

CASE STUDY



Ensuring energy sufficiency over an operating horizon by determining desired State of Charge (SOC) trajectory of Energy Storage Resources (ESRs)

Problem:

- ESR penetration is around 15 GW with close to 150 GW in queue
- Increased reliance on ESRs to provide energy during net load ramps (e.g., solar ramp down in evening) and minimize firm load shed during prolonged weather events through strategic charging/discharging of ESRs

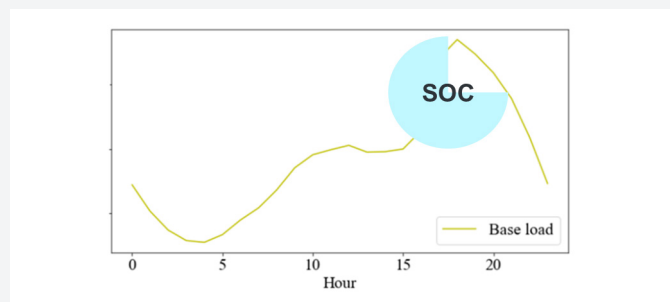


Potential Solution:

- Develop a tool to determine the desired ESR SOC trajectory over the Reliability Unit Commitment (RUC) look-ahead operating horizon based on expected future conditions
- The POC will provide a possible way to ensure energy sufficiency during all operating hours
- ERCOT can work with MPs to propose a solution to implement procedures to instruct ESRs to achieve the desired SOC trajectory

Benefit:

- Grid reliability by ensuring energy sufficiency



Timeline



Planning

Define needs and requirements



Testing the Idea (POC)

Test the tool for POC



Getting Feedback

Market Participant feedback



Implementation

Production environment and operations

