Energy Storage Design Project – Feedback Form

February 18, 2020

Date Submitted: *YYYY/MM/DD*	**Feedback Provided By:** Company Name: **Storage Power Solutions** Contact Name: Kerry Lakatos-Hayward Contact Email: [redacted]

Following the February 18, 2020 Energy Storage Advisory Group (ESAG) meeting to discuss the Energy Storage Design Project, the IESO is seeking feedback from participants on whether the Interim Design Features presented within the design document offer pragmatic solutions for the participation of energy storage in IESO Administered Markets in the near term. The IESO will work to consider feedback and incorporate comments as appropriate and post responses on the engagement webpage.

The referenced presentation and design document can be found under the February 18, 2020 entry on the ESAG webpage.

Please provide feedback by March 3, 2020 to engagement@ieso.ca. Please use subject: *Feedback: Energy Storage Design Project*. To promote transparency, this feedback will be posted on the ESAG webpage unless otherwise requested by the sender.

Thank you for your time.

Topic	Feedback
Design Feature Self-Scheduling 1 – Maintain current capacity limit of 10 MW for- Self-scheduling energy storage resources in the real-time energy market	SPS supports this requirement for the interim period, but encourages the IESO to reconsider raising this limit for the long-term period.
Design Feature Self-Scheduling 2 – Raise current capacity limit of 10 MW for Self-scheduling energy storage resources providing regulation service only	SPS supports this change.
Design Feature Facility Registration 1 – Registration of self-scheduling energy storage facilities providing regulation service only	SPS understands that this is required due to the interim limitation of the DSO engine.
Design Feature Facility Registration 2 – Registration of self-scheduling energy storage facilities in the real-time energy market	SPS understands that this is required due to the interim limitation of the DSO engine.
Design Feature Facility Registration 3 – Registration of dispatchable energy storage facilities	SPS has reviewed page 43 of the presentation deck and is confused with the description that a dispatchable energy storage facility in the real time energy market will be registered as a "single, self-scheduling generator resource and a single, non-dispatchable load resource." Please confirm if this is correct or an error.
Design Feature Prudential Security 1 – Prudential Support Obligation for market participants with energy storage facilities.	SPS believes that basing the loss for prudential estimation on an estimate of cycle efficiency losses is a fair approach.

Topic	Feedback
Design Feature Day Ahead Commitment Process 1 – DACP data submission requirements for each class of interim energy storage participation	SPS appreciates IESO's efforts to create a more level playing field between resource-types and would recommend futher research be taken longer term to understand the unique value that energy storage can provide to both quick start and non-quick start resources, as well as intermittent generation, and how this value can be unlocked in marketplace via new service types.
Design Feature Day Ahead Commitment Process 2 – No overlap rule for bids and offers into the DACP for energy storage facilities	SPS wishes to better understand the implications for the no overlap rule for bids and offers into the DACP for certain scenarios. For example, would this rule feasibly allow a dispatchable ESR (e.g. an energy storage resource > 10 MW and/or one that wishes to provide OR service) to provide regulation services? Specifically, would an ESR be permitted to charge the battery during the dispatch day to compensate for cycle efficiency losses? If so, what would be the acceptable bid/offer combination be permitted to charge the battery?
Design feature State of Charge 1 – Restriction against overlapping or equal bid/offer prices	As above, SPS wishes to better understand the implications for the no overlap rule for bids and offers into the DACP for certain scenarios. For example, would this rule feasibly allow a dispatchable ESR (e.g. an energy storage resource > 10 MW and/or one that wishes to provide OR service) to provide regulation services? Specifically, would an ESR be permitted to charge the battery during the dispatch day to compensate for cycle efficiency losses? If so, what would be the acceptable bid/offer combination be permitted to charge the battery?
Design feature State of Charge 2 – Addressing potential changes to SoC-limited bids and offers	SPS understands the proposed decision logic to be followed during the Mandatory Window and does not forsee any issues.

Topic	Feedback
Design Feature Operating Reserve 1 – no simultaneous offers of operating reserve from the two resources comprising a dispatchable energy storage facility	Comment specific to slide 72 "prerequisites to offering Operating Reserve" Similar to comments above, SPS wishes to understand the logical restrictions on dispatch/self schedule imposed by the decision rules. For example, is a self-scheduling resource < 10 MW permitted to offer OR? Slide 26 may need to be broken out into 3 slides to match the types of ESR's contemplated on slide 34: (1) self scheduling resources < 10 MW; (2) self-scheduling resources providing regulation only service up to 50 MW; (3) dispatchable energy resources.
Design Feature Operating Reserve 2 – Operating reserve requirements specific to a dispatchable load resource comprising a dispatchable energy storage facility	The implication of this rule is that the participant must have SOC for 70 minutes. Could the IESO confirm that the payment for the OR reserve requirement would match 70 minutes.
Design Feature Operating Reserve 3 – Operating reserve requirements specific to a dispatchable generator resource comprising a dispatchable energy storage facility	The implication of this rule is that the participant must have SOC for 130 minutes. Could the IESO confirm that the payment for the OR reserve requirement would match 130 minutes.

General Comments/Feedback:

SPS has reviewed stakeholder comments provided on November 11th 2019, in which a number of stakeholders advocated for inclusion of behind-the-meter storage, recognizing its scale and potential value. While SPS understands that IESO has deemed behind-the-meter storage out of scope for the design project, SPS does not support this position. We would encourage the IESO to provide further clarity on this important issue, along with how it proposes to facilitate dual participation of ESR's, clarifying in the design document on when and how BTM resources will be included.
In summary, SPS would like to thank the IESO for providing the opportunity to provide comment.