

## Adapture Renewables Leverages Ascend's Smart-Bidder to Optimize First-Ever Utility-Scale BESS Projects in ERCOT



Adapture Renewables, Inc. is a US-based utility-scale energy developer, owner and operator with more than 340 MW of solar projects in operation across 12 US states. Owned by KIRKBI Climate – the private holding and investment company of the Kirk Kristiansen family founded to build a sustainable future for the LEGO® brand through generations – Adapture seeks to accelerate the global energy transition through projects that produce benefits for customers, developers, landowners, and communities. With 4 GW of generation under development, Adapture sought to expand their portfolio by co-developing and operating their first-ever battery energy storage systems (BESS) within the ERCOT footprint.

Adapture Renewables' first two BESS projects, located in Collin County and Kimble County, Texas, began operating commercially on February 20, 2025 and March 3, 2025, respectively. Together, the Collin and Kimble units have the capacity to store and dispatch nearly 50 MWh, which can provide sufficient power for up to 67,000 homes for one hour daily during peak electricity demand. A third project is projected to begin operations in Fall 2025, which will increase by 50% the overall generating capacity of Adapture's initial BESS portfolio.

Adapture Renewables selected Ascend Analytics to optimize live bidding operations for all three BESS units through the use of Ascend's SmartBidder™ platform and full-service consultative support. Thanks to SmartBidder's optimization framework and post-launch strategic support from the Ascend team, Adapture was able to increase revenues by over 20% during the first few months of operation while also reducing risks. SmartBidder is the most widely used algorithmic bid optimization tool in US power markets. A highly flexible, highly customizable platform,

SmartBidder allows clients like Adapture Renewables to maximize the value of delivered energy and ancillary services (AS) in day-ahead (DA) and real-time (RT) markets. The platform is complemented by Ascend's team of expert analysts, who help customers design market participation strategies that align with their risk appetites.

### Situation

#### Navigating BESS Operations in a Complex Energy Market

For their initial foray into energy storage operations, Adapture sought expertise that would allow them to quickly navigate a complex market like ERCOT, which offers RT energy, DA energy, and five different ancillary services products. In the absence of an in-house trading team, Adapture also sought sophisticated energy analytics software that could automate trading processes, directly input market participation rules, maximize DA and RT trading choices, customize for risk appetite, and ultimately optimize bid and offer strategies in order to maximize risk-adjusted returns. Additionally, faced with significant upcoming changes to the Texas market in the form of ERCOT's Real-Time Co-Optimization + Battery (RTC+B) initiative, Adapture needed a trusted partner that could help them adapt to RTC+B-driven changes to scheduling, bidding, compliance, and market participation.

As tightening conditions have begun pushing up capacity prices in some markets, political pushback and growing sensitivity to energy costs has ensued. Increasingly, stakeholders have been expressing concerns about the future of organized power markets, with some calling to dissolve the markets and re-regulate the power sector. Containing capacity costs without compromising the incentives needed to encourage new unit entry presents a significant challenge, with a limited set of viable solutions.

### Solution

#### Trusted Resource: Ascend Selected for Sophisticated Software, Market Expertise

Following a competitive RFP process, the Adapture Renewables management team engaged Ascend and the SmartBidder platform to support scheduling services and optimize bidding operations. Two key reasons helped drive Adapture's choice. First, the SmartBidder platform provided a powerful, customizable, market-tested, and intuitive solution that allowed Adapture to effectively begin operating in ERCOT. Additionally, the Ascend team

was a proven, trusted resource for helping BESS owners and operators to develop and execute custom strategies for maximizing risk-adjusted returns in Texas.

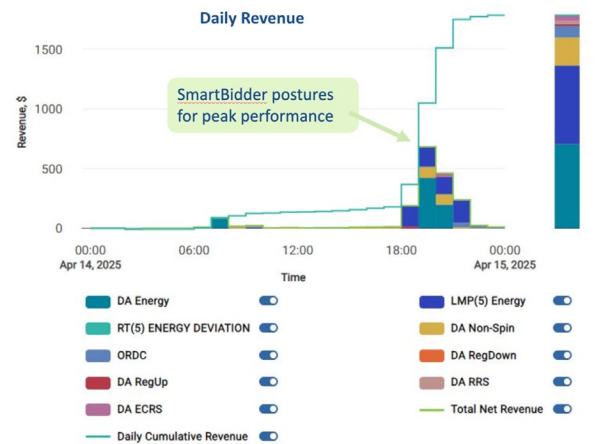
### Strategy Development: Shifting the Focus from Total Cumulative Revenue to Risk-Adjusted Returns

Prior to launching the first two BESS units in Collin and Kimble Counties, the Adapture team consulted frequently with Ascend Analytics to develop strategies for optimizing bidding and offer operations. The initial strategy leaned into maximizing cumulative revenues out of the gate.

Armed with real-world results, Ascend and Adapture's strategy evolved toward an operational philosophy of maximizing risk-adjusted returns, working together to create risk management policies that took into account specific market and asset constraints. Subsequently, Ascend and Adapture leveraged the risk management policies to identify and implement strategies in SmartBidder that could secure more revenue without increasing downside risk. SmartBidder helps clients like Adapture to mitigate downside risk by using a multi-modal approach that drives enhanced market forecasts, including absolute DA and RT price forecasts, probabilistic forecasts, DART forecasts, RT price spikes, ancillary throughput forecasts, market states, and more.

During weekly calls and communications, Ascend also worked with members of the Adapture team to develop sophisticated market participation strategies. These conversations provided insights on how best to leverage short-term forecasts for DA and RT markets, including ways to capture arbitrage opportunities through DART trading. Properly understanding short-term forecasts is crucial for revenue maximization: DA prices are, on average, more lucrative. However, failing to capture a significant RT price spike may mean an immense missed revenue opportunity.

Ascend also partnered with Adapture to craft strategies for bidding into ERCOT ancillary services markets, in which five different sets of market rules exist for five different AS products. Because of the complexity surrounding AS participation in ERCOT, it was imperative that the rules around each service were directly and programmatically accounted for in optimization and offer strategies. Similar to the example shown in **Figure 1**, the Ascend team helped Adapture create diversified optimization strategies that leveraged participation in energy and ancillary services to optimize returns and reduce risk.



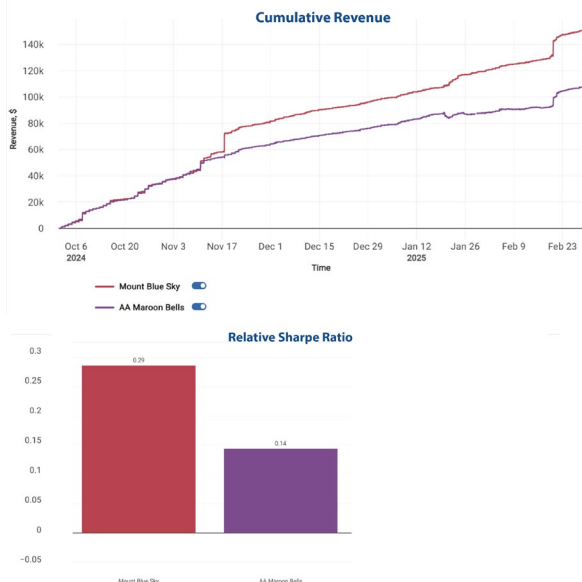
**Figure 1:** A diverse mix of energy and ancillary services maximizes risk-adjusted returns

## Results

### Outcome: A Profitable, Sustainable Approach for Maximizing Risk-Adjusted Returns

Ultimately, Adapture Renewables leveraged the SmartBidder platform and Ascend's expertise to create nuanced risk management policies and profitable market participation strategies.

During Adapture's onboarding and go-live period, Ascend rolled out a new optimization framework, increasing revenues by over 20% relative to the prior framework, while also improving the Sharpe ratio relative to legacy stochastic agent strategies, as seen in **Figure 2**. After Adapture's first two BESS units went live, Ascend and Adapture introduced more complex trading features and honed strategies, pushing up revenues by an additional 5-10% in just a few months.



**Figure 2:** Cumulative Revenues, Relative Sharpe Ratios

## Analytics to Power the Energy Transition

In the months following the launch of the Collin and Kimble BESS units, Adapture and Ascend continued to work together to develop higher-resolution views into how specific hours, trades, physical asset constraints, and operations decisions affected revenue and risk. The Ascend team also monitored Adapture's BESS units to ensure they maintained a healthy, stable condition. On multiple occasions, the Ascend team was able to identify performance or participation issues before they appeared on Adapture's radar.

"I had multiple conversations with the Ascend team about why strategies reacted the way they did, why the strategies are set up a certain way, how to fully understand the SmartBidder user interface, ideas on how to advance the development of the strategies, but most importantly the power of overrides and how to submit them quickly," said Jacob Rissberger, Manager of Power Marketing Analysis for Adapture Renewables. "Whatever question I had, Ascend was super quick to answer and support."

Ultimately, the partnership combined Adapture's scale and leadership in utility-scale solar and storage development with Ascend's expertise in ERCOT and leadership in operational bidding to bring this project to successful launch and continued operation. Ascend Analytics will continue to serve as a trusted partner as Adapture Renewables prepares to launch their third unit in Fall 2025. As part of the process, Ascend is updating the SmartBidder platform to ensure that Adapture and other users with assets in ERCOT will be ready to navigate the changes that are coming with RTC+B.

### About SmartBidder

SmartBidder™ uniquely provides a unified platform for custom bid optimization combined with scheduling services to manage asset performance and operations for storage, renewable, and hybrid assets. SmartBidder maximizes revenue and reduces risk, offering asset owners and operators a 100% increase relative to traditional arbitrage strategy, as well as a 50% Sharpe Ratio improvement. The solution enables users to develop their own customized bid strategies based on nodal specific forecasts, asset specific constraints, and risk-based optimization for day-ahead and real-time bids.

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 realtime 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](http://www.AscendAnalytics.com) for more information.

