

**BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, DC**

New York Blenheim-Gilboa Pumped Storage Project – New York Power Authority)))))	Project No. 2685-026
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**COMMENTS OF THE SCHOHARIE COUNTY
BOARD OF SUPERVISORS ON SCOPING DOCUMENT 1**

The Schoharie County Board of Supervisors (“Schoharie County”) submits these comments on the Scoping Document 1 (the “Scoping Document”) for the Blenheim-Gilboa Pumped Storage Project (“Blenheim-Gilboa Project”) pursuant to Rule 5.9 of the Commission’s Rules, 18 C.F.R. § 5.9 (2014), and the schedule for the submission of written comments established in the Scoping Document.

**INTRODUCTION AND
SUMMARY OF POSITION**

Schoharie County has reviewed both the Scoping Document and the Pre-Application Document (the “PAD”) submitted by the New York Power Authority (“NYPA”) and attended the public hearings on the Scoping Document conducted on July 7 and 9, 2014. As many of the comments made at those public hearings made clear, there is widespread concern among the residents of Schoharie County that the dam creating the Blenheim-Gilboa Project’s lower reservoir may no longer be adequate in light of increasing levels of precipitation due to events such as Hurricane Irene. These concerns are heightened by the fact that NYPA has refused for

many years to operate the Blenheim-Gilboa Project in a manner that would mitigate the flooding that has periodically devastated this area, based on its claim that it is prohibited from undertaking such actions by the provisions of its current license, which NYPA has not proposed to change in this relicensing proceeding.

The vast majority of the public comments received at those hearings also made clear that the Blenheim-Gilboa Project has had a number of substantial adverse impacts on human health and the environment over the last fifty years. These adverse impacts include removing substantial amounts of property from local tax rolls and imposing heavy demands on local infrastructure including highways, police, fire protection and ambulance services. Unlike privately-owned energy facilities, the Blenheim-Gilboa Project makes no property tax payments to the municipalities in which it is located that would offset these burdens and provides no services to those residents. Moreover, the Commission was not required to consider any of these adverse impacts when it issued the original license for the Blenheim-Gilboa Project, as that license was issued prior to the enactment of the National Environmental Policy Act of 1969 (“NEPA”).¹

In order to properly consider these concerns in this relicensing proceeding, the following additional studies must be added to the scope of the Environmental Assessment to be performed in this proceeding:

- A study must be performed to ensure that the Blenheim-Gilboa Project will be able to withstand the increased levels of precipitation occurring in the Schoharie Valley since the issuance of the original license.
- A study must be conducted to determine the extent to which the Blenheim-Gilboa Project can be operated in a manner that would mitigate periodic flooding in the Schoharie Valley;

¹ 42 U.S.C. §§ 4321-4370h.

- A study must be performed to reevaluate the quantity and quality of water that must be discharged by the Blenheim-Gilboa Project;
- The record in this proceeding must include a detailed study quantifying the cumulative effect of the burdens that the Blenheim-Gilboa Project imposes on Schoharie County and its residents; and
- A study must also be performed to assess the air emissions impacts of the Blenheim-Gilboa Project;

Because of the significance of the environmental impacts addressed in these studies, a full Environmental Impact Study (“EIS”) will also be required in this proceeding.

ANALYSIS

I. ADDITIONAL STUDIES TO BE PERFORMED

Pursuant to Rule 5.9 of the Commission’s Rules, 18 C.F.R. § 5.9 (2014), Schoharie County respectfully submits the following list of additional studies required to fully understand and evaluate the environmental impacts of the proposed re-licensing of the Blenheim-Gilboa Project.

A. A Study Must Be Conducted To Ensure That The Blenheim-Gilboa Project Is Able To Safely Withstand The Increased Levels Of Precipitation Occurring In The Schoharie Valley Since The Issuance Of The Original License

The safety of our residents and their property must always be of primary concern of Schoharie County. In light of the disastrous environmental impacts that would flow from any failure of the dam creating the Blenheim-Gilboa Project’s lower reservoir, Schoharie County believes that a study must be done to determine the ability of NYPA’s three Tainter gates located in the earthen dam, impounding the lower reservoir of the Blenheim Gilboa Project to safely pass a Probable Maximum Flood (PMF) event. The objectives of this study should include, but not be limited to, the following:

- Estimating the extent and duration of the current pluvial, taking into consideration the impact of climate change in the Catskill Mountains and its effect upon the current release works at the Blenheim-Gilboa Project to accommodate the PMF.
- Updating estimates of any changes possible in the frequency, volume and elevation of extreme flood events.
- Determining the dimensions of release works to be sued to the Blenheim-Gilboa Project that would provide a Factor of Safety (FOS) at the Blenheim-Gilboa Project of 1.5 of an estimated PMF.

The maximum pool elevation of the lower reservoir of the Blenheim-Gilboa Project during the hurricane induced flood of August 28, 2011 was 898.25 feet above mean sea level. This is less than 2 feet from the maximum pool elevation of 900 feet and less than 10 feet from the crest of the earthen dam. The maximum elevation of flood waters passing over the 1,324 foot long masonry spillway of the NYCDEP's Gilboa Dam, five miles south of the Blenheim-Gilboa Project, was 1,137.93 feet above mean sea level. NYCDEP estimates the PMF at the Schoharie Reservoir/Gilboa Dam would attain an elevation of 1,145.5 feet. This is 15.5 feet higher than the Gilboa Dam's crest elevation of 1,130 feet above mean sea level. The catchment area of the Blenheim-Gilboa Project is 42 square miles larger than the New York City owned Schoharie Reservoir. Two tributaries downstream of the Schoharie Reservoir are conduits for runoff in times of extreme flood. They are the Platterkill, USGS #0135120 and the Minekill, USGS #01350140. Their waters enter the Schoharie Creek and pass through the Blenheim-Gilboa Project.

Schoharie County is concerned that that the earthen dam impounding the lower reservoir at the Blenheim-Gilboa Project would be overtopped due to the current size of the release works at the power project, were a PMF of the magnitude estimated by NYCDEP to occur. The maintenance of adequate stream flow records in the Schoharie Creek drainage basin dates back to the early 20th century. It is of urgent importance to know if the release works currently in place at

the Blenheim-Gilboa Project are adequate to accommodate a PMF or if they need to be augmented to cope with a changing climate.

In performing this study, NYPA should take into consideration existing studies estimating the PMF at the NYCDEP owned and maintained Gilboa Dam/Schoharie Reservoir as well as taking a multi-proxy approach to estimate the frequency and magnitude of flooding that might have taken place prior to the arrival of European settlers in the Schoharie Drainage basin. Dendrochronological studies have been conducted in the Catskill Mountains at the behest of NYCDEP to shed light on past climatologic conditions and their impact on water resources. While past floods will not absolutely reflect future potential extreme flooding, an understanding how varying climatic conditions influences weather patterns provides a useful predicate for the development of a reasonable PMF estimation. A research team led by Neil Pederson of Lamont Doherty published a study on this subject in the February 2013 issue of the Journal of Climate, of the American Meteorological Society. This study could serve as a model for one conducted under the auspices of the applicant.

The public interest in this study and its nexus to the Blenheim-Gilboa Project are clear. The failure to have release works of sufficient capacity to accommodate a PMF at the Blenheim-Gilboa Project would be catastrophic. The overtopping and breaching of the earthen dam impounding the lower reservoir, in time of an extreme flood, would add an additional 5 billion gallons to an extreme high water event. The Schoharie Creek passes through three counties before reaching its confluence with the Mohawk River at Fort Hunter, New York. Not only residents of the Schoharie Valley in Schoharie County would be impacted by the failure of the Blenheim-Gilboa Project Lower Reservoir dam, due to inadequate release works. Portions of Schenectady and Montgomery Counties would be placed in serious jeopardy, were a breach to

occur at the lower reservoir dam at the Blenheim-Gilboa Project. The salient question is whether or not the carrying capacity of the three Tainter gates at the Blenheim-Gilboa Project, which were designed in the 1960s, are up to the task of coping with floods of the 21st century.

NYPA should also take into consideration, but not be limited to using, the following procedures, agencies and institutions in determining the adequacy of their release works at the Blenheim-Gilboa Project to cope with a PMF.

- Analysis of USGS stream flow records and any trend they might indicate.
- NWS and NOAA data.
- Analysis by an independent review team of NYPA's findings at the conclusion of their study.
- Utilize the resources such as Lamont Doherty and the NWS Atmospheric Science Research Center to provide an accurate estimate of the effect of climate change on the PMF in the catchment of the Blenheim-Gilboa Project.

Because an overtopping of the earthen dam impounding the lower reservoir at the Blenheim-Gilboa Project would be a human, environmental and economic catastrophe, it is reasonable to request that a study be done to determine the adequacy of the release works at the Blenheim-Gilboa Project. This is especially true considering the fact that NYPA is asking for a license renewal of fifty years duration. Considering that annual precipitation as measured by the National Weather Service at the nearby Albany Airport has risen from 36 inches to 42 inches between 1970 and the present, the Commission must carefully consider whether changing weather patterns have impacted dam safety. If the issue of the release works at the Blenheim-Gilboa Project is not addressed in this re-licensing proceeding, it may come back at a future date as a stark reminder of an opportunity by NYPA to aid its neighbor that was neglected with tragic consequences for all involved.

An estimate of the cost of preparing the study as requested is as follows:

- Experts (engineer/hydrologist/meteorologist) 240 hours each @ \$100.00 = \$24,000.00
- Technicians in above fields
- 3 x 80 hours @ \$50.00 = \$12,000.00
- Secretarial/Printing - \$4,000.00
- Total Cost \$40,000²

B. A Study Must Also Be Conducted To Determine The Extent To Which The Blenheim-Gilboa Project Can Mitigate The Periodic Flooding That Plagues The Schoharie Valley

A second factor significantly impacting the safety of the residents of Schoharie County and their property is the need to control the disastrous flooding that sometimes occurs in the Schoharie Valley. As the Commission noted in *Eugene Water and Electric Board*,³ many other dams and the reservoirs they create provide needed flood control services to the communities they serve. For the past forty-five years, however, NYPA has consistently refused to provide any flood control assistance to Schoharie County, claiming that the license issued to it by the Commission actually prohibits it from doing so. In light of the substantial adverse environmental impacts of such flooding events, the Commission's assessment of the environmental impacts of the Blenheim-Gilboa Project must include consideration of the extent to which that facility could also be operated as a flood control project. Such operations would serve the public interest by providing a substantial benefit to County residents living downstream

² Sources:

American Meteorological Society, Vol. 26 Issue 4 Feb. 2013. "Is an epic pluvial masking the water insecurity of the greater New York City region?"

Science Digest Journal of Hydrology 2007 – "Recent climate trends and implications in the Catskill Mountain region of New York, U.S.A."

³ 81 FERC ¶ 61,270 (1997), *aff'd sub. nom. American Rivers v. FERC*, 201 F.3d 1186 (9th Cir. 1999).

of the Blenheim-Gilboa Project and have a direct nexus to that project. The results of this study would permit the Commission to determine whether the new license for the Blenheim-Gilboa Project should include conditions requiring it to provide such flood control services. A qualified professional engineering firm would be required to perform this study. At this time, Schoharie County does not have an estimate of the cost of this study.

C. A Study Must Be Conducted Of The Burdens Imposed On Schoharie County And Its Residents By the Blenheim-Gilboa Project

As previously noted, the Blenheim-Gilboa Project imposes substantial burdens on the communities in which its facility is located, yet pays no property tax and has consistently refused to assist these localities with reasonable flood control measures. To assess these environmental impacts, NYPA should be required to evaluate the burdens imposed on the streets and roads and other public infrastructure in these areas, property tax revenues lost by these localities and their school districts, as well as the additional costs in police, fire protection and ambulance service that will be borne by these localities if the license for the Blenheim-Gilboa Project is renewed.

This analysis has a direct nexus to the Blenheim-Gilboa Project and will serve the public interest by providing the Commission with a clear assessment of the burdens imposed on these communities by a decision to relicense this project. Schoharie County is unaware of any existing information on this subject. The study methodology should include an analysis of the number of vehicle trips by NYPA personnel over public roads in Schoharie County, as well as the number of incidents in which local police, fire and ambulance crews have been required to respond to NYPA-related incidents and the extent to which the personnel and equipment requirements of such first responders are greater than they would have been in the absence of the Blenheim-Gilboa Project. In addition, this analysis should also calculate the real property tax revenues lost by these communities due to the existence of this project. NYPA performed a similar study for

the relicensing of its Niagara Power Project in Docket No. P-2216, and that study should be used as a model for this study.

Schoharie County estimates that the costs of this study will be as follows:

- 250 hours @ \$300.00 per hour \$75,000.
- Clerical, printing and publications 100 hours @ \$50.00 per hour \$5,000.
- Total \$80,000.

D. A Study Must Be Conducted To Evaluate The Quantity And Quality Of Water That Must Be Discharged By The Blenheim-Gilboa Project

A study should also be conducted to determine the benefits which would accrue to water quantity and quality downstream of the Blenheim-Gilboa Project by the additional discharge of water from that facility equal to the amount lost annually from the surface of the upper and lower reservoirs due to evaporation. This study should include the following steps:

- Estimating the amount of water lost annually at the Blenheim-Gilboa Project due to evaporation and expressing that quantity in terms of cubic feet per second (“cfs”), on a daily basis.
- Expressing as a percent figure the extent that augmentation of stream flow in the Schoharie Creek, as measured at U.S.G.S. stream gauge #01350180 at North Blenheim would increase stream flow at that site, as shown on Table 4.3.1.2-2 of the Pre Application Document (PAD p.# 2685-026.
- Compiling an inventory of both fish and benthic macroinvertebrates in the Schoharie Creek between North Blenheim U.S.G.S. gage station #01350180 and U.S.G.S. gage station #01350355.
- Compiling an inventory of Ichthyoplankton and Zooplankton in the reach of the Schoharie Creek located between U.S.G.S. stream gage #01350180, North Blenheim and U.S.G.S. stream gage #013500355, Breakabeen.

The relevant resource management goals and public interest considerations that would be served by this study are as follows: Stream flow in the Schoharie Creek downstream of the New York City owned Schoharie Reservoir/Gilboa Dam, and operated by the New York City Department of Environmental Protection, (“NYCDEP”) has been greatly diminished since 1926, due to the diversion, which is especially pronounced during the summer months, through the Shandaken Tunnel to the Ashokan Reservoir. Evaporative loss from the Blenheim-Gilboa Project annually has been computed to be 2,842 acre feet, assuming that 42” of water is lost to the atmosphere from the Blenheim-Gilboa Project reservoirs annually. This amounts to 3.9256 “cfs. As the median flow at the North Blenheim stream gage is 8 cfs during the months of July-October, what approximates a 4 cfs increase in stream flow would constitute a 50% increase over the current median. This would greatly benefit the ecology of the Schoharie Creek.

In terms of existing information and the need for additional information, the PAD devotes no substantive mention of benthic macroinvertebrates down stream and less than one page (4-97) to this subject within the confines of the Blenheim-Gilboa Project’s reservoirs. A significant Brook Trout, *Salvelinus fontinalis*, fishery existed in the reach of the Schoharie Creek, downstream of the Blenheim-Gilboa Project between North Blenheim and Breakabeen, prior to the Hurricane induced flood of August 28, 2011. Remnants of that historic, native char population are still found in the Schoharie Creek in this area. The presence and importance of this fishery was noted by such distinguished fishing authors as Ernest Schwiebert. A survey of the foods there, and other species of fish feed on, as well as the zooplankton should be conducted by the applicant in the area between U.S.G.S. stations 01350180 and 01350355. This survey should include but not be limited to, such organisms as: May Flies (Ephemeroptera), Stone Flies (Plecoptera), Cassid Flies (Trichoptera), Midges (Diptera), Dragon Flies (Anisoptera), Dobson

Flies (Megaloptera), and Cray Fish (Cambaridae). All of the May Flies mentioned in Art Flick's New Stream Side Guide are found in the aforementioned reach of the Schoharie Creek. A qualitative and quantitative analysis of this reach by the applicant would demonstrate the environmental benefits that would be derived from enhanced stream flow during the drier summer months.

The nexus of this study to the Blenheim-Gilboa Project is clear: The virtual doubling of median stream flow between North Blenheim and Breakabeen during the dry summer months would be of obvious benefit to the ecology of this reach of the Schoharie Creek. Compensatory releases from the Blenheim-Gilboa Project, to make up for evaporative loss, should have been a component of the original license for this project. Unfortunately, it was not, which exacerbated low flow in the Schoharie Creek, in time of non spillage of the NYCDEP Schoharie Reservoir/Gilboa Dam. Additional "conservation releases" should be a requirement for the applicant's license renewal. These compensatory releases should not be made during time of flooding downstream of the Blenheim-Gilboa Project.

In terms of study methodology, the least damaging commonly accepted collection techniques should be used in obtaining specimens and the compilation of an inventory of stream biota in the area referred to. The entire Schoharie Creek basin sustained massive trauma as a result of Hurricane Irene's passage on August 28, 2011. This was especially observable in the Schoharie Creek and its tributaries. Electrofishing, as a collection method, should NOT be used. Please refer to the Information and Technology Report, USGS/BRD/ITR-2003-0002 entitled "Electrofishing and its Harmful Effects on Fish" for an explanation.

There are many institutions in the area, both educational and commercial, capable of making a survey of this type and scope. The fact that no comprehensive environmental impact

study was made at the time of the original license granted to the Blenheim-Gilboa Project is illustrative of the changing times. A sound and comprehensive study should be required as part of the Commission's NEPA review of NYPA's relicensing request.

A reasonable effort should be funded by NYPA to collect and collate the information required to adequately address the issues raised in this submission regarding the benefits of conservation releases described. The compilation of facts and their analysis in determining evaporative loss from the Blenheim-Gilboa Project should also be required. The environmental benefits anticipated from increased stream flow downstream from the Blenheim-Gilboa Project will far exceed the cost of this study and the implementation of enhanced stream flow, especially in time of drought.

An estimate of the monetary cost of this study is as follows:

- Collection and collating of specimens: 4 technicians – 40 hours each @ \$25.00 = \$4,000.00
- Expert Analysis and Compilation of Data 80 hours @ \$100.00 = \$8,000.00
- Secretarial/Printing - \$4,000.00
- Total Cost \$16,000⁴

E. A Study Must Be Conducted Of The Cumulative Impacts Of The Blenheim-Gilboa Project On Air Quality In New York State

The Scoping Document erroneously concludes that decommissioning the Blenheim-Gilboa Project would result in the loss of a “viable, safe, and clean renewable source of power to

⁴ Sources:

The Ultimate Fishing Book, Houghton Mifflin Co. Boston, 1981 P. 56.

Electrofishing and its harmful effects of fish. Information and Technology Report USGS/BRD/ITR-2003-0002.

Pre Application Document FERC Docket #2685-026 Table 4.3.1.2-2.

the region.”⁵ While this statement may be true in most Commission licensing proceedings, it is demonstrably not true in the case of the Blenheim-Gilboa Project, which relies entirely on electricity taken from New York’s Bulk Electric System to pump water from its lower reservoir to its upper reservoir, where it can later be released to produce electricity. Because NYPA has offered no proof that this electricity is supplied by “clean renewable sources of power,” this conclusion cannot be sustained on the current record.

Moreover, as an earlier passage in the Scoping Document makes clear, the Blenheim-Gilboa Project actually draws considerably more electric energy from New York’s Bulk Electric System than it returns:

The Blenheim-Gilboa Project is a pumped storage project with four pump-turbine/motor generating units, with a total plant capacity of 1,160 megawatts (MW). The average annual generation during the years 2002 to 2012 was 619,467 megawatt-hours (MWh), and the average annual pumping consumption during that same period was 924,424 MWh.⁶

In such circumstances, the Commission’s review of the environmental impacts associated with continued operation of the Blenheim-Gilboa Project must include a study of the air emissions of the New York Bulk Energy System caused by operation of that project. Because NYPA has failed to provide any analysis of the air emissions impacts associated with the generation of the electricity used by the Blenheim-Gilboa Project in pumping operations, the Commission lacks the information necessary to assess this key environmental impact. Moreover, to the extent that a portion of this electricity is generated by fossil-fired plants in non-attainment areas, the cumulative impacts of the Blenheim-Gilboa Project on air quality in those non-attainment areas is an important issue that must be considered in this proceeding.

⁵ Scoping Document at 17.

⁶ *Id.* at 4.

The public interest considerations that would be served by this analysis and the nexus to the Blenheim-Gilboa Project are both clear, as ensuring that relicensing that project will not adversely impact air quality in New York State is a vital public concern. Schoharie County is not aware of any existing studies or other information relevant to this issue. Such a study could be conducted using General Electric's MAPS-MegaWatt Flow program or any similar model of the dispatch of the Bulk Electric System in New York and neighboring states that could estimate the cumulative air emissions impacts of the Blenheim-Gilboa Project. The cost of this study is unlikely to exceed \$80,000.

II. A FULL ENVIRONMENTAL IMPACT STUDY IS REQUIRED TO FULLY AND FAIRLY EVALUATE THE FOREGOING STUDIES AND THE "NO PROJECT" ALTERNATIVE

Under NEPA, a full EIS is required whenever the environmental impacts of proposed agency action are shown to be substantial. The courts have consistently held that the issuance of licenses for major hydroelectric facilities such as the Blenheim-Gilboa Project are major federal actions with substantial environmental impacts that require the preparation of a full EIS. The courts have also held that this is true in the case of relicensing as well as in the issuance of new licenses, and that the Commission cannot avoid the need for such a detailed environmental review simply because it is relicensing an existing facility. As the court explained in *Confederated Tribes of the Yakima Indian Nation v. Baldrige*:⁷

[T]he decision to relicense is to be based on the same inquiry as original licensing, including a consideration of all relevant harms and benefits to public uses related to the project. The Commission must determine whether any changes in operations are required by "then existing" law and has full authority to impose such changes Relicensing, then, is more akin to an irreversible and irretrievable commitment of a public resource than a mere continuation of the status quo. Simply because the same resource

⁷ 746 F.2d 466 (9th Cir. 1984), *cert. denied*, 471 U.S. 1116 (1985).

has been committed in the past does not make relicensing a phase in a continuing activity. Relicensing involves a new commitment of the resource, which in this case lasts for a forty-year period.⁸

These findings apply with equal force in this case, except that the proposed term of the new license is fifty years.

CONCLUSION

WHEREFORE, for the above-stated reasons, the Board of Supervisors of Schoharie County respectfully requests that the studies proposed herein be included in the Scoping Document and that the Commission find that a full Environmental Impact Study is required in this proceeding.

Respectfully submitted,

/s/

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Chairman of the Schoharie County Board of Supervisors

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⁸ 746 F.2d at 476-77.

Document Content(s)

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