



Multi-Site Industrial Manufacturer Wanted to Assess Market Opportunity for Fuel Cell Combined Heat and Power Systems

Situation

A multi-site manufacturing company was struggling with high electricity costs, impacting their ability to compete in competitive markets. The company was looking for solutions to reduce their high power costs including energy and capacity, considering the use of combined heat and power fuel cell systems running on hydrogen. In addition, the company wanted to evaluate the state of the current fuel cell CHP products and technology to consider entering the market.

Solution

Velerity used the manufacturing company's three locations as the test cases to evaluate the customer value proposition and market opportunity for fuel cell combined heat and power systems. Velerity's approach included:

- Identifying and characterizing commercially available fuel cells for onsite power generation;
- Acquiring site specific power profiles for the three industrial sites, including energy and power demand, thermal power requirements, and cost data; and
- Preparing an integrated model to evaluate the electric, thermal and economics of converting to combined heat and power.

Prepared detailed cash flows and investment model to determine customer value proposition and power returns.

Result

The manufacturing company was able to integrate the results of the energy and financial modelling into their plans for product expansion and diversification into the fuel cell industry.

