Ascend Analytics
MARKET INSIGHTS

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Mitigating Uncertainty in Energy Storage Project Finance

For energy storage project finance stakeholders, uncertainty abounds. In multiple US markets, merchant performance in 2024 exposed fundamental revenue instability. Potential cost risks and regulatory risks add further headwinds for merchant energy storage developers, increasing perceived risks and potentially diminishing expected returns. Amid market conditions like these, the ability to solve for cash flow stability and long-term certainty while retaining upside has never been more critical.

In a recent webinar, Dr. Gary Dorris, CEO of Ascend Analytics, and Adam Hise, Managing Director of Storage Risk Solutions, discussed the current state of merchant storage in the US, derisking strategies for merchant storage development and finance, and how Ascend's EnSurance™ revenue insurance solution can help transfer market risk away from assets while maximizing project returns.

Key Takeways

- When turbulent conditions occur, market sentiment can drag investor liquidity and offtake value into a downward equity spiral. The most effective way to counteract this dynamic is through a revenue insurance solution, such as Ascend's EnSurance, that transfers downside risk while preserving equity upside.

- Vehicles that insure a combination of the short-term stability and long-term certainty of cash flow most efficiently protect merchant storage investments.

- A revenue floor, such as the one offered by Ascend's EnSurance, protects financiers from expected and frequent low volatility conditions, as well as from minimum magnitude of high volatility conditions over time. This approach unlocks efficient financing by insuring against downside risk, while retained upside exposure maximizes levered returns.

- In comparing a revenue floor to a toll agreement or a fully merchant approach, the stability and long-term certainty offered by a revenue floor enables comparable leverage to a toll and better levered upside returns than merchant.

- Leveraging insights gleaned from more than 1 GW of EnSurance transactions, the webinar offers guidance on derisking energy storage projects, as well as case studies that examine return-maximizing strategies in multiple US energy markets.

Uncertainty in US Merchant Energy Storage Markets

In 2024, merchant energy storage performance exposed a fundamental revenue instability and kicked off a potentially vicious cycle, in which decreases in offtake strike, tenor and creditworthiness greatly diminished the appetite for development as well as the overall merchant appetite among offtakers.

These dynamics occurred in parallel to a dramatic increase of financier merchant appetite and value, severely constraining the ability of banks to write further merchant debt. Additional cost risks, regulatory risks, much higher perceived project risks, and lower expected levered returns combined to produce an overall market picture that was far from rosy.

Opportunities exist, however, to break through this vicious cycle. Developers and financiers who can invest in and advance assets in a time when fewer projects are occurring can find an advantage. The key is to solve for cash flow stability and long-term certainty while retaining project upside to ensure maximized low-risk returns.

Derisking to Ensure Energy Storage Project Cash Flow Stability and Certainty

In markets such as ERCOT (Electric Reliability Council of Texas), the fundamental storage risk profile continues to evolve. ERCOT is long and getting longer, and often yields uninspiring BESS value when weather doesn't stress the system. In a market like ERCOT, the risk is not whether low volatility days, months, or years arise, but whether high volume days fail to occur. In this context, risks to cash flow stability and certainty occur, as shown in **Figure 1**.

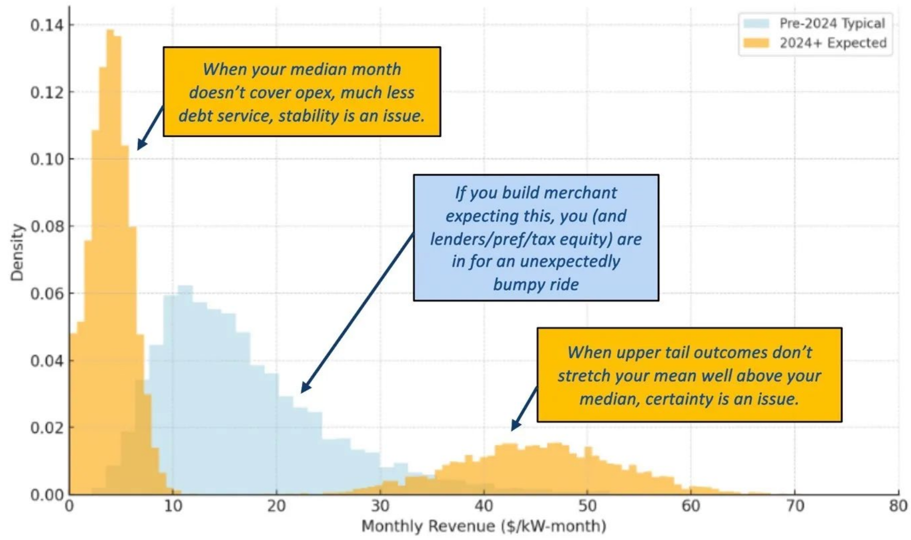

Figure 1. Risks to cash flow stability and certainty in ERCOT

In order to most efficiently protect merchant storage investments, then, it becomes critical to combine short-term stability of and long-term certainty of cash flow. This is where a revenue floor, such as that provided by Ascend's EnSurance, provides risk reduction and revenue maximization opportunities. By paying an upfront premium, the project retains exposure to large and infrequent upside events, all while ensure the most optimal situation with regard to cash flow, as seen in **Figure 2**.

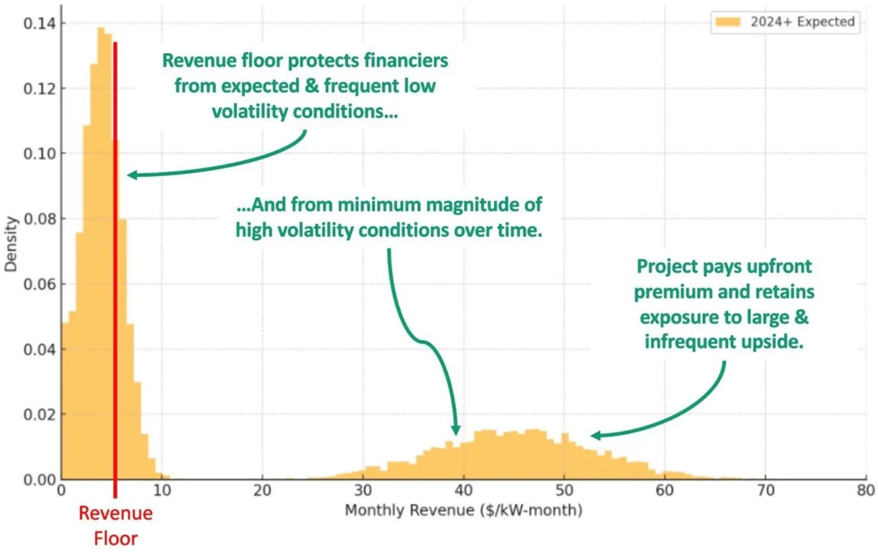

Figure 2. A revenue floor protects against downside risk while ensuring exposure to upside opportunities

The Importance of Weighing Opportunity Costs in Merchant Energy Storage Project Finance

When considering the best vehicle for financing merchant energy storage projects, it remains critical to consider opportunity cost. While toll agreements often provide better returns in downside scenarios, they prohibit any possibility of capturing upside agreements, and are still exposed to cost risk. Fully merchant approaches can be compelling in upside scenarios, but low leverage due to downside exposure still limits merchant returns.

A revenue floor, such as the one offered by Ascend's EnSurance, protects against worst-case merchant returns while insuring efficient debt terms that allow stakeholders to capitalize on upside returns. The floor stability and long-term certainty afforded by EnSurance enables comparable leverage to toll and better levered upside returns than merchant, as shown in **Figure 3.**

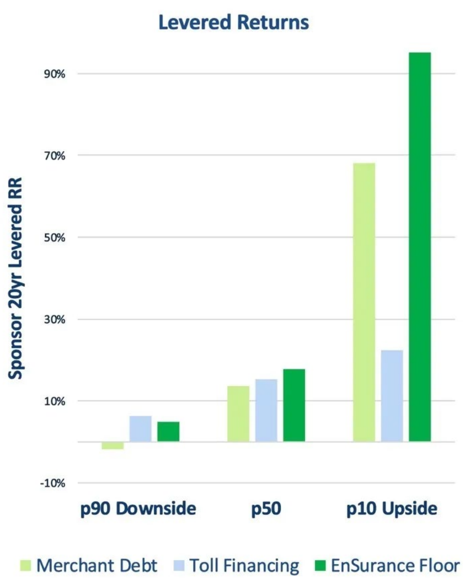

Figure 3. The Ascend EnSurance floor provides comparable returns to tolls in downside scenarios and maximizes returns in all other scenarios.

Ultimately, the optimal derisking solution is a function of perceived opportunity cost relative to upfront costs. While tolls and fully merchant approaches may prove appropriate for some project development opportunities, the EnSurance revenue floor enables efficient financing – even in uncertain times – by delivering stability and certainty for upfront costs well below opportunity costs.

Interested in Learning More?

EnSurance™ enables efficient merchant storage financing by transferring revenue risk to investment-grade counterparties, empowering developers to maximize upside returns while protecting against downside risk. Access the full webinar now, or contact us to learn more.