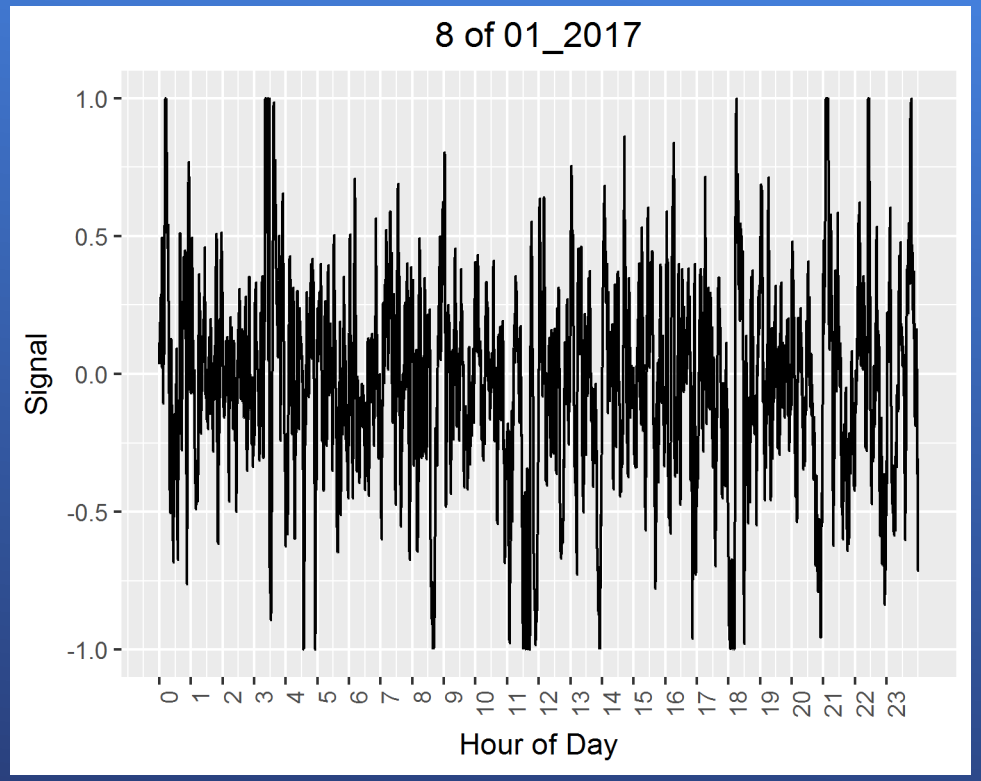
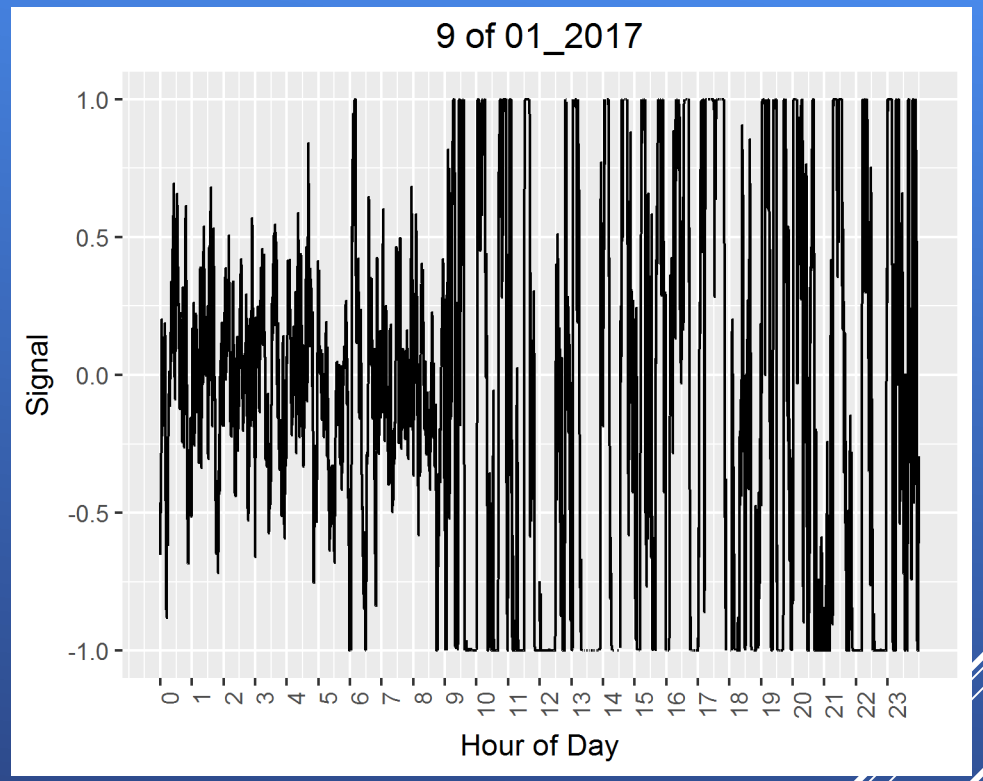
Assessment of the PJM RegD signal change and storage duration optimization

Was there a significant impact to Li-Ion battery storage based on the change and what can developers do to improve their position in the future

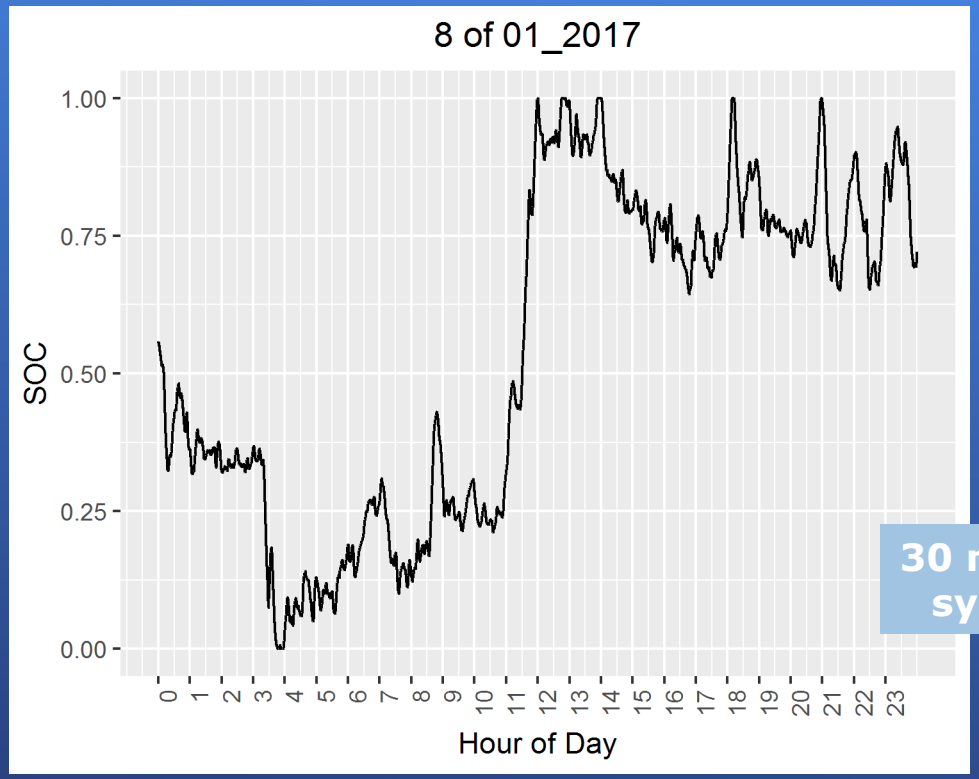
On 9Jan17 PJM revised their approach to how the RegD signal was generated



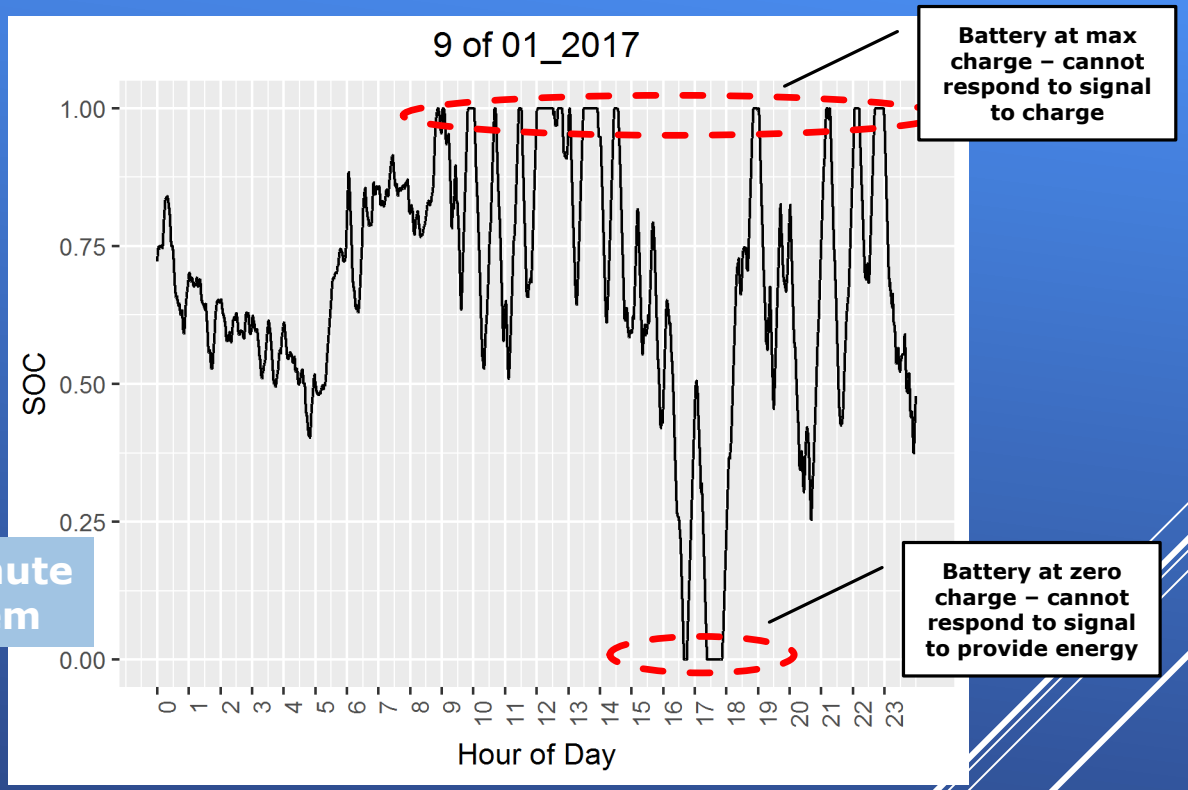


The result of the change to the signal was an increased amount of "pegging" the batteries at full charge or full discharge for "extended" periods of time

Based on the new signal, current storage with a duration of 1 hour or less was able to respond less

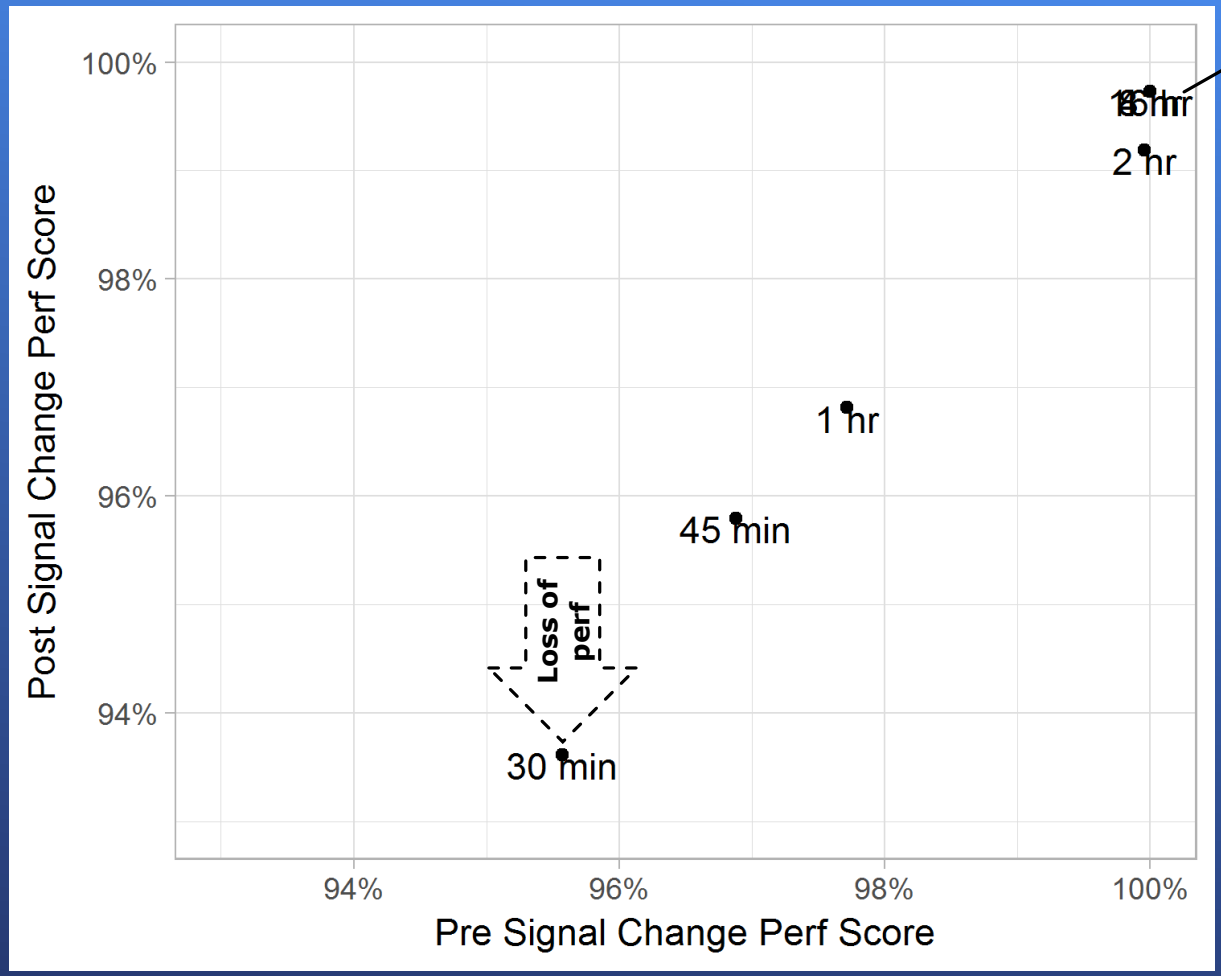


30 minute system



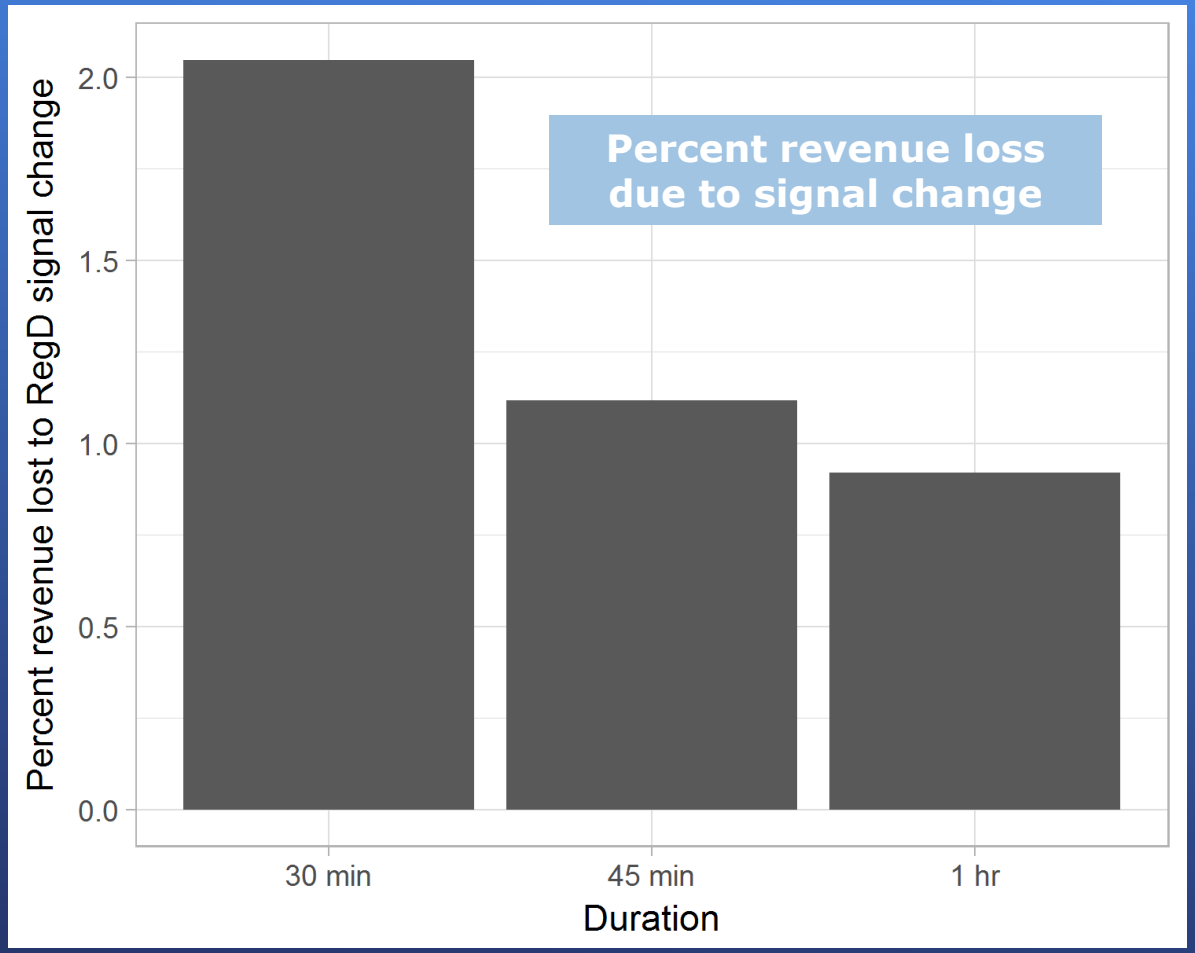
The inability to respond to a signal command to accept more energy from the grid, or give it to the grid, reduced the performance score for what was an optimized storage device prior to the change

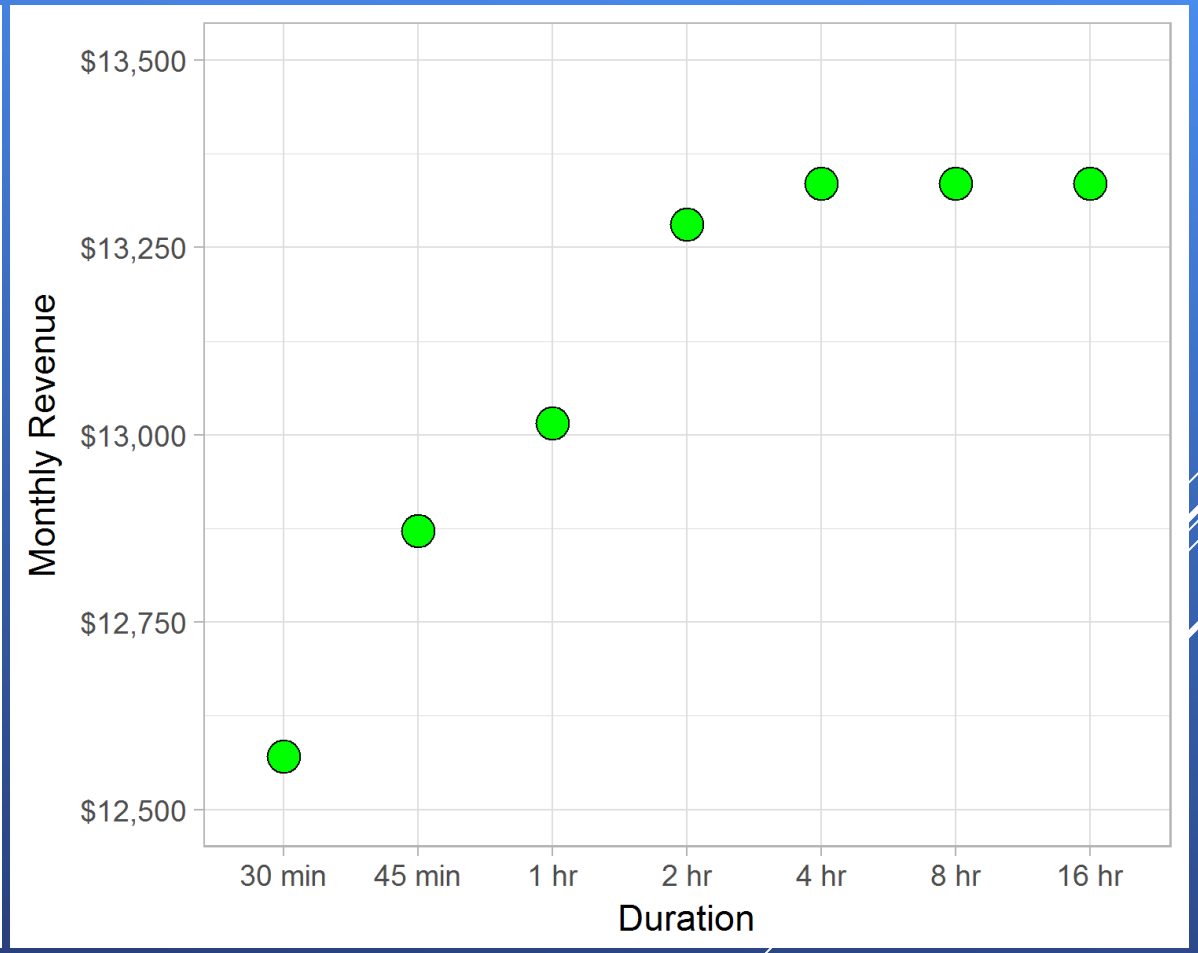
Comparing the performance of various durations of storage before and after the signal change



While all durations show a reduction in performance score post signal change, the longer duration systems fare better

Going forward, longer durations are needed to preserve performance score (and revenue)





Revenue potential improves with duration increase, but there is a limit -> greater than a 4 hour system currently doesn't buy more revenue (per MW)