

**UNITED STATES OF AMERICA**  
**Before the**  
**FEDERAL ENERGY REGULATORY COMMISSION**

**FINANCIAL REPORTING FOR )  
NEW ELECTRIC STORAGE )  
TECHNOLOGIES )**

**Docket No. AD10-13**

**COMMENTS OF THE NATIONAL HYDROPOWER ASSOCIATION REGARDING  
RATES, ACCOUNTING AND FINANCIAL REPORTING FOR NEW ELECTRIC  
STORAGE TECHNOLOGIES**

The National Hydropower Association (NHA)<sup>1</sup> hereby submits written comments in response to the Federal Energy Regulatory Commission’s (Commission or FERC) Office of Energy Policy and Innovation request issued June 11, 2010, in FERC Docket No. AD10-13. NHA commends the Commission for continuing to recognize the need for energy storage and for examining potential new pathways for valuing and compensating storage services.

**I. Introduction**

As NHA has stated previously, Congress and the Administration, as well as the states, have set ambitious energy goals for the country, seeking the short and long term benefits of significantly increased renewable energy generation, such as reduced emission of greenhouse gases and other pollutants. All renewable resources will play a critical role in meeting these

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<sup>1</sup> NHA is a non-profit national association dedicated exclusively to advancing the interests of the U.S. hydropower industry, including conventional, pumped storage and new hydrokinetic technologies. NHA’s membership consists of more than 170 organizations including public utilities, investor owned utilities, independent power producers, project developers, equipment manufacturers, environmental and engineering consultants and attorneys. In 2009, NHA established a Pumped Storage Development Council to promote the benefits of energy storage and to advocate for needed changes to facilitate increased pumped storage project development.

goals. However, the accelerated penetration of intermittent renewables, such as wind and solar, also present challenges to the grid that become amplified as the percentage of generation from these resources increases.

Hydropower pumped storage can absorb excess generation (or negative load) at times of high output and low demand, and release that stored energy during peak demand periods, proving to be an excellent technology partner for the growth of intermittent renewable electricity generation in the United States' energy supply system.

In addition to its benefit in optimizing the integration of renewable resources, energy storage provides a series of other ancillary services that ensures grid reliability and stability – such as load balancing, frequency control and reserve generation. These are all attributes that hydropower pumped storage projects are already providing, and with the proper incentives, can be further maximized to meet this growing need.

As the Commission staff states in the request for comments, hydropower pumped storage is the most widely adopted storage technology in the country to date. Proposed new projects totaling tens of thousands of megawatts are also under consideration with preliminary permits or license applications filed at the Commission. However, as FERC staff also noted, these projects were built in a different time under business models operating in a different economic climate. As FERC investigates the needs of new energy storage technologies, NHA strongly encourages consideration also be given to these new proposed projects in the pumped storage sector.

## **II. General Comments**

In the comments below, NHA discusses the following: the value of storage; potential approaches to categorizing storage service for compensation purposes; using storage facilities for multiple purposes; and new contract storage service.

### **A. The value of storage**

We believe all parties must recognize that the “problem” FERC faces in “categorizing storage service for compensation purposes” is caused by the tremendous operational flexibility that modern electric storage can provide. We must not constrain the development, construction, ownership, operation and use of modern electric storage to satisfy existing regulatory accounting conventions. Instead, we must create a regulatory construct that recognizes and rewards the development, construction, ownership, operation and use of modern storage technology to efficiently integrate and enable greater penetration of renewable resources, support reliable operations of the “smart grid” and continue the integration of new technology into our electric energy infrastructure.

### **B. Potential approaches to categorizing storage service for compensation purposes**

Determining the appropriate rate structure and cost recovery method for electric storage is critical to continued development of this important class of electric energy infrastructure. Whether projects are developed by investor-owned utilities (IOUs), publicly-owned utilities or independent developers, a rational methodology for cost recovery is essential to spur capital investment in this area.

For example, potential storage project developers will examine specific storage opportunities and determine how each opportunity would fit into the current regulatory regime for cost recovery. Developers can develop financial models to assess both regulatory and market risks if the regulations are well defined and the markets are competitive and relatively free from outside influence. One particular challenge for storage project developers is the dual purpose nature of these types of projects. They may deliver generation products like energy, capacity and ancillary services as well as transmission products like congestion management, transmission load factor optimization and reliability improvements. Furthermore, they can deliver new types of ancillary services such as ultra fast reserve (reaction time below 1 second) that may be necessary for the integration of renewables such as solar PV or frequency regulation and spinning reserve in charging mode. Compensation method(s) reviewed by the FERC must be reflective of this dual purpose nature.

In addition, some developers of large storage projects will likely use a “contract storage” model for development, risk mitigation and project finance. Well-defined rules regarding “contract storage” may be critical to the development of large electric storage projects.

### **C. Using storage facilities for multiple purposes**

NHA is concerned that any requirement that limits the provider of electric storage from fully utilizing the capabilities of the storage asset will likely lead to higher costs for storage services and potentially less capital investment in electric storage.

With regard to Maintaining the Independence of Market Operators, NHA believes that the independence of market operators (RTOs/ISOs) is critical to the success of organized markets, and believes that boundaries should be defined so that market operators do not become

market participants, thereby losing their independence. NHA understands there may be interest in areas where an ISO/RTO exists in giving the ISO/RTO some level of control over the operation of a storage facility for meeting system reliability needs. The merits of such circumstances should be reviewed on a case by case basis.

#### **D. New contract storage**

NHA believes that contracts will be an important component in the future development of certain large-scale electric storage, including pumped hydroelectric storage. There are a variety of contractual relationships that may emerge, all of which will be important for allocating risk and securing financing to facilitate development, construction, operation and ownership of pumped storage facilities. While noting the challenges developers of large storage projects face, the potential economies of scale and platform for introduction of advanced technologies will continue to create a demand for the services and products that only large-scale electric storage can provide.

### **III. Conclusion**


Once again, with the rise of renewable energy standards and other incentives for increased renewable energy generation driving the planning and commissioning of a tremendous amount of variable renewable energy projects across the country, America's electrical energy infrastructure is in need of the ancillary services and storage capacity that hydropower pumped storage can provide.

NHA believes pumped storage projects, with the benefits they offer, are proven technologies and are key assets in ensuring grid reliability and stability, as well as increasing intermittent renewable electricity generation.

NHA applauds FERC staff for examining the issues surrounding rates, accounting, and financial reporting requirements for new energy storage technologies and looks forward to working with the Commission to ensure similar issues for pumped storage project development are addressed as part of this process.

Respectfully submitted,

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ASSOCIATION

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