

Subject: FW: HOW TO PARTICIPATE Ashokan Pumped Storage Project FERC # P-15056
From: Amanda LaValle <alav@co.ulster.ny.us>
Date: 2/26/2021, 11:08 AM
To: "ulsteremc@googlegroups.com" <ulsteremc@googlegroups.com>

Hello EMC Members,

Forwarding information on how to participate in the Ashokan Pumped Storage project. This was a topic of concern at our last EMC meeting.

Amanda

From: Dennis Doyle - Planning <ddoy@co.ulster.ny.us>
Sent: Friday, February 26, 2021 10:37 AM
To: supervisor@woodstockny.org; Rob Stanley <shandakensupervisor@yahoo.com>; supervisor@woodstockny.org; James Quigley <ulstersup@icloud.com>; supervisor@marbletown.net; supervisor@townofhurley.org; olivesupervisor@hvc.rr.com
Cc: Amanda LaValle <alav@co.ulster.ny.us>; Evelyn Wright <ewri@co.ulster.ny.us>
Subject: HOW TO PARTICIPATE Ashokan Pumped Storage Project FERC # P-15056

Supervisors: I know that many of you have concerns regarding the proposed Ashokan Pumped Storage Project.

I have provided the links that will help you through the process to intervene in the project. I would suggest that you file a doc-less motion to intervene unless you have documents that you would like to upload – say a resolution of the Board. The process is outlined below

The main on-line FERC Link is [here](#) that will provide you a menu of options. I have also provided links that you may wish to consider rather than full intervenor status.. You may also want to pass these on to concerned individuals as a way to monitor the filings with the Commission without full intervenor status. They will need to know the Docket Number for the project it is **P-15056**

There are links below that should help you through the FERC process.. Individuals may not want seek full intervenor status.

You can monitor the proceedings as receive notices of Commission filings by using [esubscription](#) you can also comment via [ecomment](#)

Guide to intervene is below - the link is [here](#) – you should use the sample intervention letter to format your doc-less motion

How to Intervene Online for a FERC Docket – Lake Powell Pipeline

Now that you have written an intervention letter, it is time to submit it. Below are step-by-step instructions for intervening on the Lake Powell Pipeline via the FERC website if you have created a document to attach and upload in pdf or doc format. If you have not yet registered on the FERC website with your email address and a password, you will have to do so in order to log in and submit comment:

1. Go to the **FERC.gov website**
2. On the top of the website, click on the tab called **Documents and Filings**
3. Select **Eregister**
4. **Login** or register
5. On the left side of the screen, select the tab for **Efiling**
6. On the main section of the screen, three columns will appear. On the left of the three columns, **select general**
7. Then on center of the three columns select **intervention**
8. On the right of the three columns, select **motion to intervene** (if you are filing without a pdf or document to upload – you can select “Doc-less motion to intervene” at this step).
9. Click **next**
10. Enter **docket number P-12966** to intervene on the Lake Powell Pipeline Project.
11. Click **next**
12. Under the Select column, click the plus sign for dockets P-12966-000 through 005
13. Click **next**
14. In the **description box**, write Motion to Intervene of [your name] for the Lake Powell Pipeline (or if you are doing a doc-less intervention, you can write in your contact info and reasons for intervening in the box – take note only 6,000 characters are allowed for Doc-less motions)
15. Choose file: **upload PDF** (no file upload needed for doc-less motion – just type in your information for your intervention)
16. Click **upload** if you are uploading a file

Hope this helps

Dennis Doyle
Director
Ulster County Planning Department
Ulster County Transportation Council
Office : 845-340-3340
Desk: 845-340-3339
Mobile: 845-332-0974
<http://www.ulstercountyny.gov/planning>

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To unsubscribe from this group and stop receiving emails from it, send an email to ulsteremc+unsubscribe@googlegroups.com.

To view this discussion on the web visit <https://groups.google.com/d/msgid/ulsteremc/MN2PR09MB5866CCF97EEF5A039A54AC0CDA9D9%40MN2PR09MB5866.namprd09.prod.out>

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Premium Energy Holdings, LLC

Project No. 15056-000

NOTICE OF PRELIMINARY PERMIT APPLICATION ACCEPTED FOR FILING
AND SOLICITING COMMENTS, MOTIONS TO INTERVENE, AND COMPETING
APPLICATIONS

(February 11, 2020)

On November 19, 2020, Premium Energy Holdings, LLC, filed an application for a preliminary permit, pursuant to section 4(f) of the Federal Power Act (FPA), proposing to study the feasibility of the Ashokan Pumped Storage Project to be located 14 miles west of the City of Kingston in Ulster County, New York. The sole purpose of a preliminary permit, if issued, is to grant the permit holder priority to file a license application during the permit term. A preliminary permit does not authorize the permit holder to perform any land-disturbing activities or otherwise enter upon lands or waters owned by others without the owners' express permission.

The proposed project would consist of the following: (1) a new 2,618-foot-long, 212-foot-high roller-compacted concrete dam for the upper reservoir for alternative 1 (Stony Clove Reservoir) with a surface area of 245 acres and a storage capacity 22,496 acre-feet at a surface elevation of 1,500 feet above mean sea level (msl); (2) a new 2,736-foot-long, 232-foot-high roller-compacted concrete dam for the upper reservoir for alternative 2 (Woodland Reservoir) with a surface area of 313 acres and a storage capacity 26,231 acre-feet at a surface elevation of 1,210 feet msl; (3) a new 2,527-foot-long, 304-foot-high roller-compacted concrete dam for the upper reservoir for alternative 3 (Wittenberg Reservoir) with a surface area of 226 acres and a storage capacity 25,558 acre-feet at a surface elevation of 1,180 feet msl; (4) the existing Ashokan Reservoir for the lower reservoir with a surface area of 8,300 acres and a storage capacity of 382,358 acre-feet at a surface elevation of 585 feet msl; (5) new 13.99-mile-long tunnels, shafts, and penstocks for alternative 1 connecting the upper and lower reservoirs; (6) new 11.58-mile-long tunnels, shafts, and penstocks for alternative 2 connecting the upper and lower reservoirs; (7) new 3.81-mile-long tunnels, shafts, and penstocks for alternative 3 connecting the upper and lower reservoirs; (8) a new 500-foot-long, 125-foot-wide, 150-foot-high underground reinforced-concrete powerhouse containing five turbine-generator units with a total rated capacity of 800 megawatts; (9) a 17.3-mile-long, 230-kilovolt new transmission line for alternatives 1 and 2 from the proposed Ashokan switchyard to the existing Hurley avenue substation; (10) a 12.9-mile-long, 230-kilovolt new transmission line for alternative 3 from the proposed Ashokan switchyard to the existing Hurley avenue substation; and (11) appurtenant facilities. The proposed project would have a maximum annual generation of 2,700 gigawatt-hours.

Applicant Contact: Victor M. Rojas, Premium Energy Holdings, LLC, 355 South Lemon Avenue, Suite A, Walnut, CA 91789; phone: 909-595-5314.

FERC Contact: Woohee Choi; phone: (202) 502-6336.

Deadline for filing comments, motions to intervene, competing applications (without notices of intent), or notices of intent to file competing applications: 60 days from the issuance of this notice. Competing applications and notices of intent must meet the requirements of 18 CFR 4.36.

The Commission strongly encourages electronic filing. Please file comments, motions to intervene, notices of intent, and competing applications using the Commission's eFiling system at <https://ferconline.ferc.gov/eFiling.aspx>. Commenters can submit brief comments up to 6,000 characters, without prior registration, using the eComment system at <https://ferconline.ferc.gov/QuickComment.aspx>. You must include your name and contact information at the end of your comments. For assistance, please contact FERC Online Support. In lieu of electronic filing, you may submit a paper copy. Submissions sent via the U.S. Postal Service must be addressed to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 888 First Street NE, Room 1A, Washington, DC 20426. Submissions sent via any other carrier must be addressed to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 12225 Wilkins Avenue, Rockville, Maryland 20852. The first page of any filing should include docket number P-15056-000.

More information about this project, including a copy of the application, can be viewed or printed on the "eLibrary" link of the Commission's website at <http://www.ferc.gov/docs-filing/elibrary.asp>. Enter the docket number (P-15056) in the docket number field to access the document. For assistance, contact FERC Online Support.

Kimberly D. Bose,
Secretary.

FEDERAL ENERGY
REGULATORY COMMISSION
888 First Street NE
Washington, DC 20426



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U.C. FINANCE DEPT.
KINGSTON, NY

Ulster County
244 Fair Street
P.O. Box 1800
Kingston, NY 12402-

Docket No.: P-15056



355 South Lemon Ave, Suite A
Walnut, CA 91789
(909) 595-5314 Phone
(909) 595-5394 Fax

January 29, 2021

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

Re: Premium Energy Holdings' First Amendment for Preliminary Permit
for the Ashokan Pumped Storage Project, FERC Project No. 15056-
000

Dear Secretary Bose:

Pursuant to 18 C.F.R. §§ 4.32 and 4.81 of the Federal Energy Regulatory Commission's ("FERC") regulations, enclosed for filing is Premium Energy Holdings, LLC's ("Premium Energy") Amendment to Application for Preliminary Permit for the Ashokan Pumped Storage Project under P-15056-000. This amendment reflects the following changes:

- (1) The contact information of towns located within 15 miles of the project dam, now considers Town of Woodstock, Town of Ulster, and Town of Saugerties.
- (2) Contact information of Indian tribes that may be affected by the project, now considers Delaware Nation, Delaware Tribe of Indians, Saint Regis Mohawk Tribe, and Stockbridge Munsee Community.
- (3) Information about nominal rating of the pump-turbine generator-motor, and about the spillway of the reservoirs (Exhibit 1).
- (4) New series of maps for the project layout (Exhibit 3).

The required amendment in the application is requested to avoid the potential land use conflict and engineering design liabilities. If you have any questions or require additional information regarding this submittal, please contact me at (909) 595-5314 or email me at victor.rojas@pehllc.net.

Sincerely,



Victor M. Rojas

Managing Director at Premium Energy Holdings, LLC

Enclosures

cc:

**BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

**APPLICATION FOR PRELIMINARY PERMIT
FOR THE
ASHOKAN PUMPED STORAGE PROJECT**

FERC Project No. 15056-000

Prepared by
Premium Energy Holdings, LLC

January 29, 2021

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INITIAL STATEMENT
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Application for Preliminary Permit
for the Ashokan Pumped Storage Project

Premium Energy Holdings, LLC ("Premium Energy"), a California based limited liability corporation, applies to the Federal Energy Regulatory Commission for a preliminary permit for the Ashokan Pumped Storage Project, as described in the attached exhibits. This application is made in order that the applicant may secure and maintain priority of application for a license for the project under Part I of the Federal Power Act while obtaining the data and performing the acts required to determine the feasibility of the project and to support an application for a license.

1. The location of the proposed project is:

State or territory:	New York
Counties:	Ulster County
Township or nearby town:	Shokan City, West Hurley City
Streams:	Esopus Creek, Bush Kill Creek

2. The exact name, business address, and telephone number of the applicant are:

Premium Energy Holdings, LLC
355 South Lemon Ave, Suite A
Walnut, CA 91789
Telephone: (909) 595-5314

3. The name, business address, and telephone number of the persons authorized to act as agent for the applicant in this application are:

Victor M. Rojas
Managing Director at Premium Energy Holdings, LLC
355 South Lemon Ave, Suite A
Walnut, CA 91789
Telephone: (909) 595-5314
Email: victor.rojas@pehllc.net

Maria Hernandez
Project Manager at Premium Energy Holdings, LLC
355 South Lemon Ave, Suite A
Walnut, CA 91789
Telephone: (909) 595-5314
Email: maria.hernandez@pehllc.net

4. Preference under Section 7(a) of the Federal Power Act
5. Premium Energy is a corporation based in California and is not claiming preference under section 7(a) of the Federal Power Act. Premium Energy's business primarily involves the retrofit and modernization of pumping plants, transmission planning and design, power system studies, testing and commissioning of power plants and substations.
6. Term of Permit:

The proposed term of the requested permit is twenty-four (24) months.
7. Existing Dams or Other Project Facilities:

The proposed project would make use of the existing Ashokan reservoir water and existing dam. 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.

ADDITIONAL INFORMATION REQUIRED BY 18 C.F.R. § 4.32(a)

1. Identification of persons, associations, domestic corporations, municipalities, or state that has or intends to obtain and will maintain any proprietary right necessary to construct, operate, or maintain the project:

Premium Energy Holdings, LLC
355 South Lemon Ave, Suite A
Walnut, CA 91789
Telephone: (909) 595-5314

2. Identify (names and mailing addresses):

- i. Every county in which any part of the project, and any Federal facilities that would be used by the project, would be located.

Ulster County Government
244 Fair Street, PO Box 1800
Kingston, NY 12402
Telephone: (845) 340-3000

- ii. Every city, town or similar local political subdivision:

- (A) In which any part of the project, and any Federal facilities that would be used by the project, would be located:

West Shokan Town
45 Watson Hollow Rd
West Shokan, NY 12494
Telephone: (845) 657-8118

- (B) That has a population of 5,000 or more people and is located within 15 miles of the project dam:

Shokan City
50 Bostock Rd
Shokan, NY 12481
Telephone: (845) 657-2912

Olivebridge Town
Beaverkill Rd
Olivebridge, NY 12461
Telephone: (845) 657-8177

Woodstock Town
NY 212
Woodstock, NY 12498
Telephone: (845) 679-2113

Ulster Town
1 Town Hall Rd
Lake Katrine, NY 12449
Telephone: (845) 382-2455

Saugerties Town
4 High Street
Saugerties, NY 12477
Telephone: (845) 246-2321

iii. Every irrigation district, drainage district, or similar special purpose political subdivision:

- (A) In which any part of the project, and any Federal facilities that would be used by the project, would be located:

Ulster County Soil and Water Conservation District
3130 State Route 28, PO Box 667
Shokan, NY 12481
Telephone: (845) 688-3130

- (B) That owns, operates, maintains, or uses any project facilities or any Federal facilities that would be used by the project:

New York State Office of Parks, Recreation and Historic Preservation
625 Broadway
Albany, NY 12238
Telephone: (518) 474-0456

New York City Department of Environmental Protection
59-17 Junction Blvd
Flushing, NY 11368
Telephone: (718) 595-7000

New York Department of Environmental Conservation
625 Broadway
Albany, NY 12233
Telephone: (518) 402-8044

iv. Every other political subdivision in the general area of the project that there is reason to believe would likely be interested in, or affected by, the application, and interest:

National Park Services
519 Albany Post Rd
Hyde Park, NY 12538
Telephone: (845) 229-2501

Ridgeline Forest Services
402 Krumville Rd,
Olviebridge, NY 12461
Telephone: (845) 657-7125

v. All Indian tribes that may be affected by the project:

Delaware Nation
31064 State Highway 281 Building 100
Anadarko, OK 73005
Telephone: (405) 247-2448

Delaware Tribe of Indians
5100 Tuxedo Blvd
Bartlesville, OK 74006
Telephone: (918) 337-6591

Saint Regis Mohawk Tribe
412 State Route 37
Akwesasne, NY 13655
Telephone: (518) 358-3203

Stockbridge Munsee Community
65 1st Street
Troy, NY 12180
Telephone: (715) 793-4836

VERIFICATION STATEMENT

This application for a preliminary permit for the proposed Ashokan Pumped Storage Project is executed in the state of California, county of Los Angeles.

By: Victor M. Rojas
Premium Energy Holdings, LLC
355 South Lemon Ave, Suite A
Walnut, CA 91789

Being duly sworn, deposes, and says that the contents of this application for a preliminary permit are true to the best of his knowledge or belief. The undersigned applicant has signed the application on this 18th day of November of 2020.



Victor M. Rojas
Managing Director at Premium Energy Holdings, LLC

Subscribed and sworn before me, a Notary Public of the State of California, County of Los Angeles, this day of January 29th, 2021.



NOTARY PUBLIC

EXHIBIT 1 – DESCRIPTION OF THE PROPOSED PROJECT

1. GENERAL CONFIGURATION

The proposed Ashokan Pumped Storage Project would be located 14 miles west of the City of Kingston in the Ulster County, NY. The project concept envisions the construction of a pumped storage power plant facility with a rated capacity of 800 MW. The Project proposes to use the existing Ashokan Reservoir as a lower pool and a new reservoir in the Catskill Mountains to serve as the upper pool.

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 water storage would not be used for project operation.

The existing Ashokan Reservoir is one of two reservoirs in New York City's Catskill Water Supply System, which was created in 1915 (105 years of age). The Ashokan Reservoir is conformed of earthen dams that are 213 ft high and total 5.5 miles in length. The Ashokan reservoir is comprised of two watersheds, the west basin receives water from Esopus Creek, and then the flow continues into the east basin through a concrete spillway, to supply water to New York City.

Alternatives for an upper reservoir to operate the Ashokan Pumped Storage Power Plant would require the construction of a new embankment to create a new reservoir in the Catskill Mountains, north or northwest of the Ashokan Reservoir. The new upper reservoir alternatives are listed below and are depicted in Exhibit 3.

- Upper Reservoir Alternative 1: A new Stony Clove Reservoir at 1,500 ft el.
- Upper Reservoir Alternative 2: A new Woodland Reservoir at 1,210 ft el.
- Upper Reservoir Alternative 3: A new Wittenberg Reservoir at 1,180 ft el.

The embankments for the proposed upper reservoir alternatives would consist of roller compacted concrete dams. Conceptual dimensions for the project's dams are detailed in table 1. Aside from the construction of the new embankment for the selected upper reservoir alternative, hydro power penstock and pressure tunnels will be required to connect the upper and lower reservoirs to the powerhouse. The tunnel system dimensions for each alternative are detailed in tables 2 through 4.

Table 1. New Reservoirs' Embankment Dimensions

Description	Proposed Reservoir	Dam Crest Elev. [ft]	Dam Height [ft]	Dam Length at Crest [ft]	Composition
Upper Reservoir	Stony Clove Reservoir	1,510	212	2,618	Waterproof roller compacted concrete
	Woodland Reservoir	1,220	232	2,736	Waterproof roller compacted concrete
	Wittenberg Reservoir	1,190	304	2,527	Waterproof roller compacted concrete

Table 2. Stony Clove Reservoir Tunnel Dimensions

Type	Tunnel Diameter [ft]	Tunnel Length [mi]	Composition/Lining
Headrace Tunnel	38	1.44	Concrete-lined
Surge Shaft	34	0.02	Concrete or Steel lined
Vertical Shaft	34	0.27	Concrete-lined
Horizontal Tunnel	34	10.03	Concrete-lined
Penstocks (5)	22	0.15	High Strength Steel
Tailrace Tunnel	40	2.08	Concrete-lined

Table 3. Woodland Reservoir Tunnel Dimensions

Type	Tunnel Diameter [ft]	Tunnel Length [mi]	Composition/Lining
Headrace Tunnel	46	1.19	Concrete-lined
Surge Shaft	41	0.04	Concrete or Steel lined
Vertical Shaft	41	0.22	Concrete-lined
Horizontal Tunnel	41	8.29	Concrete-lined
Penstocks (5)	26	0.12	High Strength Steel
Tailrace Tunnel	49	1.72	Concrete-lined

Table 4. Wittenberg Reservoir Tunnel Dimensions

Type	Tunnel Diameter [ft]	Tunnel Length [mi]	Composition/Lining
Headrace Tunnel	47	0.39	Concrete-lined
Surge Shaft	42	0.04	Concrete or Steel lined
Vertical Shaft	42	0.07	Concrete-lined
Horizontal Tunnel	42	2.71	Concrete-lined
Penstocks (5)	27	0.04	High Strength Steel
Tailrace Tunnel	50	0.56	Concrete-lined

The powerhouse would be located west of the existing Ashokan Reservoir. The approximate floor level would be between 200 to 300 ft below ground level. The cavern will be stabilized with high strength projected concrete (shotcrete) and the powerhouse will include steel formwork and concrete as necessary. The tentative dimensions for the powerhouse are 500 ft long, 125 ft wide, and 150 ft high. On the other hand, the cavern of the transformers chamber also will be stabilized with high strength shotcrete. This chamber will have tentative dimensions of 165 ft long, 60 ft wide, and 50 ft high. The powerhouse generating/pumping units, electrical switchyards, interconnecting transmission lines, and other appurtenant facilities would complete the project.

The proposed Ashokan Pumped Storage Project is expected to have a rated capacity of 800 MW. It would interconnect with the existing Hurley Avenue Substation to facilitate pumped storage operations. Consequently, the project would be most attractive to the New York Independent System Operator (NYISO) member utilities, due to the proposed use for storing renewable resources in the area. Additionally, other electrical utilities in New York and New

Jersey are expected to be interested in the project as a resource for storing and maximizing renewable energy use.

2. RESERVOIRS

The upper and lower reservoirs configuration would be determined by evaluating the best suited alternative to maximize the available hydraulic head and minimize the penstock layout to reduce energy losses, while staying within environmental constraints. The proposed reservoir sites within this application are the result of conceptual engineering completed by Premium Energy and its consultants. During the term of the preliminary permit, Premium Energy will further investigate on the pumped storage reservoirs configuration and select the best suited location for energy, economic, and environmental considerations.

The project concept includes the existing Ashokan Reservoir with a raised dam serving as a lower reservoir and one of the three alternatives for an upper reservoir in the Catskill Mountains. A hydraulic head of up to 914 ft would exist between the new upper reservoir and the Ashokan reservoir, which would be exploited for hydro power generation.

A. Lower Reservoir Configuration

The project proposes the existing Ashokan Reservoir, that will be used as the lower pool for the pumped storage operation. The existing Ashokan Reservoir has a maximum water surface elevation of 586 ft. The reservoir's water surface covers 8,300 acres, with around 382,358 acre-ft of storage capacity. Also, additional water volume at Ashokan reservoir would be discharged through the Esopus Creek (southeast basin).

The existing Ashokan Reservoir would experience a maximum surface level variation of 2 ft during operation of the Project, and approximately 15,800 acre-ft would be used for pumping or generating power. With this volume, operation at 800 MW would be possible for 12 hours of continuous output.

B. Upper Reservoir Configuration

The project's three proposed upper reservoir alternatives are located in the vicinity of the Friday Mountain, the Wittenberg Mountain, and the Southwest Hunter Mountain, near the Ashokan Reservoir. The proposed upper reservoir would be built in either the Stony Clove Creek, the Woodland Creek, or the Maltby Hollow Brook (Wittenberg Reservoir). The new upper reservoir alternatives' physical characteristics are detailed in table 5.

Table 5. Upper Reservoir Alternatives Characteristics

Proposed Upper Reservoir	Surface Area [acre]	Storage Capacity [acre-ft]	Maximum Surface Elevation [ft]	Head Compared to Lower Reservoir [ft]
Stony Clove Reservoir	245	22,496	1,500	914
Woodland Reservoir	313	26,231	1,210	624
Wittenberg Reservoir	226	25,558	1,180	594

The new reservoirs will have intake-outlet structures with a submerged intake elevation at an adequate height to enable pumped storage operation. Below this elevation, a permanent reserve of water will remain in the reservoirs. From the intake-outlet structures, a pressure tunnel will unfold to connect the new Ashokan PS Powerhouse and then to the existing Ashokan Reservoir. The proposed upper reservoir alternatives would have enough stored water for the Ashokan Pumped Storage Power Plant to generate 800 MW for 12 hours.

The new upper reservoir alternatives site would naturally discharge runoff water through its own concrete spillways to the existing streams which would be impounded. During high water level season, excess water from the proposed upper reservoirs would be discharged to the Stony Clove Creek, the Woodland Creek or the Maltby Hollow Brook, respectively. These streams naturally discharge to the Esopus Creek and the Ashokan Reservoir.

3. TRANSMISSION LINES

The Project's powerhouse would be connected to the proposed Ashokan Switchyard, from where the Project would connect to the existing Hurley Avenue Substation. In order to store energy or deliver power to the regional electrical utility network, construction of a new 230 AC transmission line will be necessary to transmit power from the Ashokan Pumped Storage Switchyard to the existing Hurley Avenue Substation. The new transmission line will require a new corridor with a length of 12.9 miles (Wittenberg Reservoir alternative) or 17.3 miles (Stony Clove and Woodland Reservoir alternatives). From the Hurley Avenue Substation, the following transmission paths would be available:

- Power transmission to Ohioville, NY, through the existing Central Hudson Gas & Electric 115 kV AC transmission line, which may require capacity upgrades.
- Or power transmission to Roseton, NY, through the existing Central Hudson Gas & Electric 345 kV AC transmission line.

Further studies of the project's transmission lines location/alignment, type of towers, number of circuits, conductor selection, and number of bundle conductors per phase, as well as interconnection alternatives will be carried out during the term of this preliminary permit, to select the most preferable line design. Additionally, preliminary system impact studies of the project interconnection will be conducted to determine the minimum network improvements for the interaction of the project with the existing AC network system.

4. PROJECT CAPACITY

Based on preliminary analysis, the planned total installed capacity of the Ashokan Pumped Storage Power Plant would be of 800 MW. However, the project's rating may vary as studies proceed. The project would store excess renewable energy, helping to integrate renewables into the grid, and to supply firm peaking power generation with primary load following capability. Premium Energy plans to conduct a system impact study and power market investigations to help further refine the range of suitable generation capabilities.

Assuming a plant capacity factor of 40%, the Ashokan Pumped Storage Power Plant, rated 800 MW for generation and 1000 MW for pumping, would produce a maximum of 2,700 GWh of annual energy production. On a preliminary analysis, the maximum gross head may be up to 914 feet, depending on the selected upper reservoir alternative. The proposed project currently

envisioned procurement of five new pump-turbine generator-motor sets for the pumped storage power plant. Each pump-turbine would have a nominal rating at 200 MW to supply the 1000 MW pumping mode demand.

5. FEDERAL LANDS

The lands enclosed within the proposed project boundary are New York State Lands. Therefore, there are no public land survey legal subdivisions. The project layout study boundary, as shown in Exhibit 3, encompasses both federal and private lands. The proposed Ashokan Pumped Storage Project would occupy New York's State Lands north and east of the Ashokan Reservoir; and part of New York's City Land, which is managed by the NY State Department of Conservation and the NY City Department of Environmental Protection.

The existing Ashokan Reservoir extends through the New York's City Lands. The proposed upper reservoir alternatives: Stony Clove Reservoir, Woodland Reservoir or Wittenberg Reservoir, would be created in the New York's State lands. The pressure tunnels or penstocks would go through part of the New York's State Lands and the New York's City Lands.

The interconnection of the project will require new 230 kV transmission lines interconnecting with the existing Hurley Avenue Substation. The proposed transmission corridor for these lines would extend through New York's State Lands and City Lands.

Form FERC-587
OMB No. 1902-0145
(Expires 10/31/2018)

LAND DESCRIPTION

**Non-Public Land States
(and Non-Rectangular Survey System Lands in Public Land States)**

1. STATE NEW YORK 2. FERC PROJECT NO. Not applicable

3. FEDERAL RESERVATION: New York State Land

4. FEDERAL LAND HOLDING AGENCY: NY City Department of Environmental

5. Counties: Ulster County

6. Check one:

☐ License

☒ Preliminary Permit

Check one:

☐ Pending

☐ Issued

If preliminary permit is issued, give expiration date: _____

7. Federal Tract(s) Identification

Proposed Stony Cloves Reservoir

Lat/Long: 42.132128°/-74.248227°

Proposed Woodland Reservoir

Lat/Long: 42.049120°/-74.332221°

Proposed Wittenberg Reservoir

Lat/Long: 41.980680°/-74.321224°

8. Exhibit Sheet Number(s) or Letter(s)

Exhibit 3 – Project Layout

Exhibit 3 – Electrical Interconnection

Exhibit 3 – Section View of Alternative 1

Exhibit 3 – Section View of Alternative 2

Exhibit 3 – Section View of Alternative 3

Transmission Line

9. contact's name Victor M. Rojas

telephone no. (909-595-5314)

date submitted January 29, 2021

This information is necessary for the Federal Energy Regulatory Commission to discharge its responsibilities under Section 24 of the Federal Power Act.

Form FERC-587
OMB No. 1902-0145
(Expires 10/31/2018)

LAND DESCRIPTION

**Non-Public Land States
(and Non-Rectangular Survey System Lands in Public Land States)**

1. STATE NEW YORK 2. FERC PROJECT NO. Not applicable

3. FEDERAL RESERVATION: New York City Land

4. FEDERAL LAND HOLDING AGENCY: NY State Department of Conservation

5. Counties: Ulster County

6. Check one:

☐ License

☒ Preliminary Permit

Check one:

☐ Pending

☐ Issued

If preliminary permit is issued, give expiration date: _____

7. Federal Tract(s) Identification

Existing Ashokan Reservoir

Lat/Long: 41.977006°/-74.164845°

Existing Ashokan Dam

Lat/Long: 41.938406°/-74.218574°

Transmission Line

8. Exhibit Sheet Number(s) or Letter(s)

Exhibit 3 – Project Layout

Exhibit 3 – Electrical Interconnection

Exhibit 3 – Section View of Alternative 1

Exhibit 3 – Section View of Alternative 2

Exhibit 3 – Section View of Alternative 3

9. contact's name Victor M. Rojas

telephone no. (909-595-5314)

date submitted January 29, 2021

This information is necessary for the Federal Energy Regulatory Commission to discharge its responsibilities under Section 24 of the Federal Power Act.

EXHIBIT 2 – DESCRIPTION OF THE PROPOSED STUDIES

1. GENERAL REQUIREMENT

Premium Energy proposes to carry out an extensive feasibility study to evaluate the proposed reservoir configuration alternatives, as well as the power transmission alternatives. The primary aspects to be studied are the geological, environmental and water resources, and electrical engineering of the project. The studies would also include the economic viability and financing of the project. The complete feasibility study will include:

- Project site land investigation.
- Geological and seismic investigation.
- Soil surveys, test pits, bore holes and topographical surveying.
- Hydrological studies including runoff, rain, evaporation and groundwater flow.
- Evaluation of upper reservoir configuration alternatives.
- Devising of the project's water supply plan, including legal and water rights matters.
- Environmental and cultural impact study comprising environmental surveys, impact identification, evaluation and mitigation measures.
- Engineering studies to optimize the project's physical configuration.
- Energy market studies and determination of preliminary power sales and supply expectations.
- Evaluation of transmission interconnection alternatives including electrical system impact studies.
- Determination of size and specifications of the required electromechanical equipment.
- Cost estimates, economic feasibility and financing options investigation.

Based on the results and findings of the initial stages of the feasibility study, the applicant will prepare a Notice of Intent and Pre-Application Document as detailed in 18 C.F.R. §§5.5 and 5.6.

Temporary access roads will not be required to reach the project's proposed features site. The existing roads would be enough to perform the required studies. The existing New York State Route 28 and 28A will allow access to the existing Ashokan Reservoir. Likewise, the existing New York State Route 214 will be sufficient to reach the proposed Stony Clove Reservoir site, the existing Woodland Valley Road will reach the proposed Woodland Reservoir site. Finally, the existing Moon Haw Road will allow access to the proposed Wittenberg Reservoir site.

2. WORK PLAN FOR NEW DAMS CONSTRUCTION

The new upper reservoir dam construction will require subsurface investigations in the Catskill Mountains. The investigations would be done at the proposed upper reservoirs sites, as depicted in exhibit 3. Soil and rock borings will be necessary to determine the rock/soil structure and stability for the proposed dams and power plants foundations.

Soil and rock samples shall be extracted to conduct studies and determine the soil mechanical properties. Therefore, assessing the project site's suitability for construction of the new dams. Furthermore, seismic surveys will also be required.

The schedule of activities will be completed by the applicant during the permit period as shown in the table below:

Table 6. Schedule of Activities

Schedule	Activity
Beginning in Month 1 to the end of Month 4	Conceptual engineering and evaluation of the alternative reservoir configurations
Beginning in Month 1 to the end of Month 6	Initial scoping and consultation
Beginning in Month 5 to the end of Month 10	Geotechnical and hydrological studies
Beginning in Month 7 to the end of Month 12	Soil and topographical surveying
Beginning in Month 1 to the end of Month 16	Environmental and cultural impact study
Beginning in Month 1 to the end of Month 14	Engineering studies to optimize the project's physical configuration
Beginning in Month 4 to the end of Month 16	Planning and evaluation of transmission interconnection alternatives
Beginning in Month 1 to the end of Month 12	Devising of water supply plan
Beginning in Month 12 to the end of Month 18	Legal and water rights matters
Beginning in Month 14 to the end of Month 24	Determination of size and specifications of the required equipment
Beginning in Month 10 to the end of Month 16	Energy market assessment
Beginning in Month 6 to the end of Month 16	Economic study for feasibility & financial planning investigation
Beginning in Month 10 to the end of Month 16	Preliminary licensing proposal, consultation, and documentation
Beginning in Month 16 to the end of Month 24	Preparation, review and filing of the FERC license application

The schedule of activities may deviate from its initial formulation. Activities may be adjusted or supplemented depending upon circumstances which may develop as the studies proceed. Remedial actions to the possible disturbance of the proposed studies include the implementation of an erosion and material disposal plan, backfilling of core borings and test pits, and replanting any disturbed vegetation.

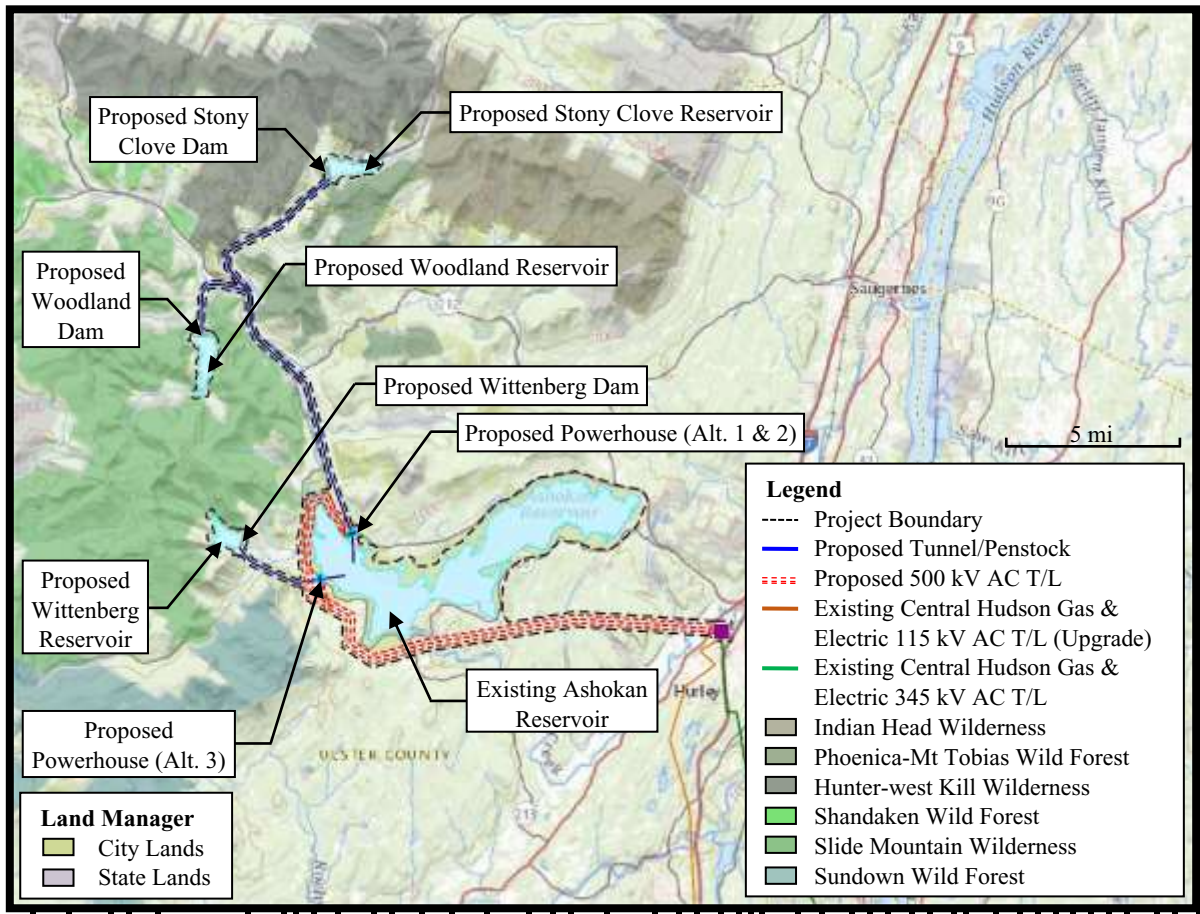
3. STATEMENT OF COSTS AND FINANCING

The total estimated cost of carrying out or preparing the studies, investigations, tests, surveys, maps, plans or specifications described above are \$5 Million.

The expected sources of financing available to carry out the activities of the described feasibility study are:

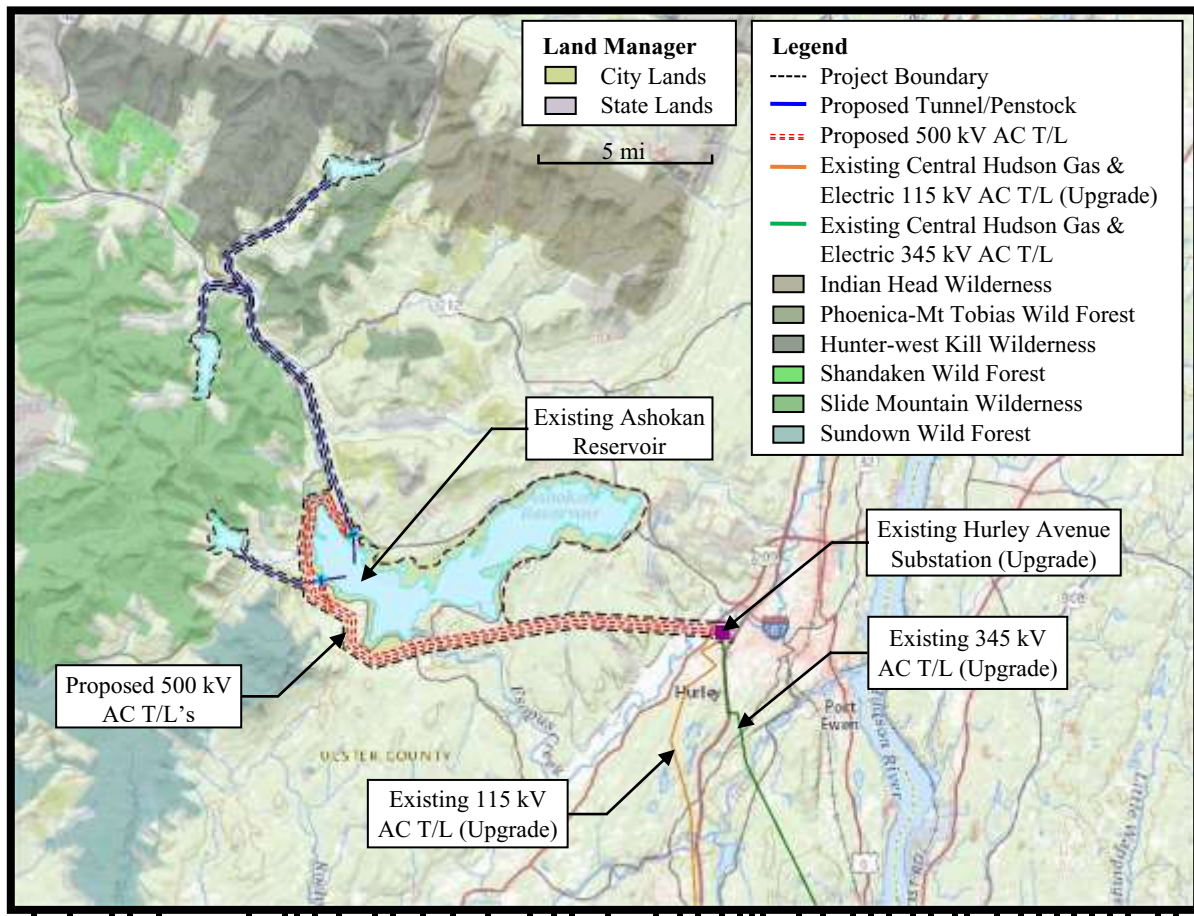
- Premium Energy's available funds.
- Balance raising through investors.

The proposed market for the energy storage and production covers the electric markets in New York. Power purchasing entities and other potential off-takers will be identified in further investigations during the term of the preliminary permit.

EXHIBIT 3 – ASHOKAN PUMPED STORAGE PROJECT MAP**Ashokan Pumped Storage Project Study Area Boundary****Project Layout**

Ashokan Pumped Storage Project Study Area Boundary

Electrical Interconnection



Existing Ashokan Reservoir Limits



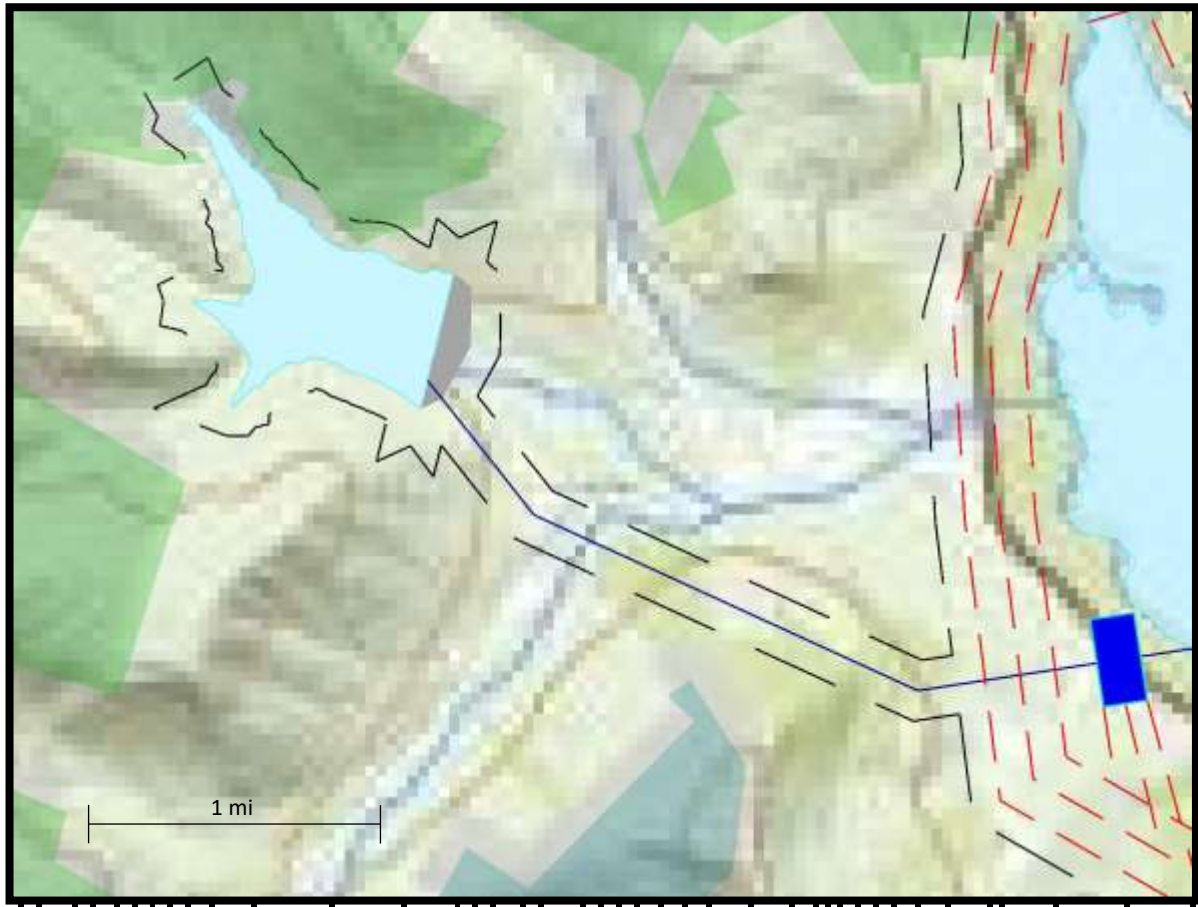
Proposed Stony Clove Reservoir Limits



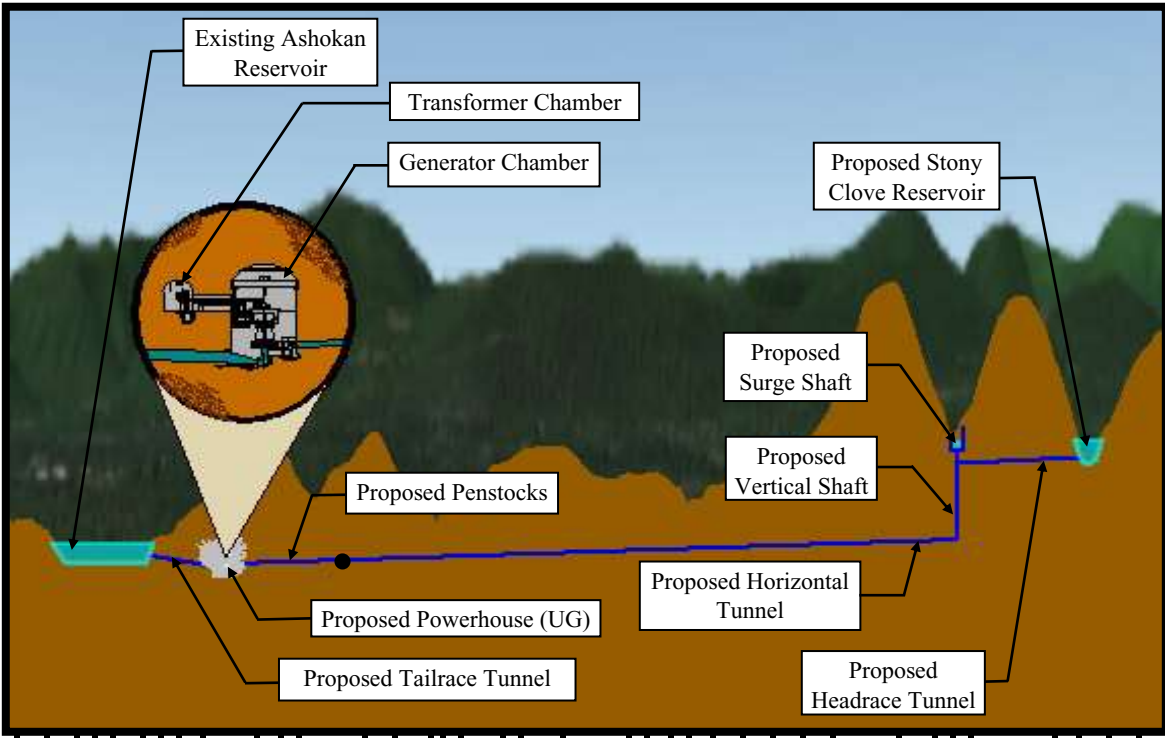
Proposed Woodland Reservoir Limits



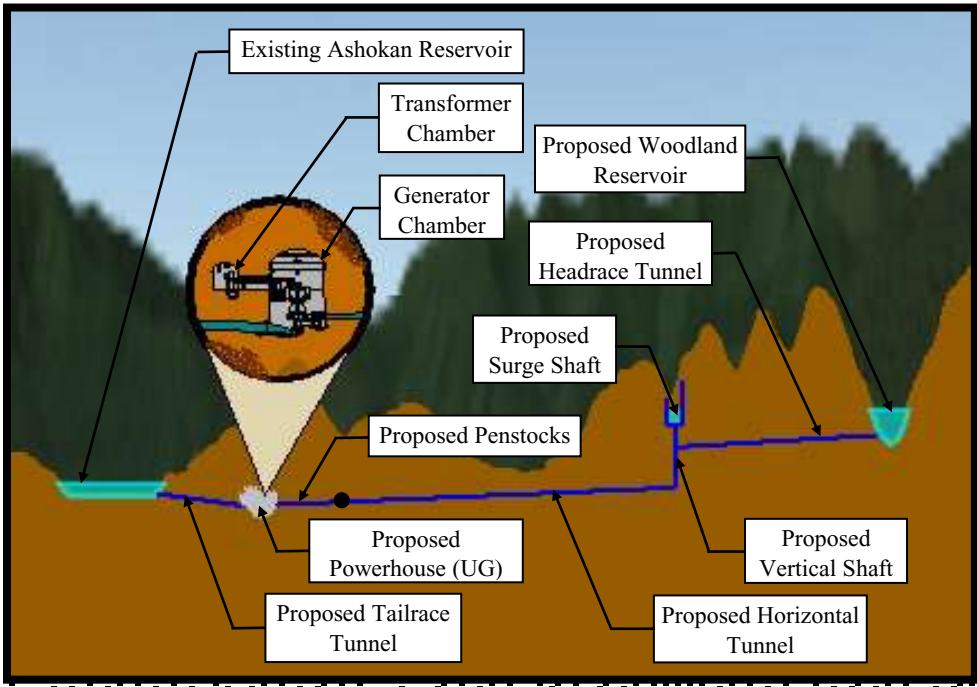
Proposed Wittenberg Reservoir Limits



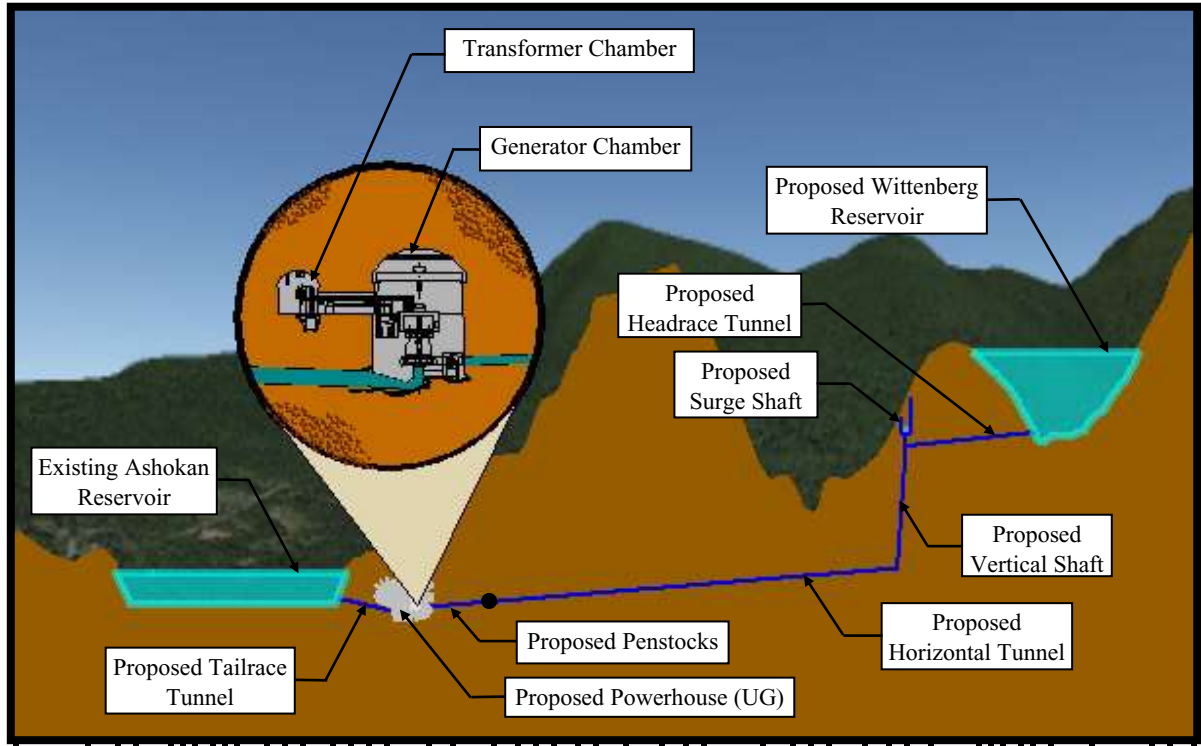
Section View of Alternative 1 (Stony Clove Reservoir)



Section View of Alternative 2 (Woodland Reservoir)



Section View of Alternative 3 (Wittenberg Reservoir)



Document Content(s)

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