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| Key Topic Concept (KTC) Number | 10 | KTC Title | ESR - Study & Capacity Assumptions |
| Date Posted | | November 21, 2019 | |
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| Executive Summary | | This KTC recommends how Energy Storage Resources (ESRs) shall be treated in Reliability Unit Commitment (RUC) studies and other capacity assumptions. | |
| Recommendation Description | | ESRs shall be treated similar to other short lead-time Resources. The RUC engine shall evaluate ESRs based on the values provided in their Current Operating Plan (COP) that reflect their expected available capacity. | |
| BESTF Discussion | | On 10/18/19, ERCOT staff presented material related to RUC studies and processes.  On 11/4/19, the BESTF reached consensus on KTC 10 item 3. | |
| TAC Action Requested | |  | |
| TAC Action Summary | | On 11/20/19, TAC approved KTC 10 item 3. | |

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| Proposed KTC Recommendation Language |

# *Key Topic/Concept recommendation Language for TAC Approval*

None.

# *Key Topic/Concept recommendation Language Previously Approved by tac*

11/20/19 TAC Meeting (Consensus from 11/4/19 BESTF meeting):

1. The existing processes that are currently in place for other short-lead time Resources will also be applied to Energy Storage Resources (ESRs). In the near-term, system changes will not be made to the RUC engine. However, because of the very short lead-times, commitment recommendations for ESRs will be deferred in the RUC process by the ERCOT Operator.
2. In the near-term, the RUC engine will not be changed to consider an ESR’s state-of-charge. Instead, QSEs representing ESRs will be required to reflect duration limitations for their Resources in the COP High Sustained Limits (HSLs) for their Resources. Applicable Business Practice Manuals will be updated, but the following high-level expectations will apply:
   1. For ESRs providing Ancillary Service (AS), COP HSLs must be greater than or equal to the combined amount of AS being provided by the ESR.
   2. For ESRs that have additional energy that is not reserved for AS and is expected to be available for economic dispatch in Real-Time, the incremental HSL values above the combined amount of AS responsibility are expected to reflect duration limitations of the ESR.
   3. For ESRs not providing AS, the full HSL values are expected to reflect duration limitations of the ESR.
3. In the longer term, the RUC engine will be enhanced to recognize ESRs and consider state-of-charge when determining projected dispatch for the RUC study period.

# *Key Topic/Concept recommendation Language IN DISCUSSION AT BESTF*

1. (Item 1) Define "Storage Peak Average Capacity Percentage" to be used in the report on Capacity, Demand and Reserves (CDR) for various batteries.
2. (Item 2) Outage Coordination Studies
3. (Item 4) Operational Studies
4. (Item 5) Transmission Planning Studies

# *Future Decision Points and Issues for Developing Key topic/Concept recommendation Language*

None.

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| Applicable Protocol Section(s) |  |
| Impacted System(s) / Application(s) |  |