

BATTERY PERFORMANCE AUDIT / ERCOT

Revolution

Top-quartile performance. Ranked #73 of 300 over the period. Observed real-time dispatch earned \$628.1K after estimated wear. The best policy tested would have earned \$957.6K - a \$329.5K improvement.

#73/300

ERCOT RESOURCE RANK

\$64/MW-day

MARKET VALUE PER MW-DAY

\$757.1K

ESTIMATED MARKET VALUE

EIA PLANT

66170

REVIEW PERIOD

2 MAR 2026 - 30 MAY 2026

EXECUTIVE READOUT

Top-quartile performance. Ranked #73 of 300. A causal timing policy would have added \$329.5K after estimated wear.

Overall estimated market value was \$757.1K. Positive market contributions totaled \$969.7K. Estimated wear reduced it by \$212.6K. In the separate dispatch test, \$836.6K of gross value minus \$208.5K of wear produced \$628.1K of net value.

ASK THE GRID RESEARCH / EIA 66170

2 MAR 2026 – 30 MAY 2026

#73

of 300 comparable ERCOT resource registrations at \$64/MW-day.

WHAT DROVE VALUE

- Above the ERCOT median. Ranked #73 of 300.
- Nearby comparison: #10 of 37, \$15/MW-day above the local median.
- The largest positive contributions are real-time energy (\$840,812) and real-time ancillary-service adjustments (\$103,945).

WHAT SHOULD CHANGE

- Observed dispatch captured 41.5% of the public perfect-price benchmark, leaving a \$883,682 diagnostic gap. Start with the tested timing result, then review the intervals driving the remaining gap.
- The best tested timing policy would have added \$329,529 after estimated battery wear.

#73/300

ERCOT RESOURCE RANK

\$64/MW-day

THIS BATTERY

\$45/MW-day

ERCOT MEDIAN

Ranking context: #73/300 is the ERCOT resource rank. #62/259 is the settlement-point battery-site rank used for local, zonal, and system comparisons. The denominator changes because multiple ERCOT resources can share one battery site. The \$64/MW-day ranking metric includes day-ahead energy, real-time energy, and day-ahead ancillary services. Real-time ancillary-service adjustments and estimated wear appear in the value bridge but do not enter the published ranking metric.

Where value came from

DAY-AHEAD ENERGY		\$0
REAL-TIME ENERGY		\$840,812
DAY-AHEAD AS		\$24,933
REAL-TIME AS		\$103,945
ESTIMATED BATTERY WEAR		-\$212,626

COMPARABLE BATTERIES

How you compare with batteries that operate like yours

We compare this battery with assets that have a similar market mix, operating pattern, size, and duration.

Performance by battery unit

BATTERY UNIT	ERCOT RESOURCE	ERCOT RANK	PERCENTILE	VALUE / MW-DAY
1	TBWF_ESS_ESR1	#73/300	75.9 percentile	\$64/MW-day

Performance against similar batteries

PEER GROUP	THIS BATTERY	RANK	PERCENTILE	PEER MEDIAN
Similar market mix	Mixed two-market participation	#31/117	74.1 percentile	\$49/MW-day
Similar operating pattern	Real-time energy-first	#40/139	71.7 percentile	\$48/MW-day
Similar size and duration	1.5-2.5-hour, 150+ MW	#17/40	59.0 percentile	\$58/MW-day

Peer groups. These comparisons use visible operating patterns and hardware. They do not judge the skill of the operator or make assumptions about private controls.

NEARBY COMPETITION

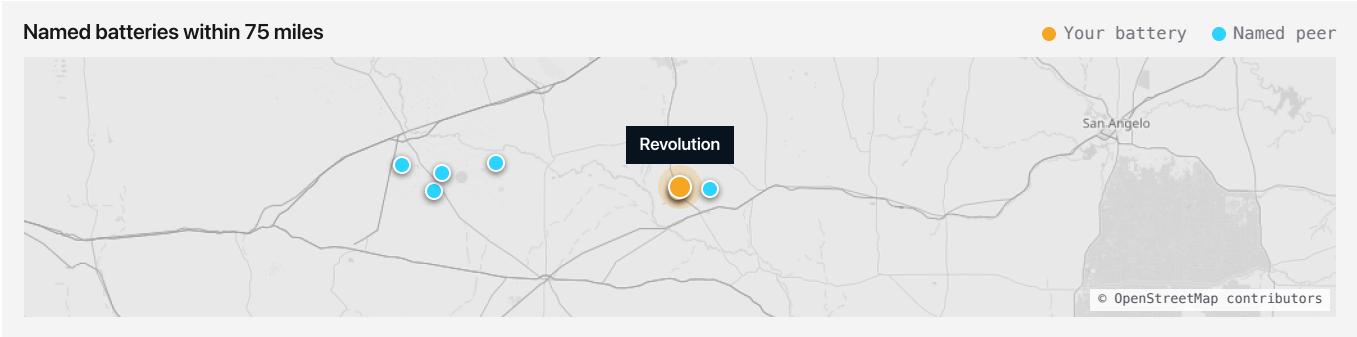
Revolution ranks #10 of 37 nearby batteries, #10 of 40 in the FarWest zone, and #62 of 259 across ERCOT

The named batteries below provide the clearest local comparison. Every rank uses the same value-per-MW-day measure.

#62/259
SYSTEM COMPARISON

#10/40
FARWEST ZONE

#10/37
WITHIN 75 MILES



Named batteries in your competitive set

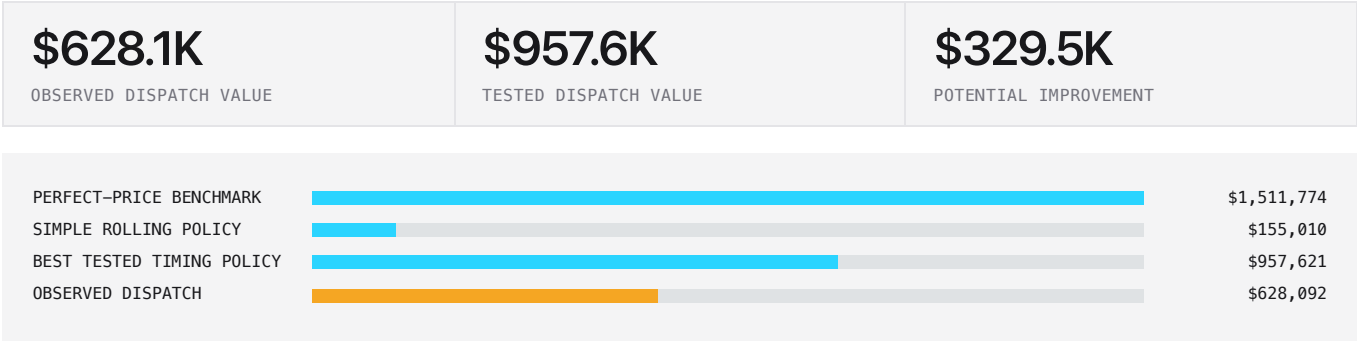
BATTERY / ERCOT MARKET ID	LOCAL	ZONE	ERCOT	DISTANCE	VALUE / MW-DAY
Flower Valley I / Flower Valley II / TX7 Flat Top FLOWERII_RN · EIA 64423, 64915, 66007 · ERCOT RESOURCES FLOWERII_ESR1	#8/37	FarWest #8/40	#42/259	62.3 mi	\$78/MW-day
North Pecos Clean Energy Center (BESS) ELM_ST_RN2 · EIA 69458 · ERCOT RESOURCES ELM_ST_ESR2	#9/37	FarWest #9/40	#52/259	71.6 mi	\$71/MW-day
Revolution TBWF_ES_BES1 · EIA 66170 · ERCOT RESOURCES TBWF_ESS_ESR1 · YOUR BATTERY	#10/37	FarWest #10/40	#62/259	0.0 mi	\$64/MW-day
Swoose I SWOOSE1_U1 · EIA 64916 · ERCOT RESOURCES PYOTE_ESR1	#11/37	FarWest #11/40	#65/259	48.9 mi	\$63/MW-day

Local peers are within 75 miles. Distance provides geographic context; it does not imply that batteries face the same grid constraints.

IMPROVEMENT OPPORTUNITY

Better dispatch timing would have added \$329.5K after estimated wear

We tested the same operating days using the battery's visible limits and existing ancillary-service commitments. Only charge and discharge timing changed. The best policy earned \$957.6K with 34.7% more cycles.



How dispatch value changes

POLICY	GROSS ENERGY	ESTIMATED WEAR	ENDING SOC ADJUSTMENT	NET VALUE	IMPROVEMENT	CYCLES
Perfect-price benchmark	\$1,885,091	-\$327,889	-\$45,428	\$1,511,774	\$883,682	88.9
Simple rolling policy	\$247,329	-\$43,904	-\$48,414	\$155,010	-\$473,081	11.9
Best tested timing policy	\$1,284,596	-\$280,886	-\$46,089	\$957,621	\$329,529	76.2
Observed dispatch	\$836,628	-\$208,536	\$0	\$628,092	\$0	56.6

This is a historical timing test, not a forecast. It does not include private operating limits or final settlements.

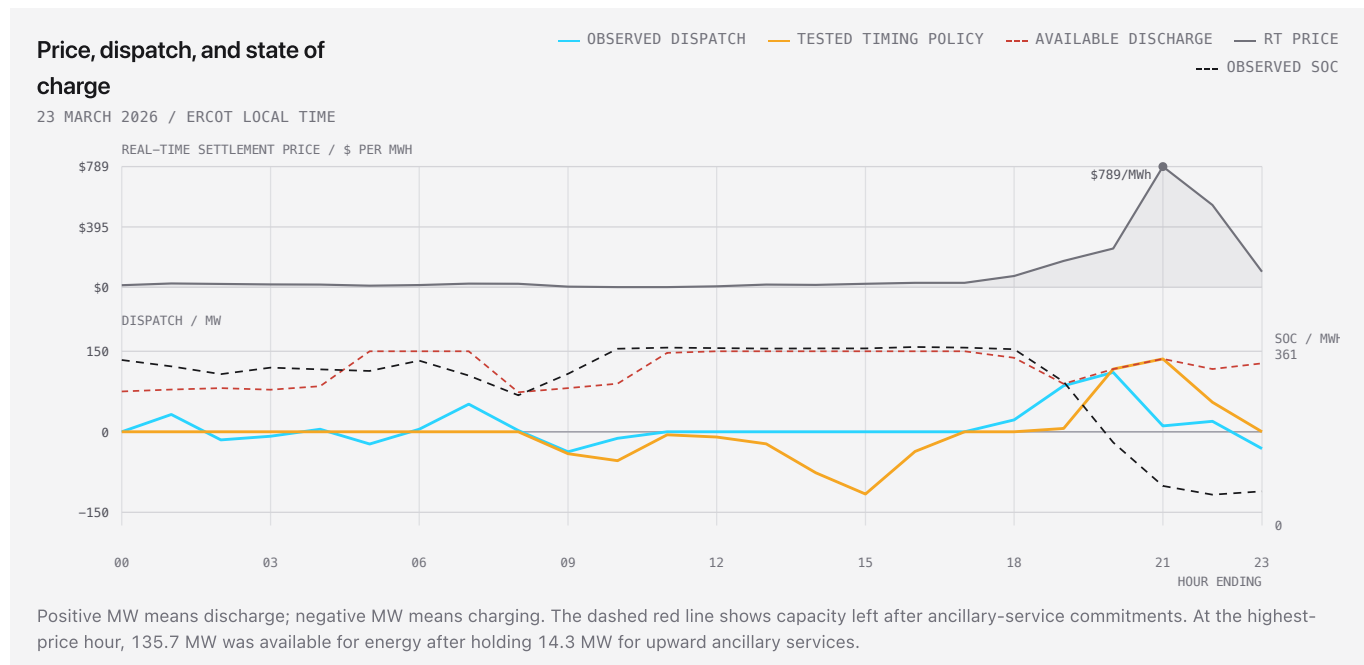
WHERE VALUE WAS MISSED

23 March 2026 created the largest potential improvement

The tested policy improved value on 65.8% of days. The typical daily improvement was \$1.7K, and its five best days contributed 45.3% of total positive improvement.

65.8% DAYS IMPROVED	\$1.7K TYPICAL DAILY IMPROVEMENT	\$82.2K COST WHEN THE TEST DID WORSE
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Operating day	Versus observed	Potential improvement	Share
23 Mar 2026		\$115.1K	28.0%
12 Apr 2026		\$18.4K	4.5%
4 Apr 2026		\$18.1K	4.4%
19 May 2026		\$17.7K	4.3%
6 May 2026		\$17.1K	4.2%



At the highest-price hour, the tested policy discharged 124.8 MW more while preserving the battery's existing ancillary-service commitments.

BATTERY OPERATION

Public telemetry shows how the battery actually operated

These are operating observations, not manufacturer ratings. They define the limits used in the dispatch comparison.

TBWF_ES_BES1 / TBWF_ESS_ESR1

CRANE COUNTY

HIGHEST OBSERVED DISCHARGE

149.8 MW

The battery averaged 11.2 MW while discharging and 13.4 MW while charging over 90 days.

HIGHEST OBSERVED STATE OF CHARGE

368.7 MWh

This is the highest state of charge reported in ERCOT data, not a manufacturer rating or a claim about usable energy.

Battery details

FIELD	VALUE	SOURCE
Battery reviewed	Full EIA plant / one ERCOT ESR	EIA plant record
EIA plant	66170 - Revolution	EIA-860
Operator	Crane 2 BESS, LLC	EIA entity record
ERCOT price nodes	TBWF_ES_BES1	ERCOT registration data
ERCOT ESRs	TBWF_ESS_ESR1	ERCOT registration data
QSE / DME	QTEN29 / YCRAN2	ERCOT registration data
Dispatch states	16.7% discharge / 18.5% charge / 64.9% idle	ERCOT five-minute data
Observed cycling	0.73 cycles/day	ERCOT operating data
Ramp up / down	150.0 / 150.0 MW/min	ERCOT five-minute data

How the ERCOT ranking was built

The primary comparison contains 300 eligible ERCOT resource registrations. The geographic comparison contains 259 eligible settlement-point battery sites.

325 REGISTERED BATTERY RESOURCES	321 MATCHED TO DAY-AHEAD DATA	319 ENOUGH PUBLIC DATA	300 / 259 RESOURCES / BATTERIES RANKED
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Method

1. The primary ERCOT resource rank compares estimated day-ahead energy, real-time energy, and day-ahead ancillary-service value per observed MW-day. Local, zonal, and system ranks combine resources at each settlement-point battery site.

2. An ERCOT resource enters the ranking when public data cover at least 80% of the review window and show at least 5 MW of discharge capability.
3. Multi-unit batteries are combined into one plant result while each unit also keeps its own performance row.

4. Observed dispatch comes from ERCOT five-minute operating data. It is not the owner's final settlement meter.

5. The tested policy uses only prices available at each decision time and stays within visible operating limits and existing commitments.

6. Estimated wear and ending state of charge are included in every policy comparison.

APPENDIX / MODEL DETAILS

How the dispatch test works

Every five minutes, the tested policy chooses charge, discharge, or idle using only prices available at the time. It stays within visible operating limits and includes estimated battery wear.

Dispatch assumptions

Decision cadence	5 minutes	Dispatch recalculated every five minutes
Forecast horizon	24 hours	Causal policies use the latest realized real-time price and any day-ahead SPPs ERCOT had published by that decision; unpublished or missing intervals fall back to the latest real-time price
One-way efficiency	95.0% charge / 91.4% discharge	Configured assumption
Wear	\$5/MWh throughput	Included in the dispatch decision and reported value
Visible operating limits	100.0% coverage	Power, state of charge, and ancillary-service commitments
Share of unconstrained decisions limited by a visible operating constraint	0.0%	Proposed dispatch was clipped to disclosed power, state-of-charge, or ancillary-service headroom limits

Data coverage and ending state of charge

Compared intervals	22,444 of 25,554	87.8%
Continuous data segments	15	Minimum / median / maximum: 12 / 997 / 6336 intervals
Starting inventory	Observed SOC	Reset at every continuous segment
Tested-policy ending adjustment	-\$46.1K	Difference from observed ending state of charge, valued at the final real-time price
Observed ending adjustment	\$0	Observed state of charge is the comparison point

Operating limits. Every five minutes, the test uses the latest visible power, state of charge, and ancillary-service limits. It does not see future operating data. If a public power limit is missing, the test assumes zero dispatch.

Perfect-price benchmark. The benchmark knows future real-time prices but obeys the same publicly visible operating limits and recalculates every five minutes. It is a diagnostic comparison, not a forecast or a certified physical upper bound.

APPENDIX / LIMITATIONS AND SOURCES

What this report can establish – and what it cannot

This public-data audit is designed to find operating patterns and estimate opportunity. It is not a replacement for private settlements, warranty terms, or control-system data.

Limits

1. This is an estimate from public market and operating data, not an ERCOT settlement statement or audited owner revenue.

2. Private contracts, fees, penalties, warranty terms, and meter corrections are not visible in public data.

3. The tested policy changes real-time charge and discharge timing; it does not re-optimize ancillary-service awards.
4. Hardware limits shown here are operating observations, not manufacturer ratings or warranty limits.

5. The perfect-price result is a diagnostic benchmark under public operating limits, not a forecast, certified upper bound, or dispatch recommendation.

Sources

SOURCE	USED FOR
EIA-860 battery records	Plant name, operator, and EIA identity
Ask the Grid asset directory	Location and peer mapping
ERCOT resource registration	Battery unit and node mapping
ERCOT 60-Day SCED battery data	Dispatch, state of charge, limits, and commitments
ERCOT day-ahead battery data	Energy and ancillary-service awards
ERCOT real-time prices	Nodal energy prices
ERCOT ancillary-service prices	Real-time ancillary-service prices

FROM AUDIT TO ACTION

Turn this report into an operating plan

This report is a point-in-time view of Revolution. Continue observing the battery in Ask the Grid to follow its market position, inspect the intervals that drive value, and compare it with named ERCOT peers as conditions change.

01 / OBSERVE

Keep the asset in market context

Track ranking, dispatch behavior, nodal prices, and nearby competition on the same analytical surface used for this report.

02 / VALIDATE

Separate real gaps from constraints

Review settlements, availability, warranty limits, bid curves, EMS logs, and outage notes before changing the operating policy.

03 / IMPROVE

Test the lightest changes first

Prioritize charge and discharge timing, state-of-charge targets, ancillary-service posture, bid thresholds, and exception rules.

Our team can review these findings with your operators and recommend a prioritized set of changes. The goal is practical: identify what can improve quickly, estimate the value before anything changes in control, and reserve deeper integration work for opportunities that justify it.

This is an Ask the Grid public-data report. A custom owner study can add private metadata, actual state of charge, physical and commercial constraints, additional ISOs, weather, deeper correlation analysis, and operator-specific recommendations.

Observe this asset in Ask the Grid

Email hello@askthegrid.com