Electric Storage as a Transmission-Only Asset (SATOA)

Revised Phase I Policy Proposal

Planning Advisory Committee
February 13\textsuperscript{th}, 2019
Purpose:

- Review Scope of Phase I SATOA Discussions
- Discuss Phase I Policy Revisions Since January

Key Takeaways:

- Scope is intentionally limited in order to expedite SATA implementation - gaining experience before developing complete solution
- Including all transmission types in Phase I proposal (BRP, MEP, MVP, GIP, MPF)
- Clarify Functional Control is Coordinated between TOP, RC, Market Op
Review Scope of current initiative as laid out in June Issue paper and January policy paper (p. 6)

- **In scope:**
  1. The issues identified in the assigned Steering Committee Issue document and as summarized above, including related cost and revenue considerations.
  2. Electric storage facilities eligible to be transmission assets by virtue of being connected to the MISO Transmission System.
  3. Treatment of electric storage facilities selected in MTEP to address transmission reliability issues as a transmission asset alternative, including modeling and evaluation in the MTEP reliability planning process, and in the Attachment X Generator interconnection processes.
Review Scope of current initiative as laid out in June Issue paper and January policy paper

**Beyond Scope:**

1. Issues identified by FERC Order 841 establishing requirements for the participation model for provision of market services by storage facilities, or otherwise assigned to other committees by the SC (except as may be required to provide necessary coordination with planning issues within scope).
2. The MTEP planning process itself
3. Treatment of Non-transmission Alternatives in planning
4. Modeling of Electric Storage Resources during the course of the MISO Generator Interconnection Procedures (i.e., Attachment X of the Tariff) other than those previously selected as SATA in MTEP reliability studies
5. Cost allocation treatment for reliability-driven projects or any other transmission project classification under the tariff
6. Policies for the treatment of behind the meter generation (BTMG or btmg)
Phased policy development proposed as a means of getting SATA operational and gaining experience before addressing complete solution

• Phase I as proposed in January:
  o Phase I will address treatment of Storage as Transmission-Only Assets (SATOA).
  o Enables consideration of storage facilities in the MTEP reliability planning process sooner than it will take to resolve more complex policy decisions for assets providing both transmission and market services.
Revisions to Phase I policy will include applicability of SATOA to any existing transmission asset category under tariff

- SATOA eligible to be selected as
  - Baseline Reliability Project (BRP)
  - Market Efficiency Project (MEP)
  - Part of an MVP portfolio (MVP)
  - A Generator Interconnection Project (GIP)
  - A Market Participant Funded Upgrade (MPF)
- Consistent with scope framework to consider transmission assets only, but without changing MTEP processes, transmission classification, cost allocation, or eligibility
- Selection based on existing MTEP planning processes (need, evaluation, best solution)
- Cost allocation and eligibility to develop are based on existing tariff requirements for each transmission asset classification
Clarification on functional control of SATOA

• As a transmission asset MISO retains “functional control” over SATOA
• Normal protocols for functionally controlled transmission assets include coordination between local transmission operator, MISO Reliability Coordinator/Market Operator
• Market monitoring and mitigation ensures operation of all transmission assets is impartial wrt markets
• SATOA have characteristics different than traditional wires: injection and withdrawal of energy
• Coordinated control as with other transmission assets should result in minimal unaccounted for energy, while ensuring that these assets can perform the transmission reliability functions they are selected and compensated for
Phase I policy revisions will recognize coordination necessary between TOP, MISO RC, and MISO Market Operations

• In some applications, SATOA may need to be controlled via automated processes similar to fast relay initiated Special Protection Schemes (e.g. to avert instabilities following critical contingencies)
• In other cases local TOP may identify real time issues and communicate them to MISO RC (as today).
• Still in other cases MISO may recognize day-ahead need for use of the SATOA and its impact on the generation solution
• In any of these cases coordination between MISO Market Ops, RC, and TOP must occur
• In any of these cases, energy injections and withdrawals will be included in UDS system enabling energy balance
Next time we will provide the revised policy document, and draft BPM and tariff

• Policy Doc will address many of stakeholder comments received in January.
• Areas we are focusing on that may need tariff and/or BPM revisions or additions include:
  - **Interconnection**
    - Attachment X provisions related to SATOA interconnection

  **Functional Control**
  - Mirror the tariff provisions related to how SSR unit is committed and scheduled
  - Others re transmission control protocols (not identified yet)

**Settlement of Energy Transactions for Transmission Purposes**

**Registration of Assets and Market Participants**
## SATOA Policy Work Plan

<table>
<thead>
<tr>
<th>Date</th>
<th>Milestone</th>
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<tbody>
<tr>
<td>Apr 18</td>
<td>PAC Mtg: initial discussion of issues and process</td>
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<tr>
<td>Jun 13</td>
<td>PAC Mtg: review and discussion of Issue Paper</td>
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<tr>
<td>Jul 15</td>
<td>Stakeholder comments on Issue Paper Due</td>
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<tr>
<td>Aug 17</td>
<td>Tentative - PAC conf. call discussion of comments / revisions</td>
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<tr>
<td>Sep 26</td>
<td>PAC meeting discussion of comments and any revisions</td>
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<tr>
<td>Oct 17</td>
<td>Stakeholder comments due</td>
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<td>Oct 31</td>
<td>SATA Workshop</td>
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<tr>
<td>Nov 14</td>
<td>PAC meeting Recap Workshop &amp; Propose Phased Approach</td>
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<tr>
<td>Dec 5</td>
<td>Stakeholder Comments on Proposal to Phase Policy Development</td>
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<tr>
<td>Jan 2019</td>
<td>PAC Mtg: draft Phase I Policy Proposal</td>
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<tr>
<td>Feb 2019</td>
<td>Revised Phase I Policy Proposal (doc update in March)</td>
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<tr>
<td>Mar 2019</td>
<td>Draft BPM / tariff language</td>
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<tr>
<td>Apr 2019</td>
<td>Revisions to BPM / tariff language</td>
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<td>May 2019</td>
<td>Continue Discussion as Needed</td>
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<tr>
<td>Jun 2019</td>
<td>FERC Filing Requesting September Decision</td>
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