

UNITED STATES OF AMERICA  
BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

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

**BLenheim-GILBOA PUMPED STORAGE POWER PROJECT**

**FERC PROJECT No. 2685**

**EXHIBIT D**  
**STATEMENT OF COSTS AND FINANCING**

December 2016

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**NY Power  
Authority**

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## **1 Introduction**

The Blenheim-Gilboa Pumped Storage Project (B-G Project) is located on Schoharie Creek, a tributary of the Mohawk River, about 40 miles southwest of Albany, New York, in the northern Catskill Mountains. The B-G Project is owned and operated by the Power Authority of the State of New York (Power Authority).

This exhibit is a requirement under the Federal Energy Regulatory Commission (FERC) regulations which can be found in 18 Code of Federal Regulation (CFR) Section 4.51(e). The information provided herein covers the specifics prescribed for Exhibit D and serves the purpose of providing a statement of costs and financing.

## **2 Original Cost of Existing Unlicensed Facilities (18 CFR Section 4.51(e)(1))**

This section is not applicable to the B-G Project because the Power Authority is not applying for an initial (original) license. The B-G Project was originally licensed in 1969.

### **3 Estimated Amount Payable Upon Takeover Pursuant to Section 14 of the Federal Power Act (18 CFR Section 4.51(e)(2))**

The Power Authority is a corporate municipal instrumentality of the state, a body corporate and politic, a political subdivision of the State of New York exercising governmental and public powers. The applicant is also a municipality within the meaning of Section 3(7) of the Federal Power Act (FPA). Because it is a state subdivision, the Project is not subject to the takeover provisions of Section 14 of the FPA. Accordingly, the Commission's regulations do not require the Power Authority to include an estimate of take-over costs.

## **4 Estimated Cost of New Development (18 CFR Section 4.51(e)(3))**

### **4.1 Land and Water Rights (18 CFR Section 4.51(e)(3)(i))**

The Power Authority is not proposing to expand land or water rights as a consequence of this license application.

### **4.2 Cost of New Facilities (18 CFR Section 4.51(e)(3)(ii))**

The Power Authority is not proposing any capacity related developments for the B-G Project.

## 5 Estimated Average Annual Cost of the Project (18 CFR Section 4.51(e)(4))

The average annual cost of the Project includes capital costs and annual operating costs. The average annual costs also include any costs associated with the proposed PM&E measures. The Power Authority is a subdivision of the State of New York and pays no federal, state, or local taxes.

### 5.1 Capital Costs

As of the end of the year 2015, the current net investment in the Project is \$253 million. The annual carrying costs consist of two parts, depreciation, and the cost of capital, which is a return on the investment.

### 5.2 Operational Costs

[Table 5-1](#) presents the B-G Project's operational costs from 2007 to 2015. Operating costs include the costs of purchased power and related expenses, fuel consumed, operation and maintenance, and administrative expenses.

Table 5-1: The B-G Project's Annual Operating Costs (\$ Millions)

	2007	2008	2009	2010	2011	2012	2013	2014	2015
Operating Expenditure	\$94.1	\$91.9	\$49.1	\$61.4	\$55.9	\$56.6	\$63.2	\$78.0	\$69.3

### 5.3 Costs of Proposed Environmental Measures

The Power Authority is still in the process of conducting studies and evaluating the need for potential new environmental measures.

## 6 Estimated Annual Value of Project Power (18 CFR Section 4.51(e)(5))

As with other entities active in the New York electricity market, the Power Authority participates in the New York Independent System Operator (NYISO) competitive wholesale electricity market. The NYISO, governed by FERC, coordinates energy producers' bids and utility demands to secure reliable, low-cost energy throughout New York. The B-G Project provides low-cost energy and stores water for power production during periods of peak energy demand. Power revenues represent the difference in peak Locational Based Marginal Prices (LBMPs) from the NYISO electric marketplace minus the off peak prices for pumping. Operations of the B-G Project are based on the energy needs of the region and state; therefore, the B-G Project is not operated continuously.

The NYISO market also values the installed capacity (ICAP) and ancillary services provided by generation facilities. ICAP is required by the NYISO to ensure reliability of the electric system. The NYISO market rewards those generating units capable of meeting the NYISO's reliability rules. The Project also produces ancillary services that provide operating reserve and black start capability to the NYISO market which are also valued by the NYISO market.

[Table 6-1](#) provides operating revenues for the B-G Project from 2007 through 2015. Operating revenues include revenues from wholesale customers and market-based power sales and the provision of ancillary services to the New York electricity market.

Table 6-1: The B-G Project's Annual Operating Revenue (\$ Millions)

	2007	2008	2009	2010	2011	2012	2013	2014	2015
Operating Revenue	\$107.7	\$103.4	\$53.2	\$53.5	\$36.5	\$44.3	\$83.8	\$112.5	\$75.5

## **7 Sources and Extent of Financing (18 CFR Section 4.51(e)(6))**

The Power Authority finances capital projects using a combination of debt obligations and internal funding sources. The Power Authority has adequate financial resources for the operation of the Project for the term of a new license.

## **8 Licensing Costs (18 CFR Section 4.51(e)(7))**

Licensing costs will be included in the Final License Application.

## 9 On-Peak and Off-Peak Values of Project Power (18 CFR Section 4.51 (e)(8))

The Project’s power is dispatched into the NYISO’s wholesale market. Prices in this market are determined on an hourly basis by location. The B-G Project is located in NYISO’s Capital Load Zone. Real-Time Market Locational-Based Marginal Pricing (LBMP) data for that zone for 2015 is provided in 5-minute-increments on the NYISO website ([www.nyiso.com](http://www.nyiso.com)). This data (RTD Zonal LBMP) is summarized into hourly values, and assigned each value as either on-peak or off-peak according to the following definitions:

- On-peak – The 16-hour period 7:00 a.m. - 11:00 p.m. on non-holiday weekdays (Monday - Friday)
- Off-peak – All other times
- Holidays – New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day

On-peak, off-peak, and overall averages on a monthly and annual basis were then calculated; the results are summarized in [Table 9-1](#).

Table 9-1: 2015 Real-Time Market Locational-Based Marginal Pricing – Capital Load Zone

Month	On-Peak (\$/MWh)	Off-Peak (\$/MWh)	Overall (\$/MWh)
January	67.17	48.90	<b>57.15</b>
February	138.11	109.74	<b>123.25</b>
March	54.07	43.50	<b>48.51</b>
April	31.22	21.72	<b>26.37</b>
May	33.59	22.20	<b>27.10</b>
June	23.35	15.56	<b>19.37</b>
July	29.99	20.16	<b>25.02</b>
August	37.83	23.64	<b>30.05</b>
September	39.70	24.96	<b>31.84</b>
October	28.80	21.85	<b>25.14</b>
November	26.24	17.94	<b>21.63</b>
December	28.26	19.04	<b>23.40</b>
<b>Annual</b>	<b>44.27</b>	<b>31.90</b>	<b>37.68</b>

This process was then analyzed for the adjacent load zones; annual results are summarized in [Table 9-2](#).

Table 9-2: 2015 Real-Time Market Locational-Based Marginal Pricing – Capital Load Zone and Adjacent Load Zones

Load Zone	On-Peak (\$/MWh)	Off-Peak (\$/MWh)	Overall (\$/MWh)
North	28.86	20.85	<b>24.59</b>
Mohawk Valley	34.42	23.85	<b>28.79</b>
Capital	44.27	31.90	<b>37.68</b>
Hudson Valley	43.84	30.36	<b>36.66</b>

## **10 Estimated Average Annual Increase or Decrease in Project Generation or Value of Project Power (18 CFR Section 4.51(e)(9))**

The Power Authority proposes no changes to B-G Project operations. The Power Authority anticipates no major changes to average B-G Project generation or the value of B-G Project power as both are driven by the NYISO market.