Proposed Revision to Simulated Dispatch of Storage in the ELCC Model

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Considerations

1. All else equal, maximizing reliability value of storage
2. Consistency with the status quo for dispatching economic resources relative to Demand Resources (i.e., Load Management). In particular:
   a) Exhaust all economic resources prior to deploying Load Management.
   b) Deploy Load Management in order to maintain Primary Reserves (currently 2,450 MW)
   c) Do not shed load in order to maintain Primary Reserves
3. Takes account of the effect of imperfect foresight of load, intermittent resource output, and thermal outages, as well as diverse approaches to scheduling and bidding limited duration resources.

Proposed revised method for simulating dispatch of limited duration resources and combination resources

- When limited duration resources and combination resources are required to serve load, they are dispatched in proportion to their ICAP, with no foresight.
- When the combined power of all limited duration resources and combination resources (plus all thermal resources and intermittent resources) is insufficient to meet load plus 2,450 MW of primary reserve, then Load Management is deployed. At this stage, enough Load Management is deployed such that economic resources are available to serve the remaining load plus provide 2,450 MW of Primary Reserves. Limited duration resources and combination resources are dispatched in proportion to their ICAP in order to meet residual load margin minus 2,450 MW of primary reserve, with no foresight.
- If in any hour the combined output of all resources under the above methodology is insufficient to meet load, and there is additional headroom available in any classes, then those classes are dispatched up until their power is exhausted or the load shed is avoided.
- Primary Reserves are exhausted as needed to maintain load—load is not shed in order to maintain Primary Reserves.

Characteristics of this approach

- Does not use foresight.
- Exhausts the MW of all economic resources before deploying Load Management.
- During times of peak risk, when resource output improves reliability the most, Load Management is deployed at 100%, and all other limited and combination resource classes are also deployed at 100% (unless their inventory has been exhausted). This provides all resources the opportunity to maximize their reliability value.
- Consistent with the status quo: Load Management is dispatched to preserve Primary Reserves. However, when load is shed, Primary Reserves are not maintained.
- This methodology strikes a balance between maximizing reliability and avoiding concerns about imperfect foresight and bidding behavior while respecting the status quo for dispatch of economic resources relative to Load Management.

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