



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION
AUGUSTA, ME 04333

DEPARTMENT ORDER

IN THE MATTER OF

RUMFORD FALLS HYDRO LLC)	MAINE WATERWAY DEVELOPMENT
Rumford)	AND CONSERVATION ACT PERMIT AND
Oxford County)	WATER QUALITY CERTIFICATION
RUMFORD FALLS HYDRO PROJECT)	
TURBINE-GENERATOR UPGRADES)	
#L-24576-35-A-N (Approval))	FINDINGS OF FACT AND ORDER

Pursuant to the provisions of 38 MRSA Sections 464 *et seq.* and Sections 630 *et seq.*, 06-096 CMR 450 (*Administrative Rules for Hydropower Projects*, effective date September 1, 1987), and Section 401 of the Federal Water Pollution Control Act (a.k.a. Clean Water Act), the Department of Environmental Protection has considered the application of RUMFORD FALLS HYDRO LLC with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. APPLICATION SUMMARY

The applicant proposes to upgrade the turbine-generator capacity of the existing Rumford Falls Hydro Project, located on the Androscoggin River in the Town of Rumford, Oxford County, Maine.

2. EXISTING PROJECT

The existing Rumford Falls Hydro Project consists of two dams, two impoundments, two generating stations, and appurtenant facilities.

The Upper Station Development consists of Upper Dam, a forebay, a gatehouse, penstocks, and a powerhouse. The concrete gravity dam is 464 feet long and 37 feet high and creates an impoundment with a surface area of about 419 acres at a normal full pond elevation of 601.24 feet msl. The powerhouse contains four turbine-generator units with a total rated generating capacity of 26,550 KW at a net head of 96-97 feet. The maximum hydraulic capacity of the upper station units is 4,500 cubic feet per second (cfs).

The Lower Station Development consists of Middle Dam, a headgate structure, a 2400-foot-long intake canal, a gatehouse, penstocks, surge tanks, and a powerhouse. The rock-filled, timber-crib dam is capped and reinforced with concrete. The dam is about 330 feet long and 20 feet high and creates an impoundment with a surface area of about 21 acres at a normal full pond elevation of 502.44 feet msl. The powerhouse contains two turbine-generator units with

a total rated generating capacity of 12,800 KW at a net head of 72 feet. The maximum hydraulic capacity of the lower station units is 2,800 cfs.

Each project development operates as a run-of-river facility, with outflowe approximately equal to inflow on an instantaneous basis.

3. REGULATORY HISTORY

By Order #L-17643-33-A-N dated December 7, 1992, the Department issued water quality certification for the proposed continued operation of the existing Rumford Falls Hydro Project under a new federal license (FERC No. 2333).

By Order #L-17643-33-D-T, the Department approved the transfer of the December 7, 1992 water quality certification from Rumford Falls Power Company to Rumford Falls Hydro LLC.

4. PROPOSED UPGRADES

In 2008, the applicant replaced the turbine runner in both of the turbine-generator units at the Lower Station Development as part of a scheduled maintenance upgrade. This resulted in an increase of 196 cfs in the hydraulic capacity of the lower station units and an increase of 2400 KW in lower station generating capacity.

In 2009, the applicant proposes to replace the turbine runner and rewind the generator in Unit 3 as part of a schedule maintenance upgrade. This will result in an increase of 50 cfs in the hydraulic capacity of the upper station units and an increase of 1300 KW in upper station generating capacity.

All upgrade work will take place within the existing powerhouses, and there will be no structural modifications to any project structures, including dams. There will be no changes to existing run-of-river operations, impoundment level fluctuations or minimum flow releases.

5. JURISDICTION

- a. Hydropower Project Permit. The proposed upgrade of turbine-generator capacity qualifies as the "construction, reconstruction or structural alteration of a hydropower project" under the Maine Waterway Development and Conservation Act (MWDCA), 38 MRSA Section 630 *et seq.* Because the proposed construction activities are located in an organized municipality, they are subject to the permitting jurisdiction of the DEP under the terms of the MWDCA.
- b. Water Quality Certification. The proposed upgrade of turbine-generator capacity qualifies as an "activity...which may result in (a) discharge into the navigable waters (of the United States)" under the Clean Water Act (CWA), 33 USC 1251 *et seq.* Section 401 of the CWA requires that any applicant for a federal license or permit to conduct such an activity will comply with applicable State water quality standards.

The applicant has filed an Application for Amendment of License for the Rumford Falls Hydro Project with the Federal Energy Regulatory Commission to authorize the proposed upgrade of turbine-generator capacity. Therefore, water quality certification will be considered.

The DEP has been designated by the Governor of the State as the certifying agency for issuance of Section 401 water quality certification for all activities in the State not subject to Land Use Regulation Commission permitting and review. The proposed project is located in an organized municipality that is not subject to LURC's regulatory jurisdiction.

- c. Terms and Conditions. Section 401(d) of the CWA provides that a water quality certification shall set forth any limitations necessary to assure that an applicant for a federal license or permit will comply with any appropriate requirement of state law, and that such limitations shall become a condition on the federal license or permit issued for the activity. As discussed above, a permit is required under Maine law for the construction of the proposed upgrade of turbine-generator capacity at the Rumford Falls Hydro Project. The MWDCA is a state water quality-related law. Consequently, the terms and conditions of any MWDCA permit issued for the proposed project constitute appropriate and necessary limitations to be set forth in any certification issued for the project.

6. APPLICABLE WATER QUALITY STANDARDS

- a. Classification. The receiving waters that are or may be affected by the project are currently classified as follows:

Androscoggin River, main stem, including all impoundments, from the Ellis River to a line formed by the extension of the Bath-Brunswick boundary across Merrymeeting Bay in a northwesterly direction—Class C. 38 MRSA Section 467(1)(A)(2).

- b. Designated Uses. Class C waters must be of such quality that they are suitable for the designated uses of drinking water supply after treatment; fishing; agriculture; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation; navigation; and as habitat for fish and other aquatic life. 38 MRSA Section 465(4)(A).
- c. Numeric Standards. The numeric standards for the receiving waters are as follows.

The dissolved oxygen content of Class C waters shall be not less than 5 parts per million or 60% of saturation, whichever is higher, except that in identified salmonid spawning areas where water quality is sufficient to ensure spawning, egg incubation and survival of early life stages, that water quality sufficient for these purposes shall be maintained. 38 MRSA Section 465(4)(B).

- d. Narrative Standards. The narrative standards for the receiving waters are as follows.

Discharges to Class C waters may cause some changes to aquatic life, provided that the receiving waters shall be of sufficient quality to support all species of fish indigenous to the receiving waters and maintain the structure and function of the resident biological community. 38 MRSA Section 465(4)(C).

The habitat characteristics and aquatic life criteria of Class C are deemed to be met in an existing impoundment which is classified C provided that any reasonable changes are implemented that do not significantly affect existing energy generation capability and that would result in an improvement in the habitat and aquatic life of the impounded waters. Where the actual quality of the impounded waters attains any more stringent habitat characteristic or aquatic life criteria than that required under Class C, that existing water quality must be maintained and protected. 38 MRSA Section 464(10).

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

7. FINANCIAL CAPACITY

The total estimated cost of the proposed upgrade of turbine-generator capacity is \$5.99 million. These costs will be financed through project generating revenues.

8. HYDROELECTRIC POWER GENERATION

The proposed upgrade of turbine-generator capacity will increase average annual generation at the Rumford Falls Hydro Project by 17,100,000 kilowatts hours per year. This is equivalent to the electricity that would be produced by burning 28,500 barrels of oil (at 600 kWhrs per barrel) or 7,924 tons of coal (at 2,158 kWhrs per ton). All power generated by the project is currently sold on the open market and fed into the local utility grid for distribution.

The State of Maine has developed a Comprehensive Energy Plan (Governor's Office of Energy Independence and Security, January 15, 2009) with the goal of charting a course to guide the State to a secure energy future with affordable, reliable and clean energy supplies that are environmentally responsible and economically beneficial to Maine energy consumers and utility rate payers. The strategies set forth in the Plan to meet this goal include: (1) strengthening energy efficiency, conservation and weatherization; (2) fostering renewable energy; (3) improving transportation and fuel efficiencies; (4) upgrading electricity and natural gas services, transmission systems and transmission infrastructures; (5) continuing to have the State lead by example on energy policy; and (6) addressing energy emergency preparedness and response.

With respect to fostering renewable energy, the Plan recommends the following goals:

- Encourage Maine's businesses and residences to invest in distributed renewable generation of energy;

- Continue to advance Maine's position as a leader in responsible wind power development and maximize the tangible benefits Maine people receive;
- Work with State agencies, the Governor's Ocean Energy Task Force, Maine Maritime Academy and private developers to promote tidal power in Maine;
- Seek to develop on-site clean, renewable energy projects at appropriate state facilities;
- Work with public and private schools across the state to facilitate energy alternative demonstration projects;
- Support research at the University of Maine to create cellulosic ethanol from paper making waste;
- Increase the use of bio-fuels and alternative energy in state-occupied buildings;
- Encourage development of ethanol-blend fueling stations;
- Increase the development and use of cogeneration and tri-generation in the State;
- Encourage the strategic location and development of industrial and district heating energy generation clusters;
- Assist the University of Maine and other colleges with the use of biomass/bio-fuel cogeneration and tri-generation energy systems; and
- Increase the generation of renewable power into the State of Maine's electricity portfolio.

The proposed upgrade of turbine-generator capacity will meet the goals of the State's Comprehensive Energy Plan by increasing the in-state generation of renewable power.

9. OTHER ISSUES; REVIEW COMMENTS

No other significant issues involving any statutory criteria of the Maine Waterway Development and Conservation Act or applicable water quality standards have been identified. No objections to the proposed upgrade of turbine-generator capacity have been raised by State review agencies or members of the public.

BASED on the above Findings of Fact and the evidence contained in the application and supporting documents, the Department makes the following conclusions:

1. The applicant has the financial capacity and technical ability to undertake the project.
2. The applicant has made adequate provision for protection of public safety.
3. The project will result in significant economic benefits to the public.
4. The applicant has made adequate provision for traffic movement.
5. The proposed activity is not located within the jurisdiction of the Land Use Regulation Commission.
6. The applicant has made reasonable provisions to realize the environmental benefits, if any, and to mitigate the adverse environmental impacts of the project.

7. The advantages of the project are greater than the direct and cumulative adverse impacts over the life of the project.
8. There is a reasonable assurance that the project will not violate applicable State water quality standards.

THEREFORE, the Department APPROVES the above noted application of RUMFORD FALLS HYDRO LLC to upgrade the turbine-generator capacity of the existing Rumford Falls Hydro Project, as described above, SUBJECT TO THE ATTACHED CONDITIONS:

1. STANDARD CONDITIONS

The Standard Conditions of Approval for projects under the Maine Waterway Development and Conservation Act, a copy attached.

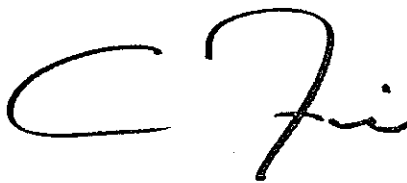
2. EXISTING CERTIFICATION CONDITIONS

All existing conditions in the water quality certification for the continued operation of the Rumford Falls Hydro Project, as contained in Department Order #L-17643-33-A-N dated December 7, 1992, including any subsequent amendments, modifications and condition compliances, shall remain in effect.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES.

Date of initial receipt of application: 04/02/2009

Date application accepted for processing: 04/14/2009



This permit has been digitally signed by Andrew C. Fisk on behalf of Commissioner David P. Littell. It is digitally signed pursuant to authority under 10 M.R.S.A. § 9418. It has been filed with the Board of Environmental Protection as of the signature date 2009.07.13 11:17:19 -04'00'