

Project Candidate Template

1 Storage as Transmission

1.1 Problem / Opportunity

The unique characteristics of energy storage allow these assets to provide many potential services to grid operators. During normal operation, storage often has very positive impacts on transmission systems by relieving peak demand through injections and reducing congestion through off-peak charging to bring power where it will be needed later. In some instances, storage used exclusively as a transmission asset could provide a faster and cheaper option for providing the same or similar services as traditional alternatives, while providing valuable optionality to scale or augment project size or operation in the future. There is currently no pathway by which a storage project could operate a storage asset as transmission. Market rules for such projects would need to consider what impact market participation may have to avoid double payment while allowing for flexibility and reduced revenue requirements through traditional rate-basing mechanisms. The project should also consider whether modifications to the interconnection and/or transmission expansion procedures would be required to accommodate such projects. Finally, the project should consider options for cost recovery for storage as transmission, while evaluating participation of storage in various transmission use cases.

1.2 Project Objective(s) & Anticipated Deliverable(s)

This project has two primary components. The first component would have the NYISO develop a process by which a storage project could be evaluated as a transmission asset, including options for cost recovery. The second component would have the NYISO develop rules and methods for operating the storage as a transmission asset, taking multi-use and double payment issues into consideration, as well as the various use cases. These components are related and may depend on one another.

This process should include discussions with developers in this space, review of the literature from FERC on the issue, and consideration of similar projects in other jurisdictions. The deliverable of this project would be market rules for evaluating, interconnecting, and operating storage as a transmission asset.

1.3 Project Justification

Transmission upgrades may be necessary to ensure delivery of clean energy across New York's electric grid. However, transmission development is often difficult, expensive, and on very extended time frames. Utilizing storage as transmission provides another alternative for providing these services on a shorter timescale and potentially at lower cost, while preserving valuable optionality in the process. Without a path forward and market rules, these projects are unlikely to be proposed or move forward, despite the significant potential benefits.