



Renewables Success Stories



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THE FOLLOWING ARE SOME EXAMPLES OF INITIATIVES TAKEN BY CAMS THAT INCREASED VALUE, ADVANCED SAFETY CONSIDERATIONS, OR OTHERWISE IMPROVED VALUE FOR PROJECT OWNERS.

Financial Hedge Risk Mitigation



Background

CAMS manages a wind project in the ERCOT market with a financial hedge that requires purchases of stipulated quantities of energy at a market hub, while the project's production is sold at the project's node. This structure exposes the project to risks stemming both from actual generation volumes versus hedge required quantities, and \$/MWh price differences between the node and the hub (i.e., basis risk) due to transmission congestion. The project owner sought advice from CAMS on mitigation strategies.

Solution

In response, CAMS developed and continues to implement volume and basis risk mitigation strategies consistent with the owner's goals, including:

- By analyzing historical market pricing information, CAMS developed recommendations for the purchase of products in the ERCOT market, including for example Congestion Revenue Rights, which ameliorate risks associated with real-time price volatility that could adversely affect the project's revenues.
- Market analysis is performed to support recommendations on a day-to-day basis for the purchase in the ERCOT market of energy for those times when the project's actual production is below hedge-required quantities.

More generally, CAMS performs a similar role for other projects it manages.

Optimization of Energy Sales



Background

CAMS manages a wind project in the ERCOT market with a commercial structure that provides opportunities to earn additional revenues through various optimization strategies.

Solution

CAMS performed a detailed analysis of historical and current market data and other variables to develop an optimization strategy consistent with the owner's risk appetite and goals, including:

- Provision to the owner, who was new to the market, of detailed white papers outlining various options and associated risks in support of recommended optimization strategies. An example can be provided upon request.
- Using CAMS' in-house E-TRaC software, CAMS developed a project-specific web-viewable monitoring platform that provides relevant data to alert the owner to market exposure, the effectiveness of current strategy, and signals when hedging tactics need to be altered.

CAMS can more generally develop strategies in other markets, customized according to an owner's risk profile, corporate structure, and desired involvement in daily procedures.

Operational Improvements



Background

CAMS provides operational oversight of on-site wind turbine Original Equipment Manufacturers (OEMs) performing maintenance pursuant to long term agreements. CAMS serves as the owners' on-site eyes and ears, ensures best practices are implemented and that the OEM performs according to the terms of its maintenance contract.

Solutions

In that role, CAMS has provided several solutions, including:

- Successfully negotiated resolution of various OEM end-of-warranty claims, as well as resolution of claims with an EPC contractor on the same project for damage to blades during construction.
- Secured five-year warranty extension on padmount transformers, after successfully refuting manufacturer's failure analysis.
- Enabled owner to obtain O&M service agreement provision for unlimited gearbox replacements for suspect population.
- Identified power curve anomalies at a site leading to the OEM revising turbine control software.
- Obtained a \$480k settlement for pervasive pitch system issues despite the long-term maintenance contract lacking a serial defect clause.
- Reviewed non-OEM performance enhancements, raising awareness for future repairs and questionable results from vendor AEP increases.

Commercial Improvements



Background

CAMS provides commercial oversight of an on-site wind turbine OEM performing maintenance pursuant to a long term agreement. CAMS' asset managers interact with OEM's senior operational and commercial team to address emergent issues.

Solutions

In that role, CAMS has provided several solutions, including:

- The long-term service agreement includes provisions for LDs or bonuses based on turbine availability as calculated by a production-based methodology laid out in the agreement. CAMS aggressively monitored and validated availability reporting by turbine OEM, and shadow calculated OEM-claimed availability. Over the course of one particular availability period CAMS corrected the OEM's calculation of contractual availability, yielding a \$125k improvement to the initial settlement amount proposed by the OEM.

Background

On a newly commercial wind project, the owner needed a means by which to monitor the operational performance of its new asset in real time, and also to ensure the project was receiving appropriate services from vendors hired to support the project.

Solutions

CAMS proposed and undertook various actions to timely provide the owner with project visibility and appropriate vendor support, including:

- Streamlined reporting by providing customizable “flash reports” to monitor project KPIs.
- Evaluated numerous operational monitoring tools, providing recommendations for each, and ultimately worked closely with the selected vendor to implement integration of its monitoring tool into the project.
- Completed lengthy and detailed negotiation of amendments to numerous project commercial and financing agreements in order to transition energy manager to owner’s preferred (and lower cost) vendor.

Regulatory Improvements

Background

An existing customer purchased a new utility-scale solar project and faced concerns that the seller had not appropriately addressed regulatory (primarily NERC) compliance requirements. Owner contracted with CAMS to have its regulatory compliance team perform a full audit of the project. The audit found severe compliance shortcomings.

Solution

CAMS determined the appropriate corrective actions to bring the project into compliance and then either itself implemented those actions, or managed implementation of those actions by specialized vendors. CAMS subsequently worked with the regulatory enforcement agency to mitigate enforcement actions.



Background

CAMS was approached by an owner of a renewables project in the late stages of construction to ensure the project would be fully NERC compliant by COD.

Solution

CAMS developed project-specific compliance programs, organized and verified that all compliance-required testing was completed, and took the initiative to work with construction contractors to add in compliance requirements during construction and commissioning (thereby reducing otherwise higher post-COD compliance costs). Facility completed NERC registration with no issues.

Environmental and Safety Improvements



Background

As part of its role as asset manager to a large wind project, CAMS EH&S group monitors and reviews the safety procedures and practices of the OEM that is performing the up-tower maintenance. In that role, CAMS learned that the OEM's procedures did not include a key rescue procedure for technicians injured up-tower.

Solution

CAMS notified the owner and OEM of the procedural gap

- CAMS worked over the course of several months with the OEM to seek agreement about how to address this key shortcoming. OEM ultimately agreed to implement a new procedure, and subsequently rolled out that procedure fleet-wide.

Background

CAMS was hired by an existing customer during the late stages of the construction of a utility scale wind farm. CAMS' environmental team ingrained itself in the construction process, attending construction meetings and reviewing construction plans, and identified various shortcomings and risks.

Solution

The CAMS team undertook actions to address its findings and concerns, including:

- Identified incomplete portions of the construction storm water permit requirements and other permits required for the development of the project. Ensured that the permits were not terminated prior to requirement completion, thereby avoiding permit violations.
- Advised owner on actions needed to ensure that the cost of the ongoing compliance obligations were born by the EPC contractor and not by the owner.
- Identified gaps with required registrations and programs needed to ensure compliance at COD, and worked with owner and contractors to address those gaps.
- Identified potential areas of project liability due to conflicting environmental programs implemented by the BOP Operator and the Turbine Operator.

Cash Management



Background

The owner of a wind project was confronted with the possibility of cash being trapped due to Debt Service Coverage Ratio (DSCR) requirements in a financing agreement and asked CAMS for suggestions.

Solution

CAMS conceptualized and, following review and approval by the owner, implemented an intricate cash management strategy that allowed for the meeting of DSCR requirements and distributions.



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