

CLIENT CASE

RETROFIT TO POWERPRO2700 FOR DATA CENTER



IT & DATA CENTER UNITED STATES

- UPS type: Dynamic UPS
- Power module: 2,187 kVA
- No-break rating: 1,750 kW@ 0.8 pf of net useable power
- Engine: Re-use Existing MTU, Installed in 2001
- Phase 1 install: 10 modules
- Operating voltage: 480 V/60 Hz
- Configuration: Isolated Redundant system configuration
- Redundancy: N+2
- Housing: Indoor, Existing Building

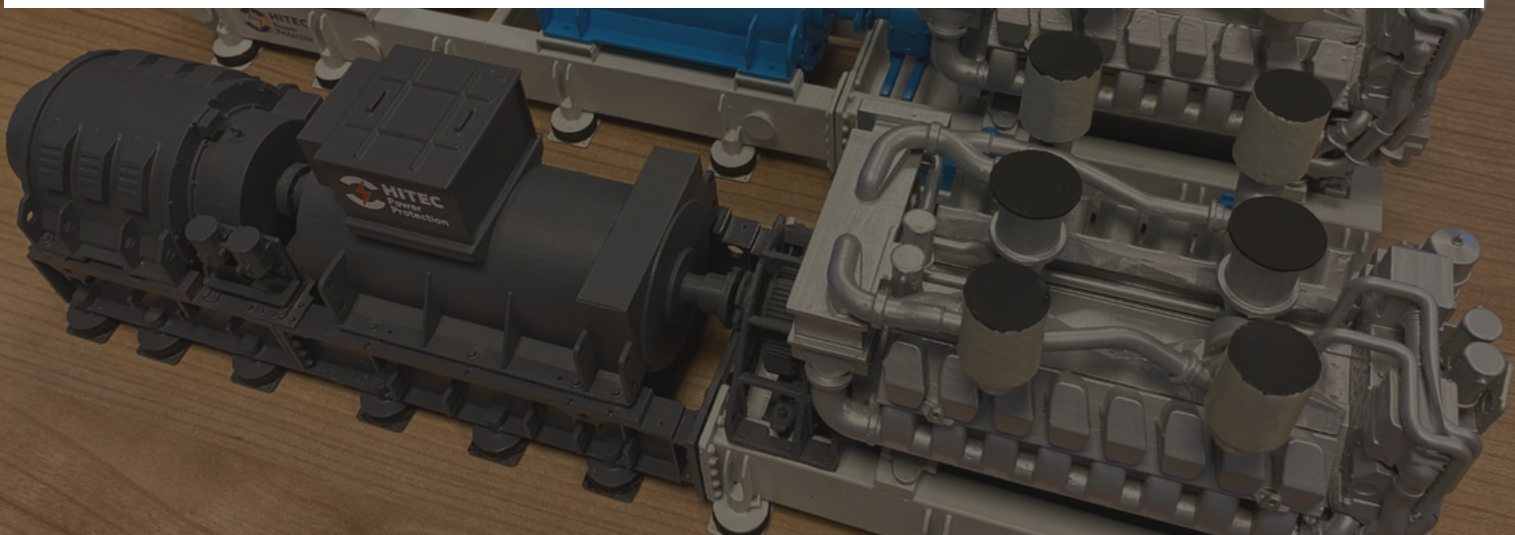
The current digital age relies on the availability of physical IT systems, software applications and data. During and after the Covid-19 pandemic, the availability of a good digital infrastructure has proven to be of paramount importance. Data centers, i.e. facilities where critical IT infrastructure is located, play an important role.

As data centers need to provide uninterruptable services to their users, in turn they need to rely on critical equipment like uninterruptable power supply (UPS) systems. Digital Realty in this case is a real estate investment trust, specialized in data centers and colocation.

Project Challenge

Digital Realty took ownership of a datacenter in the heart of San Francisco in the year 2000, this facility requires constant and clean electrical power regardless of any external influences; such as lightning strikes, rolling blackouts or extreme heat. This datacenter consists of a total of ten (10) legacy HITEC Dynamic Rotary UPS systems and supporting equipment. After 20 years of operation, the technology was ready for a

refresh to a more modern and more efficient system. In order to prolong the infrastructure, HITEC worked closely with the customer to design a custom retrofit solution utilizing the innovative PowerPRO series that had been introduced in 2015. The challenge was to replace sufficient components in the legacy units with new PowerPRO components, significantly increasing the reliability and the energy efficiency.

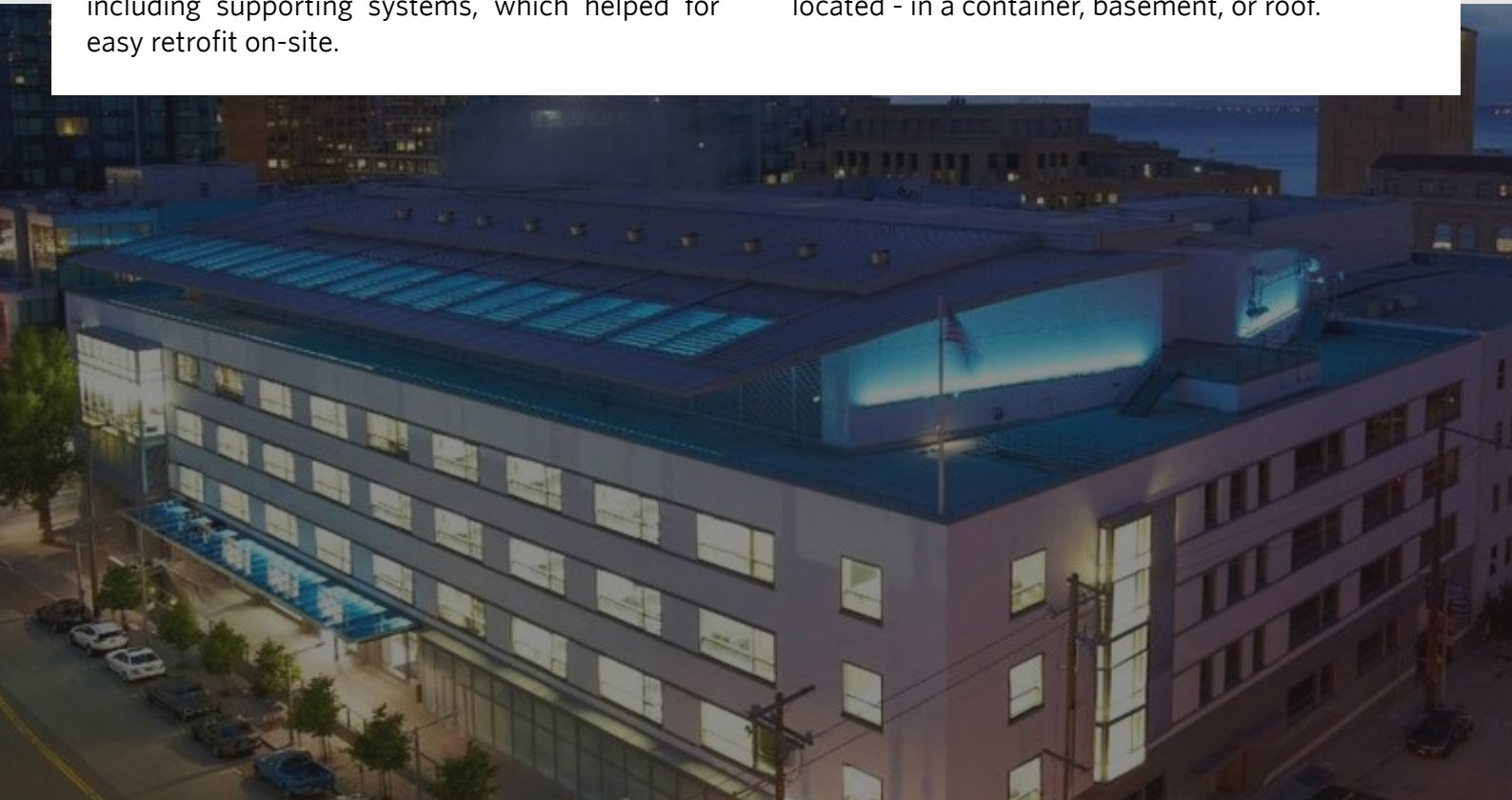


Project Solution

HITEC helped this particular client by retrofitting the legacy machines to PowerPRO2700 systems, combining the existing box frame and a PowerPRO2700 I-beam. In the retrofit, the flywheel, alternator and clutch were replaced for new, and all HMI's were replaced with state-of-the-art panels, touch screens and electronics.

An independent reliability study determined that the existing 20-years old MTU 16V4000G80 DDEC diesel engines didn't need to be replaced, including supporting systems, which helped for easy retrofit on-site.

The latest model of HITEC products have extremely high efficiency, especially compared to the legacy models, so efficiency savings of this retrofit were incredibly attractive. As an added benefit, the PowerPRO system comes standard with automatic relubrication of the bearings to significantly reduced the maintenance cost and offer an impressive 10-year overhaul window. The retrofitted PowerPRO2700 machines fit inside the envelope of the legacy ones, showing that HITEC could retrofit any job, regardless of where it is located - in a container, basement, or roof.



Customer Experience

Digital Realty is very happy, so much so, that they are considering to retrofit the remaining portfolio of DRUPS, consisting of 60+ HITEC machines in the United States. Moreover, the reputation

of the project itself has got traction within the channels of the data industry, and that has also created additional client retrofit activities.



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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