



CPower

Case Study: Global Aerospace and Defense Company


Decades of Demand Response: Scaling Flexibility Across a Large, Distributed Enterprise

A major aerospace and defense company operating hundreds of sites worldwide has a long history of managing energy demand to support both grid reliability and business performance. With roots in demand-side management dating back to the 1970s, the organization has continually

evolved its approach to energy flexibility — combining operational expertise with modern technology to unlock long-term value.

A Legacy of Flexibility

The company's engagement with demand response (DR) began in the early 1970s, when it earned federal recognition for innovative load management



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— Principal Energy Engineer

practices. By the 1980s, individual facilities were participating in voluntary power containment programs, and by the late 1990s, the organization was actively exploring new ways to optimize energy use and reduce costs.

Over time, energy managers transitioned from ad hoc, voluntary curtailments to more structured and repeatable demand response programs that could scale across multiple facilities.

Strategic Expansion and Scaling Up

In the mid-2000s, the company began to expand its demand response participation more strategically. After evaluating several service providers, it selected CPower, a partner that could help scale its efforts across the enterprise. Now a CPower customer for over a decade, today the organization has more than a dozen facilities enrolled in demand response programs across a single regional grid. This centralized approach has allowed the company to standardize processes, improve visibility, and scale flexibility across its portfolio.

Lessons in Scaling Demand Response

The company’s experience offers valuable insights for organizations seeking to expand flexible load management:

- **Executive and site-level buy-in** proved essential. Early pilot projects helped build confidence among facility teams and demonstrated that demand response could be executed reliably without disrupting core operations.
- **Data and technology** played a critical role. Leveraging data and technology proved critical, switching accounts to coincident peak rates and using advanced tools like CPower Connect™ allowed the company to analyze load patterns and uncover savings opportunities. For instance, data revealed that some sites consumed as much energy on weekends as weekdays, prompting corrective action on the company’s curtailment and load shifting strategy.
- **Operational visibility** uncovered unexpected behaviors. In some cases, facilities were consuming nearly as much energy on weekends as on weekdays, prompting adjustments to curtailment and load-shifting strategies.

A major inflection point came when the company moved from occasional participation to more frequent dispatch programs offered by the regional grid operator.



After piloting one such program at a single site, the company demonstrated that increased participation could significantly improve financial returns.

Automation and pre-configured strategies—such as pre-cooling—helped streamline operations, reduce manual intervention, and minimize the burden on on-site staff.

The organization also chose to reinvest demand response revenue into energy efficiency initiatives, including facility-wide lighting upgrades, further compounding the value of participation.

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Balancing Operations and Flexibility

Demand response participation is carefully balanced with the realities of large-scale manufacturing. Facility teams must weigh the value of curtailment against potential impacts on employee comfort and productivity.

Through experience, the organization learned that modest temperature adjustments are often less disruptive than reductions in lighting, particularly in facilities where HVAC and lighting systems are interconnected. As a result,

curtailment strategies are designed to prioritize operational continuity and minimize disruption.

Looking Ahead: Automation and Engagement

The company continues to expand its demand response footprint by bringing additional facilities into advanced programs. A growing focus on automation is helping reduce manual effort, improve consistency, and support broader scalability.

Equally important is ongoing engagement with site teams. By fostering collaboration and sharing best practices across facilities, the organization continues to refine strategies that deliver sustained operational and financial impact—while supporting a more flexible and resilient grid.



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