

DE13-109

**ASHUELOT RIVER HYDRO, INC.**

42 Hurricane Road  
Keene, NH 03431  
(603) 352-3444  
bking@gaw.com

April 11, 2013

Ms. Debra A. Howland  
Executive Director  
New Hampshire Public Utilities Commission  
21 South Fruit Street, Suite 10  
Concord, NH 03301-2429



RE: Minnewawa Hydroelectric Project, FERC License No. 7887  
Application for New Hampshire RPS Class IV, Small Hydro

Dear Director:

Please find enclosed an original and two copies of our application for NH Class IV Renewable Portfolio Standard for the Minnewawa Hydroelectric Project. We have also made this submittal electronically.

We look forward to any questions by phone or email (contact information above).

Kind regards,

A handwritten signature in black ink, appearing to read "Bob King".

Bob King, PE, President

027121210



# State of New Hampshire Public Utilities Commission

21 S. Fruit Street, Suite 10, Concord, NH 03301-2429



## APPLICATION FORM FOR RENEWABLE ENERGY SOURCE ELIGIBILITY FOR CLASS IV

### HYDRO SOURCES WITH A TOTAL NAMEPLATE CAPACITY OF ONE MEGAWATT OR LESS

Pursuant to New Hampshire Administrative Code [Puc 2500](#) Rules, Puc 2505.02 Application Requirements  
Laws of 2012, Chapter 0272

- Please submit one (1) original and two (2) paper copies of the completed application and cover letter to:

Debra A. Howland  
Executive Director  
New Hampshire Public Utilities Commission  
21 South Fruit Street, Suite 10  
Concord, NH 03301-2429

- Send an electronic version of the completed application and the cover letter electronically to [executive.director@puc.nh.gov](mailto:executive.director@puc.nh.gov).

The cover letter must include complete contact information and clearly state that the applicant is seeking certification as a Class IV source. Pursuant to Chapter 362-F:11 I, the Commission is required to render a decision on an application within 45 days upon receiving a completed application.

If you have any questions please contact Barbara Bernstein at (603)271-6011 or [Barbara.Bernstein@puc.nh.gov](mailto:Barbara.Bernstein@puc.nh.gov).

Please provide the following:

1. Applicant Name: Ashuelot River Hydro, Inc.

Mailing Address: 42 Hurricane Road

Town/City: Keene State: NH Zip Code: 03431

Primary Contact: Robert E. King

Telephone: 603 352 3444 Cell: 603 903 5348

Email address: bking@gaw.com

2. Facility Name: Minnewawa Hydroelectric Project

(physical address) 39 Roxbury Road

Town/City: Marlborough State: NH Zip Code: 03455

If the facility does not have a physical address, the Latitude \_\_\_\_\_ & Longitude \_\_\_\_\_

**(To qualify the electrical production for RECs, the facility must be registered with the NEPOOL – GIS).**

3. The facility's ISO-New England asset identification number, if available. MSS 794

4. The facility's GIS facility code, if available. MSS 794

5. A description of the facility including the following:

5.a. The gross nameplate capacity 1000 KW

5.b. The facility's initial commercial operation date 1992

5.c. The date the facility began operation, if different than the operation date \_\_\_\_\_

5.d. A complete description of the facility **including location, structures and equipment.**

This small hydro facility consists of one Bouvier francis turbine and a Louis Allis generator of 938 kw actual capacity, installed at a power plant which had been abandoned in 1968 and rebuilt in 1991-2. The plant receives water from a 5750 foot long penstock and a dam located on the Minnewawa Brook in the Town of Marlborough, County of Cheshire, New Hampshire.

6. A copy of all necessary state and federal (FERC) regulatory approvals as **Attachment A.**

7. A copy of the title page of the Interconnection Agreement between the applicant and the distribution utility, the page(s) that identifies the nameplate capacity of the facility and the signature pages. *Please provide this information as **Attachment B.***

8. Pursuant to 2505.01(c), no generation facility shall be eligible to acquire new certificates under this Chapter while selling its electrical output at long-term rates established before January 1, 2007. Please provide a copy of the facility's long-term rate agreement as **Attachment C.**

There is no Rate Order applying to this project.

9. A description of how the generation facility is connected to the distribution utility.

There is a padmount transformer and a short transmission line connecting the station to PSNH at 12,470 volts. There is a three phase vacuum recloser between the transformer and PSNH's pole.

10. A statement as to whether the facility has been certified under another non-federal jurisdiction's renewable portfolio standard and proof thereof. *Provide documentation as **Attachment D.***

The facility is certified as both Maine and Connecticut Class II renewable. See Attachment D, page 2.

10. A statement as to whether the facility's output has been verified by ISO-New England.

The facility has been connected to the grid since 1992 and has been registered with the NEPOOL GIS and the ISO for many years. See Attachment D, page 1.

11. An affidavit by the applicant attesting that the contents of the application are accurate. *Use either the Affidavit at the bottom of this page, or provide a separate document as **Attachment E**.*

12. The name and telephone number of the facility's operator, **if different from the owner**.

Facility Operator Name: \_\_\_\_\_

Phone: \_\_\_\_\_

13. Other pertinent information that you wish to include to assist in classification of the facility provide as **Attachment F**.

CHECK LIST: The following has been included to complete the application:	YES
• All contact information requested in the application.	Yes
• A copy of all necessary state and federal (FERC) regulatory approvals as <b>Attachment A</b> .	yes
• A copy of the title page of the Interconnection Agreement between the applicant and the distribution utility, the page(s) that identifies the nameplate capacity of the facility and the signature pages as <b>Attachment B</b> .	yes
• A copy of provide a copy of the facility's long-term rate agreement as <b>Attachment C</b>	n/a
• . <b>If applicable</b> , documentation of the hydro facility's certification(s) in other non-federal jurisdiction's renewable portfolio standard program(s) as <b>Attachment D</b> .	yes
• A signed and notarized attestation or <b>Attachment E</b> .	yes
• A GIS number has been provided or has been requested.	yes
• Other pertinent information has been provided (if necessary) as <b>Attachment F</b> .	n/a
• This document has been printed and notarized.	yes
• The original and two copies are included in the packet mailed to Debra Howland, Executive Director of the PUC.	yes
• An electronic version of the completed application has been sent to <a href="mailto:executive.director@puc.nh.gov">executive.director@puc.nh.gov</a> .	yes

**AFFIDAVIT**

The Undersigned applicant declares under penalty of perjury that contents of this application are accurate.

Applicant's Signature [Signature] Date April 11, 2013  
 Printed Name Robert E. King, Pres., Ashuelot River Hydro

Subscribed and sworn before me this 11 Day of April (month) in the year 2013

County of Cheshire State of New Hampshire

Tracie J. Lavettue  
 Notary Public/Justice of the Peace

My Commission Expires August 8, 2017



Attachment A

MINNEWAWA

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

ESI Hydropower Company, Inc. Project No. 7887-001

ORDER ISSUING LICENSE  
(Minor Project)

(Issued July 14, 1986)  
ESI Hydropower Company, Inc. has filed a license application under Part I of the Federal Power Act (Act) to construct, operate, and maintain the Minnewawa Project, located in Cheshire County, New Hampshire, on the Minnewawa Brook. The project would affect the interests of interstate or foreign commerce.

Notice of the application has been published. No protests or motions to intervene were filed in this proceeding, and no agency objected to issuance of this license. Comments received from interested agencies and individuals have been fully considered in determining whether to issue this license, as discussed below.

Summary of Findings

An Environmental Assessment (EA) was issued for this project. Background information, analysis of impacts, support for related license articles, and the basis for a finding of no significant impact on the environment are contained in the EA attached to this order. Issuance of this license is not a major federal action significantly affecting the quality of the human environment.

The design of this project is consistent with the engineering standards governing dam safety. The project will be safe if constructed, operated, and maintained in accordance with the requirements of this license. Analysis of related issues is provided in the Safety and Design Assessment attached to this order.

The Director, Office of Hydropower Licensing, concludes that the project would not conflict with any planned or authorized development, and would be best adapted to comprehensive development of the waterway for beneficial public uses.

The Director orders:

(A) This license is issued to ESI Hydropower Company, Inc. (licensee), for a period of 40 years, effective the first day of the month in which this order is issued, to construct, operate, and maintain the Minnewawa Project. This license is subject to

the terms and conditions of the Act, which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the Act.

(B) The project consists of:

(1) All lands, to the extent of the licensee's interests in those lands, enclosed by the project boundary shown by Exhibit G:

Exhibit G	FERC No. 7887-	Showing
G-1	3	Project Boundary and Location Map
G-2	4	Proposed Penstock Route and Location Map
G-3	5	Location Map of Project Powerhouse

(2) Project works consisting of: (a) the Minnewawa Dam, a concrete structure 60 feet high and 200 feet long; (b) an impoundment with a surface area of 10 acres, a storage capacity of 120 acre-feet, and a normal water surface elevation of 1,070.2 feet NGVD; (c) a 42-inch-diameter wood stave penstock on trestles and piers, 5,776 feet long; (d) a powerhouse containing one generating unit having a capacity of 938 kW; (e) a tailrace; (f) a transmission line 100 feet long; and (g) appurtenant facilities.

The project works generally described above are more specifically shown and described by those portions of Exhibits A and F recommended for approval in the attached Safety and Design Assessment.

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

(C) The Exhibit G described above and those sections of Exhibits A and F recommended for approval in the attached Safety and Design Assessment are approved and made part of the license.

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

4(b), except the second sentence; 4(e), insofar as it relates to approval of plans by the Chief of Engineers and the Secretary of the Army; 6, insofar as it relates to public notice and to the acceptance and expression in the

license of terms and conditions of the Act that are waived here; 10(c), insofar as it relates to depreciation reserves; 10(d); 10(f); 14, except insofar as the power of condemnation is reserved; 15; 16; 19; 20; and 22.

(E) This license is subject to the articles set forth in Form L-15, (October 1975), entitled "Terms and Conditions of License for Unconstructed Minor Project Affecting the Interests of Interstate or Foreign Commerce," except Article 15. The license is also subject to the following additional articles:

Article 201. The licensee shall pay the United States the following annual charge, effective the first day of the month in which this license is issued:

For the purpose of reimbursing the United States for the cost of administration of Part I of the Act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 1250 horsepower.

Article 202. The licensee shall clear and keep clear to an adequate width all lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which result from maintenance, operation, or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. All clearing of lands and disposal of unnecessary material shall be done with due diligence to the satisfaction of the authorized representative of the Commission and in accordance with appropriate federal, state, and local statutes and regulations.

Article 301. The licensee shall commence construction of project works within two years from the issuance date of the license and shall complete construction of the project within four years from the issuance date of the license.

Article 302. The licensee shall at least 60 days prior to start of construction, submit one copy to the Commission's Regional Director and two copies to the Director, Division of Inspections, of the final contract drawings and specifications for pertinent features of the project, such as water retention structures, powerhouse, and water conveyance structures. The Director, Division of Inspections, may require changes in the plans and specifications to assure a safe and adequate project.

Article 303. The licensee shall review and approve the design of contractor-designed cofferdams and deep excavations prior to the start of construction and shall ensure that construction of cofferdam and deep excavations is consistent with the approved design. At least 30 days prior to start of construction of the cofferdam, the licensee shall submit to the Commission's Regional Director and Director, Division of Inspections, one copy each of the approved cofferdam construction drawings and specifications and the letter(s) of approval.

Article 304. The licensee shall within 90 days of completion of construction file, for approval by the Commission, revised Exhibits A, F, and G to describe and show the project as built.

Article 305. The licensee shall within six months from the issue date of the license submit to the Director, Office of Hydropower Licensing, for approval, stability and stress analyses of the Minnewawa dam. The report must be approved prior to the start of construction. The stability and stress analyses shall analyze the effects of floods on the arch structure and foundation, up to and including the PMP. The response of the arch to ice loads and the effects of temperature changes on the arch shall be included in the stability and stress analyses.

Article 401. The licensee shall operate the Minnewawa Project in an instantaneous run-of-river mode for the protection of fish and wildlife resources in Minnewawa Brook. The licensee, in operating the project in an instantaneous run-of-river mode, shall at all times act to minimize the fluctuation of the reservoir surface elevation, by maintaining a sufficient discharge from the project so that flow in Minnewawa Brook, as measured immediately downstream from the project tailrace, approximates the instantaneous sum of the inflow to the project reservoir. Instantaneous run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the licensee and for short periods upon mutual agreement between the licensee and the New Hampshire Fish and Game Department.

Article 402. The licensee shall maintain in Minnewawa Brook a continuous minimum flow of 4 cubic feet per second, as measured immediately downstream from the Minnewawa Dam or inflow to the reservoir, whichever is less, for the protection of fish and wildlife resources in the bypassed reach of Minnewawa Brook. This flow may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement between the licensee and the New Hampshire Fish and Game Department.

Article 403. The licensee, prior to any future construction at the project, shall consult with the New Hampshire State Historic Preservation Officer (SHPO) about the need for a cultural resource

survey and for salvage work. Documentation of the nature and extent of consultation, including a cultural resources management plan and a schedule to conduct any necessary investigation prior to such construction, and copies of letters from the SHPO accepting the plan, shall be filed with the Commission within 6 months of any construction activity in the location of such investigations. The licensee shall make available funds in a reasonable amount for any such work as required. If any previously unrecorded archeological or historic sites are discovered during the course of construction or development of any project works or other facilities at the project, the licensee shall stop construction activity in the vicinity of such archeological or historical sites and consult with the SHPO and a qualified archeologist to determine the significance of the sites, and the licensee shall consult with the SHPO to develop a mitigative plan for the protection of significant archeological or historic resources. If the licensee and the SHPO cannot agree on the amount of money to be expended on archeological or historical work related to the project, the Commission reserves the right to require the licensee to conduct, at its own expense, any such work found necessary.

Article 404. The licensee, after consultation with the Soil Conservation Service and the New Hampshire Fish and Game Department, shall prepare and file with the Commission, within 1 year from the date of issuance of this license, a plan to control erosion and to minimize the quantity of sediment or other potential water pollutants resulting from project construction and operation. The plan shall include descriptions, and topographic map locations of control measures, an implementation schedule, monitoring and maintenance programs for project construction and operation, and provisions for periodic review of the plan and for making any necessary revisions to the plan. The licensee shall include in the filing documentation of agency consultation on the plan, and copies of agency comments or recommendations. If the licensee disagrees with any agency recommendations, the licensee shall provide a discussion of the reasons for disagreeing. The Commission reserves the right to require changes to the plan. Unless the Director, Office of Hydropower Licensing, directs otherwise, the licensee may commence ground-disturbing activities at the project 90 days after filing this plan.

Article 405. (a) In accordance with the provisions of this article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain other types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee shall also have continuing responsibility to supervise and control

the uses and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, cancelling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The types of use and occupancy of project lands and waters for which the licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 water craft at a time and where said facility is intended to serve single-family type dwellings; and (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the uses and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of its standard guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

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

(d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certificates or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from the edge of the project reservoir at normal maximum surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 45 days before conveying any interest in project lands under this paragraph (d), the licensee must submit a letter to the Director, Office of Hydropower Licensing, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked Exhibit G or K map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraphs (c) or (d) of this article:

(1) Before conveying the interest, the licensee shall consult with federal and state fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer.

(2) Before conveying the interest, the licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved Exhibit R or approved report on recreational resources of an Exhibit E; or, if the project does not have an approved Exhibit R or approved report on recreational resources, that the lands to be conveyed do not have recreational value.

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

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

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

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

(f) This order is issued under authority delegated to the Director and is final unless appealed under Rule 1902 to the Commission by any party within 30 days from the issuance date of this order. Filing an appeal does not stay the effective date of this order or any date specified in this order. The licensee's failure to appeal this order shall constitute acceptance of the license.

*Richard T. Hunt*

Richard T. Hunt  
Director, Office of  
Hydropower Licensing

ENVIRONMENTAL ASSESSMENT 1/  
DIVISION OF ENVIRONMENTAL ANALYSIS, OFFICE OF HYDROPOWER LICENSING  
FEDERAL ENERGY REGULATORY COMMISSION

Date: 5/30/86

Project name: Minnewawa FERC No. 7887 - 001

A. APPLICATION

1. Application type: Minor license Date filed: 3 / 16 / 84

2. Applicant: ESI Hydropower Co., Inc.

3. Water body: Minnewawa Brook River basin: Ashuelot

4. Nearest city or town: Marlborough

5. County: Cheshire State: New Hampshire

B. RESOURCE DEVELOPMENT

1. Purpose: The proposed project would provide an estimated average of 2,950,000 kilowatt hours (kWh) of electrical energy per year to the Public Service Company of New Hampshire.

2. Need for power: The project could provide a small portion of projected resource requirements for the New England Power Pool (NEPOOL) area. The staff's economic analyses show that benefits are possible through installation of the project. The staff finds a need for the project. From the time the project becomes operational until it is needed to serve load directly, the proposed project would be available to lessen the use of existing fossil-fueled, electric-generating plants located in the NEPOOL and adjacent areas. Its generation could conserve nonrenewable resources, reduce the emission of noxious byproducts caused by the combustion of fossil fuels and produce economic benefits.

3. Hydroelectric power and resource utilization: The staff has studied the hydro-power potential of Minnewawa Brook at the proposed site. The study considered the existing topography and available streamflow and analyzed the project's hydraulic capacity, turbine type, installed capacity, estimated annual generation, cost estimate, and economics.

The project, as proposed, fully utilizes the site for hydropower purposes. The project would use a single, horizontal Francis turbine, which would utilize river flow ranging from approximately 20 to 50 cubic feet per second (cfs). The turbine would operate under an estimated average head of 263 feet. The choice of turbine is appropriate for the site with respect to the available head and flow.

The plant would operate in an inflow equal to the outflow from the project mode (run-of-river) and would utilize about 14,500 acre-feet of water annually to generate electricity. About 2,900 acre-feet would be released at the dam to provide a minimum flow in the bypassed reach of Minnewawa Brook. The flows in the river exceeds the sum of the minimum flow requirements and the hydraulic capacity no more than 21 percent of the time .

The turbine would be connected to a 938 kilowatt (kW) generator. The applicant has estimated that 2,950,000 kWh would be generated annually. Staff studies show that the estimated average energy generation is reasonable for the available flow, minimum flow releases, and head at the site.

1/ Figures and attachments referenced in the text are omitted from this document due to reproduction requirements.

FEDERAL POWER COMMISSION

TERMS AND CONDITIONS OF LICENSE FOR UNCONSTRUCTED  
MINOR PROJECT AFFECTING THE INTERESTS OF  
INTERSTATE OR FOREIGN COMMERCE

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

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

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

made without the prior approval of the Commission, which in its judgment have produced or will produce any of such results, shall be subject to such alteration as the Commission may direct.

Upon the completion of the project, or at such other time as the Commission may direct, the Licensee shall submit to the Commission for approval revised exhibits insofar as necessary to show any divergence from or variations in the project area and project boundary as finally located or in the project works as actually constructed when compared with the area and boundary shown and the works described in the license or in the exhibits approved by the Commission, together with a statement in writing setting forth the reasons which in the opinion of the Licensee necessitated or justified variation in or divergence from the approved exhibits. Such revised exhibits shall, if and when approved by the Commission, be made a part of the license under the provisions of Article 2 hereof.

Article 4. The construction, operation, and maintenance of the project and any work incidental to additions or alterations shall be subject to the inspection and supervision of the Regional Engineer, Federal Power Commission, in the region wherein the project is located, or of such other officer or agent as the Commission may designate, who shall be the authorized representative of the Commission for such purposes. The Licensee shall cooperate fully with said representative and shall furnish him a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of the project and for any subsequent alterations to the project. Construction of the project works or any feature or alteration thereof shall not be initiated until the program of inspection for the project works or any such feature thereof has been approved by said representative. The Licensee shall also furnish to said representative such further information as he may require concerning the construction, operation, and maintenance of the project, and of any alteration thereof, and shall notify him of the date upon which work will begin, as far in advance thereof as said representative may reasonably specify, and shall notify him promptly in writing of any suspension of work for a period of more than one week, and of its resumption and completion. The Licensee shall allow said representative and other

officers or employees of the United States, showing proper credentials, free and unrestricted access to, through, and across the project lands and project works in the performance of their official duties. The Licensee shall comply with such rules and regulations of general or special applicability as the Commission may prescribe from time to time for the protection of life, health, or property.

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

Article 6. The Licensee shall install and thereafter maintain gages and stream-gaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative.

The Commission reserves the right, after notice and opportunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may be mutually agreed upon. The Licensee shall keep accurate and sufficient records of the foregoing determinations to the satisfaction of the Commission, and shall make return of such records annually at such time and in such form as the Commission may prescribe.

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

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

Article 9. The operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be controlled by such reasonable rules and regulations as the Commission may prescribe for the protection of life, health, and property, and in the interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes, and the Licensee shall release water from the project reservoir at such rate in cubic feet per second, or such volume in acre-feet per specified period of time, as the Commission may prescribe for the purposes hereinbefore mentioned.

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

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

Article 12. Whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the Licensee shall

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

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

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

Article 15. The Licensee shall consult with the appropriate State and Federal agencies and, within one year of the date of issuance of this license, shall submit for Commission approval a plan for clearing the reservoir area. Further, the Licensee shall clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition,

all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. Upon approval of the clearing plan all clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

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

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

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

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142 FERC ¶ 62,220  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Marlborough Hydro Associates  
Ashuelot River Hydro, Inc.

Project No. 7887-017

ORDER APPROVING TRANSFER OF LICENSE

(Issued March 18, 2013)

1. By application filed January 9, 2013, Marlborough Hydro Associates (transferor) and Ashuelot River Hydro, Inc. (transferee) seek Commission approval to transfer the license for the Minnewawa Hydroelectric Project, FERC No. 7887, from the transferor to the transferee. The project is located on the Minnewawa Brook in Cheshire County, New Hampshire.
2. The Commission issued a 40-year license to ESI Hydropower Company, Inc. on July 14, 1986.<sup>1</sup> By order issued October 20, 1987,<sup>2</sup> the Commission approved a transfer of license from ESI Hydropower Company, Inc. to Minnewawa Hydro Company, Inc. By order issued March 5, 1991,<sup>3</sup> the Commission approved the transfer of the license from Minnewawa Hydro Company, Inc. to Marlborough Hydro Corporation. By order issued December 24, 1991,<sup>4</sup> the Commission approved the transfer of the license from Marlborough Hydro Corporation to Marlborough Hydro Associates.
3. Public notice of the application for transfer of license was issued on March 1, 2013, with a due date of 15 days from the issuance date of the notice, by the Commission, as the deadline for filing comments and motions to intervene. No comments or motions to intervene were filed.
4. Transferee has agreed to accept all of the terms and conditions of the license and to be bound by the license as if it were the original licensee.

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<sup>1</sup> 36 FERC ¶ 62,028 (1986).

<sup>2</sup> 41 FERC ¶ 62,060 (1987).

<sup>3</sup> 54 FERC ¶ 62,141 (1991)

<sup>4</sup> 57 FERC ¶ 62,238 (1991).

Project No. 7887-017

- 2 -

5. Transferor has generally complied with the terms and conditions of the license and agrees to pay annual charges that have accrued to the date of the transfer. Transferee will be required to comply with the requirements of the license as though it were the original licensee. Transfer of the license for this project is consistent with the Commission's regulations and is in the public interest.

The Director orders:

(A) Transfer of the license for the Minnewawa Hydroelectric Project, FERC No. 7887 from Marlborough Hydro Associates to Ashuelot River Hydro, Inc. is approved.

(B) Marlborough Hydro Associates shall pay all annual charges that accrue up to the effective date of the transfer.

(C) Approval of the transfer is contingent upon: (1) transfer of title of the properties under license, transfer of all project files including all dam safety related documents, and delivery of all license instruments to Ashuelot River Hydro, Inc. which shall be subject to the terms and conditions of the license as though it were the original licensee; and (2) Ashuelot River Hydro, Inc. acknowledging acceptance of this order and its terms and conditions by signing and returning the attached acceptance sheet. Within 60 days from the date of this order, the transferee shall submit certified copies of all instruments of conveyance and the signed acceptance sheet.

(D) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the FPA, 16 U.S.C. § 8251 (2006), and the Commission's regulations at 18 C.F.R. § 385.713 (2012). The filing of a request for rehearing does not operate as a stay of the effective date of this order, or of any other date specified in this order. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

Charles K. Cover, P.E.  
Chief, Project Review Branch  
Division of Hydropower Administration  
and Compliance

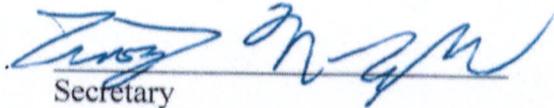
Project No. 7887-017

- 3 -

IN TESTIMONY of its acknowledgment of acceptance of all of the terms and conditions of this order, Ashuelot River Hydro, Inc. this 22nd day of March, 2013, has caused its corporate name to be signed hereto by Robert E. King, its President, and its corporate seal to be affixed hereto and attested by Timothy N. Taylor its Secretary, pursuant to a resolution of its Board of Directors duly adopted on the 22nd day of March, 2013, a certified copy of the record of which is attached hereto.

By 

Attest:

  
 Secretary  
 (Executed in triplicate)

\* No corporate seal.

ATTACHMENT D  
12/4/91

OPERATING AGREEMENT  
FOR PURPOSES OF WHEELING

AGREEMENT, dated October 30, 1991 by and between Marlboro Hydro Corp. (hereinafter referred to as INTERCONNECTOR), AND PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE, a New Hampshire Corporation having its principal place of business in Manchester, New Hampshire (hereinafter referred to as PSNH).

WHEREAS, INTERCONNECTOR desires to interconnect their 1000 KW Minnewawa Project hydroelectric generating facility (the "FACILITY"), located in Marlboro, New Hampshire, on Minnewawa Brook, with the electric system of PSNH in accordance with applicable New Hampshire Public Utilities Commission (the "NEPUC") Orders; and

WHEREAS, INTERCONNECTOR has made arrangements to sell the entire output of the FACILITY to Littleton Electric Light Dept. (LELD) in Littleton, Massachusetts; and

WHEREAS, PSNH is willing to wheel the entire output from the FACILITY across its electric system on a non-firm basis; and

WHEREAS, it is necessary that certain agreements be made prior to interconnection and the commencement of sales of electricity to insure the safety, reliability and integrity of PSNH's electric system;

NOW THEREFORE, the parties hereby agree as follows:

Article 1. Interconnection and Voltage Characteristics.

The interconnection point shall be that point at which the FACILITY interconnects with the 12.47 KV electric system at PSNH.

Unless PSNH converts its interconnection circuit, all electric energy delivered to PSNH's system shall be 12.47 KV, three-phase, sixty hertz.

Article 2. Metering.

The metering shall be configured so as to represent the generation delivered to the PSNH electric system. The metering may be installed on the generation side of the transformer provided that transformer losses are subtracted from the measured generation by a suitable method.

INTERCONNECTOR will install, own, and maintain all metering equipment as referenced in Article 4, to measure the flow of electrical energy from INTERCONNECTOR to PSNH. If at any time, the meter is found to be in error by

Article 16. Notices and Service.

All notices, including communications and statements which are required or permitted under the terms of this AGREEMENT, shall be in writing, except as otherwise provided or as reasonable under the circumstances. Service of a notice may be accomplished by personal service, telegram, registered or certified commercial overnight courier, or registered or certified mail or by telecopy provided followed the next business day with service under any one of the preceding methods.

The mailing addresses of the parties are as follows:

INTERCONNECTOR: Marlboro Hydro Corp.  
P. O. Box 1073  
Dover, NH 03820  
Attn: John N. Webster  
Telecopy No. (207) 384-2128  
Telephone No. (207) 384-5334

PSNH: Public Service Company of New Hampshire  
1000 Elm Street  
P. O. Box 330  
Manchester, NH 03105-0330  
Attn: Manager, Supplemental Energy Sources  
Telecopy No. (603) 634-2449  
Telephone No. (603) 634-2312

IN WITNESS WHEREOF, the parties each by its duly authorized representatives have hereunto caused their names to be subscribed, as of the day and year first above written.

MARLBORO HYDRO CORP.

By: John N. Webster

PUBLIC SERVICE COMPANY  
OF NEW HAMPSHIRE

By: Earl G. Legacy

Earl G. Legacy, Vice President

### Generator Information

NEPOOL Generator: Yes

MSS Unit ID: 794

Plant Name: UNDER5MW

Unit Name: \* MINIWAWA

Status: Approved

Name Plate Capacity: \* 1,000 (MW)

Location of generating unit: \* New England (ISO New England Control Area)

City: \* Marlborough

State: \* NEW HAMPSHIRE

#### Labor Characteristics

Majority of employees operating at generation plant are employed under collective bargaining agreement:  (check for yes)

If generating plant experienced a labor dispute in the most recent calendar year, replacement workers were used:  (check for yes)

#### Vintage

Vintage (month and year of commercial operation): \* 01/1992 (format: MM/YYYY)

Repowering/derate date: (format: MM/YYYY)

Capacity addition/subtraction: (MW)

Refurbishment date: (format: MM/YYYY) (Relevant to Maine RPS)

Date Operation Recommended after at Least Two Years of Not Operating: (format: MM/YYYY) (Relevant to Maine RPS)

Date recognized by System Operators as capacity resource after not being recognized as a capacity resource for at least two years: (format: MM/YYYY) (Relevant to Maine RPS)

FERC hydroelectric license relicensing date: (format: MM/YYYY)

#### Emissions Reporting

CEM Reporting:  (check for yes)

Ability to Cogenerate Electricity and Steam:  (check for yes)

ORIS PL: (1 - 6 numeric characters)

Emissions Unit ID(s): (1 - 6 alphanumeric characters, separate multiple ids with semicolons)

Peer unit name and address (if not reporting actual generator emissions):

Fuel Type: \*  Single Fuel  Multi Fuel  
 Hydroelectric/Hydropower

### Generator Information

#### Hydroelectric/Hydropower

- Hydro-small (30 MW or less) - Automatically qualifies as Connecticut CEO-eligible
- Hydro - run-of-the-river hydropower facility that has a nameplate generating capacity of not more than five megawatts, does not cause an appreciable change in the river flow, and began operation after July 1, 2003

Fuel Type Attributes:  
(select all that apply)

Connecticut

Class I Renewable Energy Source:

(check for yes) -- If yes Reveal Output to Regulators must be checked

Class I low emission eligible energy source ("LREC"):

(check for yes) -- If yes Reveal Output to Regulators must be checked

Class II Renewable Energy Source:



(check for yes) -- If yes Reveal Output to Regulators must be checked

Class III Portfolio Standard:

No -- If yes Reveal Output to Regulators must be checked

State Certification Number:

CT00210-07

Date of Eligibility:

04/2007 (format: MM/YYYY)

CT CEO Eligible:

(check for yes)

R-O-R Hydro: Percentage Qualifying as Class I:

Massachusetts

RPS Class I Renewable Generation Unit:

(check for yes)

Percentage of Generation Qualifying as RPS Class I: \*\*

Solar Carve-Out Unit:

(check for yes)

RPS Class II Renewable Generation Unit:

(check for yes)

Percentage of Generation Qualifying as RPS Class II: \*\*

RPS Class II Waste Energy Generation Unit:

(check for yes)

APS Alternative Generation Unit:

(check for yes)

Generation level per year or Energy imported per year above which qualifies as RPS New Renewable Resource:

(MWh)

RPS Statement Of Qualification Number:

(format: AB1234YY)

Eligible MA Renewable for NOx allowances claims from Public Benefit set-a-side:

(check for yes)

MA Renewable NOx State Certification Number:

Maine

Class I New Renewable Energy Resource Qualification:

(check for yes)

Class II Eligible Resource:



(check for yes)

Community Based Renewable Energy:

(check for yes)