



April 12, 2021

Online submission – Comments re: Ashokan Pump Storage Docket # P-15056

Ms. Kimberly Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE
Washington DC 20426

RE: Comments regarding Docket # P-15056 – Ashokan Pumped Storage Project

Dear Secretary Bose:

Catskill Mountainkeeper, a non-profit organization with its primary office in Livingston Manor in Sullivan County New York and a satellite office in Woodstock in Ulster County New York, hereby submits comments regarding the Ashokan Pumped Storage application for a preliminary license submitted by Premium Energy Holdings (Docket # P-15056).

Catskill Mountainkeeper is a 501(3)(3) non-profit organization that is nationally recognized as an advocate for the Catskill region. Catskill Mountainkeeper works with a network of more than 40,000 concerned citizens and strategic partners to protect and promote our region's extraordinary natural heritage, while promoting smart development that supports local communities. Many of those in our network live, work, and recreate at and within 15 miles of the Ashokan Reservoir, at and within 15 miles of the proposed alternative sites for the Ashokan Pumped Storage Project's Upper Reservoir, and in New York City and other towns and cities served by the Ashokan Reservoir as a source of drinking water. One member of Catskill Mountainkeeper's staff lives in Shandaken, a town with a population of approximately 3,000 people that is listed as a potential site for two of the alternative configurations of the subject proposal.

Catskill Mountainkeeper has a vital interest in and represents the public interests of residents of Shandaken, Olive, communities near the Ashokan Reservoir, and residents of New York City. Our members stand at risk of serious harms from the construction and operation of the project, as well as from additional infrastructure necessary to service it, such as the Ashokan Switchyard, powerhouse, and transmission lines. This proposal for pumped storage at the Ashokan Reservoir has almost instantaneously united an entire region in opposition to its potential harms to the drinking water supply for New York City, the forever wild lands of the Catskill Forest Preserve, and the local treasures in the mountain hollows and along the Esopus Creek and its tributaries. We

offer this letter and the following specific observations and concerns as comments to the Federal Energy Regulatory Commission (FERC) regarding this proposal. We focus on issues that may not have been addressed or fully addressed by others. Based on these comments, we request that FERC reject this preliminary application or require further information from the applicant that could be evaluated following a new public comment period.

I. Errors in application

A1. Proposed system does not constitute a closed loop

As the Ashokan Reservoir has outlets both to the drinking water supply system of New York City via the Catskill Aqueduct and to the Esopus Creek downstream of the Ashokan Reservoir (commonly called the “Lower Esopus”), the claim that the proposed system is a “closed loop” cannot be sustained.

In addition, FERC’s regulations (18 CFR Pt 7) include at § 7.1(c)(3) a definition of closed-loop pumped storage projects:

“Qualifying criteria for closed-loop pumped storage projects [include] requirements that the project ‘(i) Cause little to no change to existing surface and groundwater flows and uses; ... [and] (iii) Utilize only reservoirs situated at locations other than natural waterways, lakes, wetlands, and other natural surface water features’” (adopted per notice beginning at 84 Fed Reg 17064 [04/24/2019] and explained at ¶¶ 22~31 ff).

Therefore, since this proposal relies on damming an existing natural watercourse to impound its waters in any one of the three alternative upper pools, including construction of a half-mile long concrete dam at each of its alternatives (see application Exhibit 1, 1. General Configuration, Table 1 at page 11), it cannot qualify as a closed loop system.

A2. Proposal does not qualify for expedited licensing process

We note in advance that this proposal does not qualify for expedited processing (see FPA § 35, 16 USC § 823f and 18 CFR Part 7). As described in the application’s Initial Statement, “The Ashokan Pumped Storage Project would use the existing Ashokan reservoir as a lower pool and proposes a new upper reservoir in the Catskill Mountains to serve as upper pool. The filling of these reservoirs would be done through the Esopus Creek and the existing Ashokan Reservoir” (01/29/2021 application, filing date 02/01/2021, item 7 on page 6). The application continues by describing three alternatives for an upper reservoir: “The proposed upper reservoir would be built in either the Stony Clove Creek, the Woodland Creek, or the Maltby Hollow Brook

(Wittenberg Reservoir)" (01/29/2021 application, filing date 02/01/2021, Exhibit 1, 2. Reservoirs, B. Upper Reservoir Configuration, on page 13).

Each of the alternative proposed upper pools would be located so as to impound waters of an existing natural surface watercourse. An expedited licensing process, however, is authorized by FPA § 35 / 16 USC § 823f, which obligates FERC to adopt regulations, which, per subdivision (g)(2)(A) as part of qualifying criteria, includes the requirement that a project "cause little to no change to existing surface and ground water flows and uses." FERC's regulations (18 CFR Pt 7) include at § 7.1(c)(3) a definition of closed-loop pumped storage projects:

"Qualifying criteria for closed-loop pumped storage projects [include] requirements that the project '(i) Cause little to no change to existing surface and groundwater flows and uses; ... [and] (iii) Utilize only reservoirs situated at locations other than natural waterways, lakes, wetlands, and other natural surface water features'" (adopted per notice beginning at 84 Fed Reg 17064 [04/24/2019] and explained at ¶¶ 22~31 ff). Therefore, if this proposal relies on damming an existing natural watercourse to impound its waters in any one of the three alternative upper pools, such as this proposal which includes construction of a half-mile long concrete dam at each of its alternatives (see application Exhibit 1, 1. General Configuration, Table 1 at page 11), it cannot qualify for an expedited procedure.

B. Proposal with three alternatives does not constitute a unified application or "complete unit of development"

Per FERC's own precedent in Owens Valley (FERC Docket # P-14984), this application is deficient as not constituting "a complete unit of development." This application calls for not one but three alternative upper pools. As described in the application's Initial Statement, "The Ashokan Pumped Storage Project would use the existing Ashokan reservoir as a lower pool and proposes a new upper reservoir in the Catskill Mountains to serve as upper pool. The filling of these reservoirs would be done through the Esopus Creek and the existing Ashokan Reservoir" (01/29/2021 application, filed date 02/01/2021, item 7 on page 6). The application continues by describing three alternatives for an upper reservoir: "The proposed upper reservoir would be built in either the Stony Clove Creek, the Woodland Creek, or the Maltby Hollow Brook (Wittenberg Reservoir)" (01/29/2021 application, filed date 02/01/2021, Exhibit 1, 2. Reservoirs, B. Upper Reservoir Configuration, on page 13).

In Owens, via a rejection letter dated 05/24/2019, FERC rejected an application for a preliminary permit that was almost identical to the instant application, citing a "patent deficiency" per FERC regulations [18 CFR § 4.32(e)(2)]. This regulation is a procedural provision allowing summary rejection in such a case. As per the rejection letter, the implementing law here {Section 3(11) of the Federal Power Act (FPA) [16 USC § 796(11)]} "defines 'project' for the purposes of the statute and the Commission's implementing regulations as a 'complete unit of development'. The application ...

proposes three closed-loop pumped storage generating facilities.... Each of these proposed closed-loop pumped storage generating facilities constitutes a distinct complete unit of development, as contemplated by the FPA. Therefore, each proposed closed-loop pumped storage generating facility requires the filing of a separate preliminary permit application."

C. Omissions in application

1. Proposal does not address permit obligations imposed by the United States Environmental Protection Agency

The Ashokan Reservoir and its surrounding watershed are managed under permit obligations imposed by the Environmental Protection Agency (EPA) on New York City and the New York City Department of Environmental Protection (DEP). In January of 1993, the EPA issued a Filtration Avoidance Determination (FAD) to allow New York City to avoid filtration of waters from its Catskill and Delaware Water Supply Systems. The EPA issued subsequent FADs in December 1993, January 1997, May 1997, November 2002, and July 2007. In September 2007, the EPA delegated the responsibility for issuing Surface Water Treatment Rules for the Catskill and Delaware Water Supply Systems to the New York State Department of Health (DOH). DOH issued a Revised 2007 FAD in May 2014, and a new FAD in 2017.¹ All of the FADs include provisions requiring the City to protect the watersheds surrounding the Water Supply Systems and require compliance with stringent standards for water quality.

Failure to meet those standards could result in New York City being required to construct filtration facilities. Current estimates place the capital cost of adding such facilities in the billions of dollars, with annual operations and maintenance costs in the hundreds of millions of dollars. Accordingly, New York City places tremendous emphasis and expends significant resources on protecting the entire water supply system and maintaining water quality within its reservoirs.

2. Proposal does not address permit obligations imposed by the New York State Department of Environmental Conservation

This proposal appears to require a 401 Water Quality Certificate from the New York State Department of Environmental Conservation (DEC), either due to incursions on the Ashokan Reservoir system or due to percolation losses invading the subsurface aquifer. We challenge the accuracy of the following description offered in the application, yet, even if true, the use of this system may have impacts regulated under New York State law: "The proposed Ashokan Pumped Storage Project would operate in a closed loop. Aside from evaporation and percolation losses, the project's water would stay within the system. Therefore, the existing Ashokan Reservoir's remaining [sic] water storage would not be used for project operation" (01/29/2021 application, filed date 02/01/2021, Exhibit 1 Description, 1 General Configuration).

First, it is inconceivable that the operation of the proposed pumped storage facility would “stay within the system” and not have an adverse impact on drinking water quality in the Ashokan Reservoir. The withdrawal and reintroduction of huge volumes of water daily will inevitably result in churning of sediment accumulated in the upper basin of the Reservoir for over 100 years, which will then be discharged either into a drinking water aqueduct or into downstream flows of the Esopus Creek. Such impacts on water quality are regulated in New York under Environmental Conservation Law (ECL) § 11-0503. The ECL has been held by the DEC and affirmed in case law to be applicable to a situation involving discharge of only approximately 4,000 cubic yards of sediment (*Mtr. of Chasm Hydro Inc. vs. N Y S Dep’t of Env’tl Cons*, 14 NY3d 27 (2010)).

Second, here the applicant affirmatively represents that losses due to percolation will occur, which necessarily means there is at least a possibility of impact on groundwater quality at any of the three proposed alternative sites (addressed in Environmental Conservation Law, Purposes and Findings of Art 15 Title 31 [*Groundwater Protection & Remediation Program*] and Art 17 Title 14 [*Nonpoint Source Water Pollution Control*]: in both Titles, the term “waters” includes groundwater, §§ 15-0107(4), 17-0105(2) respectively). While a release to groundwater by percolation may not be a discharge to navigable waters of the United States within the intent of federal statute (33 USC § 1341), there may be a release indirectly into navigable waters depending on groundwater flow: percolation from impounded structures such as each of the three proposed dams can be expected to infiltrate into navigable waters downstream.

II. Application does not address existing function and uses of the Ashokan Reservoir and its watershed

A. Proposal’s potential impacts on drinking water resources

The primary drinking water supply impaired by Upper Esopus Creek turbidity is the Ashokan Reservoir, which provides approximately 40% of the drinking water supply to about 9 million New York state residents.

B. Proposal’s potential impacts on churning and turbidity

Based on observations of similar pumped storage projects in the region and nationally, the rapid filling and drawdown of the upland reservoir could result in almost complete loss of native riparian plant and animal communities bordering the upland reservoir and along streams for some distance upstream of the reservoir. These same observations imply that churning will inevitably occur in the Ashokan Reservoir, where a century’s siltation has led to increasing difficulties with turbidity in the drinking waters from the Reservoir, as well as in waters discharged to the Esopus Creek downstream of the Reservoir (“Lower Esopus”).

C. Proposal's potential impacts on streams and water quality

Each of the alternative sites proposed for an upper reservoir would dam a stream carrying high loads of coarse sediment (bed load) through steep mountain valleys. As proposed, each upper reservoir dam would interrupt 100% of the coarse sediment supply. Bed load is needed to re-form stream riffles and other channel stabilizing features downstream of the proposed upper reservoir dam. Stream riffles and other natural channel features armor streambeds against erosion. Streams located downstream of newly constructed dams are highly likely to become unstable and erode downward and laterally following dam construction during a period of adjustment. This adjustment period or channel evolution is critical to the stream returning to an equilibrium state following the disruption to hydrology and sediment supply caused by dam construction and would likely occur over a period of decades.

In addition to downward adjustment of channels, a reduction in stream flow downstream of a dam can lead to sediment accumulation in the channel bed triggering stream bank erosion. In accordance with modern understandings of stream physics confirmed through scientific study, it can be expected that streams below a newly constructed dam will undergo erosion and adjustment before a new channel configuration achieves hydraulic stability (References: Williams, G.P. and Wolman, M.G. 1984. Downstream Effects of Dams on Alluvial Rivers. United States Geological Survey, Professional Paper 1286; Church, M. 1995. Geomorphic response to river flow regulation: case studies and time- scales. *Regulated Rivers* 11: 3–22; and Grant, G.E., Schmidt, J.C., and Lewis, S.L. 2003. A geological framework for interpreting downstream effects of dams on rivers. In O'Connor, J.E. and Grant, G.E., editors. *A Peculiar River*. American Geophysical Union, *Water Science and Applications* 7, pp. 203–219).

The Ashokan Watershed's geology is such that coarse bed load transported by streams is frequently deposited over relatively deep deposits of clay sediments that historically formed under glacial lakes. Channels starved of bed load below a dam would likely erode into glacial lake clays and substantially increase fine sediment loading to downstream water bodies, including the Esopus Creek and Ashokan Reservoir.

Adjustments to the channel bed and stream bank erosion raise the following concerns: 1) banks in this watershed include large hill slopes that are layered with glacial lake clays that threaten water quality; 2) extensive bank erosion could undermine existing public culverts and bridges located on affected streams; 3) public roads by necessity are located near or adjacent to streams in steep mountain valleys and could be undermined; 4) in this heavily forested watershed, bank erosion would likely increase the supply of large wood to channels, further contributing to channel instability and threatening public infrastructure; and 5) private septic systems, buildings, and stream crossings could similarly be undermined.

The Upper Esopus Creek and minor tributaries between the Ashokan Reservoir and Allaben are included on the NYS Section 303(d) List of Impaired Waters. Water supply

and recreational uses are impaired by silt/sediment. Streambank erosion is the primary source of silt/sediment, along with a diversion from the Schoharie Reservoir. The confluences of Woodland Creek and Stony Clove (waters flowing through two of the proposed sites for an upper reservoir) are located within the portion of Upper Esopus Creek impaired by high levels of turbidity. Streambank and bed erosion below any upland reservoir could further contribute to water quality impairment of the Upper Esopus Creek.

Riparian plant communities that resist bank erosion and provide unique and valuable wildlife habitat, could be threatened downstream of the reservoir by extreme changes in the hydrologic regime and erosion processes as described above.

The installation of transmission lines could further degrade riparian areas throughout the watershed.

D. Proposal does not address impact on Ashokan Reservoir Watershed

For the past 20 years, the DEP, the NRCS Emergency Watershed Protection Program, and local communities have funded the Ashokan Watershed Stream Management Program (AWSMP) in the 255-square mile Ashokan Reservoir Watershed. The AWSMP has assessed streams and published stream management plans for the Esopus Creek and most of its major tributaries. The AWSMP has assessed conditions in all of the streams proposed for upland reservoirs and is monitoring bank erosion in all streams affected by this proposal.

The AWSMP focuses on managing and restoring geomorphic channel stability, sediment transport, riparian cover, aquatic habitat, and floodplain access. The AWSMP works to restore ecological function to streams by implementing restoration projects and riparian plantings. The AWSMP provides education, funding, and technical support to local communities for applying stream best management practices to their projects.

Since 2001, the AWSMP has fully assessed over 15 tributaries to the Esopus Creek and Bush Kill streams and restored geomorphic function to over two miles of stream and stabilized over 1.5 acres of hill slope. The AWSMP has completed over \$2.1 million in projects to restore Woodland Creek and over \$6.1 million to restore the Stony Clove Creek. These projects stabilized large sections of eroding stream banks and channels, reconnected floodplains to their hydrological sources, and re-vegetated riparian areas with Catskill native species. The AWSMP is currently working with the United States Geological Society (USGS) and the DEP to monitor and study the effects of these projects on the fish community, aquatic habitat, bed load and suspended sediment transport, and turbidity.

E. Projected worsening of turbidity due to climate change, exacerbated by proposed project

Because changing climate has included increased frequency and intensity of storm events, any project that might destabilize stream banks and lead to increased erosion during storms could potentially exacerbate existing conditions and worsen the burden to communities of escalating adverse impacts.

F. Legal implications for applicant of licensing proposal

While federal law (FPA § 27 / 16 USC § 821) apparently disclaims intent to preempt a limited class of State laws related to water management ("Nothing contained in this chapter shall be construed as affecting or intending to affect or in any way to interfere with the laws of the respective States relating to the control, appropriation, use, or distribution of water used in irrigation or for municipal or other uses, or any vested right therein"), there is potential economic liability related to the practical application of this exemption, as documented in the dissenting opinion in *Brownville Power Corp. v. Hydro Development Group*, 97 AD2d 947 (4th Dept. [Nov 4] 1983):

“Section 27 of the Federal Power Act [16 USC § 821] explicitly preserves the applicability of the ‘laws of the respective States relating to the control, appropriation, use, or distribution of water used in irrigation or for municipal or other uses, or any vested right acquired therein’ [citation omitted]. The proprietary right to use water for power purposes is among those rights preserved by section 27 of the Act [citations omitted]. Reconciling the preemptory nature of FERC’s jurisdiction under the Federal Power Act, and the preservation of property rights under section 27, the Court of Appeals for Second Circuit has held that the purpose of section 27 is to preserve to holders of State-conferred water rights a right to compensation if those rights are taken or destroyed as incident to the exercise by another of a license granted by the Commission (*Scenic Hudson Preservation Conference v Federal Power Comm.*, 453 F2d 463, 478, cert denied 407 US 926; [16 USC § 803(c)]). The State courts are, therefore, statutorily preempted from enjoining hydroelectric power development pursuant to such a license ... but they are not statutorily preempted from litigating the property rights issue and awarding compensatory damages where property was taken by one granted a license or exemption. [citation omitted].”

Thus, if some injury to New York City water supply system were to be caused by a licensed project, although that injury could not be enjoined, the licensee could be held liable for damages. The business interests of the permit applicant should therefore urge utmost caution in pursuing this proposal, given the large number of water customers served by the Ashokan Reservoir.

III. Inability to Acquire Lands Located within the New York State Forest Preserve

FERC's *Policy Statement on Hydropower Licensing Settlements* (2006) (accessed at [FERC Policy regarding Settlement Agreement \(chelanpud.org\)](http://chelanpud.org)) raises the issue of this applicant's ability to acquire the lands necessary to conduct the proposed project (see ¶ 29 at pp 13~14):

"The Commission has regulatory authority only over the licensee, and thus can administer and enforce the terms of the license only through the licensee and the licensee's property rights. Standard license Article 5 requires the licensee to acquire and retain all interests in non-federal lands and other property necessary or appropriate to carry out project purposes {fn 5 omitted}. The licensee may obtain these property interests by contract or, if necessary, by means of federal eminent domain pursuant to FPA section 21. {fn 6: 16 USC § 814 (2000)}"; the referenced statute, FPA § 21 / 16 USC § 814, appears to limit licensee's authority to acquire property by eminent domain, as constrained by this proviso:

"That no licensee may use the right of eminent domain under this section to acquire any lands or other property that, prior to October 24, 1992, were owned by a State or political subdivision thereof and were part of or included within any public park, recreation area or wildlife refuge established under State or local law...."

That is, even if a party is successful in obtaining a license from FERC, it is up to that party acting without official assistance to acquire the land it needs for the project, and it cannot acquire pre-1992 parklands from the State of New York by condemnation. Since New York State's constitutional protections apply to all Forest Preserve land ("forever wild lands"), and since most, if not all, of the lands in the Catskill Forest Preserve in the area near the Ashokan Reservoir were acquired well before 1992, the ability of this applicant to bring this proposal to completion depends on a highly unlikely and illegal (absent a change in New York State's Constitution) "willing surrender" of public state forest lands to a private business interest.

Although absence of feasibility of completing a project may not be grounds for denying a preliminary license, it seems critical that FERC seek clarification from the applicant about the ways in which such a project would proceed, if lands within the Catskill Forest Preserve of New York State cannot be acquired by eminent domain. That is, the applicant should be required to resubmit an alternative that has a reasonable prospect of being completed and does not rely on acquisition of lands that are not legally available for sale.