



ELECTRICITY STORAGE ASSOCIATION

Response to Request for Information (RFI) for the New York Energy Highway

May 30, 2012

RESPONDENT INFORMATION:

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BACKGROUND:

Electricity Storage Association (ESA) is an international trade association established to foster development and commercialization of energy storage technologies. The mission of ESA is to promote the development and commercialization of competitive and reliable energy storage delivery systems for use by electricity suppliers and their customers.

ESA was originally founded in 1991 as the Utility Battery Group (UBG) and was made up of eight founding utilities. This group was open to all organizations involved in batteries for electric utility storage applications. In addition to the utility members, the organization soon included suppliers, system engineers, and facilitators, such as EPRI and the U.S. Department of Energy. The organization focused on presentations on technical and project progress in the world of utility storage. In 1996, the name of the organization was changed to Energy Storage Association to reflect the fact that technologies other than batteries, such as flywheels, ultracapacitors, and superconducting magnetic energy storage were also important in a utility storage context. In 2001, the name was again changed to Electricity Storage Association to highlight the emphasis on technologies that store electricity after it is generated.

There are currently nearly 150 members of the organization (list attached), including utilities, developers, technology manufacturers, investors, national laboratories, research institutions, and consultants.

An Advocacy Council was developed to engage in federal and state legislative and regulatory advocacy efforts on behalf of ESA, which are designed to promote the development and commercialization of competitive and reliable energy storage systems within the United States. The Council works closely with state entities, like NY-BEST, to support state policy efforts as well as to collaborate on federal issues.

MEETING ENERGY HIGHWAY OBJECTIVES

As an international trade association, ESA does not propose a specific project but will instead address the importance of including energy storage technologies and applications as New York develops an Energy Highway. Energy storage addresses a number of the key objectives listed in the RFI.

- 1) *Reduce constraints on the flow of electricity...expand the diversity of power generation sources supplying downstate.* Energy storage technologies have the unique ability to be charged from any power source, to store that power, then to dispense it where and when it is needed. Energy storage technologies can behave, therefore, as generation sources and can be easily placed in downstate areas of high urban concentration and demand. Energy storage technologies emit no point source emissions, require no pipelines, use no water, and to date have been relieved of any environmental permitting requirements. Energy storage technologies enable successful integration of renewable energy resources in both their nearly instantaneous regulation of fluctuations on the grid as well as their ability to store generation as it produced (such as wind energy at night), releasing it when the system most needs it (as in afternoon times of peak demand).
- 2) *Assure that long-term reliability of the electric system is maintained.* Energy storage technologies enhance the reliability of the grid, responding more quickly and accurately to instabilities than traditional resources.
- 3) *Increase efficiency of power generation.* With energy storage, other generation sources, like natural gas combined cycle plants (which have a 42% average capacity factor according to the U.S. Department of Energy's Energy Information Administration), are able to be more efficiently and effectively utilized. Gas plants can be used during off-peak times to charge energy storage, relieving them of the need to be in standby mode (with significant cost and emissions).
- 4) *Increase efficiency of generation in urban areas.* As stated in #1 above, energy storage can be sited in urban setting with no concern of emissions or other negative environmental impacts. Energy storage technologies could be placed in commercial basements, empty warehouses, and underdeveloped lots or brownfield sites.

MEETING GROWTH AND SUSTAINABILITY GOALS

Energy storage technologies would be sustainable and environmentally responsible, as stated above, while creating opportunities in New York for economic growth.

- 1) *Create jobs and opportunities.* The energy storage community in New York is vibrant and rapidly growing. The founding and subsequent hard work of the New York Battery and Energy Storage Technology Consortium (NY-BEST) has led to increased investment in New York companies and projects. A recent study by the Copper Development Association shows a healthy five year market horizon for energy storage technologies if they are bolstered by smart public policy.
- 2) *Contribute to an environmentally sustainable future for New York.* Energy storage changes the calculus of the whole grid, enabling the system to be used more efficiently and effectively. Coupled with smart grid technologies, energy storage technologies could provide the stability and reliability to enable the system to be managed by virtually every consumer and producer.

- 3) *Apply advanced technologies.* Energy storage technologies are groundbreaking. The Department of Energy through its Office of Electricity Delivery and Energy Reliability as well as ARPA-E program has focused a significant portion of its funding and effort on developing these technologies.
- 4) *Maximize New York State electric ratepayer value.* Energy storage on the grid should reduce the cost to the ratepayer. Not only can we defer building additional power plants and transmission lines, we can use what we have when we need and it and when the cost is right.
- 5) *Adhere to market rules.* The ESA has been working intimately within the stakeholder process with the NY ISO. FERC has been tremendously supportive of enabling energy storage to have a meaningful place in the bulk power system by making rules that stipulate compensation for the services energy storage can provide.

RECOMMENDATIONS

ESA suggests several policy recommendations to improve the market for energy storage technologies that can have significant positive impact on the success of the Energy Highway.

- **Include energy storage in planning and procurement:** utility and regional planning should evaluate energy storage as both a generation alternative and a transmission alternative; capacity procurement and markets should allow energy storage to participate in the process; storage should be evaluated as an alternative to alleviate transmission congestion, particularly in the downstate area.
- **Include energy storage in the State's Renewable Portfolio Standard:** energy storage should be added to list of RPS eligible technologies; existing RPS methodologies can be borrowed to recognize emission reductions from energy storage; alternatively, the creation of a clean capacity standard (that includes storage) would complement an RPS rather than continue reliance on building new gas-fired combustion turbines to meet capacity needs.
- **Incentivize contracts with independently-owned storage:** private capital is prepared to invest in storage and provide reliability services to utilities; allowing utilities to earn a profit on these contracts will accelerate customer benefits from storage.

CONCLUSIONS

ESA believes New York State is in a unique position to continue energy storage technology and manufacturing growth supported by state policies and become a national—and international—leader in this industry. NY-BEST as an organization can certainly be of assistance in this effort. ESA is prepared to advocate on behalf of those efforts and provide any appropriate technical and policy counsel to the New York organization.

We hope that, by submitting this set of recommendations, ESA can become a trusted resource to the Governor's office as the New York Energy Highway vision is implemented. Energy storage technologies and applications are perfectly suited to meet nearly all of the objectives the program seeks and New York, as a result of carrying these out, can become a national leader in energy storage.

Thank you for the opportunity to comment on this RFI.

Best regards,

A handwritten signature in black ink, appearing to read "Katherine Hamilton". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

Katherine Hamilton
Policy Director
Electricity Storage Association