



COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
WESTERN REGIONAL OFFICE

436 Dwight Street • Springfield, Massachusetts 01103 • (413) 784-1100

DEVAL L. PATRICK
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Lieutenant Governor

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SENT ELECTRONICALLY

Mr. Kevin M. Webb
Environmental Affairs Coordinator
Littleville Power Company, Inc.
One Tech Drive, Suite 220
Andover, MA 01810

July 8, 2009

Subject: Water Quality Certification
Glendale Hydroelectric Project
FERC No 2801

Dear Mr. Webb:

As attached, please find a Section 401 Water Quality Certificate as issued by the Department for the above referenced project. Your attention is directed to each of the Certification Provisions contained in the Certificate. If you have any questions please contact Robert Kubit at 508-767-2854 at Robert.Kubit@ma.state.us or myself at 413-755-2138, Robert.J.McCollum@state.ma.us.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert J. McCollum".

Robert J. McCollum
Program Chief
Wetlands & Waterways
DEP Western Region

W://RM/Stockbridge 401 WQC -r1 Letter
Enclosure

SENT ELECTRONICALLY
Water Quality Certification
Glendale Hydroelectric Project,
FERC License No. 2801-MA
BRPWW11

Applicant: Littleville Power Company, Inc.
Subsidiary of Enel North America, Inc.

INTRODUCTION

In October 2007, the Littleville Power Company, Inc., a subsidiary of Enel North America, Inc. (Project Owner), submitted to the Federal Energy Regulatory Commission (FERC) an Application for Subsequent License for the Glendale Hydroelectric Project, a Minor Project of less than 1.5 MW Capacity located at an existing dam on the Housatonic River in Stockbridge, MA (Project). The Project was self-certified as a Qualifying Facility pursuant to Section 210 of the Public Utilities Resource Protection Act (PURPA) on October 30, 2000, under FERC docket QF01-26. The Project was self-recertified as a Qualifying Facility on May 3, 2006. The Project Owner submitted an application for Water Quality Certification (Certification) to the Massachusetts Department of Environmental Protection (MassDEP) on November 15, 2007. On November 11, 2008, the Project Owner withdrew and resubmitted its Certification application.

PROJECT DESCRIPTION

The Glendale Hydroelectric Project is located within River Segment MA21-19 on the main stem Housatonic River in southwestern Massachusetts. 314 CMR 4.06 of the Massachusetts Surface Water Quality Standards (Standards) classifies this segment as a Class B, Warm Water Fishery. The Housatonic River at the Project has a drainage area of 272 square miles.

The topography of the basin is greatly varied. It is hilly and mountainous in the east, gives way to rolling upland toward the west, and the Massachusetts and New York border region contains a large valley running in a north-south direction. The river reach between the nearest upstream Willow Mill dam and the Glendale dam is predominantly flat water with some areas of quick water and riffles. It meanders through areas of marble-limestone bedrock, wide floodplains, wetlands, meadows, and a golf course. The banks along the Project impoundment, canal, and bypassed reach are relatively steep. The base

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of the adjacent Monument Mountain, located to the west of the tailrace, is a flatter area. Below the Project, the river is swift with lots of quick water and several mid-sized rapids. The proposed Project will provide additional recreational access through formal canoe portage facilities and parking.

There are several dams on the main stem of the Housatonic River used for hydropower generation, and others are used for flood storage or water withdrawal. The Willow Mill Project (FERC Project No. 2985), used for hydropower generation and water withdrawals for paper mill processing, is the next upstream dam located about 6 miles from the Project dam. The next downstream dam is at the Risingdale Impoundment, approximately 4 miles from the Project dam in Great Barrington, Massachusetts. On December 15, 2004 FERC granted a three year preliminary permit to the Fox River Paper Company to study the proposed 1,100-kilowatt Risingdale Project No. 12528.

As licensed by FERC, the existing Glendale Hydroelectric Facility consists of:

1. a 250 foot long, 30 foot high concrete gravity dam with a 182 foot long spillway;
2. a 23 acre reservoir;
3. two manually operated 10 foot by 10 foot intake gates;
4. a 1,500 foot long by 40 foot wide intake canal;
5. a fore bay structure and a 250 foot long, 12 foot diameter steel penstock;
6. a powerhouse containing four turbine generating units with a combined installed capacity of 1,140 kilowatts;
7. a 300 foot long tailrace channel;
8. a step-up transformer and an 83 foot long, 13.8 kilovolt transmission line; and
9. appurtenant facilities.

The Housatonic River reach that is bypassed by the Project (measured from the gatehouse to the tailrace channel) is about 2,500 feet long. The Project Owner's Application for Subsequent License proposes significant modifications to the existing hydroelectric facility. General and detailed Project location maps are attached to this Certification as "Attachment A". The proposed Project will include a new 165kW turbine unit in the waste gate slot located at the gatehouse adjacent to the dam. This unit would operate off of a proposed minimum bypassed reach flow of 90 cubic feet per second (cfs) or inflow. The Project will continue to be operated in a run-of-river mode using automatic pond level control. The Project boundary circumscribes the Project's impoundment at elevation 814.9 ft NGVD, or 4.0 ft above the normal pond elevation of 810.9 ft NGVD, corresponding to the extent of the Project Owner's flowage rights. The Project boundary in the vicinity of the Project works follows the Project Owner's existing property lines.

IMPACTED RESOURCES

The Housatonic River originates approximately thirty miles upstream of the Project at the confluence of the West and Southwest Branches of the Housatonic River in Pittsfield. The West Branch Housatonic River originates at the outlet of Pontoosuc Lake in Lanesborough and Pittsfield. The Southwest Branch originates from Richmond Pond in the town of Richmond. The East Branch Housatonic River, which originates from Muddy Pond in the town of Washington, soon joins the main stem Housatonic River. From Pittsfield, the river flows south for 150 miles (approximately 54 river miles in Massachusetts) until it empties into Long Island Sound near Bridgeport, CT.

The Housatonic River is undergoing a process of restoration. MassDEP and the United States Environmental Protection Agency are working with local communities to address ongoing water quality issues at wastewater treatment facilities. The General Electric Corporation has begun an active program to remediate longstanding polychlorinated biphenyl (PCB) contamination issues in the Pittsfield area. Recreational activities in and around the Housatonic River continue to grow in popularity. A new catch and release fishing area created by the Massachusetts Division of Fisheries & Wildlife (MADFW), with brown trout as the target species, includes the Project bypass reach. While the Housatonic River in this reach is classified by MassDEP as a Warm Water Fishery, MADFW has evidence that brown trout do persist through the summer months in these reaches. Additionally, at least fifteen species of fish have been collected from the project impoundment in the recent past, including smallmouth bass, white sucker, yellow perch, pumpkinseed, and shiners. Downstream from the project tailrace many of those same species have been collected, as well as dace and brown trout. At this time, there are no anadromous fish species present within the vicinity of the Project. However, there is an active migratory fish restoration program on the Housatonic River in Connecticut.

Fishery resource agencies are actively involved in diadromous restoration efforts within the watershed. These efforts are based on management goals contained in the following published fishery plans:

1. Interstate Fishery Management Plan for American Eel. April 2000. Atlantic States Marine Fisheries Commission.
2. Fishery Management Plan for the American Shad and River Herring. 1985 (amended in 1998). Atlantic States Marine Fisheries Commission.
3. Diadromous Fisheries Plan for the Upper Housatonic River Basin. 2000. Connecticut Department of Environmental Protection.

These plans call for improved fish passage and other measures to enhance populations of migratory fish. Accomplishing the stated fishery management goals requires providing fish passage using methods such as the installation of fishways along the Housatonic River.

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According to the Connecticut Department of Environmental Protection's (CT DEP) Diadromous Fisheries Plan for the Upper Housatonic River Basin (2000), the Housatonic River from Derby Dam in the towns of Derby and Shelton, CT, upstream to the base of Bulls Bridge Dam in the Town of Kent, CT, has been targeted for anadromous fish restoration. The catadromous American eel will be restored up to the base of the Falls Village Dam in the towns of Salisbury and Canaan, CT. The new license issued for the Housatonic River Project (FERC No. 2576) requires fish passage facilities at the Stevenson, Shepaug, and Bulls Bridge dams.

Presently there are no plans to restore anadromous fish to the Massachusetts portion of the Housatonic River. However, once the CT DEP's restoration plan is fully implemented, American eel would have access to the base of the Risingdale Dam (FERC No. 12528) in Great Barrington, Massachusetts. Although no upstream eel passage facilities are required at the Housatonic River Project's Falls Village facility, it is assumed eels will be able to ascend the Great Falls at the Falls Village Dam. Therefore, passage would only need to be provided at the downstream Risingdale dam before eel have access up to the Glendale Project. Therefore, there is a possibility that passage for American eel will be required at this Project before the term of the proposed new license expires.

Upstream passage for eels is fairly well understood, and is relatively inexpensive compared to other upstream fishways. Downstream passage needs for eels are less well understood. Research is ongoing to determine the types of bypass measures that are most effective for upstream eel passage. At some sites a traditional surface bypass may suffice, while at others, temporary station shut-downs may be the only means to ensure safe passage of out-migrating adult eels.

APPLICABLE LAW

The Massachusetts Clean Waters Act (State Act), G.L. c.21, §§ 26-53, delegates responsibility for enhancing the quality and value of water resources within the Commonwealth to MassDEP. The State Act directs MassDEP to take all action necessary or appropriate to secure to the Commonwealth the benefits of the Federal Clean Water Act, 33 U.S.C. §§1251-1387 (Federal Act). The main objectives of the Federal Act are to restore and maintain the chemical, physical and biological integrity of the nation's waters. To meet these objectives, MassDEP adopted the Massachusetts Surface Water Quality Standards, 314 CMR 4.00. The Standards classify each body of water within the Commonwealth; designate the most sensitive uses to be enhanced, maintained and protected for each class; prescribe minimum water quality criteria required to sustain the designated uses; and contain regulations necessary to achieve the designated uses and maintain existing water quality including, where appropriate, the prohibition of discharges into waters of the Commonwealth.

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314 CMR 4.06 (5), Figure 2 and Table 2 classify the Housatonic River as a Class B water for its entire length in Massachusetts. All Class B waters are designated as habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation (314 CMR 4.05(3)(b)). Class B waters shall also be suitable for irrigation and other agricultural uses, and for compatible industrial cooling and process uses. Class B waters must also consistently exhibit good aesthetic quality (314 CMR 4.05(3)(b)). The minimum criteria applicable to Class B waters are listed within 314 CMR 4.05(3)(b). Additional minimum criteria applicable to all surface waters are listed within 314 CMR 4.05(5). The Antidegradation provisions of 314 CMR 4.04 at minimum require protection of all existing and designated uses of water bodies, and maintenance of the level of water quality needed to protect those uses.

CERTIFICATION PROVISIONS

1. MassDEP APPROVES the application of Littleville Power Company, Inc. and CERTIFIES that there is reasonable assurance that Glendale Hydroelectric Project, as described above and subject to the conditions below, can be operated in compliance with the applicable provisions of §303 of the Federal Act, 33 U.S.C. § 1313.
2. This Water Quality Certification shall become a condition on the FERC License issued to the Project Owner.
3. This Certification shall become effective on the date that the license issued for the Project by FERC becomes effective.
4. The state and federal resource agencies referred to in this Certification include the MassDEP, the Massachusetts Department of Fisheries and Wildlife (MADFW), and the U.S. Department of the Interior, Fish and Wildlife Service (USFWS).
5. The Project shall be operated by the Project Owner in accordance with the conditions contained in this Certification and the information included in the FERC application dated October 2007. Any modifications made to the FERC application during the initial licensing process that would have a significant or material effect on the conclusions or conditions contained in this Certification, as determined by MassDEP, must be submitted to MassDEP for prior review and approval.
6. The Project shall be operated to maintain the existing and designated uses of the Housatonic River as outlined in the Standards at 314 CMR 4.00, and to maintain an integrated and diverse biological community within the Housatonic River.

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7. The Project Owner shall obtain and 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.

8. All activities shall be conducted in compliance with the Massachusetts Wetlands Protection Act, including the Rivers Protection Act, G.L. Chapter 131, Section 40, and the implementing regulations at 310 CMR 10.00. A Water Quality Certification shall be obtained from MassDEP prior to initiating any activity that will cause a discharge subject to §404 of the federal Act, 33 U.S.C., §1344. The Project Owner shall comply with all applicable provisions of the Public Waterfront Act, G.L. c. 91, and the implementing regulations at 310 CMR 9.00.

9. Prior to beginning any construction on the Project, the Project Owner shall submit a plan to monitor and control erosion during construction activities to keep impacted waters free from turbidity in concentrations that are aesthetically objectionable or would impair any designated use(s) of such waters. The Project Owner shall implement the plan as approved by MassDEP.

10. All construction, maintenance and repair activities, including disposal of debris and removal of sediments in impounded areas, shall be conducted in a manner so as not to impair water quality, and pursuant to and in compliance with any required approvals.

11. Any proposed change to the Project that MassDEP determines would have a significant or material effect on the findings, conclusions, or conditions of this Certification, including Project operation, shall be submitted to MassDEP for prior review and approval.

12. MassDEP may request, at any time during which this Certification is in effect, that FERC reopen the license to make modifications MassDEP deems necessary to maintain compliance with the Standards at 314 CMR 4.00, or other appropriate requirements of state law.

13. MassDEP reserves the right to add and alter the terms and conditions of this Certification when authorized by law, and as it deems appropriate to carry out its responsibilities during the life of the Project with respect to water quality and the protection of the existing and designated uses of the waters of the Commonwealth.

14. The Project Owner shall operate the project in a run-of-river mode such that inflow to the project equals outflow from the project on an instantaneous basis and fluctuations of the head pond water level are minimized. This operating regime may be temporarily modified by approved maintenance activities, agreement between the Project Owner and appropriate state and/or federal resource agencies, or by extreme hydrologic conditions or emergency electrical system conditions, as these terms are defined below.

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15. The Project Owner shall release to the project bypass reach a continuous minimum flow of 90 cfs, or inflow, if less, for the protection and enhancement of fish and aquatic life habitat. Minimum flows may be temporarily modified by approved maintenance activities, by agreement between the Project Owner and appropriate state and federal resource agencies, or by extreme hydrologic conditions or emergency electrical system conditions, as these terms are defined below.

16. "Extreme Hydrologic Conditions" signifies the occurrence of events beyond the Project Owner's control including without limitation, abnormal precipitation, extreme runoff, flood conditions, ice conditions or other hydrologic conditions which render the operational restrictions and requirements contained within this Certification impossible to achieve, or are inconsistent with the safe operation of the Project.

17. "Emergency Electrical System Conditions" signifies operating emergencies beyond the Project Owner's control which require changes in flow regimes to eliminate such emergencies including without limitation, equipment failure or other abnormal temporary operating condition, 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.

18. During refilling of the project reservoir after dam maintenance or emergency drawdown, the Project Owner shall operate the project such that 90% of inflow to the project is released below the project and the impoundment is refilled on the remaining 10% of inflow.

19. Within three months of completion of turbine installation at the dam, or upon such other schedule established by FERC, the Project Owner shall, submit a plan for monitoring run-of-river operation and flow releases from the Project to MassDEP for approval. The plan shall include: a description and design of the mechanisms and structures that will be used; a description of periodic maintenance and/or calibration that will be conducted to ensure these mechanisms and structures work properly; a description of the method used to record project operation data for verification of proper operations and minimum flow releases; and a description of the manner in which data will be maintained for inspection by MassDEP and the state and federal resource agencies. The Project Owner shall consult with the state and federal resource agencies in developing these plans, shall respond to all agency comments, and shall include agency comment letters when submitting the plans to MassDEP for approval. The Project Owner shall provide the state and federal resource agencies with at least thirty days to respond to a draft plan before it is submitted to MassDEP for approval. The Project Owner shall implement the plan as approved by MassDEP.

20. Within six months of the effective date of this Certification, or upon such other schedule established by FERC, the Project Owner shall submit to MassDEP for approval, an Invasive Species Control Plan (ISCP). The plan shall include a schedule for regularly monitoring invasive species within the project area, including without limitation zebra mussel and water chestnut. The plan shall also identify methods used to control selected

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species. The Project Owner shall consult with the state and federal resource agencies and in developing the ISCP, shall respond to all agency comments, and shall include agency comment letters when submitting the plan to MassDEP for approval. The Project Owner shall provide the resource agencies with at least thirty days to respond to a draft plan before submission to MassDEP for approval. The Project Owner shall implement the plan as approved by MassDEP.

21. Within one year of the effective date of this Certification, or upon such other schedule established by FERC, the Project Owner shall install full-depth, one inch clear trash racks with velocities less than or equal to two feet per second (≤ 2 fps) at the intakes to the main and minimum flow units to reduce impingement and entrainment of fish at the Project.

22. The Project Owner shall, in a manner approved by MassDEP after consultation with the state and federal resource agencies, design, construct, operate, and maintain upstream eel passage facilities within one year of the installation of upstream eel passage facilities at the Risingdale Dam downstream of the Project. Six months prior to initiating operation of these facilities, the Project Owner shall, after consultation with the state and federal resource agencies, submit to MassDEP for approval an American eel passage effectiveness monitoring plan. The Project Owner shall implement the plan as approved by MassDEP. The schedule and other requirements of this condition may be amended with the mutual written agreement of the Project Owner and MassDEP.

23. Within one year of the installation of upstream eel passage facilities, the Project Owner shall submit to MassDEP for approval, a plan for providing safe downstream passage for American eels. The Project Owner shall implement the plan as approved by MassDEP.

24. The Project Owner shall, in a manner approved by MassDEP after consultation with the state and federal resource agencies, design, construct, operate, and maintain upstream and downstream anadromous fish passage facilities within one year of the installation of upstream and downstream anadromous fish passage facilities at the Risingdale Dam. Six months prior to initiating operation of these facilities, the Project Owner shall, after consultation with the state and federal resource agencies, submit to MassDEP for approval an upstream and downstream anadromous fish passage effectiveness monitoring plan. The Project Owner shall implement the plan as approved by MassDEP. The schedule and other requirements of this condition may be amended with the mutual written agreement of the Project Owner and MassDEP.

25. The Project Owner shall allow any employee, agent, consultant, contractor or authorized representative of MassDEP or MADFW to enter the facilities in order to assess compliance with the terms and conditions of this Certification including, but not limited to, entry for the purposes of: (i) investigating, sampling, inspecting, or photocopying documents or other writings, conditions, equipment, practices or property; (ii) interviewing facility personnel and contractors; (iii) making records of field activities;

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and (iv) observing any activities undertaken at the facilities under any of the provisions of this Certification.

26. If any event occurs which delays or will delay the Project Owner's performance of work beyond a deadline established by or pursuant to this Certification, which event was beyond the reasonable control and without the fault of the Project Owner or any person or entity subject to the Project Owner's control, and which event could not have been prevented or avoided by the exercise of due care, foresight, or due diligence on the part of the Project Owner (a "force majeure event"), then the time for performance shall be extended for an appropriate period of time, as determined by MassDEP in its sole discretion. The Project Owner shall bear the burden of demonstrating that a force majeure event has occurred or will occur, and that the delay was beyond the reasonable control and without the fault of the Project Owner. Such an extension of time must be in writing to have effect.

27. Submissions under this Certification shall be sent to:

MassDEP: Massachusetts Department of Environmental Protection
Division of Watershed Management
Central Regional Office
627 Main Street
Worcester, MA 01608
(508) 767-2854; FAX (508) 791-4131

Massachusetts Department of Environmental Protection
Bureau of Resource Protection
Western Regional Office
436 Dwight Street
Springfield, MA 01103
(413) 755-2138; FAX (413) 784-1149

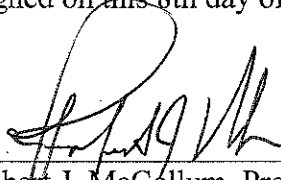
MADFW: Massachusetts Division of Fisheries and Wildlife
Field Headquarters
Assistant Director of Fisheries
1 Rabbit Hill Road
Westborough, MA 01581
(508) 389-6331; FAX (508) 389-7890

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USFWS: United States Fish and Wildlife Service
New England Field Office
Attention: Supervisor
70 Commercial Street, Suite 300
Concord, NH 03301-5087
(603) 223-2541; FAX (603) 223-0104

Signed on this 8th day of July, 2009.



7/8/09

Robert J. McCollum, Program Chief
Wetlands & Waterways
MassDEP Western Regional Office