

**To: John Fernandez, ESTF Chair
Angela Maiko, ESTF Vice Chair
December 8, 2017**

Comments from ESA and GPI on MISO's ESTF Charter & Management Plan

The Energy Storage Association and Great Plains Institute appreciate the opportunity to submit comments on the final revisions to the Energy Storage Task Force Charter and priorities for the group's Management Plan.

ESA and GPI support the final Charter language as posted with the November 28th, 2017 meeting materials. We believe this language supports the intended mission of the Energy Storage Task Force and allows needed flexibility to identify, prioritize, and communicate energy storage-related issues to MISO's Steering Committee and other stakeholder entities.

We appreciate the willingness of MISO and stakeholders engaged in the ESTF to keep up critical momentum heading into 2018 by holding a conference call on December 20th, 2017 to develop the group's management plan. Our comments submitted ahead of the November 18th, 2017 ESTF meeting included a list of priority issues, as well as a link to the issues list posted as part of the August 24th Common Issues Meeting on Energy Storage¹. For your reference, the same list of priority issues is copied below. We still believe this list is a good starting place for the management plan discussion. We have also added several key dates that the ESTF should keep in mind while developing the management plan such that needed reforms can be implemented in a timely manner. This fits in with the Gantt chart approach discussed during the November 28th, 2017 ESTF meeting. We intend these dates to be informative to the discussion and expect that stakeholders will want to discuss the magnitude of needed process changes and realistic timelines for implementation, in conjunction with these referenced dates. The outcome of this will hopefully serve to form the list of top priorities, and ultimately the management plan, for the ESTF.

Proposed Processes for Issue Investigation

- Resource adequacy rules / capacity accreditation (**October 31st – Generator Verification Test Capacity results due**)
- Market registration/resource types available for storage
- Market products that utilize and compensate storage flexibility
 - Fast-responding services (Regulation, PFR, etc) / AGC Enhancement
 - Ramp product / flexible capacity
 - Multi-period commitments
 - Load-shifting product
- Interconnection process and rules for standalone storage and hybrid systems / adding storage to an existing generator (**Definitive Planning Phase Study Timeline is fluid but relevant**)
- Treatment of storage as a transmission asset / inclusion of storage in MTEP planning models (**September 15th – MTEP Submission Deadline**)
- Modeling and optimization of storage resources / bidding & registration parameters
 - State of charge management and approaches for energy limited assets

¹<https://www.misoenergy.org/Library/Repository/Meeting%20Material/Stakeholder/CIM/2017/20170824/20170824%20Energy%20Storage%20CIW%20Item%2003%20ESR%20Issues%20List.pdf>

- Persistence in ACE Signal
- Framework for multiple-use storage
 - Providing both distribution & wholesale services
 - Providing both transmission & generator services
- Qualification for SSR of energy storage resources

Lastly, we include recommendations for the management plan below. These are updated from our previously submitted management plan recommendations to reflect the accomplishments of the ESTF during the November 28th, 2017 meeting, and the items that needed to be pushed forward to December 2017 and into 2018.

- Sample task 1
- Sample task 2

Quarter 4 2017

Planned tasks for the quarter:

- Sample task 1
- Sample task 2

October	<ul style="list-style-type: none"> ● Establish charter and 2018 management plan
November	<ul style="list-style-type: none"> ● Finalize charter ● Solicit stakeholder submission of existing Tariff, BPM, and MISO processes for issue investigation and placement on management plan
December	<ul style="list-style-type: none"> ● Review the Issues list included in the August Common Issues Meeting materials and any stakeholder issue submissions to date ● Review additional issues/management plan recommendations submitted for consideration by stakeholders Solicit prioritization of submitted issues & ongoing work for investigation ● 2018 Meeting Schedule ● Develop 2018 Management Plan ● Develop reporting process to Steering Committee and monitoring of ongoing coordination with other committees

Quarter 1 2018

Planned tasks for the quarter:

- Sample task 1
- Sample task 2

January	<ul style="list-style-type: none">• Review prioritization feedback and develop management plan going forward• Review energy storage-related ongoing work in other committees (capacity accreditation, modeling in MTEP)• Development of Gantt chart for top-ranked priority issues• Discussion of top-ranked priority issue(s)
February	<ul style="list-style-type: none">• Discussion of top-ranked priority issue(s)
March	<ul style="list-style-type: none">•

Sincerely,

Matt Prorok, Great Plains Institute
Jason Burwen, Energy Storage Association