

ESA appreciates the opportunity for ongoing dialog with NYISO on its Energy Storage Integration initiative and thanks NYISO for its effort to work with industry stakeholders to develop market modifications that will facilitate better utilization of advanced energy storage technologies in wholesale markets. In response to the latest update on the initiative at the September 29 Market Issues Working Group meeting, ESA has comments on several elements of the plans for Energy Storage Integration.

Foremost, ESA strongly agrees with other industry stakeholders that NYISO should not spend the next year working only on extending the Limited Energy Storage Resource's maximum duration from one hour to four hours, particularly if this work comes at the expense of other storage-related market design activity. Although comments earlier this year from ESA did suggest the LESR extension as a possibly beneficial action, the additional information that NYISO has released in recent months suggests that there are already options for energy storage with more than an hour of duration. Namely, the option for energy storage with at least one hour of duration to participate in Energy and Ancillary Services markets as a "Non-Capacity Supplier" seems to provide an avenue for market participation by resources with between one and four hours of duration. This was not apparent until recently, and NYISO should ensure its tariff and manual language does indeed offer this as an option (no reference to a Non-Capacity Supplier currently exists in available NYISO documentation). Provided this classification does allow storage to provide multiple Ancillary Services, including Operating Reserves and Regulation, along with Energy, there does not appear to be a need or desire for multi-hour LESRs. The exception would be if a resource could frequently switch into and out of the LESR category in order to receive state-of-charge management during periods it is only offering Regulation, but NYISO has previously indicated this is not possible.

Instead of spending the next year working on extending the LESR duration limit, NYISO should devote its efforts to accelerating the second phase of Energy Storage Integration, which it is referring to as "Energy Storage Offer." Several of the concepts proposed in this phase would directly facilitate the integration and better utilization of advanced storage technologies into NYISO. The proposal to allow intra-hour switching between charging and discharging based on prices would be particularly beneficial for resources in the Energy market and allow resources to rapidly respond to the needs of the bulk power system indicated through changes in Real Time prices. In addition, investigating option of state-of-charge management by NYISO—perhaps in connection with the ability to selection Real Time Commitment modes—will be an important step toward better optimization of available storage capacity. Generally, NYISO should examine storage-specific modeling and key operational parameters needed for extending state-of-charge management to non-LESR resources, including both Energy Limited Resources and Non-Capacity Suppliers. At a minimum, the ability to utilize an LESR-like signal to adjust a resource's basepoint when only providing Regulation would help prolong the ability of storage to provide the product. Because many these concepts lack significant detail in NYISO's presentations and materials, ESA strongly encourages NYISO to focus its efforts on working with stakeholders to refine these ideas as soon as possible.

In addition to working on the specific concepts outlined for the Energy Storage Integration project, NYISO should take steps to promote confidence in existing market rules and participation options. NYISO should provide developers a degree of certainty that changes in market rules from Energy Storage Integration, as well as from other projects like the DER

Roadmap effort, will not negatively affect the ability of storage to provide currently available products and earn existing revenue streams. Without some degree of legally valid assurance that market changes will not negatively affect the participation of existing and near-future storage projects under current market rules, developers will not be able to justify installing new storage projects—therefore the benefits to the bulk power system that additional storage can provide will be further delayed.

In conclusion, ESA applauds the work NYISO has done thus far to further integrate energy storage resources into wholesale markets and hopes the constructive dialog between ISO staff and the industry continues. NYISO should continue this effort with a focus on making the most promising market design concepts a priority in order to catalyze the addition of more advanced energy storage into the bulk power system as efficiently and quickly as possible. Thank you for the continued engagement on this matter, ESA looks forward to providing more feedback and collaboration in subsequent conversations.