F-4	1004	Beldens – Site Plan
Sheet F-5	1005	Beldens - Unit #3 Powerhouse and Intake Plan and Profile
Sheet F-6	1006	Beldens - Plan and Sections of Units #1 and #2 Powerhouse
Sheet F-7	1007	Beldens - Plan, Elevation, and Section of East and West Dams
Sheet F-8	1008	Huntington Falls - Site Plan
Sheet F-9	1009	Huntington Falls - Unit #3 Powerhouse and Intake Plan and Profile
Sheet F-10	1010	Huntington Falls - Plan, Elevation & Section of Units #1 and #2 Powerhouse
Sheet F-11	1011	Huntington Falls - Plan, Elevation & Section of Dam
Sheet F-12	1012	Proctor - Permanent Access Bridge Option - Site & Plan Profile
Sheet F-13	1013	Proctor - Temporary Access Road Option and Plan Section

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

(C) The Exhibits A and F as described above are approved and made part of this license. The revised Exhibit G drawings filed on May 11, 2012, do not conform to Commission regulations and are not approved.

(D) This license is subject to the conditions submitted by the Vermont Department of Environmental Conservation under section 401(a)(1) of the Clean Water Act, 33 U.S.C. § 1341(a)(1) (2012), as those conditions are set forth in Appendix A to this order.

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(E) This license is also subject to the articles set forth in Form L-3 (Oct. 1975), entitled, "Terms and Conditions of License for Constructed Major Project Affecting Navigable Waters of the United States" (*see* 54 F.P.C. 1792 *et seq.*), as set forth in this order, and the following additional articles:

Article 201. *Administrative Annual Charges.* The licensee must pay the United States annual charges, effective the first day of the month in which the license is issued, and as determined in accordance with the provisions of the Commission's regulations in effect from time to time, for the purpose of reimbursing the United States for the cost of administration of Part I of the Federal Power Act. The authorized installed capacity for that purpose is as follows:

(a) 14,349 kilowatts (kW) based on the authorized and currently existing capacity; and

(b) 22,807 kW upon commencement of construction of the additional capacity authorized in this order.

The licensee must file a report stating the date of commencement of construction of the additional authorized capacity, within 90 days of such date. Such commencement date will be the effective date for the annual charges under Article 201(b).

Article 202. *Exhibit F Drawings.* Within 45 days of the date of issuance of this license, as directed below, the licensee must file the approved Exhibit F drawings in electronic file format on CDs.

Digital images of the approved exhibit drawings must be prepared in electronic format. Prior to preparing each digital image, the FERC Project-Drawing Number (i.e., P-2558-1001 through P-2558-1013) must be shown in the margin below the title block of the approved drawing. Exhibit F drawings must be identified as (CEII) material under 18 CFR §388.113(c). Each drawing must be a separate electronic file, and the file name must include: FERC Project-Drawing Number, FERC Exhibit, Drawing Title, date of this license, and file extension in the following format [P-2558-#####, F-1, Drawing Title, MM-DD-YYYY.TIF]. All digital images of the exhibit drawings shall meet the following format specification:

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

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Article 203. Exhibit G Drawings. Within 90 days of license issuance, the licensee must file, for Commission approval, revised Exhibit G drawings enclosing within the project boundary all project works and facilities necessary for operation and maintenance of the project, including the Huntington Falls Development's existing portage trail from the canoe/kayak take-out to the Morgan Horse Farm Road. The licensee must also describe the project purposes that are served by the lands in the current project boundary along the shoreline of the Proctor impoundment, describe any lands not currently serving a project purpose, and remove any lands within the project boundary at the Proctor Development that are not serving a project purpose. The Exhibit G drawings must comply with the Commission's regulations at 18 C.F.R §§ 4.39 and 4.41 (2014).

Article 204. Amortization Reserve. Pursuant to section 10(d) of the Federal Power Act, a specified reasonable rate of return upon the net investment in the project must be used for determining surplus earnings of the project for the establishment and maintenance of amortization reserves. The licensee must 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 must deduct the amount of that deficiency from the amount of any surplus earnings subsequently accumulated, until absorbed. The licensee must set aside one-half of the remaining surplus earnings, if any, cumulatively computed, in the project amortization reserve account. The licensee must 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 must 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 must be the weighted average cost of long-term debt and preferred stock for the year, and the cost of common equity must 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 205. Headwater Benefits. If the licensee's project was directly benefited 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,

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the licensee must 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 license. The benefits will be assessed in accordance with Part 11, Subpart B, of the Commission's regulations.

Article 301. *Cofferdam and Deep Excavation Construction Drawings.* Should construction require cofferdams or deep excavations, the licensee must: (1) review and approve the design of contractor-designed cofferdams and deep excavations prior to the start of construction; and (2) must ensure that construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days before starting construction of any cofferdams or deep excavations, the licensee must submit one copy to the Commission's Division of Dam Safety and Inspections (D2SI)-New York Regional Engineer and two copies to the Commission (one of these copies must be a courtesy copy to the Commission's Director, D2SI), of the approved cofferdam and deep excavation construction drawings and specifications, and the letters of approval.

Article 302. *Dam Safety and Spillway Adequacy Report.* Within 60 days of the date of this license, the licensee must submit one copy to the Division of Dam Safety and Inspections (D2SI)-New York Regional Engineer and two copies to the Commission (one of these must be a courtesy copy to the Director, D2SI), of a report on the Proctor Development describing the effects of the target reservoir levels required by this license on upstream and downstream flooding and the project's spillway adequacy. At a minimum, the report must: (1) include a flood routing study that evaluates the ability of the project to safely pass flows up to the Inflow Design Flood; (2) assess if there would be an increased likelihood of low-lying structures being flooded under the new operating scenario; (3) assess any impacts to the currently operating flashboard systems; and (4) if necessary, include a plan and schedule for performing any remedial measures necessary to ensure the continued safe operation of the developments during high flows. The licensee must not implement the water level requirements of this license until the D2SI-New York Regional Engineer determines that the altered project operations have no adverse impact on dam safety and issues a letter indicating such.

Article 303. *Contract Plans and Specifications.* At least 60 days prior to start of construction, the licensee must submit one copy of its final contract plans and specifications and supporting design report to the Commission's Division of Dam Safety and Inspections (D2SI)-New York Regional Engineer, and two copies to the Commission (one of these must be a courtesy copy to the Director, D2SI). The submittal must also include as part of preconstruction requirements: a Quality Control and Inspection Program, Temporary Construction Emergency Action Plan, and a Soil Erosion and Sediment Control Plan. The licensee may not begin construction until the D2SI-New York Regional Engineer has reviewed and commented on the plans and specifications,

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determined that all preconstruction requirements have been satisfied, and authorized the start of construction.

Article 304. As-Built Drawings. Within 90 days of completion of construction of the facilities authorized by this license, the licensee must file for Commission approval, revised Exhibits A, F, and G, as applicable, to describe and show those project facilities as built. A courtesy copy must be filed with the Commission's Division of Dam Safety and Inspections (D2SI)-New York Regional Engineer; the Director, D2SI; and the Director, Division of Hydropower Administration and Compliance.

Article 305. Project Modification Resulting from Environmental Requirements. If environmental requirements under this license require modification that may affect the project works or operations, the licensee must consult with the Commission's Division of Dam Safety and Inspections (D2SI)-New York Regional Engineer. Consultation must allow sufficient review time for the Commission to ensure that the proposed work does not adversely affect the project works, dam safety, or project operation.

Article 401. Commission Approval, Notification, and Filing of Amendments.

(a) *Requirement to File Plans for Commission Approval*

Various conditions of this license found in the Vermont Department of Environmental Conservation's (Vermont DEC) section 401 water quality certification (certification) conditions (Appendix A) require the licensee to prepare plans in consultation with other entities for approval by Vermont DEC for submittal to the Commission, and implement specific measures without Commission approval. Each such plan must also be submitted to the Commission for approval.

The following table indicates the agencies that the licensee must consult with before preparing plans and the deadline for filing the plans with the Commission for approval.

<b>Vermont DEC Certification Condition</b>	<b>Plan Name</b>	<b>Consulting Agencies</b>	<b>Date Due to Commission</b>
D	Flow Management and Monitoring Plan	Vermont DEC and the U.S. Fish and Wildlife Service (FWS)	Within 6 months of license issuance.
H	Recreation Plan	Vermont DEC	Within 1 year of



			license issuance and updated every 10 years thereafter.
I	Debris Disposal Plan	Vermont DEC	Within 6 months of license issuance.

The licensee must include with each plan filed with the Commission documentation that the licensee developed the plan in consultation with the above specified agencies and has received approval from the Vermont DEC, as appropriate. The Commission reserves the right to make changes to any plan submitted. Upon Commission approval, the plan becomes a requirement of the license, and the licensee must implement the plan or changes in project operations or facilities, including any changes required by the Commission.

*(b) Requirement to File Reports*

Vermont DEC certification condition D in Appendix A requires the licensee to file reports with Vermont DEC that describe deviations from the certification’s operating conditions. These reports will document compliance with requirements of this license and may have bearing on future actions. Each such report must also be submitted to the Commission within 10 days of a deviation.

*(c) Requirement to Notify the Commission of Planned and Unplanned Deviations from License Requirements*

Certain conditions of Vermont DEC’s certification in Appendix A would allow the licensee to temporarily modify project operations under certain conditions. The Commission must be notified prior to implementing such modifications, if possible, or in the event of an emergency, as soon as possible, but no later than 10 days after each such incident.

<b>Vermont DEC Certification Condition</b>	<b>License Requirement</b>
B	Impoundment drawdowns below the operating levels specified in certification condition B.
G	Any proposed limitations of access to State waters imposed by the licensee must first be subject to written approval by Vermont DEC. In cases where an immediate threat to public safety exists, access may be restricted without prior approval; the licensee must so notify Vermont DEC and must file a request for

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	approval, if the restriction is to be permanent or long term, within 14 days of the restriction of access.
J	Any proposals for project maintenance or repair work, including drawdowns below the fixed dam crest to facilitate repair/maintenance work, must be filed with Vermont DEC for prior review and approval, if said work may have a material adverse effect on water quality or cause less-than full support of an existing use or a beneficial value or use of State waters.

*(d) Requirement to File Amendment Applications.*

Certain conditions of Vermont DEC's certification in Appendix A contemplate unspecified long-term changes to project operations or facilities for the purpose of mitigating environmental impacts. For example, condition E requires Green Mountain to provide upstream or downstream fish passage facilities, upon a request from the Vermont Department of Fish and Wildlife, if the status of Otter Creek fish populations or fishery management objectives change. Such changes may not be implemented without prior Commission authorization granted after the filing of an application to amend the license.

Article 402. Spill Prevention Control and Countermeasures Plan. Within six months of license issuance or at least 90 days before the start of any land-disturbing, land-clearing, or project facility upgrade activities, whichever occurs first, the licensee must file with the Commission for approval, a spill prevention control and countermeasures plan. The purpose of this plan is to minimize the potential for hazardous material spills and ensure that procedures are in place to minimize the extent and adverse effects of hazardous materials spills that occur during construction related to upgrades of the turbine-generator units and enhancement of recreation facilities, and operation and maintenance of the project.

The plan must include, but not necessarily be limited to, the following: (1) a description of how oil, fuels, lubricant products, and other hazardous liquid substances will be transported, stored, handled, and disposed of in a safe and environmentally acceptable manner; (2) a description of the equipment and procedures that will be used in the event of a spill to ensure the proper containment and cleanup of any hazardous substances to minimize adverse effects to water quality and aquatic resources in the project area; (3) a provision to notify the Commission and Vermont Department of Environmental Conservation (Vermont DEC) as soon as possible but no later than 24 hours after discovering a hazardous substances spill; and (4) a provision to file a report with the Commission within 10 days of a hazardous substance spill that identifies: (a) the location of the spill; (b) the type and quantity of hazardous material spilled; (c) any

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corrective actions that have been undertaken to clean up the spill; and (d) any measures taken to ensure similar spills do not occur in the future.

The plan must be developed after consultation with the Vermont DEC. The licensee must include documentation of consultation, copies of recommendations on the completed plan after it has been prepared and provided to Vermont DEC, and specific descriptions of how Vermont DEC's comments are accommodated by the plan. The licensee must allow a minimum of 30 days for Vermont DEC to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing must include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. No land-disturbing activities, land-clearing activities, or project facility upgrades shall begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee must implement the plan, including any changes required by the Commission.

Article 403. Trashrack Design. At least 90 days before the start of any project facility upgrades at the Huntington Falls Development, the licensee must file with the Commission for approval, detailed design drawings of the licensee's proposed trashrack to reduce debris loading and ice buildup at the Huntington Falls Development's turbine-generator unit 3 intake.

This filing must include, but not necessarily be limited to, the following: (1) specifications of the size of the openings between the trashrack bars (not to exceed a bar spacing of 2 inches); (2) specifications for the maximum approach velocity (not to exceed 2 feet per second); and (3) a description of the methods and a schedule for installing the trashrack.

The licensee must prepare the drawings and schedule after consultation with U.S. Fish and Wildlife Service and the Vermont Fish and Wildlife Department. The licensee must include with the drawings and schedule documentation of consultation, copies of agency comments and recommendations on the drawings and schedule after they have been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the licensee's drawings. The licensee must allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the drawings and schedule with the Commission. If the licensee does not adopt a recommendation, the filing must include the licensee's reasons, based on project-specific information.

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The Commission reserves the right to require changes to the drawings and schedule. Project facility upgrades at the Huntington Falls Development must not begin until the license is notified by the Commission that the filing is approved. Upon Commission approval, the licensee must implement the proposal, including any changes required by the Commission.

Article 404. Terrestrial Monitoring and Management Plan. At least 90 days before the start of any land-disturbing, land-clearing, or project facility upgrade activities, the licensee must file with the Commission for approval, a terrestrial monitoring and management plan. The purposes of this plan are to re-vegetate areas disturbed by construction activities authorized under this license, prevent the spread of invasive plants, and protect federally-protected wildlife species and their respective habitats within the project area.

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

(1) measures to ensure the protection of federally-listed wildlife species, to include at a minimum: (a) a provision to survey proposed construction areas for evidence of bald eagle and Indiana bat use, and potential habitat; (b) a provision to file a report with the Commission, U.S. Fish and Wildlife Service (FWS), and Vermont Agency of Natural Resources (Vermont ANR), documenting the survey results, and detailing any proposed protection/avoidance measures as necessary, at least 90 days before the start of any land-disturbing, land-clearing, or project facility upgrade activities; and (c) an implementation schedule; and

(2) measures to ensure the protection of botanical resources during construction-related activities, to include at a minimum: (a) a provision to avoid areas with known populations of invasive plant species; (b) a detailed description of any measures in addition to item (2)(a) that will be implemented to prevent the proliferation of these species (e.g., washing construction equipment, training personnel, etc.); (c) a provision to limit lay down equipment to a small footprint; (d) a provision to re-vegetate areas disturbed by construction activities authorized under this license with native species once ground-disturbing activities are completed; (e) a description of how revegetated areas would be monitored to ensure the success of the plantings; and (f) an implementation schedule.

The licensee must prepare the plan after consultation with FWS and Vermont ANR. The licensee must include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee must allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the

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

The Commission reserves the right to require changes to the plan, including any associated reports. No land-disturbing activities, land-clearing activities, or project facility upgrades shall begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee must implement the plan, including any changes required by the Commission.

Article 405. Recreation Plan. The recreation plan required by Vermont Department of Environmental Conservation (Vermont DEC) water quality certification (certification) condition H (Appendix A) must include the additional following provisions: (1) install a gravel parking area for two to three vehicles at the Proctor Development's tailwater access site; (2) final design drawings for the Proctor Development's tailrace gravel parking lot; (3) install directional signage at the Proctor and Beldens developments; (4) install interpretative signage at the Proctor Development's tailrace access area that provides information about the Otter Creek Project and how it affected the marble industry in the Otter Creek Valley; (5) a schedule for (a) implementing signage and brush clearing at the Beldens Development; (b) installing directional and interpretive signage and constructing the parking lot at the Proctor Development; and (c) modifying the location of the boat barrier at the Huntington Falls Development; (6) ensure recreationists' safety during the installation of the turbines at the Proctor Development, including signage that will inform the public when recreation use restrictions will occur; (7) operate and maintain over the term of the license (a) the Proctor Development's parking lot; (b) the Beldens Development's canoe/kayak put-in, take-out, portage, viewing platform, picnic area, and parking lot; and (c) the Huntington Falls Development's overlook/picnic area, parking lot, canoe put-in, take-out, and the portage trail from the take-out to Morgan Horse Farm Road, excluding Morgan Horse Farm Road, and from Morgan Horse Farm Road to the put-in; and (8) a discussion of how the needs of the disabled were considered in developing the plan.

The licensee must prepare the plan after consultation with the Vermont DEC, as required by certification condition H, and the additional following entities: (1) Vermont Agency of Natural Resources (Vermont ANR); and (2) the Middlebury Area Land Trust (Middlebury Trust). The licensee must 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 Vermont DEC, Vermont ANR, and the Middlebury Trust, and specific descriptions of how the entities' comments are accommodated by the plan.

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The Proctor Development's tailrace parking lot, built in accordance with this plan, must be shown on the as-built drawings filed pursuant to Article 304.

Article 406. *Programmatic Agreement and Historic Properties Management Plan.* The licensee must implement the "Programmatic Agreement Between the Federal Energy Regulatory Commission and the Vermont State Historic Preservation Officer for Managing Historic Properties that May be Affected by Issuance of a License to Green Mountain Power Corporation for the Continued Operation of the Otter Creek Hydroelectric Project in Addison and Rutland Counties, Vermont," executed on December 30, 2013, and including but not limited to the Historic Properties Management Plan (HPMP) for the project. In the event that the Programmatic Agreement is terminated, the licensee must continue to implement the provisions of its approved HPMP. The Commission reserves the authority to require changes to the HPMP at any time during the term of the license.

Article 407. *Use and Occupancy.* (a) In accordance with the provisions of this article, the licensee must 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 must also have continuing responsibility to supervise and control the use and occupancy 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 must take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The type of use and occupancy of project lands and 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

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licensee must require multiple use and occupancy of facilities for access to project lands or waters. The licensee must 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 must: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap will be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and will not change the basic contour of the impoundment 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 impoundment. No later than January 31 of each year, the licensee must 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 report on

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recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from project waters at normal surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 60 days before conveying any interest in project lands under this paragraph (d), the licensee must file a letter with the Commission, 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 Commission's authorized representative, 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 must 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 must determine that the proposed use of the lands to be conveyed is not inconsistent with any approved report on recreational resources of an Exhibit E; or, if the project does not have an approved report on recreational resources, that the lands to be conveyed do not have recreational value.

(3) The instrument of conveyance must include the following covenants running with the land: (i) the use of the lands conveyed must not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; (ii) the grantee must take all reasonable precautions to ensure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project; and (iii) the grantee must 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 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 must be consolidated for consideration when revised Exhibit G drawings would be filed for approval for other purposes.

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

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

(G) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the FPA, 16 U.S.C. § 8257 (2012), and section 385.713 of the Commission's regulations, 18 C.F.R. § 385.713 (2014). The filing of a request for rehearing does not operate as a stay of the effective date of this license or of any date specified in this order. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

Jeff C. Wright  
Director  
Office of Energy Projects

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Form L-3

(October, 1975)

**FEDERAL ENERGY REGULATORY COMMISSION****TERMS AND CONDITIONS OF LICENSE FOR CONSTRUCTED  
MAJOR PROJECT AFFECTING NAVIGABLE  
WATERS OF THE UNITED STATES**

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

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

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

Article 4. The project, including its operation and maintenance and any work incidental to additions or alterations authorized by the Commission, whether or not conducted upon lands of the United States, shall be subject to the inspection and

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

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

Article 6. In the event the project is taken over by the United States upon the termination of the license as provided in Section 14 of the Federal Power Act, or is transferred to a new licensee or to a nonpower licensee under the provisions of Section 15

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of said Act, the Licensee, its successors and assigns shall be responsible for, and shall make good any defect of title to, or of right of occupancy and use in, any of such project property that is necessary or appropriate or valuable and serviceable in the maintenance and operation of the project, and shall pay and discharge, or shall assume responsibility for payment and discharge of, all liens or encumbrances upon the project or project property created by the Licensee or created or incurred after the issuance of the license: Provided, That the provisions of this article are not intended to require the Licensee, for the purpose of transferring the project to the United States or to a new licensee, to acquire any different title to, or right of occupancy and use in, any of such project property than was necessary to acquire for its own purposes as the Licensee.

Article 7. The actual legitimate original cost of the project, and of any addition thereto or betterment thereof, shall be determined by the Commission in accordance with the Federal Power Act and the Commission's Rules and Regulations thereunder.

Article 8. The Licensee shall install and thereafter maintain gages and stream-gaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative. The Commission reserves the right, after notice and opportunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may mutually agreed upon. The Licensee shall keep accurate and sufficient records of the foregoing determinations to the satisfaction of the Commission, and shall make return of such records annually at such time and in such form as the Commission may prescribe.

Article 9. The Licensee shall, after notice and opportunity for hearing, install additional capacity or make other changes in the project as directed by the Commission, to the extent that it is economically sound and in the public interest to do so.

Article 10. The Licensee shall, after notice and opportunity for hearing, coordinate

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the operation of the project, electrically and hydraulically, with such other projects or power systems and in such manner as the Commission any direct in the interest of power and other beneficial public uses of water resources, and on such conditions concerning the equitable sharing of benefits by the Licensee as the Commission may order.

Article 11. Whenever the Licensee is directly benefited by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement, the Licensee shall reimburse the owner of the headwater improvement for such part of the annual charges for interest, maintenance, and depreciation thereof as the Commission shall determine to be equitable, and shall pay to the United States the cost of making such determination as fixed by the Commission. For benefits provided by a storage reservoir or other headwater improvement of the United States, the Licensee shall pay to the Commission the amounts for which it is billed from time to time for such headwater benefits and for the cost of making the determinations pursuant to the then current regulations of the Commission under the Federal Power Act.

Article 12. The United States specifically retains and safeguards the right to use water in such amount, to be determined by the Secretary of the Army, as may be necessary for the purposes of navigation on the navigable waterway affected; and the operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be controlled by such reasonable rules and regulations as the Secretary of the Army may prescribe in the interest of navigation, and as the Commission may prescribe for the protection of life, health, and property, and in the interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes, and the Licensee shall release water from the project reservoir at such rate in cubic feet per second, or such volume in acre-feet per specified period of time, as the Secretary of the Army may prescribe in the interest of navigation, or as the Commission may prescribe for the other purposes hereinbefore mentioned.

Article 13. On the application of any person, association, corporation, Federal agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and opportunity for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement

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between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

Article 14. In the construction or maintenance of the project works, the Licensee shall place and maintain suitable structures and devices to reduce to a reasonable degree the liability of contact between its transmission lines and telegraph, telephone and other signal wires or power transmission lines constructed prior to its transmission lines and not owned by the Licensee, and shall also place and maintain suitable structures and devices to reduce to a reasonable degree the liability of any structures or wires falling or obstructing traffic or endangering life. None of the provisions of this article are intended to relieve the Licensee from any responsibility or requirement which may be imposed by any other lawful authority for avoiding or eliminating inductive interference.

Article 15. The Licensee shall, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities, and comply with such reasonable modifications of the project structures and operation, as may be ordered by the Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the fish and wildlife agency or agencies of any State in which the project or a part thereof is located, after notice and opportunity for hearing.

Article 16. Whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the Licensee shall permit the United States or its designated agency to use, free of cost, such of the Licensee's lands and interests in lands, reservoirs, waterways and project works as may be reasonably required to complete such facilities or such improvements thereof. In addition, after notice and opportunity for hearing, the Licensee shall modify the project operation as may be reasonably prescribed by the Commission in order to permit the maintenance and operation of the fish and wildlife facilities constructed or improved by the United States under the provisions of this article. This article shall not be interpreted to place any obligation on the United States to construct or improve fish and wildlife facilities or to relieve the Licensee of any obligation under this license.

Article 17. The Licensee shall construct, maintain, and operate, or shall arrange for the construction, maintenance, and operation of such reasonable recreational facilities,

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including modifications thereto, such as access roads, wharves, launching ramps, beaches, picnic and camping areas, sanitary facilities, and utilities, giving consideration to the needs of the physically handicapped, and shall comply with such reasonable modifications of the project, as may be prescribed hereafter by the Commission during the term of this license upon its own motion or upon the recommendation of the Secretary of the Interior or other interested Federal or State agencies, after notice and opportunity for hearing.

Article 18. So far as is consistent with proper operation of the project, the Licensee shall allow the public free access, to a reasonable extent, to project waters and adjacent project lands owned by the Licensee for the purpose of full public utilization of such lands and waters for navigation and for outdoor recreational purposes, including fishing and hunting: Provided, That the Licensee may reserve from public access such portions of the project waters, adjacent lands, and project facilities as may be necessary for the protection of life, health, and property.

Article 19. In the construction, maintenance, or operation of the project, the Licensee shall be responsible for, and shall take reasonable measures to prevent, soil erosion on lands adjacent to streams or other waters, stream sedimentation, and any form of water or air pollution. The Commission, upon request or upon its own motion, may order the Licensee to take such measures as the Commission finds to be necessary for these purposes, after notice and opportunity for hearing.

Article 20. The Licensee shall clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. All clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

Article 21. Material may be dredged or excavated from, or placed as fill in, project lands and/or waters only in the prosecution of work specifically authorized under the license; in the maintenance of the project; or after obtaining Commission approval, as appropriate. Any such material shall be removed and/or deposited in such manner as to reasonably preserve the environmental values of the project and so as not to interfere with traffic on land or water. Dredging and filling in a navigable water of the United States shall also be done to the satisfaction of the District Engineer, Department of the Army, in charge of the locality.

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Article 22. Whenever the United States shall desire to construct, complete, or improve navigation facilities in connection with the project, the Licensee shall convey to the United States, free of cost, such of its lands and rights-of-way and such rights of passage through its dams or other structures, and shall permit such control of its pools, as may be required to complete and maintain such navigation facilities.

Article 23. The operation of any navigation facilities which may be constructed as a part of, or in connection with, any dam or diversion structure constituting a part of the project works shall at all times be controlled by such reasonable rules and regulations in the interest of navigation, including control of the level of the pool caused by such dam or diversion structure, as may be made from time to time by the Secretary of the Army.

Article 24. The Licensee shall furnish power free of cost to the United States for the operation and maintenance of navigation facilities in the vicinity of the project at the voltage and frequency required by such facilities and at a point adjacent thereto, whether said facilities are constructed by the Licensee or by the United States.

Article 25. The Licensee shall construct, maintain, and operate at its own expense such lights and other signals for the protection of navigation as may be directed by the Secretary of the Department in which the Coast Guard is operating.

Article 26. If the Licensee shall cause or suffer essential project property to be removed or destroyed or to become unfit for use, without adequate replacement, or shall abandon or discontinue good faith operation of the project or refuse or neglect to comply with the terms of the license and the lawful orders of the Commission mailed to the record address of the Licensee or its agent, the Commission will deem it to be the intent of the Licensee to surrender the license. The Commission, after notice and opportunity for hearing, may require the Licensee to remove any or all structures, equipment and power lines within the project boundary and to take any such other action necessary to restore the project waters, lands, and facilities remaining within the project boundary to a condition satisfactory to the United States agency having jurisdiction over its lands or the Commission's authorized representative, as appropriate, or to provide for the continued operation and maintenance of nonpower facilities and fulfill such other obligations under the license as the Commission may prescribe. In addition, the Commission in its discretion, after notice and opportunity for hearing, may also agree to the surrender of the license when the Commission, for the reasons recited herein, deems it to be the intent of the Licensee to surrender the license.

Article 27. The right of the Licensee and of its successors and assigns to use or occupy waters over which the United States has jurisdiction, or lands of the United States



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under the license, for the purpose of maintaining the project works or otherwise, shall absolutely cease at the end of the license period, unless the Licensee has obtained a new license pursuant to the then existing laws and regulations, or an annual license under the terms and conditions of this license.

Article 28. The terms and conditions expressly set forth in the license shall not be construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.

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**APPENDIX A****WATER QUALITY CERTIFICATION**

**Issued May 30, 2014, by the Vermont Department of Environmental Conservation (Vermont DEC) for the Otter Creek Project.**

**Decision and Certification**

The Department has examined the project application and bases its decision in this Certification upon an evaluation of the information contained therein that is relevant to the Department's responsibilities under Section 401 of the Federal Clean Water Act and has examined other pertinent information deemed relevant by the Department, sufficient to permit the Department to certify that there is reasonable assurance that operation and maintenance of the Otter Creek Hydroelectric Project as proposed by the Applicant and in accordance with the following conditions will not cause a violation of Vermont Water Quality Standards and will be in compliance with sections 301, 302, 303, 306, and 307 of the Federal Clean Water Act, 33 U.S.C. §1251 et seq., as amended, and other appropriate requirements of state law.

**A. Compliance with Conditions.** The Applicant shall provide notice to the Department of any proposed change to the project that would have a significant or material effect on the findings, conclusions or conditions of this Certification, including any changes to operation of the project. The Applicant shall not make any such change without approval of the Department.

**B. Flow and Water Level Management.** Project facilities shall be operated in accordance with the flow and water level management prescriptions described below. Bypass conservation flows shall be released on a continuous basis and not interrupted; conservation flows are the values listed below, or instantaneous inflow, if less, unless otherwise noted. True run-of-river operations, or r-o-r, where referenced, means no utilization of impoundment storage and that outflow from the facility is equal to inflow to the impoundment on an instantaneous basis, as further described in Footnote 2, page 6. When a facility is not operating, all flows shall be spilled at the dam.

Impoundments shall not be drawn below the fixed dam crests unless special approval is granted by the Department under Condition J below, or for a safety-related emergency. In the latter case, the Department shall be notified within 24 hours.

*Proctor:* When operating in run-of-river mode, the impoundment target elevation shall be 469.5 ft. msl. During peaking operations, the impoundment shall be operated between elevations 469.5 ft. msl and 468.0 feet msl. Peaking operations shall be subject to the operational constraints described in the tables below. A bypass conservation flow of 60 cfs shall be released at the dam at all times.

<b>May 1 through June 30<sup>41</sup></b>	
<b>River Inflow (cfs)<sup>42</sup></b>	<b>Description of Operations</b>
<400	Operate in true run-of-river mode with outflows equaling inflows on an instantaneous basis.
≥ 400	Operate in peaking mode with total turbine discharge no more than 1.5 times inflow over 24 hours.

<b>July 1 through July 15</b>	
<b>River Inflow (cfs)</b>	<b>Description of Operations</b>
<200	Operate in true run-of-river mode with outflows equaling inflows on an instantaneous basis.

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<sup>41</sup> All dates are inclusive.

<sup>42</sup> River inflows shall be defined by using the U.S. Geological Survey gage (Otter Creek at Center Rutland, Vermont, Gage No. 04282000) to determine the daily minimum flow for the calendar day prorated to the Proctor Station to select correct peaking mode operation.

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200-399	Operate in peaking mode with total turbine discharge no more than 1.5 times inflow over 24 hours.
$\geq 400$	Operate in peaking mode with total turbine discharge no more than 2.0 times inflow over 24 hours.

<b>July 16 through April 30</b>	
<b>River Inflow (cfs)</b>	<b>Description of Operations</b>
$<200$	Operate in true run-of-river mode with outflows equaling inflows on an instantaneous basis.
200-399	Operate in peaking mode with total turbine discharge no more than 2.5 times inflow over 24 hours.
$\geq 400$	Operate in peaking mode with total turbine discharge no more than 3.0 times inflow over 24 hours.

*Beldens:* The facility shall be operated in a true run-of-river mode where instantaneous inflows to the impoundment at all times. A bypass conservation flow of 35 cfs, with 10 cfs spilled over the east dam and 25 cfs over the west dam, shall be released at all times. The impoundment target elevation shall be 283.0 feet msl.

*Huntington Falls:* The facility shall be operated in a true run-of-river mode where instantaneous inflows to the impoundment at all times. A bypass conservation flow of 66 cfs shall be released at all times through a gate located at the dam. The impoundment target elevation shall be 217.8 feet msl.

**C. Flow Management During Impoundment Refill.** During refilling of a project impoundment following a drawdown associated with peaking operations at Proctor

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Station or for maintenance purposes, up to 10 percent of instantaneous inflow may be placed in storage in order to restore the water level without significantly reducing downstream flows.

**D. Flow Management and Monitoring Plan.** The Applicant shall develop and file with the Department a flow management and monitoring plan detailing how each development within the project will be operated to achieve compliance with the flow and water level management limitations described above. The plan shall include provisions for record keeping to demonstrate compliance. At a minimum, the records shall include hourly turbine flows, hourly impoundment elevations, hourly gate releases and gate and flashboard/inflatable dam status.

The plan shall include a detailed procedure about the operation of Proctor Station that addresses the ramping rate during peaking operations including the up ramp and down ramp. The plan shall include details on the sequence the units will be brought on/off line in order to be in compliance with agreed upon ramping rates. The plan shall include a provision for the inclusion of contemporaneous records from the U.S. Geological Survey gage (Otter Creek at Center Rutland, Vermont, Gage No. 04282000) associated with operation of Proctor Station and for funding the State portion for operation of the gage under the Joint Funding Agreement with the USGS.

The plan shall include the design and location of the gate at the dam that will be used to release the bypass conservation flow at Huntington Falls Station.

The plan shall include procedures for reporting to the Department deviations from prescribed operating conditions. In reporting deviations, the applicant shall include an explanation of the cause; propose steps to be taken to prevent a recurrence; and revise the plan if requested to do so by the Department.

The plan shall be developed in consultation with the Department and the U.S. Fish and Wildlife Service, and the plan shall be submitted to the Department for review within 60 days of the issuance of a federal license. The plan shall be subject to Department approval. The Department reserves the right of review and approval of any material changes made to the plan at any time and the right to request revisions to the plan if necessary to assure compliance. Compliance records shall be kept permanently and provided to the Department on request in a format specified by the Department.

**E. Fish Passage.** In the event that the status of Otter Creek fish populations or fishery management objectives change, and upon a request of the Department of Fish and Wildlife, the Department may require the applicant to provide upstream or

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downstream fish passage facilities.

**F. Turbine Rating Curves.** The Applicant shall provide the Department with a copy of the turbine rating curves, accurately depicting the flow/production relationship, for the record within one year of the issuance of a federal license.

**G. Public Access.** The Applicant shall allow public access to project lands for utilization of public resources, subject to reasonable safety and liability limitations. Such access should be prominently and permanently posted so that its availability is made known to the public. Any proposed limitations of access to State waters to be imposed by the Applicant shall first be subject to written approval by the Department. Access may be restricted without prior approval when an immediate threat to public safety exists. In those cases, the Applicant shall so notify the Department and shall file a request for approval, if the restriction is to be permanent or long term, within 14 days of the restriction of access.

**H. Recreational Facilities.** Recreational facilities shall be constructed and maintained consistent with a recreation plan approved by the Department. The issues addressed in the plan shall include provision of portages and sanitation at recreation sites for the three facilities. The plan shall be filed with the Department within one year of license issuance and shall include an implementation schedule. Where appropriate, the recreation plan shall include details on erosion control. The plan shall be updated at intervals not exceeding ten years or a written statement provided that indicates the basis for there being no need to upgrade the facilities or otherwise modify the plan. Modifications to the recreation plan shall also be subject to Department approval over the term of the license. The Department approved recreation plan and all amendments thereto as approved by the Department shall be incorporated by reference as conditions of this Certification.

**I. Debris Disposal.** The Applicant shall develop a plan for proper disposal of debris associated with project operation, including trashrack debris. The plan shall be developed in consultation with the Department, and a draft shall be submitted to the Department within 90 days of license issuance. The final plan shall be subject to Department approval. The Department reserves the right of review and approval of any material changes made to the plan at any time.

**J. Maintenance and Repair Work.** Any proposals for project maintenance or repair work, including drawdowns below the fixed dam crests to facilitate repair/maintenance work, shall be filed with the Department for prior review and approval, if said work may have a material adverse effect on water quality or cause less-than-full support of a designated use of State waters.

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**K. Record Drawings.** The Applicant shall provide the Department with a digital set of as-built plans for the record within one year of the completion of construction of project modifications at Proctor and Huntington Falls.

**L. Compliance Inspection by Department.** The Applicant shall allow the Department to inspect the project area at any time to monitor compliance with Certification conditions.

**M. Posting of Certification.** A copy of this Certification shall be prominently posted within the powerhouses at the three developments.

**N. Approval of Project Changes.** Any change to the project that would have a significant or material effect on the findings, conclusions, or conditions of this Certification, including project operation, must be submitted to the Department for prior review and written approval where appropriate and authorized by law and only as related to the change proposed.

**O. Reopening of License.** The Department may request, at any time, that FERC reopen the license to consider modifications to the license as necessary to assure compliance with the Standards.

**P. Continuing Jurisdiction.** The Department reserves the right to alter or amend this Certification over the life of the project when such action is necessary to assure compliance with the Standards and to respond to any changes in classification or management objectives for the affected waters.

**Q. Reopening of Certification.** The Agency may reopen and alter or amend the conditions of this Certification over the life of the Project when such action is necessary to assure compliance with the Vermont Water Quality Standards and to respond to any changes in the classification or management objectives for the affected waters. Any amendment that results in a change of conditions for the Project shall be subject to Paragraph H (Public Notice) and Paragraph I (Public Hearing) of the Section 401 Water Quality Certification Procedure, dated April 2, 2012.

Document Content(s)

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