## ERCOT: Battery Storage Revenue Summary

Ascend performed an assessment of ERCOT battery storage revenues for the first half of 2023. The data, extracted from publicly accessible Security Constrained Economic Dispatch (SCED) data on the ERCOT website, presented a clear picture of the distribution of wholesale energy and ancillary revenues accrued by different projects normalized by project capacity. Ascend's analysis highlights the performance in June 2023, which stood out as the highest revenue-generating month of the first half of the year. In addition, the analysis revealed that the introduction of ERCOT's latest ancillary product, the ERCOT Contingency Reserve Service (ECRS), contributed a substantial 26% to the total earnings for June.

The results displayed a large spread in the distribution of normalized revenues, with revenues averaging $26,000 per MW-month (inclusive of ECRS) in June. The data indicates that although June was the highest revenue generating month in ERCOT this year, there were batteries reporting negative and barely positive revenues. For example, while some projects, such as Key Capture Energy's Endurance Park battery, raked in a maximum of $44,000 per MW-month, the lowest project realized a revenue of negative $12,000/MW in June.

Operators looking to engage in this market asked Ascend to gauge their standing against the market average and competitors. As a result of these discussions with customers, Ascend Analytics conducted a benchmarking exercise in which Ascend's simulated bidding strategies were compared against the ERCOT SCED data (see Figure 1).

Figure 1: Performance Comparison of Ascend Strategies with ERCOT Averages
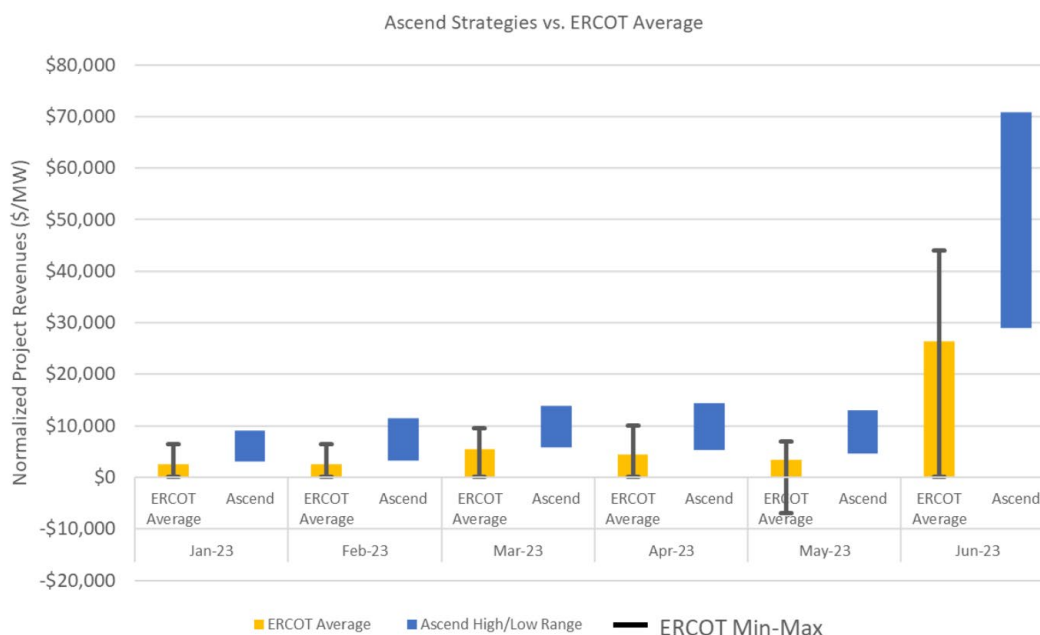
SmartBidder Outperforms Traditional Bid Strategies

SmartBidder's bid optimization agents use reinforced machine learning to determine day-ahead and real-time bids based on node-specific forecasts and user inputs. Asset managers utilizing SmartBidder have consistently reported revenues 10-20% greater than their initial revenue forecasts (often performed in BatterySIMM). The platform's adaptive and risk-adjusted recommendations, combined with in-depth data and performance reporting along with market knowledge from our analyst team, enable clients to define and track multiple strategies based on their specific risk appetite and strategic objectives.

Looking to Learn More?

Optimize your battery storage revenues with SmartBidder. The platform can be rapidly deployed on existing underperforming projects to increase realized returns. Visit AscendAnalytics.com to set up a meeting and learn more about SmartBidder's bid optimization and scheduling services.

Ascend Analytics, an innovative leader at the forefront of the energy transition, offers advanced software and consulting services that capture the evolving and real-time dynamics of energy markets. Unlike any other solution providers in the renewable energy industry, Ascend Analytics provides its customers with optimized and comprehensive decision analysis that covers everything from long-term planning to real-time operations in the electric power supply industry.

Leveraging its proprietary software and more than 20 years of expertise mapping physical conditions with financial outcomes, the company provides critical insights to steward capital investments and manage operations, making it an invaluable and key partner to utilities, developers, financiers, and corporate off-takers in managing the complexities of energy portfolios and markets. The company's unique ecosystem - which includes planning, valuation, risk management, and ISO operations – is trusted by more than 150 leading-edge businesses and is the platform-of-choice that fuels more than $6 billion in independent economic assessments.

Visit www.AscendAnalytics.com for more information.