

10. The name and telephone number of the facility's operator, if different from the owner: Same

(Name)

(Telephone number)

11. The ISO-New England asset identification number, if applicable: 754 or N/A:

12. The GIS facility code, if applicable: MSS754 or N/A:

13. **The Bar Mills Project is a hydroelectric project located on the Saco River in the towns of Buxton and Hollis, York, Maine. Constructed in 1956, the facility consists of 2 Westinghouse generators that have a total rated generating capacity of 4 MWs and has a maximum hydraulic capacity of 3,120 cfs. The Project includes an existing concrete dam, granite headworks, an intake canal, downstream fish passage facility, powerhouse, appurtenant equipment, and an approximately 5.3 mile long, 263 acre impoundment that incorporates a canoe portage, portage trail, and public swimming area. The ISO-NE Winter claimed capability is 4.0 MW and the Summer claimed capability is 2.645 MW**

14. If Class I certification is sought for a generation facility that uses biomass, the applicant shall submit:
- (a) quarterly average NOx emission rates over the past rolling year,
 - (b) the most recent average particulate matter emission rates as required by the New Hampshire Department of Environmental Services (NHDES),
 - (c) a description of the pollution control equipment or proposed practices for compliance with such requirements,
 - (d) proof that a copy of the completed application has been filed with the NHDES, and
 - (e) conduct a stack test to verify compliance with the emission standard for particulate matter no later than 12 months prior to the end of the subject calendar quarter except as provided for in RSA 362-F:12, II.
 - (f) N/A: Class I certification is NOT being sought for a generation facility that uses biomass.
15. If Class I certification is sought for the incremental new production of electricity by a generation facility that uses biomass, methane or hydroelectric technologies to produce energy, the applicant shall:
- (a) demonstrate that it has made capital investments after January 1, 2006 with the successful purpose of improving the efficiency or increasing the output of renewable energy from the facility, and
 - (b) supply the historical generation baseline as defined in RSA 362-F:2, X.
 - (c) N/A: Class I certification is NOT being sought for the incremental new production of electricity by a generation facility that uses biomass, methane or hydroelectric technologies.
16. If Class I certification is sought for repowered Class III or Class IV sources, the applicant shall:
- (a) demonstrate that it has made new capital investments for the purpose of restoring unusable generation capacity or adding to the existing capacity, in light of the NHDES environmental permitting requirements or otherwise, and

(b) provide documentation that eighty percent of its tax basis in the resulting plant and equipment of the eligible generation capacity, including the NHDES permitting requirements for new plants, but exclusive of any tax basis in real property and intangible assets, is derived from the new capital investments.

(c) N/A: Class I certification is NOT being sought for repowered Class III or Class IV sources.

17. If Class I certification is sought for formerly nonrenewable energy electric generation facilities, the applicant shall:

(a) demonstrate that it has made new capital investments for the purpose of repowering with eligible biomass technologies or methane gas and complies with the certification requirements of Puc 2505.04, if using biomass fuels, and

(b) provide documentation that eighty percent of its tax basis in the resulting generation unit, including NHDES permitting requirements for new plants, but exclusive of any tax basis in real property and intangible assets, is derived from the new capital investments.

(c) N/A: Class I certification is NOT being sought for formerly nonrenewable energy electric generation facilities.

18. If Class IV certification is sought for an existing small hydroelectric facility, the applicant shall submit proof that:

(a) it has installed upstream and downstream diadromous fish passages that have been required and approved under the terms of its license or exemption from the Federal Energy Regulatory Commission, and

See Attachment I - Note; upstream passage is not required until 2014 and 2016 for eel and anadromous fish per the FERC license issued on August 26, 2008. Downstream anadromous fish passage was installed in 2000 and downstream eel passage is required in 2026.

(b) when required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects.

See Attachment II

(c) N/A: Class IV certification is NOT being sought for existing small hydroelectric facilities.

19. If the source is located in a control area adjacent to the New England control area, the applicant shall submit proof that the energy is delivered within the New England control area and such delivery is verified using the documentation required in Puc 2504.01(a)(2) a. to e.

N/A - The source is located in the ISO-NE control area.

20. All other necessary regulatory approvals, including any reviews, approvals or permits required by the NHDES or the environmental protection agency in the facility's state.

N/A

21. Proof that the applicant either has an approved interconnection study on file with the commission, is a party to a currently effective interconnection agreement, or is otherwise not required to undertake an interconnection study.

The source is interconnected with Central Maine Power Company in its service territory in Maine under the terms of the "Continuing Site Interconnection Agreement" dated Jan. 6, 1998 and as amended from time to time. Applicable excerpts related to the Bar Mills Project are attached in Attachment III.

22. A description of how the generation facility is connected to the local electric distribution utility.
See Item 21.

23. A statement as to whether the facility has been certified under another non-federal jurisdiction's renewable portfolio standard and proof thereof.
Yes [See Attachment IV]

24. A statement as to whether the facility's output has been verified by ISO-New England.
The Bar Mills Project has been verified with ISO-NE for its maximum generating output. [See responses to items 11, 13, 19, & 21]

25. A description of how the facility's output is reported to the GIS if not verified by ISO-New England.
N/A - [See reponse to item 12]

26. An affidavit by the owner attesting to the accuracy of the contents of the application.
See Attachment V

27. Such other information as the applicant wishes to provide to assist in classification of the generating facility.
N/A

28. This application and all future correspondence should be sent to:
Ms. Debra A. Howland
Executive Director and Secretary
State of New Hampshire
Public Utilities Commission
21 S. Fruit St, Suite 10
Concord, NH 03301-2429

29. Preparer's information:

Name: **Nate Stevens**

Title: **Associate Business Manager**

Address: (1) **FPL Energy Maine Hydro LLC**

160 Capitol Street, Suite 8

Augusta

(City)

ME

(State)

04330

(Zip code)

30. Preparer's signature:

Pat St

9-24-08

93 FERC ¶ 62,189

UNITED STATES OF AMERICA
 FEDERAL ENERGY REGULATORY COMMISSION

FPL Energy Maine Hydro, LLC

Project No. 2194-009

ORDER MODIFYING AND APPROVING DOWNSTREAM FISH PASSAGE
 EFFECTIVENESS STUDY REQUIRED BY ARTICLE 21(E)

(Issued December 12, 2000)

FPL Energy Maine Hydro, LLC (licensee) filed for Commission approval on September 14, 2000, a plan to evaluate the effectiveness of its downstream fish passage facility at the Bar Mills Project. This plan is required by article 21(e) of the license.¹ The project is located on the Saco River, York County, Maine.

Article 21(e) requires the licensee to consult with the U.S. Fish and Wildlife Service (FWS), National Marine Fisheries Service (NMFS), the Maine Department of Marine Resources (MDMR), Maine Atlantic Salmon Authority [MASA, now known as the Maine Atlantic Salmon Commission (MASC)], and the Maine Department of Inland Fisheries and Wildlife (MDIFW) and develop an effectiveness study to evaluate the effectiveness of the downstream fish passage facility as constructed.

BACKGROUND

By letter to the Commission dated February 2, 2000, the licensee stated it did not feel an effectiveness study was warranted at that time based upon a salmon smolt telemetry study performed in 1997. Commission staff reviewed the telemetry study results and determined that the 1997 were not conclusive on the effectiveness of the facility as currently designed. By letter dated April 10, 2000, the Commission asked the licensee to file a detailed effectiveness study. The licensee's September 14, 2000 filing was in response to this request.

The project's powerhouse contains two vertical fixed blade propeller turbines with a combined generating capacity of 4.0 MW and hydraulic capacity of approximately 3,120 cfs. The downstream fish passage facility consists of a sluice on the west side of the power canal adjacent to the powerhouse.

¹82 FERC ¶ 61,191 (1998).

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Project No. 2194-009

-2-

LICENSEE'S PROPOSED PLAN

The licensee states it has two objectives for the proposed study: (1) evaluate the effectiveness of the new overflow weir gate and associated sluice in guiding migrating salmon smolts past the project; and (2) gather information on survival of smolts passing through the turbines at this site. The licensee acknowledges the latter is not the preferred downstream passage route for outmigrants, but believes this site-specific knowledge on turbine passage is important in understanding all potential downstream passage options.

The licensee plans to evaluate effectiveness of the downstream fish passage facility using radio telemetry techniques and is planned for May or early June 2001. A total of 300 Atlantic salmon smolts (to be used for both the effectiveness study and the turbine survival study) will be obtained from the U.S. Fish and Wildlife Service's Green Lake Hatchery and transported to the licensee's Cataract Project (FERC No. 2528; also on the Saco River). Smolts for the effectiveness study will be anesthetized and tagged by inserting the transmitter through the mouth and esophagus and placed in the stomach of each fish, or surgically implanted.

Tagged smolts will be measured to the nearest 1 mm fork length and transferred to an aerated holding tank or floating pen and held overnight to recover from handling stress. The following day, these fish will be transported via truck to the Bar Mills Project, transferred to a boat, then released in mid-river approximately 0.5 miles upstream of the project. Three separate releases of 30 smolts each are planned to evaluate the effectiveness of the downstream fish passage facility under the following conditions: (1) a fish bypass flow of 60 cfs (2 percent of the rated turbine flow) with both units operating at 100 percent; (2) a fish bypass flow of 120 cfs (4 percent of the rated turbine flow) with both units operating at 100 percent; and (3) a replication of either of the first two tests, whichever is found the most effective. The licensee notes that it may be necessary to release the smolts directly in the power canal to prevent loss of fish over the dam if spill conditions are present. Four monitoring stations (receiver locations) will be established: upstream of the project, at the fish bypass facility, and at each of the two units in the powerhouse.

Data will be collected from the receivers daily throughout the study period. Data will be summarized to include the time from release to initial detection at the project for each smolt, residency time at the project, and the chosen passage route for each smolt. Manual surveys of the area will also be conducted daily from shore and/or boat to confirm downstream passage of the smolts and to determine if the fish remain in the study area.

Project No. 2194-009

-3-

To evaluate turbine survival, the licensee proposes to balloon tag approximately 60 smolts. Thirty fish will be released under two different operating scenarios (at 100 percent gate and 50 percent gate) near the intakes to Unit No. 2 at a point where they are fully committed to turbine passage. These fish will be divided so that equal numbers of fish will be introduced into both gate wells of the unit. The licensee also plans to tag approximately 30 smolts and release them in the tailrace in order to assess mortality associated with handling.

These fish passing through the turbines will be recaptured downstream of the tailrace after the tags inflate. Tags will be removed and the fish will be placed into a holding facility to evaluate immediate (1 hour) and delayed (24, 48, and 72 hours) effects of turbine passage. Injuries will be evaluated immediately following recapture with injury and descaling noted by type, extent, and area of body.

The licensee plan to submit a draft report based on the results of the study to the consulting parties by January 31, 2002. By March 31, 2002, the licensee plans to file the report, with agency comments, to the Commission.

AGENCY COMMENTS

The FWS and the MASC provided comments on the licensee's proposed plan in letters dated August 15 and 18, 2000, respectively. The MASC stated it has no substantive comments, but asks for clarification on when the manual monitoring proposed by the licensee will occur. The MASC notes that while fish movement is expected at dusk and dawn, movement may also occur during all hours of the day.

The FWS notes that the primary goal of the study (and where emphasis should be placed) is to evaluate the effectiveness of the downstream fish passage facility, not to evaluate survival through the turbines. The FWS recommends that two tests releases be conducted at the design flow of 120 cfs, and if a test release is conducted at 60 cfs, then a second test should be completed at that flow as well.

Other comments made by the FWS, such as those regarding the turbine survival portion of the study and the evaluation of recaptured fish for the turbine passage portion, were incorporated into the proposed plan.

With the plan, the licensee included a response to the agencies' comments. The licensee states the FWS subsequently agreed with the plan, as proposed.

Project No. 2194-009

-4-

DISCUSSION

As proposed, implementation of the plan will allow for an evaluation of the facility while passing 60 and 120 cfs. The FWS recommends at least two tests at the design flow of 120 cfs, in addition to two tests at 60 cfs, if the licensee remains committed to a test at 60 cfs. Alternatively, the licensee plans to replicate whichever test is determined most effective. We agree with the FWS that replication of each test is useful, but also feel that the licensee's proposal is acceptable as well. After repeating the test at the most effective design flow, either 60 or 120 cfs, the licensee will identify whether the results can be replicated. If determined ineffective at either flow, the licensee should consider whether modifications to the structure or operation of the facility is necessary. Any recommendations for changes in operation or to the structure itself should be included in the licensee's report to the Commission. As suggested by MASC, manual monitoring of smolts may be necessary during any time of day.

As part of the plan, the licensee proposes to evaluate the survival of smolt passage through the project's turbines. We agree with the FWS that this is not necessary for the purpose of determining effectiveness of the downstream fish passage facility. These results however would provide insight on the survival of those fish that are not attracted to the facility and pass through the project's turbines.

The licensee's plan, with the above modification, should be approved.

The Director orders:

(A) The licensee's downstream fish passage effectiveness study, filed with the Commission on September 14, 2000, as modified in paragraphs (B) and (C), is approved.

(B) By March 31, 2002, the licensee shall file the results of the effectiveness study with the Commission. The report shall be submitted to the U.S. Fish and Wildlife Service (FWS), National Marine Fisheries Service (NMFS), the Maine Department of Marine Resources (MDMR), Maine Atlantic Salmon Commission (MASC), and the Maine Department of Inland Fisheries and Wildlife (MDIFW), prior to filing the plan with the Commission. The licensee's filing shall include the results of the study, agency comments, and any recommendations for changes to the downstream fish passage structure, or its operation, to the Commission for approval.

Project No. 2194-009

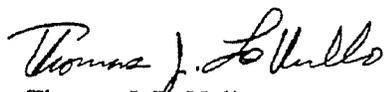
-5-

(C) Unless otherwise directed in this order, the licensee shall file seven copies of any filing required by this order with:

The Secretary
Federal Energy Regulatory Commission
Mail Code: DHAC, PJ-12.3
888 First Street, NE
Washington, DC 20426

In addition, the licensee shall serve copies of these filings on any entity specified in this order to be consulted on matters related to these filings. Proof of service on these entities shall accompany the filings with the Commission.

(D) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to CFR § 385.713.



Thomas J. LoVullo
Team Leader
Division of Hydropower Administration
and Compliance

**STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**DEPARTMENT ORDER
IN THE MATTER OF**

FPL ENERGY MAINE HYDRO LLC	)	MAINE WATER QUALITY PROGRAM;
Buxton and Hollis	)	FEDERAL CLEAN WATER ACT
York County)	
BAR MILLS HYDROELECTRIC PROJECT)	
#L-20860-33-C-N (APPROVAL)	)	WATER QUALITY CERTIFICATION

Pursuant to the provisions of 38 MRSA Section 464 et seq. and Section 401 of the Federal Water Pollution Control Act (a.k.a. Clean Water Act), the Department of Environmental Protection (Department) has considered the application of FPL ENERGY MAINE HYDRO LLC with its supportive data, agency comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. APPLICATION SUMMARY

- a. Application. FPL Energy Maine Hydro LLC (FPL Energy) proposes the continued operation of the existing Bar Mills Hydroelectric Project, located on the Saco River in the Towns of Buxton and Hollis, York County, Maine (see Exhibits 1 and 2).
- b. Existing Project Features. The existing project consists of a dam, headworks, power canal, a powerhouse, a downstream fishway, an impoundment, and appurtenant facilities. The project was originally constructed in 1919 and was rebuilt in 1950-1955.
 - i. The concrete gravity dam has a maximum height of 7 feet and includes non-overflow abutments on either side of a 264-foot-long main spillway (including a 14-foot-wide log sluice) topped with 6.75-foot-high hinged steel flashboards, a 94-foot-long masonry and concrete canal headworks structure, a masonry and concrete canal wall consisting of several overflow and non-overflow sections, a 75- to 180-foot-wide by 735-foot-long open power canal, a 7-foot-wide gate and sluice used for downstream passage, and a powerhouse intake structure. An operating bridge spans the main spillway section; an electric hoist on the bridge is used for resetting the spillway flashboards. The canal headworks structure does not contain gates, but can be fitted with stoplogs to allow for canal dewatering.
 - ii. The powerhouse is a 40-foot-wide by 80-foot-long steel and concrete structure containing two turbine-generator units with a total installed capacity of 4,000 kilowatts at an average gross operating head of 21 feet. The maximum hydraulic capacity of the turbines is 3,120 cubic feet per second. Water leaving the powerhouse flows through a 200-foot-long excavated tailrace channel before re-entering the main river channel. The tailrace is backwatered by the impoundment created by the downstream Skelton Hydroelectric Project.

- iii. The dam creates an impoundment with a surface area of about 263 acres at a normal full pond elevation of 148.5 feet msl. The impoundment extends upstream about 5.3 miles to the tailrace of the West Buxton Project.
 - iv. The project diverts water from a 1,500-foot-long bypassed reach of the Saco River between the main spillway section of the dam and the downstream terminus of the tailrace. The project power canal and tailrace are separated from the bypass reach by the canal wall and a natural island (Usher Island).
- c. Existing Project Operations. The upstream Bonny Eagle Project is operated as an intermittent peaking facility which regulates flows to projects on the lower river, including the Bar Mills Project, by storing and releasing inflow to the project on a daily basis. During high flow periods, when river flow is in excess of 4,500 cfs, the Bonny Eagle Project operates on a run-of-river basis, with generation occurring 24 hours a day and outflow approximately equal to inflow on an instantaneous basis. When river flow is less than 4,500 cfs, the Bonny Eagle Project generally operates as a peaking facility, with flows released from storage to maximize generation during peak electrical demand periods, resulting in the project impoundment being drawn down by up to 4.5 feet during the day. Flows are then reduced and the impoundment is re-filled overnight, so that outflow is approximately equal to inflow on a 24-hour basis. Seasonally varied minimum flows are released from the Bonny Eagle Project in accordance with a 1997 Instream Flow Agreement for Hydroelectric Projects on the Saco River.

The Bar Mills Project is operated on a daily cycling basis except under high flow conditions, when it joins the Bonny Eagle Project in run-of-river operation. Because the Bar Mills Project has a lower hydraulic capacity than the Bonny Eagle Project, when river flows are less than 4,500 cfs and the Bonny Eagle Project is operating in peaking mode, generation at the Bar Mills Project usually begins prior to generation at Bonny Eagle. This allows the Bar Mills impoundment to be drawn down and then catch the flow release from Bonny Eagle, thereby refilling the impoundment, usually within a few hours. This is done on a daily or twice daily basis and results in a regular fluctuation of the project impoundment by up to 2 feet. The project operates in a cycling mode about two-thirds of the year.

Minimum flow releases from the Bar Mills Project are provided in accordance with a 1997 Instream Flow Agreement for Hydroelectric Projects on the Saco River (see Section 3 below for a description of this agreement). There is currently no required minimum flow to the bypassed reach. However, based upon flow duration curves, spillage occurs into the bypassed reach about 30% of the time annually. In addition, the bypassed reach receives leakage flow (about 3 cfs) from the dam and is partially backwatered by the Skelton Project impoundment.

- d. Proposed Facilities/Operations. FPL Energy proposes to undertake the following project operational and non-operational measures for the protection, mitigation and enhancement of public resources:

- Continue to operate the project on a daily cycling mode, with daily impoundment fluctuations of up to two feet below normal full pond elevation;
- Provide a continuous minimum flow release of 25 cfs to the bypassed reach;
- Continue to provide minimum flow releases from the project in accordance with the 1997 Instream Flow Agreement for Hydroelectric Projects on the Saco River (see Section 3 below for a description of this agreement);
- Provide passage for eels and anadromous fish in accordance with the applicable provisions of the 1994 Saco River Fish Passage Agreement and the 2007 Saco River Fisheries Assessment Agreement (See Section 4 below for a description of these agreements);
- Implement a recreational plan that includes: improving the existing canoe portage take-out and parking area to accommodate trailered boats; providing and designating an angler access trail to the upper bypassed reach; providing steps and a landing at the existing canoe put-in site to enhance access to the tailrace area; stabilizing minor bank erosion near the canoe put-in site; and improving signage for all recreational facilities; and
- Implement a Historic Properties Management Plan.

2. JURISDICTION

The proposed continued operation of the project qualifies as an "activity...which may result in (a) discharge into the navigable water (of the United States)" under the Clean Water Act (CWA), 33 USC 1251 et seq. Section 401 of the CWA requires that any applicant for a federal license or permit to conduct such an activity obtain a certification from the State that the activity will comply with applicable State water quality standards. State law authorizes the Department to issue a water quality certification pursuant to Section 401 of the CWA when the standards of classification of the water body and the State's antidegradation policy are met. 38 M.R.S.A. § 464(4)(F)(3).

The Bar Mills Hydroelectric Project was originally licensed to Central Maine Power Company (CMP) as a water power project (Project No. 2194) by the Federal Power Commission (now the Federal Energy Regulatory Commission or FERC) on May 11, 1956. The initial project license was issued with an effective date of July 1, 1955 and an expiration date of June 30, 2005.

In 1999, the project was transferred from CMP to FPL Energy.

On June 27, 2003, FPL Energy filed an Application for New License to continue to operate the Bar Mills Project under a new 50-year license. This application is currently pending

before FERC. In accordance with FERC Relicensing Regulations, the Bar Mills Project is currently operating under an annual license which is automatically renewed each year until a relicensing decision is made.

The Department has been designated by the Governor of the State as the certifying agency for issuance of Section 401 Water Quality Certification for all activities in the State not subject to Land Use Regulation Commission permitting and review. The Bar Mills Project is located in an organized municipality that is not subject to LURC's regulatory jurisdiction. Therefore, the Department is the certifying agency for the project.

3. INSTREAM FLOW AGREEMENT

On June 20, 1997, CMP (now FPL Energy) entered into an agreement with the Department, state and federal fisheries agencies, and other interested parties governing flow and water level management at all dams on the main stem Saco River in Maine. The "Instream Flow Agreement for Hydroelectric Projects on the Saco River"¹ achieves and balances the following objectives and considerations:

- To improve the habitat for Atlantic salmon, American shad and river herring sufficiently to allow self-sustaining populations, and to improve habitat for resident fish and aquatic communities, focusing on the Hiram to Bonny Eagle reach which provides the most valuable spawning and rearing habitat for Atlantic salmon in the Saco River downstream of Swans Falls;
- To provide for and improve zone of passage for anadromous fish and spawning habitat below the Skelton Dam;
- To provide for spawning and rearing of clupeids (American shad and river herring) below the Skelton Dam;
- To continue the restoration of the natural hydrology and riverine ecosystems by reducing the difference between the minimum and maximum flows;
- To maintain and improve the habitat of resident aquatic life in the West Buxton to Bar Mills reach;
- To meet the State of Maine's minimum water quality standards below the Bonny Eagle and Skelton Projects; and

¹ Signatories to the 1997 "Instream Flow Agreement for Hydroelectric Projects on the Saco River" include Central Maine Power Company (now FPL Energy Maine Hydro LLC), the U.S. Fish and Wildlife Service, the Maine Department of Inland Fisheries and Wildlife, the Maine Department of Marine Resources (DMR), Saco River Salmon Club, Atlantic Salmon Federation, Maine Council of the Atlantic Salmon Federation, the Maine Department of Environmental Protection, Swans Falls Corporation (now Saco River Hydro LLC), the Maine Atlantic Salmon Authority (now part of DMR), the Maine State Planning Office, Trout Unlimited, Maine Council of Trout Unlimited, American Rivers Inc., the New Hampshire Department of Fish and Game, the City of Saco, and the City of Biddeford.

- To ensure continued hydropower generation in the Saco River basin in a cost-effective manner for the project owners, and in a manner which provides flexibility in hydropower operations to meet changing peak and off-peak electricity demands.

Under the terms of the Instream Flow Agreement for Hydroelectric Projects on the Saco River, FPL Energy currently provides the following flow releases from the Bonny Eagle and Bar Mills Projects:

- From April 1 through June 30 annually, outflow approximately equal to inflow (run-of-river operations);
- From July 1 through September 30 annually, a minimum flow of 400 cfs or inflow, whichever is less;
- From October 1 through November 15 annually, or for such alternative six week period as may be mutually agreed to by FPL Energy and state and federal fisheries agencies, a minimum flow of 600 cfs or inflow, whichever is less; and
- From November 16 through March 31 annually, a minimum flow of 250 cfs or inflow, whichever is less.

4. FISH PASSAGE AGREEMENTS

- a. 1994 Saco River Fish Passage Agreement. On June 28, 1994, CMP (now FPL Energy) entered into an agreement with state and federal fisheries agencies and other parties interested in restoring viable, self-sustaining runs of anadromous fish populations (Atlantic salmon, American shad, and river herring) to the Saco River. The long-term goal of the “Saco River Fish Passage Agreement” is to provide passage for Atlantic salmon above the Swans Falls Project.² For American shad and river herring, the goal of the agreement is to provide passage on the main stem of the Saco River only to above the Bonny Eagle Project and to tributaries below the Hiram Project.

The 1994 agreement called for the construction of a lock system to provide fish passage at the Springs and Bradbury Dams at the Cataract Project (passage had been provided earlier at the head-of-tide East Channel and West Channel Dams) and construction of a new fish lift to replace an existing pool and weir fishway at the Skelton Project. Construction of the Springs and Bradbury Dams lock system was completed in 1996,

² Signatories to the 1994 “Saco River Fish Passage Agreement” include Central Maine Power Company (now FPL Energy Maine Hydro LLC), the Maine Department of Inland Fisheries and Wildlife, the Maine Department of Marine Resources (DMR), the Maine Atlantic Sea Run Salmon Commission (now part of DMR), the Maine State Planning Office, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service (now NOAA Fisheries), the New Hampshire Department of Fish and Game, Saco River Salmon Club, Trout Unlimited, Maine Council of Trout Unlimited, American Rivers Inc., Atlantic Salmon Federation, the City of Saco, and the City of Biddeford.

while construction of the Skelton fish lift was completed in 2001. As a result, fish passage is now available up to the Bar Mills Dam.³

The 1994 agreement also called for the construction of permanent downstream fish passage facilities at the Bar Mills Project within 2 years of FERC approval of the amendment of license for the project incorporating the terms of the agreement. Construction of permanent downstream fish passage facilities at the Bar Mills Project was completed in 2000. Based on the results of the initial effectiveness studies conducted in 2001 and 2002, the design of the downstream passage facilities was modified in 2003.⁴ In 2005, FERC issued an order approving the results of effectiveness testing of the modified facility for the downstream passage of Atlantic salmon smolts.

Finally, the 1994 agreement included a long-range plan to periodically assess the need for, design of, and schedule for the construction of interim and/or permanent upstream fish passage facilities at the Bar Mills Project, the West Buxton Project, the Bonny Eagle Project, and the Hiram Project, subject to the restriction that no permanent upstream fish passage facilities at these projects would be required to be operational before May 1, 2005.⁵ This assessment process was further defined in the January 1995 “Assessment Process and Criteria” that has been adopted by the signatories as an annex to the 1994 agreement.

- b. 2007 Saco River Fisheries Assessment Agreement. In February 2007, FPL Energy entered into a “Saco River Fisheries Assessment Agreement” with state and federal fisheries agencies and other interested parties.⁶ The purpose of the 2007 agreement is to establish, for the six FPL Energy-owned projects on the Saco River,⁷ the timing and nature of the additional fish passage measures to be taken for anadromous fish, the timing and nature of fish passage measures to be taken for catadromous fish, and other measures to enhance the restoration of fish populations in the Saco River.

The 2007 agreement calls for the phased installation of upstream eel passage facilities at all projects beginning in 2008, the phased installation of downstream eel passage measures at all projects beginning in 2011, improved upstream passage for American

³ Currently, any American shad and river herring passing through the Skelton fish lift are released into the Skelton impoundment, while any Atlantic salmon passing through the Skelton fish lift are captured and trucked around the Bar Mills, West Buxton and Bonny Eagle Projects to the Ossipee River.

⁴ As modified, the downstream fish passage facilities consist of a weir gate and flume constructed in an existing sluice gate adjacent to the project powerhouse. During the salmon outmigration period, an attraction flow of 120 cfs is passed through the facilities and an 8-foot-deep weighted boom with an attached submerged screen is installed as a guidance device. Overall passage survival rates at the project for salmon smolts are estimated to be 94-96 percent.

⁵ Under the terms of the 1994 “Saco River Fish Passage Agreement,” periodic assessments of the need for upstream passage were to be conducted in 1999, 2003, 2007, and 2011.

⁶ Signatories to the 2007 “Saco River Fisheries Assessment Agreement” include FPL Energy Maine Hydro LLC, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service (now NOAA Fisheries), the Maine Department of Marine Resources (DMR), the Maine Atlantic Salmon Commission (now part of DMR), the Maine Department of Inland Fisheries and Wildlife, Saco River Salmon Club, Atlantic Salmon Federation, Maine Council of the Atlantic Salmon Federation, Saco River Hydro LLC, and the New Hampshire Fish and Game Department.

⁷ The Cataract, Skelton, Bar Mills, West Buxton, Bonny Eagle, and Hiram Projects. See Exhibit 1.

shad at the Springs and Bradbury Dams (Cataract Project) by 2015,⁸ the phased installation of upstream passage facilities for anadromous fish at the projects above Skelton beginning in 2016, and a schedule for the installation of downstream passage facilities for Atlantic salmon at the Hiram Project.

The 2007 agreement also calls for additional fisheries enhancement measures for the Saco River, consisting primarily of funding provided by FPL Energy to support specific fishery management and restoration activities within the Saco River basin.

Under the terms of the 2007 agreement, the schedule for additional upstream and downstream fish passage measures at the Bar Mills Project is as follows:

- A single permanent upstream eel passage facility is to be operational by June 1, 2014;
- A single permanent upstream anadromous fish passage facility is to be operational by May 1, 2016;
- Interim downstream eel passage measures are to be provided as needed to reduce significant adult eel mortality from downstream turbine passage; and
- Permanent downstream eel passage measures are to be operational by September 1, 2026.

5. APPLICABLE WATER QUALITY STANDARDS

- a. Classification. The receiving waters that are or may be affected by the project are currently classified as follows:
 - Saco River, main stem, from its confluence with the Little Ossipee River to the confluence with the impoundment created by the Skelton Dam—Class A. 38 MRSA Section 467(12)(A).
- b. Designated Uses. Class A waters must be of such quality that they are suitable for the designated uses of drinking water after disinfection; fishing; agriculture; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation; navigation; and as habitat for fish and other aquatic life. 38 MRSA Section 465(2)(A).
- c. Numeric Standards. The dissolved oxygen content of Class A waters shall be not less than 7 parts per million or 75% of saturation, whichever is higher, and the bacteria content of these waters shall be as naturally occurs. 38 MRSA Section 465(2)(B).

⁸ Due to the ineffectiveness of the fish locks at the Springs and Bradbury Dams (Cataract Project) in passing American shad upstream, all shad captured at the Cataract Project East Channel fish lift are currently trucked around the Springs and Bradbury Dams and released into the river below the Skelton Dam.

In accordance with 38 MRSA Section 464(13), enacted as Public Law 2003, Chapter 257, compliance with dissolved oxygen criteria in existing riverine impoundments is measured as follows:

- Compliance is not measured within 0.5 meters of the bottom;
 - Where mixing is inhibited due to thermal stratification, compliance is not measured below the point of thermal stratification when such stratification occurs; and
 - Where mixing is inhibited due to natural topographic features, compliance is not measured within that portion of the impoundment that is topographically isolated. Such natural topographic features may include, but not be limited to, natural deep holes or river bottom sills.
- d. Narrative Standards. The habitat of Class A waters must be characterized as natural, and the aquatic life must be as naturally occurs. 38 MRSA Sections 465(2)(A) & (B).

The habitat characteristics and aquatic life criteria of Class A are deemed to be met in existing impoundments classified as A if the impounded waters satisfy Class C aquatic life criteria (the receiving waters shall be of sufficient quality to support all species of fish indigenous to the receiving waters and maintain the structure and function of the resident biological community), provided that any reasonable changes are implemented that do not significantly affect existing energy generation capability and would result in improvement in the habitat and aquatic life of the impounded waters, and further provided that, when the actual quality of the impounded waters attains any more stringent habitat characteristic or aquatic life criteria than required under Class C standards, that water quality must be maintained and protected. 38 MRSA Section 464(10).

- e. Antidegradation. The Department may only approve water quality certification if the standards of classification of the waterbody and the requirements of the State's antidegradation policy will be met. 38 MRSA § 464(4)(F).

6. DISSOLVED OXYGEN

- a. Existing Conditions. The water quality of the Saco River is generally characterized as very good. Approximately 13 miles downstream of the project, water is withdrawn from the river by the Saco-Biddeford Water District for residential, commercial and industrial uses.
- b. Studies. In 2001, the applicant conducted ambient water quality sampling in the project waters in accordance with a water quality study plan reviewed and approved by the DEP. The three-day sampling event consisted of collecting dissolved oxygen and water temperature data from the upper and lower reaches of the impoundment, from the bypassed river reach, and from the tailwater. Sampling was conducted during a period of high water temperatures and below average flows during which no significant spillage occurred at the project.

Analysis of the sampling results indicates that dissolved oxygen concentrations at the time of the study met or exceeded applicable Class A standards, ranging from a low of 8.0 ppm at 93.7% saturation to a high of 9.1 ppm at 105.7% saturation.

- c. Applicant's Proposal. To protect and enhance dissolved oxygen levels, the applicant proposes to continue current project operation while providing a continuous minimum flow release of 25 cfs to the bypassed river reach.
- d. Discussion. Based on the evidence in the record, there is a reasonable assurance that the applicant's proposal to continue current project operation while providing a continuous minimum flow release of 25 cfs to the bypassed river reach will be adequate to ensure that the waters in the project impoundment, tailrace and bypassed river reach will meet applicable dissolved oxygen standards.

7. FISH RESOURCES

- a. Existing Resources. The Saco River supports a variety of resident warmwater and coldwater fish species and migratory diadromous fish species.

Principle warmwater fisheries include self-sustaining populations of smallmouth bass, largemouth bass, chain pickerel, and white perch. Other resident warmwater species include yellow perch, pumpkinseed sunfish, black crappie, brown bullhead, and several minnow species. Principle coldwater species include wild and stocked brook trout and non-native brown trout and landlocked salmon. The coldwater fishery at the Bar Mills Project is provided through a state stocking program.

Historically, six anadromous species—Atlantic salmon, American shad, alewife, blueback herring, rainbow smelt, and striped bass—used the Saco River for spawning. The catadromous American eel is also present in the river.

- b. Existing Fisheries Management Plan. In January 1987, the U.S. Fish and Wildlife Service, Maine Department of Inland Fisheries and Wildlife (DIF&W), Maine Department of Marine Resources (DMR), and Maine Atlantic Salmon Commission (ASC, now part of DMR) jointly issued a "Strategic Plan for Fisheries Management" for the Saco River.

Under the plan, the overall management goal is to manage all sport and commercial fish species of the Saco River for optimum habitat utilization, abundance, and public benefit. Specific management goals for the river reach from the Skelton Dam to the confluence with the Little Ossipee River, which includes the Bar Mills Project area, include:

- Managing the reach as a migratory pathway for Atlantic salmon, American shad, and American eel;

- Managing the reach for sustained production of trout, Atlantic salmon, American shad, alewives, and American eels consistent with habitat capabilities;
- Establishing recreational fisheries for trout and Atlantic salmon consistent with habitat capabilities; and
- Increasing recreational utilization of all warmwater fish populations and commercial utilization of American eels.

Upstream and downstream anadromous fish passage facilities are currently in place at all dams on the river from tidewater up to the Bar Mills Project.

- c. Studies. In 2002, the applicant conducted a bass spawning survey at the project. The purpose of the study was to document the number and location of bass nests in the project area. A total of 31 bass nests were observed. Nests were generally constructed in 2.5 to 5 feet of water in large gravel and cobble substrates with nearby cover, and were fairly equally distributed between the upper and middle areas of the impoundment, the lower bypassed river reach, and the tailwater area. 29 of the 31 nests were active with fry present.

In 2002, the applicant conducted habitat mapping to assess fish habitat suitability in the bypassed river reach at the project. The habitat mapping indicates that suitable habitat for spawning is extremely limited throughout the bypassed reach due to the nature of the substrates, but that the reach provides suitable habitat for adult brown trout and adult and juvenile bass.

In conjunction with the habitat mapping, the applicant also conducted an instream flow study to assess the effects of various flows on aquatic habitat in the bypassed river reach. Study flows included current leakage (about 3 cfs), 25 cfs, 50 cfs, 100 cfs, and 250 cfs. Evaluation species included adult brown trout, juvenile and adult smallmouth bass, and *Stenonema* (mayfly nymph, a macroinvertebrate species that is an important food source for fish). The results of the instream flow study indicate that weighted usable area (WUA) at representative transects for all evaluation species increases with flow but that the greatest percentage increase occurs between leakage (about 3 cfs) and 25 cfs. Additional flow analysis conducted in 2003 indicates that the wetted habitat and WUA found in the free-flowing upper bypassed reach are generally maximized at a flow of 250 cfs.

Finally, in 2002, the applicant conducted an impoundment drawdown study to evaluate the effects of impoundment fluctuations on fisheries. The results of the study indicate that less than 4% of the impoundment substrate is exposed under a 2-foot drawdown and that the exposed substrates were almost entirely fine-textured which are not preferred spawning areas for bass.

- d. Applicant's Proposals. To protect and enhance fisheries resources, the applicant proposes to continue current project operation while providing a continuous minimum

flow release of 25 cfs to the bypassed river reach, and to provide passage for eel and anadromous fish in accordance with the applicable provisions of the 1994 Saco River Fish Passage Agreement and the 2007 Saco River Fisheries Assessment Agreement.

- e. Agency Comments. DIF&W, DMR, and ASC (now part of DMR) all support the applicant's proposals to provide minimum flow releases in accordance with the 1997 instream flow agreement and to provide passage for eels and anadromous fish in accordance with the 1994 and 2007 fish passage agreements.

ASC recommends that a minimum flow of 100 cfs be maintained in the bypassed river reach to provide a zone of passage for migrating Atlantic salmon smolts and kelts⁹ and to support production of juvenile salmon.

DMR recommends that a minimum flow of 100 cfs be maintained in the bypassed river reach to provide a zone of passage for migrating anadromous fish and American eels.

DIF&W recommends that a minimum flow of 100 cfs be maintained in the bypassed river reach between April 1 and October 31 to provide a trout fishery. DIF&W states that, with this flow, the bypassed reach would be managed as a year-round fishery for stocked brown trout and that more brown trout would be stocked in the bypassed reach in the future if flows are increased.

DIF&W also recommends that, except in emergency situations, the applicant should avoid maintenance drawdowns of the impoundment during May and June to protect bass spawning habitat.

- f. Discussion.

- i. Project Water Levels and Tailwater Flows. Based on the evidence in the record, there is a reasonable assurance that the applicant's proposal to continue current project operation will be adequate to ensure that the waters in the project impoundment and tailwater areas are suitable for the designated use of habitat for fish, that these waters will be of sufficient quality to support all species of indigenous fish, and that all applicable numeric and narrative water quality standards for these waters will be satisfied, subject to the other provisions of this Order, and further provided that maintenance drawdowns are avoided where possible during May and June.
- ii. Bypassed River Reach Flows. As noted above, the evidence indicates that overall fish habitat suitability, measured as weighted useable area, increases in the bypass reach with increasing flows. However, the amount of adult smallmouth bass habitat in the bypass reach is limited (for example, the WUA for adult smallmouth bass at the maximum evaluated flow of 250 cfs is only half of the WUA for juvenile bass and adult brown trout at a flow of 50 cfs). In addition, the majority of the adult

⁹ A kelt is a post-spawn adult Atlantic salmon.

smallmouth bass habitat is in the lower bypassed reach which is backwatered by the Skelton Project impoundment. As a consequence, bypass flows are not critical for adult smallmouth bass habitat.

Looking just at habitat suitability for juvenile smallmouth bass and adult brown trout, flows of 25 cfs, 50 cfs and 100 cfs provide 60%, 72%, and 82%, respectively, of the total WUA available for these target species at the maximum evaluation flow of 250 cfs. Thus, the evidence indicates that a flow of 100 cfs will provide significantly greater habitat value than will lesser flows, especially during the growing season. Furthermore, the evidence indicates that the rate of increase in habitat value slows as flows increase above 100 cfs (for example, increasing the flow from 50 cfs to 100 cfs increases the total WUA for juvenile smallmouth bass and adult brown trout by 13%, while increasing the flow further from 100 cfs to 150 cfs only increases the WUA for these species by an additional 7%).¹⁰

In view of the evidence in the record, minimum flows of 100 cfs from April 1 to October 31 and 50 cfs from November 1 to March 31 in the bypassed river reach will significantly improve habitat conditions for smallmouth bass and brown trout and will provide a zone of passage for migrating fish, and are therefore necessary to provide a reasonable assurance that the waters in the bypassed river reach will be suitable for the designated use of habitat for fish, that these waters will be of sufficient quality to support all species of indigenous fish, and that all applicable numeric and narrative water quality standards for these waters will be satisfied, subject to the other provisions of this Order.

- iii. Fish Passage. Based on the evidence in the record, there is a reasonable assurance that the applicant's proposal to provide passage for eels and anadromous fish in accordance with the applicable provisions of the 1994 Saco River Fish Passage Agreement and the 2007 Saco River Fisheries Assessment Agreement will be adequate to ensure that the project waters will be suitable for the designated use of habitat for fish, that these waters will be of sufficient quality to support all species of indigenous fish, and that all applicable numeric and narrative water quality standards for these waters will be satisfied, subject to the other provisions of this Order, and further provided that, in accordance with the provisions of the 2007 Saco River Fisheries Assessment Agreement, follow-up studies are conducted to evaluate the effectiveness of (1) the existing downstream passage facilities in passing Atlantic salmon kelts and juvenile and adult American shad and alewives,¹¹ (2) future upstream passage facilities for anadromous fish, and (3) future upstream and downstream eel passage facilities.

¹⁰ It is noted that both the U.S. Fish and Wildlife Service and NOAA Fisheries (formerly the National Marine Fisheries Service) have recommended a minimum flow of 250 cfs in the bypassed river reach in the pending FERC relicensing proceeding.

¹¹ As noted in Section 4(a) above, permanent downstream fish passage facilities have been installed at the project and the effectiveness of these facilities has been evaluated and approved for the downstream passage of Atlantic salmon smolts.

8. WETLANDS AND WILDLIFE RESOURCES

- a. Existing Wildlife Resources. The habitat in the project area supports a diversity of wildlife species, including songbirds, waterfowl, reptiles, amphibians, and small mammals. Large mammals are infrequent, due to habitat fragmentation by roads, agriculture, and human residences. Water-dependent bird species observed on the impoundment or in adjacent wetlands include green-back heron, great-blue heron, double-crested cormorant, wood duck, black duck, mallard, and osprey. There are no mapped significant wildlife habitats in the project area.

There are no federally-listed or proposed threatened or endangered species known to occur in the project area except for transient bald eagles.

The shells of one state-listed species of special concern, the triangle floater (a freshwater mussel), have been collected from several locations in the project area.

- b. Studies. In 2001, the applicant conducted a study to identify, map, and assess the function of all wetlands adjacent to and/or backwatered by the project impoundment and tailrace.

The majority (over 80%) of the impoundment shoreline is lined with a narrow band (typically 5-15 feet wide) of fringe emergent and submerged aquatic vegetation and palustrine emergent vegetation. These fringe wetlands were not mapped due to their small size but were assessed for habitat values. There are also several large aquatic beds in the impoundment.

The applicant's study identified seven wetland systems totaling almost 131 acres. The three major wetland types found were, in descending order, palustrine forested, palustrine emergent, and palustrine scrub-shrub. The most important function identified by these wetlands is that of high quality wildlife habitat, with other important functions including sediment and nutrient removal and flood control.

- c. Applicant's Proposal. To protect and enhance wetlands and wildlife resources, the applicant proposes to continue current project operation while providing a continuous minimum flow release of 25 cfs to the bypassed river reach.
- d. Discussion. Based on the evidence in the record, there is a reasonable assurance that the applicant's proposals to protect and enhance wetlands and wildlife resources will be adequate to ensure that the project waters, including those project waters contained in wetlands, will be suitable for the designated use of habitat for aquatic life and that all applicable numeric and narrative water quality standards for these waters will be satisfied, subject to the other provisions of this Order.

9. AQUATIC HABITAT

- a. Existing Conditions. Water levels and flows above and below the project, as well as flows in the bypassed river reach between the project dam and tailrace, can affect aquatic life populations in the Saco River.
- b. Studies. In 2001, the applicant conducted benthic macroinvertebrate sampling at a representative site in the project impoundment in accordance with Department sampling protocols. In 2002, the applicant conducted benthic macroinvertebrate sampling at two replicate representative sites in the bypassed river reach in accordance with a macroinvertebrate study plan reviewed and approved by the Department. No macroinvertebrate sampling was conducted in the project tailrace, as this area is backwatered by the downstream Class GPA Skelton Project impoundment.

Analysis of the sampling results using the Department's linear discriminant model indicates that the sampled macroinvertebrate communities met applicable Class A aquatic life standards.

In 2002, the applicant conducted an instream flow study to assess the effects of various flows on aquatic habitat the bypassed river reach. Study flows included current leakage (about 3 cfs), 25 cfs, 50 cfs, 100 cfs, and 250 cfs. The results of the instream flow study indicate that wetted area at representative transects increases with flow but that the greatest percentage increase occurs between leakage (about 3 cfs) and 25 cfs. Additional flow analysis conducted in 2003 indicates that the wetted habitat found in the free-flowing upper bypassed reach is generally maximized at a flow of 250 cfs.

- c. Applicant's Proposal. To protect and enhance aquatic life, the applicant proposes to continue current project operation while providing a continuous minimum flow release of 25 cfs to the bypassed river reach.
- d. Discussion.
 - i. Aquatic Life Sampling. The Department uses the benthic macroinvertebrate community as a surrogate to determine attainment of applicable aquatic life standards in riverine waters.¹² The sampled macroinvertebrate community in the project impoundment and bypassed river reach meets Class A standards under existing flow conditions. Therefore, based on the evidence in the record, there is a reasonable assurance that the applicant's proposal to continue current project operation while providing a continuous minimum flow release of 25 cfs to the bypassed river reach will be adequate to ensure that the waters in the project impoundment and bypassed river reach are suitable for the designated use of habitat for aquatic life, as evidenced by the benthic macroinvertebrate community, and that all applicable numeric and

¹² See *Classification Attainment Evaluation Using Biological Criteria for Rivers and Streams*, 06-096 CMR 579 (effective May 27, 2003).

narrative water quality standards for these waters will be satisfied, subject to the other provisions of this Order.

- ii. Aquatic Habitat Area. There must be both sufficient quality and quantity of habitat for aquatic organisms to meet aquatic life standards. The Department has found that, generally, flows providing wetted conditions in a weighted average of 3/4ths of the cross-sectional area of a river or stream, as measured from bank-full conditions, are sufficient to meet aquatic life and habitat standards. However, each waterway is different in terms of the value of various flows in providing habitat for aquatic life, and conflicts may exist between the habitat needs of various resident aquatic organisms. As a result, on a case-by-case basis, the Department often establishes alternative flows based on identified site-specific conditions and data, where those alternative flows can be shown to meet all water quality standards. Such a case-by-case analysis of the flows needed to meet aquatic life standards in the bypassed river reach at the Bar Mills Project follows.

The 1,500-foot-long bypassed reach of the Saco River at the Bar Mills Project is of particular significance because it is one of only two free-flowing reaches in the 13-mile-long stretch of the Saco River between the Skelton Dam and the upstream limit of the Bonny Eagle impoundment (the other free-flowing reach in this stretch is the so-called “New River Channel” at the Bonny Eagle Project).

Flows of 25 cfs, 50 cfs, and 100 cfs provide 72%, 79%, and 88%, respectively, of the total weighted wetted area available at the maximum evaluation flow of 250 cfs. It is noted that natural bank-full conditions in the river reach that is now bypassed by the Bar Mills power canal, powerhouse and tailrace would have been reflective of flows higher than 250 cfs and thus would have provided even greater wetted aquatic habitat area.

The evidence indicates that a flow of at least 50 cfs in the bypassed river reach will provide wetted conditions in more than 75% of the bypass reach when compared to the wetted area available at 250 cfs. However, providing a flow of 100 cfs will benefit target macroinvertebrate species (WUA for *Stenonema* increases by almost 8%) and target fish species (WUA for juvenile smallmouth bass and adult brown trout increases by 13%), especially during the growing season.

In view of the site-specific conditions discussed above, minimum flows of 100 cfs from April 1 to October 31 and 50 cfs from November 1 to March 31 in the bypass river reach will significantly improve wetted aquatic habitat conditions for benthic macroinvertebrates and other aquatic species, including smallmouth bass and brown trout, and are therefore necessary to provide a reasonable assurance that the waters in the bypassed river reach will be suitable for the designated use of habitat for fish, that these waters will be of suitable quality to support all species of indigenous fish, and that all applicable numeric and narrative water quality standards for these waters will be satisfied, subject to the other provisions of this Order.

10. FISHING AND RECREATION IN AND ON THE WATER

- a. Existing Recreational Uses. The Saco River is used extensively for outdoor recreation, with the upstream reaches of the river being the state's most heavily-used canoe-touring river. Other recreational uses include fishing, swimming, camping, picnicking, power boating, and sight seeing. The 1982 Maine Rivers Study lists the Saco River from Union Falls (site of the Skelton Dam) to Bar Mills as a "C" river. Rivers and related corridors on the "C" list have been found to possess a composite natural and recreational resource value with statewide significance.
- b. Existing Recreational Facilities. Existing recreational access facilities in the project area include a canoe portage trail and a bypassed river reach access site.

The upstream canoe portage take-out site consists of a graveled area that doubles as a carry-in and small trailer boat launch site, and a gravel parking area. The downstream canoe portage put-in site provides access to the project tailrace, lower bypassed river reach, and the Skelton impoundment.

The bypassed river reach access site consists of a graveled parking area and foot path located on Usher Island. The site is open during daylight hours.

The project is also accessible via the upstream West Buxton canoe portage put-in site, which provides carry-in boat access to the Bar Mills impoundment.

- c. Studies. In 2002, the applicant conducted a recreational use study in the project area. Based on this study, the applicant estimates that fewer than 900 people used the project area for recreational activities during the mid-April through mid-October recreational season. More limited recreational activity occurs during the late fall and winter.
- d. Applicant's Proposals. To protect and enhance recreational access and use, the applicant proposes to implement a recreational plan that includes: improving the existing canoe portage take-out and parking area to accommodate trailered boats; providing and designating an angler access trail to the upper bypassed reach; providing steps and a landing at the existing canoe put-in site to enhance access to the tailrace area; stabilizing minor bank erosion near the canoe put-in site; and improving signage for all recreational facilities.
- e. Discussion. Based on the evidence in the record, there is a reasonable assurance that the applicant's proposals to protect and enhance recreational access and use will be adequate to ensure that the project waters will be suitable for the designated uses of fishing and recreation in and on the water and that all applicable numeric and narrative water quality standards for these waters will be satisfied, subject to the other provisions of this Order, and further provided that minimum flows of 100 cfs from April 1 to October 31 and 50 cfs from November 1 to March 31 are maintained in the bypassed river reach to enhance existing fishing opportunity (see discussion in Section 7 above).

11. HYDROELECTRIC POWER GENERATION

- a. Existing Generation. The project generates an average of 18,850,000 kilowatt-hours (KWHrs) of electricity annually. This is equivalent to the energy that would be produced by burning 31,417 barrels of oil or 8,735 tons of coal each year.
- b. Energy Utilization. The power generated by the Bar Mills Project is currently sold on the open market. All power generated by the project is fed into CMP's transmission and distribution system.
- c. Existing Energy Policies/Plans. The State of Maine has developed a comprehensive energy plan (Final Report of the Commission on Comprehensive Energy Planning, May 1992) with the goal of meeting the State's energy needs with reliable energy supplies at the lowest possible cost, while ensuring that energy production and use are consistent with a healthy environment and a vibrant economy. Specifically, the Plan establishes the following targets for Maine's energy future:
 - Reduce the State's level of dependence on oil from 50 percent to at least match the national average of 43 percent by the year 2000, with further reductions to at least the 30 percent level by 2010;
 - Increase the percentage of renewable energy resources in the State's primary energy mix from 30 percent to 40 percent by the year 2000, and to at least 50 percent by 2010;
 - Increase statewide energy efficiency relative to 1990 levels by 25 percent by the year 2000 and by at least 50 percent by 2010; and
 - Work to stabilize long-term energy prices, in balance with Maine's other energy related goals, with a specific emphasis on enhancing Maine's competitive position relative to New England and the U.S.

With respect to renewable energy, the Plan recommends that Maine actively encourage the development of wind and solar energy resources and support the continued utilization and further development, where appropriate, of the State's renewable, indigenous hydro and biomass resources.

- d. Applicant's Proposal. FPL Energy's proposal to provide a continuous minimum flow of 25 cfs to the bypassed reach would result in a decrease in energy generation of about 110,000 KWHrs a year.¹³
- e. Required Minimum Flow. Providing an increased minimum flow release to the bypassed reach of 100 cfs, as required by this certification, would result in an additional decrease in energy generation of about 690,000 KWHrs a year.¹⁴

¹³ Source: FERC Environmental Assessment for Bar Mills Hydroelectric Project, September 2005, pp. 60-63.

¹⁴ Ibid.

- f. Discussion. The project will continue to provide cost-effective indigenous renewable electricity when operated in accordance with the restrictions imposed by this certification. Therefore, there is a reasonable assurance that the proposed operation of the project, as conditioned by this Order, will be adequate to ensure that the project waters will be suitable for the designated use of hydropower generation.

Based on the above Findings of Fact, and the evidence contained in the application and supporting documents, and subject to the conditions listed below, the Department CONCLUDES that the continued operation of the Bar Mills Hydroelectric Project, as described above, will result in all waters affected by the project being suitable for all designated uses and meeting all other applicable water quality standards, provided that:

1. Daily impoundment fluctuations during cycling operation are limited to 2 feet below normal full pond elevation;
2. Impoundment drawdowns for maintenance are avoided where possible during May and June;
3. Minimum flow releases from the project are provided in accordance with the 1997 Instream Flow Agreement for Hydroelectric Projects on the Saco River, as described in Section 3 of this Order;
4. Instantaneous minimum flow releases of 100 cfs from April 1 to October 31 and 50 cfs from November 1 to March 31 are provided at all times to the bypassed river reach below the project dam;
5. Upstream and downstream passage for eels are provided in accordance with the applicable provisions of the 1994 Saco River Fish Passage Agreement and the 2007 Saco River Fisheries Assessment Agreement, as described in Section 4 of this Order;
6. The effectiveness of upstream and downstream passage facilities for eels is evaluated and changes in facilities design and/or operation are made as needed to provide effective passage;
7. Upstream passage for anadromous fish is provided in accordance with the applicable provisions of the 1994 Saco River Fish Passage Agreement and the 2007 Saco River Fisheries Assessment Agreement, as described in Section 4 of this Order;
8. The effectiveness of upstream passage facilities for anadromous fish is evaluated and changes in facilities design and/or operation are made as needed to provide effective passage;
9. The effectiveness of the existing downstream passage facilities in passing Atlantic salmon kelts and juvenile and adult American shad and alewives is evaluated and changes in facilities design and/or operation are made as needed to provide effective passage; and
10. A recreation plan to protect and enhance public recreational access and use facilities is implemented, as described in Section 10 of this Order.

THEREFORE, the Department APPROVES the application of FPL ENERGY MAINE HYDRO LLC and GRANTS certification pursuant to Section 401(a) of the Clean Water Act that there is a reasonable assurance that the continued operation of the BAR MILLS HYDROELECTRIC PROJECT, as described above, will not violate applicable water quality standards, SUBJECT TO THE FOLLOWING CONDITIONS:

1. WATER LEVELS

- A. Except as temporarily modified by (1) approved maintenance activities, (2) extreme hydrologic conditions, as defined below, (3) emergency electrical system conditions, as defined below, (4) flashboard failure or maintenance, or (5) agreement between the applicant, the Department, and appropriate state and/or federal agencies, daily impoundment fluctuations during cycling operation shall be limited to 2 feet below normal full pond elevation.
- B. "Extreme Hydrologic Conditions" means the occurrence of events beyond the applicant's control such as, but not limited to, abnormal precipitation, extreme runoff, flood conditions, ice conditions or other hydrologic conditions such that the operational restrictions and requirements contained herein are impossible to achieve or are inconsistent with the safe operation of the Project.
- C. "Emergency Electrical System Conditions" means operating emergencies beyond the applicant's control which require changes in flow regimes to eliminate such emergencies which may in some circumstances include, but are not limited to, equipment failure or other temporary abnormal operating conditions, generating unit operation or third-party mandated interruptions under power supply emergencies, and orders from local, state, or federal law enforcement or public safety authorities.
- D. The applicant shall, within 6 months of issuance of a New License for the project by FERC or upon such other schedule as established by FERC, submit plans for providing and monitoring the impoundment water levels required by Part A of this condition. These plans shall be reviewed by and must receive approval of the Department.

2. IMPOUNDMENT DRAWDOWNS FOR MAINTENANCE

Unless necessary to address emergency situations or to address dam safety and/or public safety concerns, or except as temporarily modified by agreement between the applicant, the Department, and appropriate state and/or federal agencies, the applicant shall avoid maintenance drawdowns of the project impoundment during the months of May and June.

3. MINIMUM FLOWS

A. Except as temporarily modified by (1) approved maintenance activities, (2) extreme hydrologic conditions, as defined below, (3) emergency electrical system conditions, as defined below, (4) flashboard failure or maintenance, or (5) agreement between the applicant, the Department, and appropriate state and/or federal agencies, and in accordance with the 1997 Instream Flow Agreement for Hydroelectric Projects on the Saco River, the following minimum flows shall be released from the project:

- From April 1 through June 30 annually, outflow approximately equal to inflow (run-of-river operations);
- From July 1 through September 30 annually, an instantaneous minimum flow of 400 cfs or inflow, whichever is less;
- From October 1 through November 15 annually, or for such alternative six week period as may be mutually agreed to by FPL Energy and state and federal fisheries agencies, an instantaneous minimum flow of 600 cfs or inflow, whichever is less; and
- From November 16 through March 31 annually, an instantaneous minimum flow of 250 cfs or inflow, whichever is less.

B. Except as temporarily modified by (1) approved maintenance activities, (2) extreme hydrologic conditions, as defined below, (3) emergency electrical system conditions, as defined below, (4) flashboard failure or maintenance, or (5) agreement between the applicant, the Department, and appropriate state and/or federal agencies, instantaneous minimum flows of 100 cfs from April 1 to October 31 and 50 cfs from November 1 to March 31 shall be released to the bypassed river reach below the project dam. This bypassed river reach flow shall be counted as part of the overall project minimum flow releases specified in Part A of this condition.

C. "Extreme Hydrologic Conditions" means the occurrence of events beyond the applicant's control such as, but not limited to, abnormal precipitation, extreme runoff, flood conditions, ice conditions or other hydrologic conditions such that the operational restrictions and requirements contained herein are impossible to achieve or are inconsistent with the safe operation of the Project.

D. "Emergency Electrical System Conditions" means operating emergencies beyond the applicant's control which require changes in flow regimes to eliminate such emergencies which may in some circumstances include, but are not limited to, equipment failure or other temporary abnormal operating conditions, generating unit operation or third-party mandated interruptions under power supply emergencies, and orders from local, state, or federal law enforcement or public safety authorities.

- E. The applicant shall, within 6 months of issuance of a New License for the project by FERC or upon such other schedule as may be established by FERC, submit plans for providing and monitoring the minimum flow releases required by Parts A and B of this condition. These plans shall be reviewed by and must receive approval of the Department.

4. UPSTREAM EEL PASSAGE

- A. In accordance with the provisions of the 2007 Saco River Fisheries Assessment Agreement, a single permanent upstream eel passage facility shall be installed and operational at the project by June 1, 2014. With the concurrence of the Department, this schedule may be delayed following consultation with and agreement by the U.S. Fish and Wildlife Service, NOAA Fisheries, and the Department of Marine Resources that eels are not yet sufficiently abundant to require passage or to provide enough data to allow for a determination of the type or location of the upstream eel passage facility.
- B. The applicant shall, at least 60 days prior to construction, or upon such other schedule as may be established by FERC, submit final design and operational plans for the upstream eel passage facility required by Part A of this condition, prepared in consultation with the Department of Marine Resources. These plans shall be reviewed by and must receive the approval of the Department prior to construction.
- C. The applicant shall, in consultation with the Department of Marine Resources, conduct a study or studies to determine the effectiveness of the upstream eel passage facility required by Part A of this condition, in accordance with the provisions of the 2007 Saco River Fisheries Assessment Agreement.
- D. The applicant shall, concurrent with the commencement of operation of the required upstream eel passage facility, or upon such other schedule as may be established by FERC, submit plans for a study or studies to determine the effectiveness of the upstream eel passage facility required by Part A of this condition, prepared in consultation with the Department of Marine Resources. These plans shall be reviewed by and must receive the approval of the Department prior to implementation of the study or studies.
- E. The applicant shall, in accordance with the schedule set forth in the approved study plan or plans, or upon such other schedule as may be established by FERC, submit the results of the upstream eel passage effectiveness study or studies, along with any recommendations for changes in the design and/or operation of the upstream eel passage facility installed pursuant to Part A of this condition, in accordance with the provisions of the 2007 Saco River Fisheries Assessment Agreement.
- F. The applicant shall be responsible for taking such actions as are needed to effectively pass eels upstream through the project. After reviewing the results of the effectiveness study or studies, and after notice to the applicant and opportunity for hearing, the Department reserves the right to require reasonable changes in the design and/or operation of the upstream eel passage facility installed pursuant to Part A of this

condition as may be deemed necessary to effectively pass eels upstream through the project.

5. DOWNSTREAM EEL PASSAGE

- A. In accordance with the provisions of the 2007 Saco River Fisheries Assessment Agreement, prior to the implementation of permanent downstream eel passage measures at the project pursuant to Part B of this condition, interim downstream eel passage measures shall be provided at the project as needed to reduce significant adult eel mortality from downstream turbine passage.
- B. In accordance with the provisions of the 2007 Saco River Fisheries Assessment Agreement, permanent downstream eel passage measures shall be operational at the project by September 1, 2026. With the concurrence of the Department, this schedule may be delayed following consultation with and agreement by the U.S. Fish and Wildlife Service, NOAA Fisheries, and the Department of Marine Resources that eels are not yet sufficiently abundant to require passage or to provide enough data to allow for a determination of the type or location of downstream eel passage measures.
- C. The applicant shall, at least 60 days prior to construction, or upon such other schedule as may be established by FERC, submit final plans for the permanent downstream eel passage measures required by Part A of this condition, prepared in consultation with the Department of Marine Resources. These plans shall be reviewed by and must receive the approval of the Department prior to construction.
- D. The applicant shall, in consultation with the Department of Marine Resources, conduct a study or studies to determine the effectiveness of the permanent downstream eel passage measures required by Part A of this condition, in accordance with the provisions of the 2007 Saco River Fisheries Assessment Agreement.
- E. The applicant shall, concurrent with the commencement of operation of the required downstream eel passage measures, or upon such other schedule as may be established by FERC, submit plans for a study or studies to determine the effectiveness of the permanent downstream eel passage measures required by Part A of this condition, prepared in consultation with the Department of Marine Resources. These plans shall be reviewed by and must receive the approval of the Department prior to implementation of the study or studies.
- F. The applicant shall, in accordance with the schedule set forth in the approved study plan or plans, or upon such other schedule as may be established by FERC, submit the results of the permanent downstream eel passage effectiveness study or studies, along with any recommendations for changes in the downstream eel passage measures implemented pursuant to Part A of this condition, in accordance with the provisions of the 2007 Saco River Fisheries Assessment Agreement.

- G. The applicant shall be responsible for taking such actions as are needed to effectively pass eels downstream through the project. After reviewing the results of the effectiveness study or studies, and after notice to the applicant and opportunity for hearing, the Department reserves the right to require reasonable changes in the permanent downstream eel passage measures implemented pursuant to Part A of this condition as may be deemed necessary to effectively pass eels downstream through the project.

6. UPSTREAM ANADROMOUS FISH PASSAGE

- A. In accordance with the provisions of the 2007 Saco River Fisheries Assessment Agreement, a single permanent upstream anadromous fish passage facility shall be installed and operational at the project by May 1, 2016. With the concurrence of the Department, this schedule may be delayed contingent upon the returning numbers of the target species, and following consultation with and agreement by the U.S. Fish and Wildlife Service, NOAA Fisheries, and Department of Marine Resources.
- B. The applicant shall, at least 60 days prior to construction, or upon such other schedule as may be established by FERC, submit final design and operational plans for the upstream anadromous fish passage facility required by Part A of this condition, prepared in consultation with the Department of Marine Resources. These plans shall be reviewed by and must receive the approval of the Department prior to construction.
- C. The applicant shall, in consultation with the Department of Marine Resources, conduct a study or studies to determine the effectiveness of the upstream anadromous fish passage facility required by Part A of this condition, in accordance with the provisions of the 2007 Saco River Fisheries Assessment Agreement.
- D. The applicant shall, concurrent with the commencement of operation of the required upstream anadromous fish passage facility, or upon such other schedule as may be established by FERC, submit plans for a study or studies to determine the effectiveness of the upstream anadromous fish passage facility required by Part A of this condition, prepared in consultation with the Department of Marine Resources. These plans shall be reviewed by and must receive the approval of the Department prior to implementation of the study or studies.
- E. The applicant shall, in accordance with the schedule set forth in the approved study plan or plans, or upon such other schedule as may be established by FERC, submit the results of the upstream anadromous fish passage effectiveness study or studies, along with any recommendations for changes in the design and/or operation of the upstream anadromous fish passage facility installed pursuant to Part A of this condition, in accordance with the provisions of the 2007 Saco River Fisheries Assessment Agreement.
- F. The applicant shall be responsible for taking such actions as are needed to effectively pass anadromous fish upstream through the project. After reviewing the results of the effectiveness study or studies, and after notice to the applicant and opportunity for hearing, the Department reserves the right to require reasonable changes in the design

and/or operation of the upstream anadromous fish passage facility installed pursuant to Part A of this condition as may be deemed necessary to effectively pass anadromous fish upstream through the project.

7. DOWNSTREAM ANADROMOUS FISH PASSAGE

- A. In accordance with the provisions of the 2004 Saco River Fish Passage Agreement, the applicant shall continue to operate and maintain the permanent downstream anadromous fish passage facilities currently installed at the project.
- B. Upon notification from the Department of Marine Resources, the applicant shall, in consultation with DMR, conduct a study or studies to determine the effectiveness of the existing downstream anadromous fish passage facilities in passing Atlantic salmon kelts and juvenile and adult American shad and alewives, in accordance with the provisions of the 2007 Saco River Fisheries Assessment Agreement.
- C. The applicant shall, within 6 months following notification from the Department of Marine Resources pursuant to Part B of this condition, or upon such other schedule as may be established by FERC, submit plans for a study or studies to determine the effectiveness of the existing downstream anadromous fish passage facilities in passing Atlantic salmon kelts and juvenile and adult American shad and alewives, prepared in consultation with the Department of Marine Resources. These plans shall be reviewed by and must receive the approval of the Department prior to implementation of the study or studies.
- D. The applicant shall, in accordance with the schedule set forth in the approved study plan or plans, or upon such other schedule as may be established by FERC, submit the results of the downstream anadromous fish passage effectiveness study or studies, along with any recommendations for changes in the design and/or operation of the downstream anadromous fish passage facilities currently installed at the project, in accordance with the provisions of the 2007 Saco River Fisheries Assessment Agreement.
- E. The applicant shall be responsible for taking such actions as are needed to effectively pass anadromous downstream through the project. After reviewing the results of the effectiveness study or studies, and after notice to the applicant and opportunity for hearing, the Department reserves the right to require reasonable changes in the design and/or operation of the downstream anadromous fish passage facilities currently installed at the project as may be deemed necessary to effectively pass anadromous fish downstream through the project.

8. RECREATIONAL ACCESS AND USE FACILITIES

- A. The applicant shall implement a recreation plan to protect and enhance public recreational access and use facilities. This recreational plan shall include: improving the existing canoe portage take-out and parking area to accommodate trailered boats; providing and designating an angler access trail to the upper bypassed reach; providing

steps and a landing at the existing canoe put-in site to enhance access to the tailrace area; stabilizing minor bank erosion near the canoe put-in site; and improving signage for all recreational facilities.

- B. The applicant shall, within one year of issuance of a New License for the project by FERC or upon such other schedule as established by FERC, submit plans and a schedule for implementing the recreation plan required by Part A of this condition. These plans and schedule shall be reviewed by and must receive approval of the Department.

9. LIMITS OF APPROVAL

This approval is limited to and includes the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variations from the plans and proposals contained in said documents are subject to the review and approval of the Department prior to implementation.

10. COMPLIANCE WITH ALL APPLICABLE LAWS

The applicant shall secure and appropriately comply with all applicable federal, state and local licenses, permits, authorizations, conditions, agreements and orders required for the operation of the project, in accordance with the terms of this certification.

11. EFFECTIVE DATE

This water quality certification shall be effective concurrent with the effective date of the new license issued for the project by the Federal Energy Regulatory Commission.

12. SEVERABILITY

In the event that any provision, or part thereof, of this certification is declared to be unlawful by a reviewing court, the remainder of the certification shall remain in full force and effect, and shall be construed and enforced in all respects as if such unlawful provision, or part thereof, had been omitted, unless otherwise ordered by the court.

FPL ENERGY MAINE HYDRO LLC)
BAR MILLS HYDROELECTRIC PROJECT)
#L-20860-33-C-N (APPROVAL))

FINAL
WATER QUALITY CERTIFICATION

Page 26 of 26

DONE AND DATED AT AUGUSTA, MAINE, THIS 19th DAY OF June, 2008.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: /s/ David P. Littell
DAVID P. LITTELL, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of receipt of application: 06/19/2007
Date application accepted for processing: 06/25/2007

(Initial application received 06/27/2003 and subsequently withdrawn and refiled 06/23/2004, 06/20/2005, 06/19/2006, and 06/19/2007.)

Date filed with the Board of Environmental Protection: June 23, 2008

Central Maine Power Company
FERC Electric Tariff, Fifth Revised, Vol. No. 3

Third Revised Service Agreement No. 158

CONTINUING SITE/INTERCONNECTION AGREEMENT
BY AND BETWEEN
CENTRAL MAINE POWER COMPANY
AND
FPL ENERGY MAINE, INC.

January 6, 1998

Incorporating Terms and Conditions of
First and Second Amendments to the
Continuing Site/Interconnection Agreement

Issued By: Hariph M. Smith
Director, Transmission Services

Effective On: December 23, 2003

Issued On: September 27, 2004



TABLE OF CONTENTS

ARTICLE 1.0	
DEFINITIONS	
1.0	Definitions 2
ARTICLE 2.0	
TERM	
2.0	Term 8
ARTICLE 3.0	
CONTINUING OBLIGATIONS AND RESPONSIBILITIES	
3.0	Continuing Obligations and Responsibilities 9
3.1	Interconnection Service and T&D Service 9
3.2	Access Easements, Conveyances, Licenses, and Restrictions 11
3.3	Facility and Equipment Maintenance 12
3.4	New Construction or Modifications 13
3.5	Inspections 14
3.6	Information Reporting Obligations 16
3.7	Local Services 17
3.8	Seller Provided Local Services 18
3.9	Buyer Provided Local Services 20
3.10	Communications Services 21
3.11	Spare Parts 21
3.12	Emergency Procedures 21
3.13	Service Interruptions 22
3.14	Non-Dispatchability Notification 23
3.15	Scheduled Maintenance Notification and Coordination . 23
3.16	Safety 24
3.17	Environmental Compliance and Procedures 25
ARTICLE 4.0	
OPERATIONS	
4.0	Operations 25
4.1	General 25
4.2	Buyer's Operating Obligations 25
4.3	Seller's Operating Obligations 27
4.4	Auditing of Accounts and Records 28
ARTICLE 5.0	
COST RESPONSIBILITIES, T&D RATES AND BILLING PROCEDURES	
5.0	Cost Responsibilities, T&D Rates and Billing Procedures 28
5.1	Buyer's Interconnection Cost Responsibilities and T&D Rates 28
5.2	Cost Responsibilities for Local Services 30
5.3	Billing Procedures 30
5.4	Payment Not a Waiver 30
5.5	Interest on Unpaid Balances 30
5.6	Default 30



ARTICLE 6.0
DOCUMENTATION

6.0	Documentation.	31
6.1	General.	31
6.2	Drawings	32
6.3	Maintenance or Operations Documentation.	34

ARTICLE 7.0
CONFIDENTIALITY

7.0	Confidentiality.	34
7.1	Confidentiality of Seller.	34
7.2	Confidentiality of Buyer	34
7.3	Confidentiality of Audits.	35
7.4	Remedies	35

ARTICLE 8.0
DEFAULT

8.0	Default.	35
8.1	General.	35
8.2	Failure to Pay; Interest	37
8.3	Performance of Obligations of a Defaulting Party	37
8.4	Collection Expenses.	38
8.5	Rights Cumulative.	38

ARTICLE 9.0
DAMAGE TO EQUIPMENT, FACILITIES AND PROPERTY

9.0	Damage to Equipment, Facilities and Property	38
9.1	Buyer's Responsibility	38
9.2	Seller's Responsibility.	38
9.3	Disputes	39
9.4	Limitation of Liability.	39
9.5	Insurance.	39

ARTICLE 10.0
INDEMNIFICATION

10.0	Indemnification.	39
10.1	Buyer's Indemnification.	39
10.2	Seller's Indemnification	40
10.3	Limitation on Seller's Responsibility.	41
10.4	Indemnification Procedures.	41
10.5	Survival; No Limitation.	41

ARTICLE 11.0
INSURANCE

11.0	Insurance.	41
11.1	General.	41
11.2	Certificates of Insurance; Claims Made Coverage.	41
11.3	Notice of Cancellation, Etc.	42
11.4	Additional Insureds.	42
11.5	Failure to Comply.	42
11.6	Waiver of Subrogation.	42



ARTICLE 12.0
FORCE MAJEURE

12.0	Force Majeure.	42
12.1	General.	42
12.2	Content of Term.	42
12.3	Procedures	43

ARTICLE 13.0
DISPUTES

13.0	Disputes	43
13.1	Actions Prior to Arbitration	43
13.2	Applicability of Arbitration	44
13.3	Selection of Arbitrator; Arbitration Process	44
13.4	Time Schedule.	45
13.5	Procedure.	45
13.6	Remedies	45
13.7	Confidentiality.	45
13.8	FERC Jurisdiction Over Certain Disputes.	46
13.9	Preliminary Injunctive Relief.	46
13.10	Location of Arbitration.	46
13.11	Costs.	46

ARTICLE 14.0
REPRESENTATIONS

14.0	Representations.	46
14.1	Representations of Seller.	46
14.2	Representations of Buyer	47
14.3	Representations of Both Parties.	48

ARTICLE 15.0
ASSIGNMENT/CHANGE IN CORPORATE IDENTITY

15.0	Assignment/Change in Corporate Identity.	48
15.1	General.	48
15.2	Assignment by Buyer.	49
15.3	Assignment by Seller	49
15.4	Termination of Corporate Existence, Etc.	49

ARTICLE 16.0
SUBCONTRACTORS

16.0	Subcontractors	50
16.1	Use of Subcontractors Permitted.	50
16.2	Party to Remain Responsible.	50
16.3	Liability For Conduct of Subcontractors.	50
16.4	No Third Party Beneficiary	50
16.5	No Limitation by Insurance	50

ARTICLE 17.0
LABOR RELATIONS

17.0	Labor Relations.	50
------	--------------------------	----

ARTICLE 18.0
INDEPENDENT CONTRACTOR STATUS

18.0	Independent Contractor Status.	51
------	--	----



	ARTICLE 19.0	
	LIMITATION OF LIABILITY	
19.0	Limitation of Liability	51
19.1	Consequential Damages	51
19.2	Exclusive Remedies	51
	ARTICLE 20.0	
	NOTICES	
20.0	Notices	51
20.1	. . . . .	51
20.2	. . . . .	52
	ARTICLE 21.0	
	HEADINGS	
21.0	Headings	53
22.0	Waiver	53
	ARTICLE 23.0	
	COUNTERPARTS	
23.0	Counterparts	53
	ARTICLE 24.0	
	GOVERNING LAW	
24.0	Governing Law	53
24.1	. . . . .	53
24.2	. . . . .	53
	ARTICLE 25.0	
	EQUAL EMPLOYMENT OPPORTUNITY	
25.0	Equal Employment Opportunity	54
	ARTICLE 26.0	
	SEVERABILITY	
26.0	Severability	54
	ARTICLE 27.0	
	AMENDMENTS	
27.0	Amendments	54
27.1	. . . . .	54
27.2	. . . . .	54
27.3	. . . . .	54
	ARTICLE 28.0	
	ENTIRE AGREEMENT	
28.0	Entire Agreement	55
	ARTICLE 29.0	
	MISCELLANEOUS	
29.1	Assignment of Certain Assets	55



ARTICLE 28.0
ENTIRE AGREEMENT

28.0 Entire Agreement.

This Agreement and the Separation Document constitute the entire understanding between the Parties, and supersede any and all previous understandings, oral or written, which pertain to the subject matter contained herein or therein. If there is any conflict in said documents, the Separation Document shall control over this Agreement.

ARTICLE 29.0
Miscellaneous

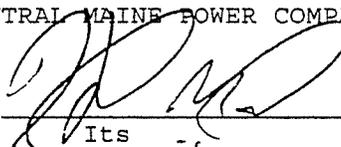
29.1 Assignment of Certain Assets.

Notwithstanding any other provision of this Agreement (including all schedules, appendixes and attachments), commencing on December 23, 2003, this Agreement shall in no way apply to the Hydroelectric Assets listed on Schedule 1.1(a) (33) of the APA as Oakland, Rice Rips, Union Gas, Lower Kezar Falls, Upper Kezar Falls and Ledgemere.

IN WITNESS WHEREOF the Parties have executed and delivered this Agreement as of the date and year first above written.

CENTRAL MAINE POWER COMPANY

By:

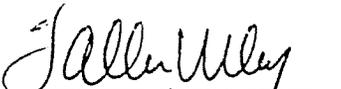


Its

Director, Transmission Services

FPL Energy Maine, INC.

By:



Its

Vice President



STATE OF MAINE
KENNEBEC, SS.

January 6, 1998

Then personally appeared the above-named J. Allen,
Walley of the above-named corporation, and
acknowledged this instrument to be his/her free act and deed
in said capacity, and the free act and deed of said
corporation.

Before me,

Elaine M. Barlow

Notary Public/Maine Attorney

Print Name:

ELAINE M. BARLOW

Notary Public, State of Maine

My Commission Expires November 21, 2009

STATE OF MAINE
KENNEBEC, SS.

January 6, 1998

Then personally appeared the above-named Harpis,
Smith of the above-named corporation, and
acknowledged this instrument to be his/her free act and deed
in said capacity, and the free act and deed of said
corporation.

Before me,

Kerri L. Foster

Notary Public/Maine Attorney

Print Name:

Kerri L. Foster
Notary Public
State of Maine
My Commission Expires
May 26, 2011



SCHEDULES
Description

- A Interconnection Facilities and Associated Equipment Description
- A1 Interconnection Facilities and Associated Equipment Description:
Cape Station #614
- B Interconnection Requirements for Generation
- C Substation Operations & Maintenance Services
- D Revenue Metering
- D1 Monthly Metering O&M Cost: Cape Steam Gas Turbines
- E Generation Communications System Services
- F Transmission Constraints on Generation
Addendum to Schedule F
- G Telecommunications Sharing Agreement
- H Switching and Tagging Procedures Manual
- I Safety Instructions
- J Voltage Regulation
- K System Restoration Plan
- L Interconnection Facilities Charges
- L1 Interconnection Facilities Support Charges: Cape Station Unit 5
- M Insurance Requirements
- N Separation Principles



Schedule A
Interconnection Facilities and Associated Equipment Description

I. Customer: (Buyer)

Unit Location:

Bar Mills Hydro, CMP System Diagram #362:

Net Capacity:

2 units 4 MW Summer 4 MW Winter

Point of Interconnection:

Interconnection of Buyer's 34.5KV air break switch (T1H) to CMP's 34.5KV line section 172 lateral tap

Point(s) of Receipt:

CMP Non-PTF 34.5KV line section 172

II. Interconnection Facilities and Associated Equipment:

No interconnection facilities are currently identified between ownership point of demarcation and CMP local network service and CMP PTF.

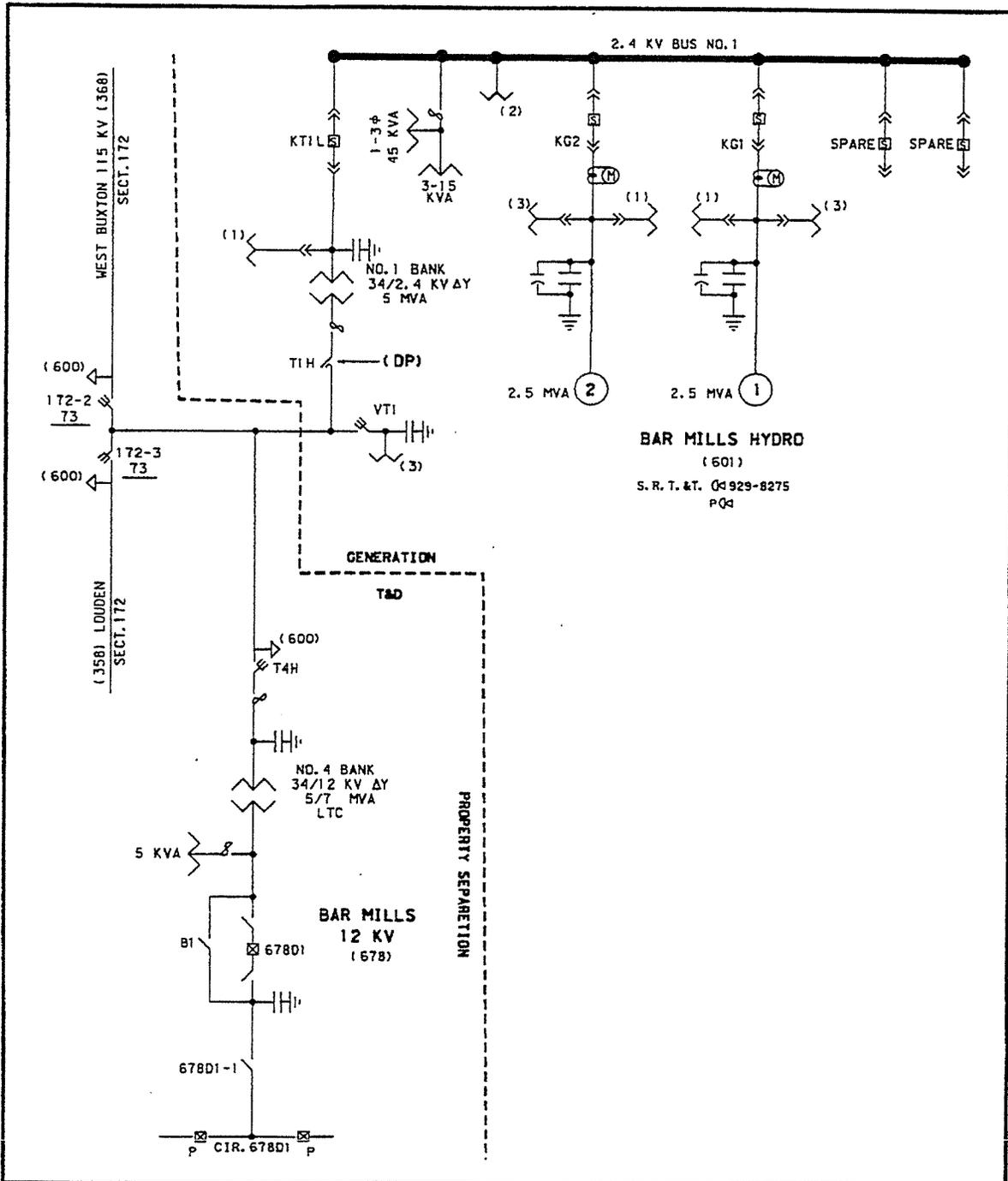
III. Additional Facilities and/or Associated Equipment:

None

IV. Special Conditions

1. In the event CMP adds equipment to this location in the future in accordance with good utility practice, and such investment is not deemed PTF, it may be directly assignable to the Customer.





EnergyEast

3300 APPLICATION		POWER ONE LINE REFERENCE			
PROJ.MGR.		BAR MILLS HYDRO BAR MILLS 12KV			
SUPV.APPR.					
<input type="checkbox"/> NEW <input type="checkbox"/> EXPAND/UPGRADE <input type="checkbox"/> TEMP.		INT. PHONE	-	EXT. PHONE	-
CONST.START	/ /	FINISH	/ /		
WRITE ON FORM/ATTACH REASON FOR PROJECT		S/S NO.	APP. 07/09/04	STATUS	362 S



GIS GENERATORS

Print Date: 9/24/2008 9:28:09 AM

Unit ID	CT Class I	CT Class II	CT Class III	CT CEO	MA RPS New Renewable Gen	MA Renewable Resource	Eligible MA NOx Allowances	ME Ren/Eff Energy Source	ME Class I	ME Class II	ME CO2 Netting	RI New Renewable Resource	RI Existing Renewable Resource	NH Class I	NH Class II	NH Class III	NH Class IV	Green-E	Plant Name	Unit Name	Location	Fuel Type
NON32120	No	No	No	No	Yes	Yes	No	No	No	Yes	No	No	No	No	No	No	No	No	Chicopee	1	New England (ISO New England Control Area)	Landfill gas
NON32121	No	No	No	No	Yes	Yes	No	No	No	Yes	No	No	No	No	No	No	No	No	Chicopee	2	New England (ISO New England Control Area)	Landfill gas
NON32122	No	No	No	No	Yes	Yes	No	No	No	Yes	No	No	No	No	No	No	No	No	Chicopee	3	New England (ISO New England Control Area)	Landfill gas
NON32508	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	UTC Power	9143	New England (ISO New England Control Area)	Fuel cell
NON32506	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	The Mohegan Tribe	9255	New England (ISO New England Control Area)	Fuel cell
NON32507	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	The Mohegan Tribe	9264	New England (ISO New England Control Area)	Fuel cell
MSS463	Yes	Yes	No	No	No	Yes	No	No	No	Yes	No	No	No	No	No	No	No	No	LVER-AEI	AEI LIVERMORE	New England (ISO New England Control Area)	Wood
MSS594	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	THAMES	AES THAMES	New England (ISO New England Control Area)	Coal
MSS326	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	ALTRESCO	ALTRESCO	New England (ISO New England Control Area)	Natural Gas



MSS931	No	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	No	UNDER5MW	AVERY DAM	New England (ISO New England Control Area)	Hydroelectric/Hydro
MSS330	No	No	No	Yes	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	PEMIGWAS	AYERS ISLAND	New England (ISO New England Control Area)	Hydroelectric/Hydro
MSS331	No	No	No	Yes	No	Yes	No	No	No	Yes	No	No	No	No	No	No	No	No	RUMFORD	AZISCO-HOS HYDRO	New England (ISO New England Control Area)	Hydroelectric/Hydro
MSS951	No	No	No	Yes	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	UNDER5MW	BALTIC MILLS - QF	New England (ISO New England Control Area)	Hydroelectric/Hydro
MSS811	No	No	No	Yes	No	Yes	No	No	No	Yes	No	No	No	No	No	No	No	No	UNDER5MW	BANTAM	New England (ISO New England Control Area)	Hydroelectric/Hydro
MSS332	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	ELLSWRTH	BAR HARBOR DIESELS 1-4	New England (ISO New England Control Area)	Diesel
MSS754	No	No	No	Yes	No	Yes	No	No	No	Yes	No	No	No	No	No	No	No	No	LOUDEN	BAR MILLS	New England (ISO New England Control Area)	Hydroelectric/Hydro
NON32590	No	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	No	Bark Mulch generator	Bark Mulch generator	New England (ISO New England Control Area)	Biomass
MSS2278	No	Yes	No	Yes	No	Yes	No	No	No	Yes	No	No	No	No	No	No	No	No	UNDER5MW	BARKER LOWER HYDRO	New England (ISO New England Control Area)	Hydroelectric/Hydro
MSS2279	No	Yes	No	Yes	No	Yes	No	No	No	Yes	No	No	No	No	No	No	No	No	UNDER5MW	BARKER UPPER HYDRO	New England (ISO New England Control Area)	Hydroelectric/Hydro
MSS833	No	No	No	Yes	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	UNDER5MW	BARNET	New England (ISO New England Control Area)	Hydroelectric/Hydro

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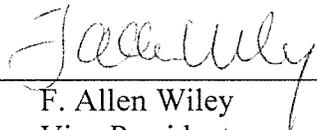
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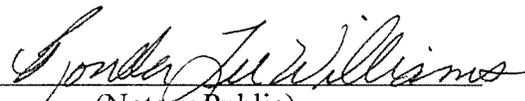
SUBSCRIPTION

This Application for Renewable Energy Source Eligibility under the State of New Hampshire Public Utilities Commission for the Bar Mills Project, FERC No. 2194 is executed in the State of Maine, County of Kennebec, by F. Allen Wiley, Vice President, FPL Energy Maine Hydro LLC, 160 Capitol Street, Augusta, Maine, 04330, who, being duly sworn, deposes and says that the contents of this application are true to the best of his knowledge or belief and that he is authorized to execute this application on behalf of FPL Energy Maine Hydro LLC. The undersigned has signed this application this 24 day of September, 2008.

FPL ENERGY MAINE HYDRO LLC

By 
F. Allen Wiley
Vice President
FPL Energy Maine Hydro LLC

Subscribed and sworn to before me, a Notary Public of the State of Maine this 24th day of September, 2008.


(Notary Public)

RONDA LEE WILLIAMS
Notary Public, Maine
My Commission Expires April 26, 2009

(My Commission Expires _____)

