



## Section 401 Water Quality Certification

Permittee: Energy Stream, LLC  
18 Washington Street  
Suite 18  
Canton, MA 02021  
Attention: Rolland Zeleny  
[IndigoHarbor@yahoo.com](mailto:IndigoHarbor@yahoo.com)

Site address: M.S.C. Hydro  
137 Providence Street  
Putnam, CT 06260

Application: 202400324  
Permit Type: Section 401 Water Quality Certification – FERC Hydropower Projects **P-5679**  
Permit: WQC-202400324  
Town: Putnam  
Waters: Quinebaug River

Pursuant to Section 401 of the Federal Clean Water Act (33USC 1341), Water Quality Certification is hereby issued to Energy Stream, LLC, (the "Permittee"), for continued operation of approximately 2,800,000 kWh/year run of the river hydroelectric project (the "Project") located on the Quinebaug River at 137 Providence Street, Putnam, Connecticut (the "site"). All activities shall be conducted in accordance with the application referenced above and filed with this department on January 11, 2024, as amended and described herein.

Said operations and development within the Quinebaug River will comply with the applicable provisions of Section 301, 302, 303, 306 and 307 of said Act and will not violate Connecticut's Water Quality Standards.

The Permittee is not proposing any changes to project facilities or operation. The Project's authorized capacity is 512 kW.

## **AUTHORIZED ACTIVITY**

Specifically, the Permittee is authorized to operate a run of the river hydropower facility for generation of approximately 2,800,000 kWh/year of zero emission electricity, with an authorized capacity of 512 kW, and make certain stream modifications and establish operational protocols to conserve and promote fish passage at existing facilities in accordance with application number 202400324 submitted to the Connecticut Department of Energy and Environmental Protection (CTDEEP).

## **PERMITTEE'S FAILURE TO COMPLY WITH THE TERMS AND CONDITIONS OF THIS PERMIT SHALL SUBJECT PERMITTEE AND PERMITTEE'S CONTRACTOR(S) TO ENFORCEMENT ACTIONS AND PENALTIES AS PROVIDED BY LAW.**

This authorization is subject to the following conditions:

### **SPECIAL CONDITIONS**

- 1. Project Operation.** The Permittee shall operate the Project as proposed in the application filed with the Federal Energy Regulatory Commission.(FERC) (FERC Accession Number 20230524-5093) and the application for a 401 Water Quality Certification for Hydropower Facilities filed with CTDEEP (#202400324). Any deviations from the equipment, structures, components, and specifications described in the applications must be approved first. The Permittee shall operate the Project in an instantaneous run-of-river mode, whereby inflow to the Project will equal outflow from the Project at all times and water levels above the Dam are not drawn down for the purpose of generating power. Run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the Permittee, or for short periods upon mutual agreement between the Permittee, CTDEEP, the U.S. Fish and Wildlife Service (the Service) and the National Marine Fisheries Service.
- 2. Minimum Bypass Reach Flow.** The Permittee shall provide a continuous minimum flow to the bypass reach of 144 cubic feet per second (cfs) or inflow to the impoundment, whichever is less. The Permittee maintains the impoundment at the flashboard crest elevation of 288.74 feet msl (the elevation that equates to the top of boards). In order to ensure 10 cfs is always provided to the bypass reach, the PLC system should be set to maintain the headpond elevation above 288.74 ft msl sufficient to provide a minimum of 0.1” or 10 cfs over the crest of the main dam.
- 3. Flow Releases During Reservoir Refill.** The Permittee shall, during reservoir refill following planned maintenance or emergency draw downs, release from the project the following minimum flows: 145 cubic feet per second (CFS) from June 1 to September 30; 289 CFS from October 1 to March 31; and 1,156 CFS from April 1 to May 31 until reservoir refill is complete and run-of-river operation is restored. If inflows to the project are less than these minimum flows, the Permittee shall release downstream, 90% of the inflow to the project and the impoundment is refilled on the remaining 10 percent of inflow. This refill procedure may be modified on a case-by-case basis with the prior approval of both the CTDEEP and the Service.

4. **Flow Monitoring and Recording Plan.** Within six (6) months of license issuance, the Permittee shall develop a plan, developed in consultation with, and requiring approval by the CTDEEP, to monitor and record the run-of-river operating mode and the minimum bypass flows. The plan shall include a description of the mechanisms and structures that will be used, the level of manual and automatic operation, the methods to be used for recording data on bypass flows and run-of-river operation, an implementation schedule, and a plan for maintaining the data for inspection by the CTDEEP, the Service and the FERC.
5. **Water Quality Monitoring Plan.** Within six (6) months of license issuance, the Permittee shall develop a plan, developed in consultation with, and requiring approval by the CTDEEP, to monitor and record dissolved oxygen concentrations and water temperature.
  - a. A description of locations, time period, methods, equipment, maintenance, and calibration procedures to monitor dissolved oxygen concentrations and water temperature at a location in the Quinebaug River immediately upstream of the dam and in the Quinebaug River downstream of the tail race; Include locations at the tailrace, bypass reach and the headpond.
  - b. Monitoring protocol shall include that all analytical results shall be retained on-site or at the Permittee's principal place of business in Connecticut. These results shall be made available to CTDEEP and the Service immediately upon request; also include any recommendations for modifications to Project operations or facilities, and any other enhancement measures that are proposed by the Permittee if the water quality constituents monitored in Project-affected waters fall below state water quality standards; and
  - c. An implementation schedule.
6. If at any time, the Permittee is aware of the Project not meeting water quality standards, the Permittee shall implement mitigation measures as sufficient to achieve said standards and notify the CTDEEP and the Service of such mitigation measures.
7. **Threatened and Endangered Species (TES).** Consultation did not identify any TES in the project impact area; however, there is indication that the federally endangered northern long-eared bat (*Myotis septentrionalis*, NLEB) is potentially affected by activities in the immediate project vicinity. This likely is due to the project area containing suitable roosting habitat. In order to avoid potential impacts to NLEB, the Permittee shall implement a time-of-year restriction on non-emergency vegetation management activities if cutting or thinning of trees equal to or greater than 3 inches diameter breast height were to occur during the period April 1 through October 31.
8. **American Eel Passage.**
  - a. The Permittee shall continue operating existing interim upstream and downstream passage for American eels. Upstream passage for American eels is provided from June 15 to September 1 by netting placed over the dam and ramps extending to the crest of the flashboards. Downstream American eel passage is provided from September 1 through

November 15, on rainy nights and three nights after rain events, by installing a ¾-inch overlay on the lower section of trashracks, operating flood lights in the forebay, opening the waste gate a minimum of 1-foot, and passing flow through a notch in the flashboards located on the west side of the spillway.

- b. The Permittee shall undertake upstream eel passage studies when directed by CTDEEP. The timing of studies will be informed by the status of permanent upstream eel passage facilities at downstream barriers. Based on results of those studies, passage design improvements/modifications may be required. Any new or modified upstream eel passage facilities shall be designed in consultation with, and require approval by, the Service and CTDEEP. Once upstream passage improvements (if needed) are operational and eels are documented successfully passing the Project, the Permittee shall either 1) modify the downstream eel passage system to meet Service and CTDEEP design criteria, or 2) conduct a study to determine if the existing downstream system provides safe, timely, and effective eel passage. If the existing measures are deemed effective, the Permittee will need to operate nightly (dusk to dawn) from August 15 to November 30. If they are not effective, upgraded measures will be needed, and shall operate nightly (dusk to dawn) from August 15 to November 30. Any new or modified downstream eel passage facilities shall be designed in consultation with, and require approval by, the Service and CTDEEP.
9. If, at any time, the permittee is aware of the Project causing migratory delay, injury or mortality to resident or migratory fish, the Permittee shall implement measures approved by CTDEEP to eliminate such migratory delay, injury or mortality.
10. The Permittee shall allow the Service and CTDEEP and the National Marine Fisheries Service to inspect the Project area at any time while the Project operates from licensing to monitor compliance with its terms and conditions.

## GENERAL TERMS AND CONDITIONS

1. **Rights.** This certificate is subject to and does not derogate any present or future property rights or other rights or powers of the State of Connecticut, and conveys no property rights in real estate or material nor any exclusive privileges, and is further Subject to any and all public and private rights and to any federal, state, or local laws or regulations pertinent to the property or activity affected hereby. This certification does not comprise the permits or approvals as may be required by Chapters 440, 446i, 446j and 446k of the Connecticut General Statutes.
2. **Expiration of Certificate.** This certificate shall expire upon the expiration of the Federal Energy Regulatory Commission permit no. P-5679 CT for the same activity.
3. **Compliance with Certificate.** All work and all activities authorized herein conducted by the Permittee at the site shall be consistent with the terms and conditions of this certificate. Any regulated activities carried out at the site, including but not limited to, construction of any structure, excavation, fill, obstruction, or encroachment, that are not specifically identified

and authorized herein shall constitute a violation of this certificate and may result in its modification, suspension, or revocation. In carrying out the certified discharge(s) authorized herein, the Permittee shall not store equipment or construction material, or discharge any material including without limitation, fill, construction materials or debris in any wetland or watercourse on or off site unless specifically authorized by this certificate. Upon initiation of the activities authorized herein, the Permittee thereby accepts and agrees to comply with the terms and conditions of this certificate.

4. **Transfer of Certificate.** This authorization is transferable with the written consent of the Connecticut Department of Energy and Environmental Protection. The Permittee shall incorporate the aforementioned terms and conditions in any conveyance—by lease, sale or otherwise—of its interests so as to legally assure compliance with said conditions for as long as the Project operates under an exemption from licensing.
5. **Reliance on Application.** In evaluating the Permittee’s application, the Connecticut Department of Energy and Environmental Protection has relied on information provided by the Permittee. If such information subsequently proves to be false, deceptive, incomplete or inaccurate, this certificate may be modified, suspended or revoked.
6. **Approval of Project Changes.** Any change to the project that would have a significant or material effect on the findings, conclusions or conditions of this certification, including project operation, must be submitted to the Connecticut Department of Energy and Environmental Protection for prior review and written approval where appropriate and authorized by law and only as related to the change proposed.
7. **Continuing Jurisdiction.** The Connecticut Department of Energy and Environmental Protection, in consultation with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service, reserve the right to add and alter the terms and conditions of this certification, when authorized by law and as appropriate to carry out its responsibilities with respect to water quality, fish and wildlife resources during the life of the project.
8. **Reopening of Certification.** The Connecticut Department of Energy and Environmental Protection may reopen and alter or amend the conditions of this Certification over the life of the Project when such action is necessary to assure compliance with the Connecticut Water Quality Standards and to respond to any changes in the classification or management objectives for the affected waters.
9. **Enforcement.** Certification conditions are subject to enforcement mechanisms available to the federal agency issuing the license and to the state of Connecticut. Other mechanisms under Connecticut state law may also be used to correct or prevent adverse water quality impacts from construction or operation of activities for which certification has been issued.
10. **Best Management Practices.** In constructing or maintaining the activities authorized herein, the Permittee shall employ best management practices, consistent with the terms and conditions of this certificate, to control storm water discharges and erosion and sedimentation

and to prevent pollution. Such practices to be implemented by the Permittee at the site include, but are not necessarily limited to:

- a. Prohibiting dumping of any quantity of oil, chemicals or other deleterious material on the ground;
- b. Immediately informing the Connecticut Department of Energy and Environmental Protection's Oil and Chemical Spill Response Division at (860) 424-3338 (24 hours) of any adverse impact or hazard to the environment, including any discharges, spillage, or loss of oil or petroleum or chemical liquids or solids, which occurs or is likely to occur as the direct or indirect result of the activities authorized herein;
- c. Separating staging areas at the site from the regulated areas by silt fences or straw/hay bales at all times;
- d. Prohibiting storage of any fuel and refueling of equipment within twenty-five (25) feet from any wetland or watercourse;
- e. Preventing pollution of wetlands and watercourses in accordance with the document "Connecticut Guidelines for Soil Erosion and Sediment Control" as revised. Said controls shall be inspected by the Permittee for deficiencies at least once per week and immediately after each rainfall and at least daily during prolonged rainfall. The Permittee shall correct any such deficiencies within 48 hours of said deficiencies being found;
- f. Stabilizing disturbed soils in a timely fashion to minimize erosion. If a grading operation at the site will be suspended for a period of thirty (30) or more consecutive days, the Permittee shall, within the first seven (7) days of that suspension period, accomplish seeding and mulching or take such other appropriate measures to stabilize the soil involved in such grading operation. Within seven (7) days after establishing final grade in any grading operation at the site the Permittee shall seed and mulch the soil involved in such grading operation or take such other appropriate measures to stabilize such soil until seeding and mulching can be accomplished.
- g. Prohibiting the storage of any materials at the site which are buoyant, hazardous, flammable, explosive, soluble, expansive, radioactive, or which could in the event of a flood be injurious to human, animal or plant life, below the elevation of the five hundred (500) year flood. Any other material or equipment stored at the site below said elevation by the Permittee or the Permittee's contractor must be firmly anchored, restrained or enclosed to prevent flotation. The quantity of fuel stored below such elevation for equipment used at the site shall not exceed the quantity of fuel that is expected to be used by such equipment in one day.
- h. Immediately informing the Connecticut Department of Energy and Environmental Protection's Innovative Partnerships and Planning Office at [DEEP.OPPD@ct.gov](mailto:DEEP.OPPD@ct.gov), (860) 424-3003 of the occurrence of pollution or other environmental damage resulting from construction or maintenance of the authorized activity or any construction associated therewith in violation of this certificate. The Permittee shall, no later than 48 hours after the Permittee learns of a violation of this certificate, report same in writing to the Connecticut Department of Energy and Environmental Protection. Such report shall contain the following information:

- i. the provision(s) of this certificate that has been violated;
  - ii. the date and time the violation(s) was first observed and by whom;
  - iii. the cause of the violation(s), if known;
  - iv. if the violation(s) has ceased, the duration of the violation(s) and the exact date(s) and times(s) it was corrected;
  - v. if the violation(s) has not ceased, the anticipated date when it will be corrected;
  - vi. steps taken and steps planned to prevent a reoccurrence of the violation(s) and the date(s) such steps were implemented or will be implemented; and
  - vii. the signatures of the Permittee and of the individual(s) responsible for actually preparing such report, each of whom shall certify said report in accordance with General Condition number 13 of this certificate.
11. For information and technical assistance, contact the Connecticut Department of Energy and Environmental Protection's Innovative Partnerships and Planning Office at [DEEP.OPPD@ct.gov](mailto:DEEP.OPPD@ct.gov), (860) 424-3003.
12. **Other Regulated Activities.** Should the Permittee wish to conduct any regulated activity in the future which requires the issuance of a permit from the Connecticut Department of Energy and Environmental Protection, the Permittee must obtain the appropriate permit(s) prior to conducting such activity. Please be aware that performing an activity without a permit required by Title 22a of the General Statutes may subject the Permittee to an injunction and penalties.
13. **Public Use.** The Connecticut Department of Energy and Environmental Protection and the U.S. Fish and Wildlife Service recommend that the Permittee permit access to the Project area wherever possible to allow for public utilization of fish and wildlife resources, taking into consideration any necessary restrictions to maintain public safety and protect Project civil works.
14. **Certification of Documents.** Any document, including but not limited to any notice, which is required to be submitted to the Connecticut Department of Energy and Environmental Protection under this certificate shall be signed by the Permittee, a responsible corporate officer of the Permittee, a general partner of the Permittee, or a duly authorized representative of the Permittee and by the individual or individuals responsible for actually preparing such document, each of whom shall certify in writing as follows:
- "I have personally examined and am familiar with the information submitted in this document and all attachments and certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief, and I understand that any false statement made in this document or its attachments may be punishable as a criminal offense in accordance with section 22a-6 under section 53a-157b of the Connecticut General Statutes."

15. **Submission of Documents.** The date of submission to the Connecticut Department of Energy and Environmental Protection of any document required by this certificate shall be the date such document is received by the Connecticut Department of Energy and Environmental Protection. Except as otherwise specified in this certificate, the word "day" as used in this certificate means the calendar day. Any document or action which falls on a Saturday, Sunday, or legal holiday shall be submitted or performed by the next business day thereafter. Any document or notice required to be submitted to the Connecticut Department of Energy and Environmental Protection under this certificate shall, unless otherwise specified in writing by the Connecticut Department of Energy and Environmental Protection, be directed to:

Office of Innovative Partnerships and Planning  
Department of Energy and Environmental Protection  
79 Elm Street, Third Floor  
Hartford, Connecticut 06106-5127

Issued Date: \_\_\_\_\_

**Emma Cimino**  
Deputy Commissioner