

# case study



## Peak Performance: How IEA Helped a Major Manufacturer Save Costs and Secure Power Reliability

### Summary

A large Illinois-based manufacturer needed a reliable source of backup power to protect production continuity. Through IEA Power's expertise, the project evolved beyond simple standby generation—into a smart, peak-shaving system that delivered both energy cost savings and operational resilience.

### The Challenge

The manufacturer's primary goals were twofold:

- Ensure power reliability to prevent costly downtime during outages.
- Reduce electricity costs associated with high-demand, on-peak utility rates.

However, the client's existing electrical infrastructure required a custom-engineered approach capable of supporting a full facility load while integrating seamlessly with the local utility system.

### The Solution

Working closely with the client's engineering and maintenance teams, IEA Power designed and installed a 4.6 megawatt natural gas-fired standby power generating system—built not only for reliability, but also for cost efficiency.

Key aspects of the solution included:

- Full-load capacity: The 4.6 MW system could support the entire electrical demand of the facility.
  - Peak shaving operation: During high-demand weekday hours (9 a.m.–10 p.m.), the generators automatically activated to offset grid usage—eliminating costly peak demand charges.
  - Off-peak automation: During low-demand periods, the system shut down automatically to take advantage of reduced off-peak rates.
  - Fully paralleling switchgear: Enabled a smooth, seamless transition between utility and generator power without interruption to operations.
- Integrated control systems: Optimized performance, load management, and efficiency throughout all operating modes.

The result was a dual-purpose system that not only provided backup power security but also delivered significant long-term cost savings.

### Result & Impact

- Elimination of utility peak demand charges—leading to substantial energy cost reductions.
- Complete facility coverage for uninterrupted power reliability.
- Seamless switching between utility and generator power.
- Operational resilience for a just-in-time manufacturing process.
- Improved return on investment, as cost savings compounded over time.
- The system's secondary benefit—serving as a standby power source during outages—helped the company maintain uptime, productivity, and profitability.

### Why IEA Power?

IEA Power specializes in complex utility interconnections and high-reliability energy projects. Whether upgrading substations, integrating generation assets, or executing live power transitions, IEA delivers engineered solutions that minimize risk and maximize uptime.

### Let's Power What's Next

Upgrading your energy infrastructure? Keep your operations running strong with IEA Power.