NexESS Analytics

NexESS was founded to empower BESS owner/operators by converting the massive amounts of data generated by these assets into useful business intelligence.

A national utility has installed a BESS located with their generation facility to provide spinning reserve and frequency support. NexESS provides operational assessments at regular intervals utilizing the BESS's high resolution data. Successes include:

- Improved operational efficiency.
- Quantified opportunities for further grid participation of the asset.
- Creation of a digital twin to model future performance.
- Visualization of key events enabling the owner to optimize dispatch and maintenance planning.
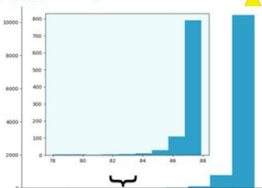
Utilization

Total Monthly Throughput: **28.5 MWh**
    SOC maintenance contribution: **39.5%** of total throughput
Cycles This Month: **0.81**
Significant response events: **4**
    Minor under freq. response events: **59**
    Minor over freq. response events: **0**

State of Charge (SOC)

SOC Range This Month: **78%** → **89%**
Average SOC: **88%**

NOTE: The BESS spends more than 95% of its time at the top of its SOC range

Capacity & Efficiency

Average Power Online	Average Energy Online
Charge: **6.2 MW**	Charge: **0.62 MWh**
Discharge: **17.3 MW**	Discharge: **4.7 MWh**

System Availability: **98.1%**
Energy for SOC maintenance: **11.3 MWh**

Observations and Recommendations

1. Throughput is less than usual this month with primarily automated response, 16 under-frequency response of over 500 kW peak and 2 manual events.
2. Power utilization is low - no discharge over 3 MWpeak, with 130 hours total discharge time.
3. The previously discussed SOC and dead band setpoint revision was not implemented during this month.
4. Imbalance was not seen this month, advise having supplier confirm a change was made to address this issue.

Bringing your data to life, our machine learning algorithms identify key events which provide line of sight to new dispatch and maintenance opportunities. We configure KPI's based on your grid participation for meaningful operational insight.

The NexESS Effect

CURATED DATA TO VISUALIZE HOW YOUR ASSET IS BEING DISPATCHED, COUPLED WITH TRUSTED ANALYTICS, DELIVERING VALUE TO YOUR INVESTMENT.

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nexess.io