

# case study



## Ensuring Uninterrupted Uptime: How IEA Power Replaced Critical Data Center Switchgear Without a Single Outage

### Summary

When a national Data Center faced reliability issues with its electrical switchgear, IEA Power engineered an innovative solution that replaced critical transfer switches without a single moment of downtime. The result: a modernized, highly reliable system completed on time, under budget, and with zero operational disruption.

### The Challenge

Data Center management discovered ongoing reliability problems tied to their electrical switchgear. Upon investigation, IEA identified three open-transition Automatic Transfer Switches (ATS) as the source of the failures.

Due to the inherent design of these units, the switches could disconnect from the utility source without successfully connecting to the emergency generator power—creating the potential for an outage.

Complicating matters further:

- Facility operations could not be shut down under any circumstances.
- Three ATS units (1,600A, 2,500A, and 4,000A) needed full replacement.
- Replacement had to occur without interrupting power to any part of the facility.

### The Solution

IEA Power developed a highly detailed and customized plan to maintain continuous power while executing the switch replacements over a three-week, three-phase installation.

Key elements of IEA's solution included:

- Utilizing a combination of generator power and custom-built temporary switchgear to maintain power throughout the installation.
- Producing custom-engineered ATS units to precisely match the footprint and geometry of the existing equipment—duplicated within fractions of an inch.
- Coordinating modifications with the manufacturer to ensure proper fit and function.
- Designing specialized control systems to synchronize three new ATS units with three standby diesel generators.
- Implementing a priority load management system to protect critical facility loads during transitions.
- Developing and overseeing post-installation testing protocols to verify performance and operational reliability.

Throughout construction, IEA supervised every step, collaborating closely with Data Center management and providing regular progress updates to ensure transparency and alignment.

### Result & Impact

- Zero downtime during installation across all three phases.
- Project completed on time and under budget.
- No impact to ongoing data center operations or customer service.
- Significant increase in reliability and long-term system stability.

### Why IEA Power?

IEA Power specializes in complex, high-stakes energy projects where uptime and reliability are non-negotiable. From industrial facilities to mission-critical data centers, IEA delivers engineered solutions that ensure power continuity, compliance, and confidence.

### Let's Power What's Next

Is your facility facing a challenge that demands reliability without compromise?