

UNITED STATES OF AMERICA
BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

**DRAFT APPLICATION FOR NEW LICENSE FOR MAJOR PROJECT –
EXISTING DAM**

**EXHIBIT H – INFORMATION
REQUIRED UNDER 18 CFR 5.18**

Prepared by:



March 2020

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**GREGORY B. JARVIS PROJECT
RELICENSING**

FERC NO. 3211



**NY Power
Authority**

Table of Contents

1	Information to be Supplied by All Applicants (18 CFR Section 5.18(c))	1
1.1	Plans and Ability of the Power Authority to Operate the Project (18 CFR Section 5.18(c)(1)(i)(A))	1
1.2	Power Authority's Need for the Electricity Generated by the Project (18 CFR Section 5.18(c)(1)(i)(B))	2
1.3	Need for Project Power, Reasonable Cost, and Availability of Alternative Sources of Power (18 CFR Section 5.18(c)(1)(i)(C))	2
1.4	Use of Project Power for Power Authority-Owned Industrial Facility (18 CFR Section 5.18(c)(1)(i)(D))	2
1.5	Need for Power if Application is an Indian Tribe (18 CFR Section 5.18(c)(1)(i)(E))	2
1.6	Impact on Power Authority's Transmission System with/without Receipt of New License (18 CFR Section 5.18(c)(1)(i)(F))	2
1.7	Plan to Modify the Project (18 CFR Section 5.18(c)(1)(i)(G))	5
1.8	Impacts of Plan Not to Modify the Project (18 CFR Section 5.18(c)(1)(i)(H))	5
1.9	The Power Authority's Ability to Operate and Maintain the Project in New License Term (18 CFR Section 5.18(c)(1)(i)(I))	5
1.9.1	Financial Resources	5
1.9.2	Personnel Resources	5
1.10	The Power Authority's Notification of Adjacent Landowners Regarding Expansion of Project on Additional Lands (18 CFR Section 5.18(c)(1)(i)(J))	5
1.11	Power Authority's Electricity Efficiency Consumption Improvement Programs (18 CFR Section 5.18(c)(1)(i)(K))	6
1.12	Names and Mailing Addresses of Indian Tribes Affected by Applicant's Proposed Project (18 CFR Section 5.18(c)(1)(i)(L))	6
2	Information to be Provided by Applicant Who is an Existing Licensee Applicant (18 CFR Section 5.18(c)(1)(ii))	8
2.1	Statement of Measures by the Power Authority to Ensure Safe Management, Operation, and Maintenance of the Project (18 CFR Section 5.18(c)(1)(ii)(B))	8
2.2	Employee and Public Safety (18 CFR Section 5.18(c)(1)(ii)(B)(5))	8
2.2.1	Employee Safety	8
2.2.2	Public Safety	9
2.3	Current Operation of Project Including Constraints Affecting Operations (18 CFR Section 5.18(c)(1)(ii)(C))	9
2.4	History of Project Operations and Record of Programs to Upgrade Operation and Maintenance of the Project (18 CFR Section 5.18(c)(1)(ii)(D))	9
2.5	Summary of Lost Generation for Unplanned Outages at Project over Last Five Years (18 CFR Section 5.18(c)(1)(ii)(E))	10

2.6	License Compliance Activities (18 CFR Section 5.18(c)(1)(ii)(F))	12
2.7	Actions Related to the Project that Affect the Public (18 CFR Section 5.18(c)(1)(ii)(G)).....	12
2.8	Ownership and Operating Expenses that would be Reduced if the License was Transferred to Another Licensee (18 CFR Section 5.18(c)(1)(ii)(H))	12
2.9	Annual Fees Paid under Part I of the Federal Power Act for Use of Any Federal or Indian Lands Included in the Project Boundary (18 CFR Section 5.18(c)(1)(ii)(I))	12

List of Figures

Figure 1.6-1. Single-Line Diagram	4
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List of Tables

Table 2.5-1. Summary of Unplanned Outages, 2015-2019	11
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1 Information to be Supplied by All Applicants (18 CFR Section 5.18(c))

The Federal Power Act requires applicants for a new license to provide certain information about the applicant's plans and ability to operate and maintain the project. Pursuant to 18 CFR § 5.18(c), this information is provided in this Exhibit. 18 CFR § 5.18(c)(1)(i) information requirements include the need for Hinckley (Gregory B. Jarvis) Hydroelectric Project (Project) power and the examination of alternative sources; plans to modify an existing Project; an applicant's ability to operate and maintain the Project; and the applicant's electrical efficiency programs. This information is included in Section 1.0 of this Exhibit. Pursuant to 18 CFR § 5.18(c)(1)(ii), Section 2.0 contains information to be provided by an applicant who is the existing licensee for a Project and discusses the Power Authority's safe management, operation, and maintenance of the Project; operational history and programs to upgrade Project operation and maintenance; compliance with the current license; and actions related to the Project that affect the public.

1.1 Plans and Ability of the Power Authority to Operate the Project (18 CFR Section 5.18(c)(1)(i)(A))

As discussed in Exhibit B, the Power Authority of the State of New York (d/b/a "New York Power Authority" and referred to as "Power Authority") has no current plans to increase capacity or generation at the Project.

Inflow to the Project consists of runoff from the West Canada Creek watershed upstream of Hinckley Dam, including Black Creek and several smaller tributaries. The Project is operated in accordance with the 2012 Hinckley Reservoir Operating Diagram (Operating Diagram). The Jarvis Project takes advantage of the releases determined by the New York State Canal Corporation (NYSCC) in accordance with the Operating Diagram. Project operations are adjusted on a twice-weekly basis. The Power Authority does not deviate from the Operating Diagram unless directed to do so by NYSCC. The current license allows for the Project to operate in a peaking generation mode. When the Project operates in such a manner, the outflow required by the Operating Diagram is averaged over the course of the day to ensure the total daily average flow is equal to the outflow required by the Operating Diagram. The Power Authority is proposing to operate the Project over the term of the new license as it has been operated in the past.

The Power Authority coordinates operation of the Project with other electrical systems through its participation in the markets operated by the New York Independent System Operator (NYISO). The Project is operated to provide low cost, emissions-free power at times of high consumer use as well as to provide baseload power during periods of low to moderate consumer use. The Project provides up to 9 megawatts (MW) of clean renewable power. Average annual generation for the period 2010-2019 was 28,863 megawatt hours (MWh) per year.

1.2 Power Authority's Need for the Electricity Generated by the Project (18 CFR Section 5.18(c)(1)(i)(B))

The sale of power from the Project is governed by provisions of New York State law relating to the marketing of hydroelectric power, specifically Article 5, Title 1 of the Public Authorities Law, which is known as the "Power Authority Act." The Power Authority markets and operates the Project to meet the marketing plan established pursuant to the Power Authority Act and the specific license conditions and operating characteristics of the Project.

The Project also plays a role in New York's renewable energy portfolio as it provides low-cost energy and stores water for power production during periods of peak energy demand. The Project provides renewable power without the emission of air pollutants or greenhouse gases that other energy sources produce.

1.3 Need for Project Power, Reasonable Cost, and Availability of Alternative Sources of Power (18 CFR Section 5.18(c)(1)(i)(C))

The average annual costs of the power produced by the Project include capital costs, operating costs (the costs of purchased power and related expenses, fuel consumed, operation and maintenance, and administrative expenses), and costs associated with the Project relicensing. As described in Exhibit D, the Power Authority has conducted an analysis of the costs of producing project power.

When hydrological conditions allow, the Project provides low cost emissions-free power for the benefit of New York State. This power is managed within the NYISO. The average annual cost of the Project is provided in Exhibit D. If the Project ceased to exist, alternative source providers would either need to have sufficient existing resources to meet the needs of their customers, including the current Project customers, or would secure resources from the wholesale market.

1.4 Use of Project Power for Power Authority-Owned Industrial Facility (18 CFR Section 5.18(c)(1)(i)(D))

The Power Authority does not use Project power for its own industrial facility or related operations.

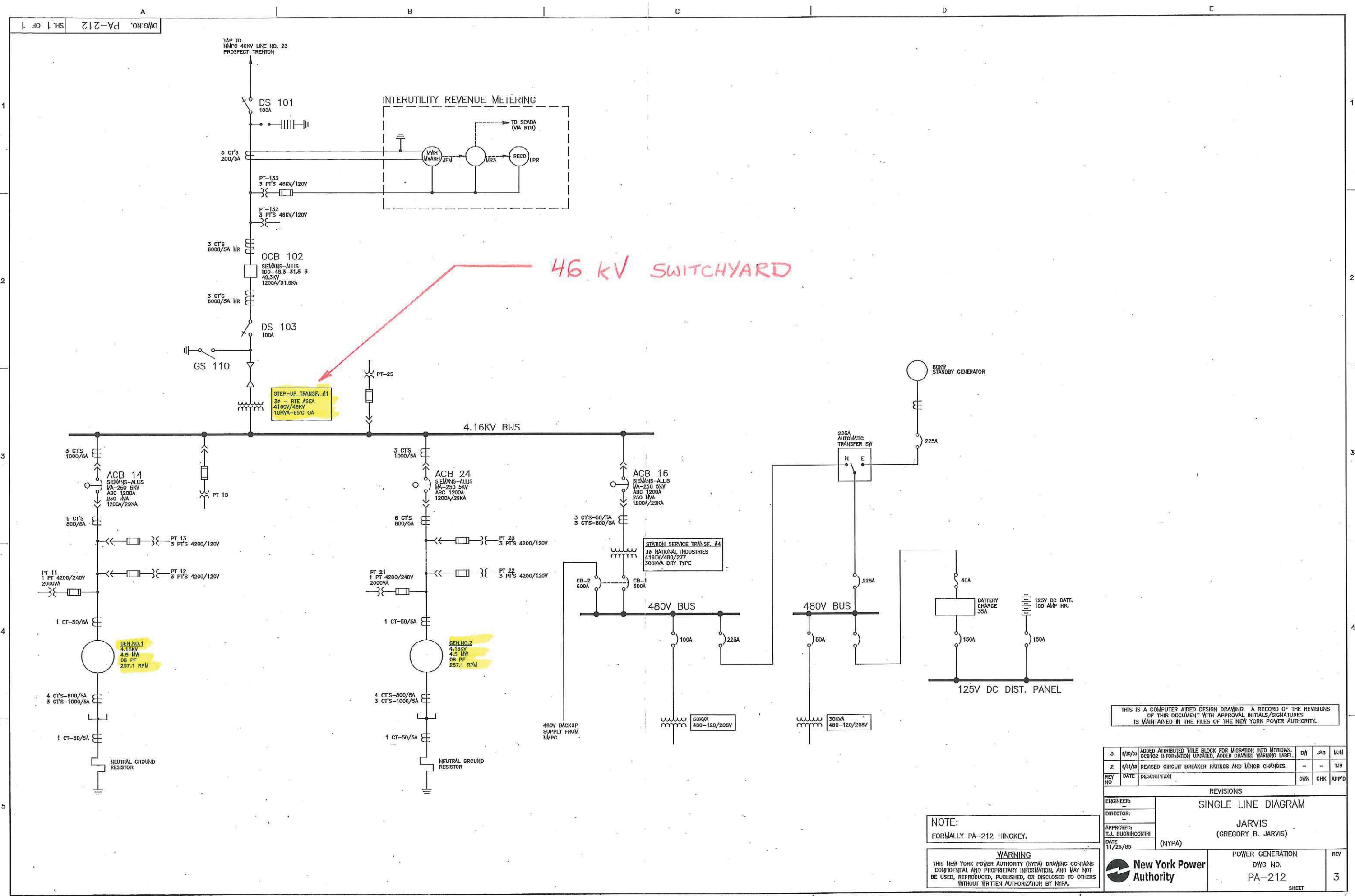
1.5 Need for Power if Application is an Indian Tribe (18 CFR Section 5.18(c)(1)(i)(E))

The Power Authority is not an Indian Tribe applying for a license located on a tribal reservation.

1.6 Impact on Power Authority's Transmission System with/without Receipt of New License (18 CFR Section 5.18(c)(1)(i)(F))

The continued flow of Project-generated energy will not impact the Power Authority's transmission system. Because the Power Authority has no plans to increase the installed capacity of the Project, the current interconnections and related transmission facilities are capable of handling

the maximum output of the Project. No upgrade of Project interconnections or related transmission facilities will be required. The single-line diagram for the Project is provided in [Figure 1.6-1](#).



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2	9/3/99	REVISED CIRCUIT BREAKER RATINGS AND MINOR CHANGES.	-	-	TJB

REVISIONS					
ENGINEER:			SINGLE LINE DIAGRAM		
DIRECTOR:			JARVIS		
APPROVED:			(GREGORY B. JARVIS)		
DATE			(NYPA)		
11/26/85			POWER GENERATION		
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1.7 Plan to Modify the Project (18 CFR Section 5.18(c)(1)(i)(G))

The Power Authority has no plans to construct new facilities or to alter operations of the Project. The Power Authority is seeking authorization to continue operating the Project in its current configuration and as it is currently licensed to operate.

1.8 Impacts of Plan Not to Modify the Project (18 CFR Section 5.18(c)(1)(i)(H))

The Project will continue to provide low-cost, renewable energy. The Project will be operated under the terms and conditions of a new license issued by the Commission.

1.9 The Power Authority's Ability to Operate and Maintain the Project in New License Term (18 CFR Section 5.18(c)(1)(i)(I))

The Power Authority's successful operation of the Project since 1984 demonstrates its financial ability and personnel experience to operate the Project during the new license term.

1.9.1 Financial Resources

The Power Authority is the nation's largest state-owned public power agency. In 2019, the Power Authority had gross operating revenue of \$2.36 billion and an Aa1/AA/AA bond rating. The Power Authority has the financial resources to operate the Project during the term of the new license.

1.9.2 Personnel Resources

The Power Authority has a full complement of operations personnel who perform all necessary day-to-day functions related to Project operations and maintenance. Power Authority staff are fully qualified to handle all aspects of the operation and maintenance of the Project. The Power Authority has a full complement of heavy equipment, which the staff is fully trained and certified to operate. All personnel receive training commensurate with their responsibilities in an ongoing effort to improve the operation of the Project in the safest and most efficient manner possible.

In addition, the Power Authority's corporate staff provides additional expertise relative to all aspects of Project operations. Corporate staff includes personnel from the Engineering, Safety, Environmental, Real Estate, Legal, and Public & Governmental Affairs groups. Corporate staff works closely with Project staff on numerous Project assignments. Examples of programs with substantial involvement of corporate staff include safety training, coordination of license compliance with staff of the Commission's Regional Office, and review of legal matters.

The Power Authority's success in the operation of the Project demonstrates its continued ability to operate the Project during the term of the new license.

1.10 The Power Authority's Notification of Adjacent Landowners Regarding Expansion of Project on Additional Lands (18 CFR Section 5.18(c)(1)(i)(J))

The Power Authority is not proposing any expansion of the Project onto additional lands.

1.11 Power Authority's Electricity Efficiency Consumption Improvement Programs (18 CFR Section 5.18(c)(1)(i)(K))

There are no regulatory requirements for the Power Authority's participation in energy conservation programs. Nonetheless, the Power Authority voluntarily participates in and sponsors a number of energy conservation programs.

Through December 2019, the Power Authority has completed over \$3.2 billion in projects under these programs. Through these initiatives, the Power Authority has produced over \$261 million in annual savings for program participants. Since 1990, the Power Authority's award winning energy efficiency programs are the centerpiece of its conservation efforts. Nationally recognized by the U.S. Department of Energy, the American Public Power Associations and the National Environmental Awards Council, the programs provide energy-efficiency improvements, with no up-front costs, to public schools and other government facilities. As part of its efforts to save energy and reduce taxpayers' costs, the Power Authority has undertaken energy-efficiency projects at more than 6,900 public facilities across the state and lowered the utility bills of state and municipal governments by approximately \$243 million annually. These measures have reduced peak electricity demand by approximately 285,000 kilowatts – equivalent to the output of a medium-sized power plant. The measures have also reduced heat-trapping greenhouse gas emissions by nearly 1,256,000 tons a year and annual oil use by almost four million barrels.

1.12 Names and Mailing Addresses of Indian Tribes Affected by Applicant's Proposed Project (18 CFR Section 5.18(c)(1)(i)(L))

There are no Indian Tribes with lands occupied by the Project or which would likely be affected by the relicensing. Nevertheless, the Power Authority has included the following Indian Tribes and Nations in the distribution of this license application.

Saint Regis Mohawk Tribe
Chief Michael Conners, Jr.
412 State Route 37
Akwasasne, New York 13655

Saint Regis Mohawk Tribe
Chief Paul O. Thompson
412 State Route 37
Akwasasne, New York 13655

Saint Regis Mohawk Tribe
Chief Beverly Cook
412 State Route 37
Akwasasne, New York 13655

Oneida Indian Nation
Oneida Nation Representative Ray Halbritter
2037 Dreamcatcher Plaza
Oneida, New York 13421

On May 24, 2017, the Power Authority sent letters to the above tribes and Nations requesting any existing, relevant, and reasonably available information with respect to resources of concern, and did not receive any responses.

2 Information to be Provided by Applicant Who is an Existing Licensee Applicant (18 CFR Section 5.18(c)(1)(ii))

2.1 Statement of Measures by the Power Authority to Ensure Safe Management, Operation, and Maintenance of the Project (18 CFR Section 5.18(c)(1)(ii)(B))

The Project is operated remotely from the Power Authority's Blenheim-Gilboa Pumped Storage Power Project but maintained and inspected weekly by Power Authority staff from the nearby Clark Energy Center in Marcy, NY. Maintenance functions at the Project are planned and scheduled by the Maintenance Resource Management Department located at Clark Energy Center. Maintenance Planners and Engineers develop project management master sheets, job plans, maintenance intervals, job safety analysis, and maintenance schedules associated with the required inspections, maintenance, and safety aspects of the Project.

In addition, between April and November, Hinckley Dam is inspected monthly by the Clark Energy Center's Mechanical Maintenance Supervisor, who is trained in dam inspection procedures by the Power Authority's Engineering Department. These monthly visual inspections include a walkover of the entire length of the embankments and result in completion of a checklist and a "Summary of Findings". Once a year, a separate inspection of the facilities is conducted by an engineer from the Power Authority's Engineering Department in conjunction with FERC's annual inspection. These regularly-scheduled inspections are conducted in accordance with the Power Authority's "Dam Safety Inspection Procedure for Hinckley Dam". This procedure includes "Inspection Criteria", a Visual Inspection Checklist, Inspection Report outline, Piezometer Readings Form, general outlines for the Survey Report, and Photographs. In the event of an earthquake or significant flood event, unscheduled visual inspections occur immediately following such an event once field conditions are deemed safe.

2.2 Employee and Public Safety (18 CFR Section 5.18(c)(1)(ii)(B)(5))

2.2.1 Employee Safety

The Power Authority operates the Project consistent with its corporate commitment to employee safety. This commitment begins with compliance with applicable local, state, and federal regulations regarding the safe operation of industrial and electrical facilities. The commitment is implemented through a rigorous safety program at the Project. Rigorous inspection and maintenance programs ensure employee safety relative to operating equipment and facilities. The Corporate Safety Oversight Group takes an active role in shaping the Power Authority's Industrial Safety Program and works closely with the Safety Administrators regarding Project issues, goals, and strategies that impact the safety program.

The Power Authority's Safety Program involves employee training sessions as well as making safety information available to employees. The Power Authority uses a Safety Newsletter to inform employees about pertinent regulatory activities, safety alerts, and corporate safety initiatives. Information in the newsletter is often discussed in periodic "Toolbox Talks." In addition

to these meetings, more extensive onsite and offsite training sessions are led by staff of the Corporate Safety Group and Project Safety Administrators. Information on safety issues and policies is made available on the Power Authority's Intranet Webpage. The Power Authority has a union/management safety committee that meets monthly.

2.2.2 Public Safety

The Power Authority places a high priority on public safety at the Project. Public safety at the Project begins with limiting public access to areas where access is safe. Types of access are regulated to ensure safe and compatible use of Project property. As required by the Commission, the Power Authority's most recent Public Safety Plan includes numerous public safety measures to ensure public safety (e.g., lighting, signage, fencing, and the like).

2.3 Current Operation of Project Including Constraints Affecting Operations (18 CFR Section 5.18(c)(1)(ii)(C))

As discussed in Exhibit B, the Project is operated in accordance with the Operating Diagram. The Project simply takes advantage of the releases determined by NYSCC in accordance with the Operating Diagram to generate power. Releases are determined by the time of year and Hinckley Reservoir elevation in accordance with the Operating Diagram. Project operations are adjusted on a twice weekly basis. The Power Authority does not deviate from the Operating Diagram unless directed to do so by NYSCC. The Project does not operate when reservoir water levels are below elevation 1195 feet Barge Canal Datum (BCD). Consistent with the Operating Diagram, during winter months, the reservoir is generally drawn down and then allowed to refill during spring melt.

Inflow to the Project consists of runoff from the West Canada Creek watershed upstream of the dam, including Black Creek and several other smaller tributaries. The Project can generate when flows are between 300 and 1,800 cfs. During periods when flows are below 300 cfs, a low level outlet is used to provide downstream minimum flows. When flows exceed 1,800 cfs flow is conveyed downstream through the turbines, the two low level outlets, and/or over the spillway. Project infrastructure allows for the full range of inflows to be passed downstream.

2.4 History of Project Operations and Record of Programs to Upgrade Operation and Maintenance of the Project (18 CFR Section 5.18(c)(1)(ii)(D))

Maintenance operations at the Project are carried out by the Power Authority's staff. Project staff are supported by engineering, project management, safety, environmental, real estate, and other staff from the Power Authority's corporate offices.

Operations at the Project include routine maintenance of electrical and mechanical equipment and associated facilities. Equipment maintenance includes scheduled maintenance activities such as examination of and repair to turbine/generator units to ensure their continued availability and optimum performance. Cavitation damage to the turbine wheels, a normal operational phenomenon, is repaired during scheduled outages usually lasting a few weeks. Similarly,

replacement of components in the commutators, and replacement of pumps, heat exchangers, filters, transducers and other equipment that degrades during the normal course of power plant operations is routinely carried out by plant staff as part of a preventive maintenance program. Such scheduled, ongoing maintenance activities are planned to minimize effects on energy production. Longer-duration, planned outages that require disassembly of the units for overhaul are typically scheduled for periods that minimize impacts to energy generation.

All civil structures are inspected annually by the Power Authority. Power Authority staff routinely perform maintenance activities such as removal of woody vegetation on earthen dikes or repairs to structural concrete. The Power Authority rebuilt Unit No. 2 in 2016 and Unit No. 1 in 2018.

2.5 Summary of Lost Generation for Unplanned Outages at Project over Last Five Years (18 CFR Section 5.18(c)(1)(ii)(E))

[Table 2.5-1](#) provides a summary of unplanned unit outages at the Project from 2015 through 2019. Where outage times were fewer than 24 hours, repairs were generally made by Project staff with equipment or materials located at the Project. For outages that exceeded 24 hours, off-site procurement of equipment or materials for the repair work was generally required, causing a longer outage time.

Over the five-year period, the average annual amount of unscheduled outage downtime was [To be provided with the Final License Application] unit hours. Typically, when a unit is forced out of service, enough generating capacity remains to meet scheduled load.

Table 2.5-1. Summary of Unplanned Outages, 2015-2019

Date(s)	Unit No.	Duration of Outage (hrs.)	Cause	Corrective Action Taken
[To be provided with the Final License Application]				

2.6 License Compliance Activities (18 CFR Section 5.18(c)(1)(ii)(F))

The Power Authority has had no instances of non-compliance with the terms and conditions of the current license. All environmental inspection and dam safety-related recommendations have been addressed in a timely manner to ensure continued safe operation of the Project facilities. Successful compliance is accomplished by use of a computerized compliance tracking system. When communications are received from the Commission, the documentation is distributed to appropriate Power Authority departments. Concurrently, the request is logged into a Compliance Tracking Database for follow-up. The person responsible for the action is identified in the tracking system. The tracking system is continually updated to reflect appropriate refinements.

In the course of its compliance obligations, the Power Authority has established a strong working relationship with the Commission. The Power Authority has responded in a timely manner to any requests by Commission staff for data or assistance. The Power Authority's Project and corporate staff jointly attend operations inspections to review salient issues with Commission staff.

2.7 Actions Related to the Project that Affect the Public (18 CFR Section 5.18(c)(1)(ii)(G))

The Project makes numerous contributions to local communities, beginning with the Project's low-cost power. The Project also affects the state, the Project region, and the local and neighboring communities through its expenditures, which include salaries to employees, and operation and maintenance costs (e.g., hiring, contractors, and purchasing materials).

During the new license term, the Power Authority will continue its role as an active participant in the life of its community. In addition, the Power Authority has developed several public access and recreational sites near the Project that will remain open for public use, including the Power Authority Boat Launch and Scenic Overlook.

2.8 Ownership and Operating Expenses that would be Reduced if the License was Transferred to Another Licensee (18 CFR Section 5.18(c)(1)(ii)(H))

If the Power Authority does not receive a new license for the Project, annual costs would be reduced by the amount of Project capital and operation and maintenance costs described in Exhibit D.

2.9 Annual Fees Paid under Part I of the Federal Power Act for Use of Any Federal or Indian Lands Included in the Project Boundary (18 CFR Section 5.18(c)(1)(ii)(I))

The Project does not occupy Federal or Indian Lands.