

Case Study: Family-owned Storage Developer Transforming a vision for storage in ERCOT with Stem's Project Development & Interconnection Support

A family-owned business in Western Texas recently embarked on an ambitious project to develop an energy storage solution on land they owned that would ultimately be interconnected with the local utility, American Electric Power (AEP) Texas, and part of ERCOT's wholesale market. With a background in utilities, including installing poles and laying wires, the owners saw the potential in energy storage but faced significant challenges due to their lack of experience – especially in the early stages of design and interconnection. Seeking to transform their project vision into reality, they turned to Stem's Project Development & Interconnection Services for guidance on how to get started.



Challenge

Despite their utility background and confidence in what could be a promising opportunity, the Family-owned Storage Developer found themselves out of depth when it came to the complexities of energy storage. They admittedly had little understanding of energy storage design, revenue modeling, or the interconnection application process, leaving them unsure of how to begin. They were not well-versed in the technical parameters necessary for early-stage project development, including required documents and timelines. With the aim of efficiently navigating the project's development, the team needed a clear understanding of critical milestones. They sought the specialized support of a knowledgeable partner that could facilitate their entry into the energy storage sector.



Solution

We take a consultative approach in our Professional Services. The Stem provided a comprehensive solution tailored to the Family-owned Storage Developer's specific needs, divided into three structured tasks that addressed both the technical and procedural gaps. First, Stem is creating an initial layout based on a proposed 50 MW / 2-hour battery system, including key specifications, major equipment quantities, physical arrangement, and electrical drawings, all based on our Revenue Modeling & Market Advisory service that identified optimal system sizing. In conjunction with the design work, we are developing an overview of the interconnection process, outlining all necessary steps from application submission to activation of the energy storage system. This includes a thorough review of the ERCOT queue to determine potential impacts from nearby projects and an estimated timeline for achieving interconnection milestones. Finally, Stem will assist in completing the interconnection application by compiling the technical data and supporting them through the submission process, ensuring they adhere to requirements and timelines.



Results

The Family-owned Storage Developer is gaining new insights into the interconnection process, timelines, and technical requirements, allowing them to plan strategically for further project development once their application is accepted. Backed by Stem's Professional Services support, they feel assured about their development project's prospects. While the immediate focus has been on the interconnection application, the partnership is opening doors for future development, construction, and operations services post-completion for long-term success. Ultimately, Stem is the force multiplier they needed for their venture into energy storage, helping the family business transform their aspirations into actionable outcomes and creating a pathway for future growth in the energy sector.

Location

Western Texas

Storage Project Sizes

50 MW

Stem Services

- Revenue Modeling & Market Advisory
- Feasibility & Preliminary Design
- Interconnection Support

Stem Solutions

- Modular ESS
- Managed Optimization

Utility Region

ERCOT

Stem Service Date

2024

To learn more about Stem's solutions, contact stem.com/contact-us.