

CLIENT CASE HIGH EFFICIENCY

TELECOMMUNICATION SINGAPORE



- UPS type: Dynamic UPS
- Power module: 2,500 kVA
- No-break rating: 2,000 kW @ 0.8pf of net useable power
- Engine rating: Standby rated at 2,500 kVA
- Phase 1 install: 8 modules
- Total capacity: 16 MW
- Operating voltage: 400 V/50 Hz
- Configuration: Tier III, concurrently maintainable
- Install: Indoor

Singapore is a secure regional data center hub with a stable government, a modern infrastructure, and global connectivity. Taking full advantage of this, the client in this case study leverages its market-leading presence and experience operating some of the most modern data centers in the world to offer class-leading telecommuni-

cations, cloud-based applications, and data services. Strategically located in the western part of Singapore, their new mission-critical facility is designed to meet the increased security and reliability demands of the next generation of power-intensive IT deployments.

Project Challenge

The new data center joined a network of eight existing data centers in Singapore. Its geographical separation, coupled with the company's internal fiber optic network, ideally positioned the site for disaster recovery and business continuity services.

Operational efficiency was of primary importance to the engineering team. Within the UPS market there are conflicting messages about the efficiency of static and dynamic UPS systems: vendors of both technologies were touting efficiencies in the high 90's at 100% load.

After extensive discussions with both static and dynamic UPS system providers, it was apparent that while static UPS systems initially seemed more efficient, many of the potential operational losses were removed from their calculations, i.e. air-conditioning, battery charging, and connection losses. The client also identified additional equipment needed to offer a comparable level of harmonic filtration to that of dynamic systems.

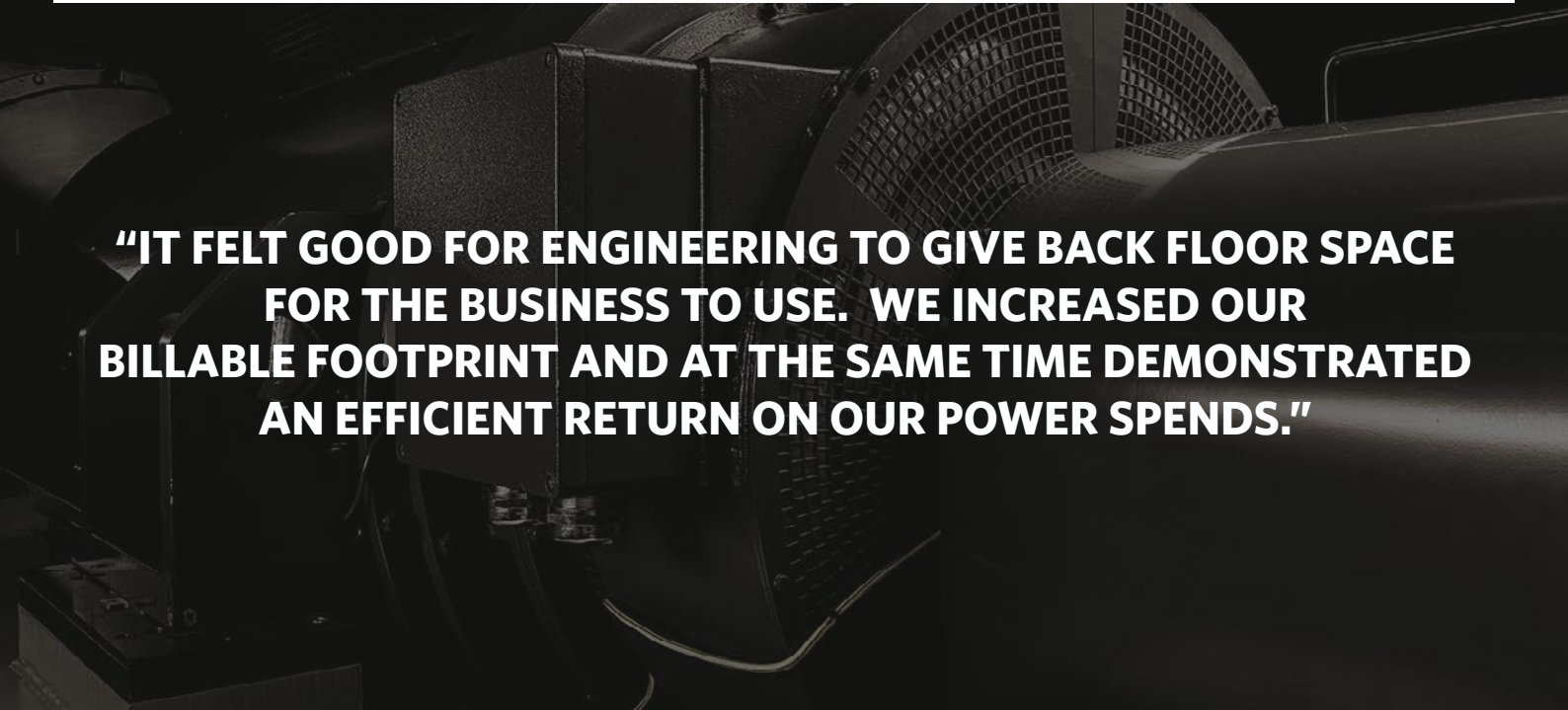


Project Solution

After a detailed study to assess the true total cost of ownership, the client opted for the solution with the lowest operational cost: dynamic UPS equipment from HITEC Power Protection. The analysis pointed to several hidden costs for static UPS.

First, high efficiencies come when the unit is operating in a near-bypass mode that provides very little power conditioning. Next, the Static UPS system could only be installed in a dust free, air-conditioned environment to protect the power electronics.

Also, the losses attributed to the increased number of connections, recharging and ventilation of the batteries tipped the scales. When these were factored back into the equation, the efficiency of the entire static UPS solution was actually more like 91%, versus the 97% on-line efficiency of the HITEC dynamic system.



"IT FELT GOOD FOR ENGINEERING TO GIVE BACK FLOOR SPACE FOR THE BUSINESS TO USE. WE INCREASED OUR BILLABLE FOOTPRINT AND AT THE SAME TIME DEMONSTRATED AN EFFICIENT RETURN ON OUR POWER SPENDS."

Customer Experience

The HITEC team worked alongside the client's engineering team to deliver a high-quality, dynamic rotary UPS installation, with fewer points of failure and natural load protection.

Most importantly, the client was able to achieve lower operational costs due to the dynamic UPS installation.



 AIR WATER GROUP

**CONTINUOUS POWER
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HITEC Power Protection BV
P.O. Box 65
7600 AB Almelo
The Netherlands

Tel: +31 546 589 589

Web: hitec-ups.com

E-mail: info@hitec-ups.com