

# Capability Statement



# Why Choose Us?



## We're Professional, Responsive & Reliable.

We design, build and service critical power infrastructure. This enables vital services such as data centres, communication networks, commercial buildings and industrial facilities to operate 24/7.

Our offices are Australia-wide, and we pride ourselves on delivering quality, reliable, on-time and competitive one-stop power system solutions. Our in-house team consists of engineers, project managers, electricians, and diesel mechanics who take the time to understand your unique business needs to provide a tailor-made plan.

### Where We Work

- Data Centres
- Commercial Buildings
- Industrial Facilities
- Production Lines
- Healthcare and Medical
- Local, State and Federal Government
- Utilities and Energy Networks, and
- Transport and Public Infrastructure.



24/7 Availability



Australian Owned and Operated



ISO Certified



Preventive Maintenance Agreements

## Services



Our professional services ensure your critical power infrastructure will meet your requirements now and into the future. Our projects team works with you throughout the process by engaging with IT, facilities, network, and security. We're with you from developing the initial requirements all the way to project execution and ongoing support.

### Our Services

- Design and Consultation
- Engineering
- Project Management
- Installation
- Power Quality Analysis
- Energy Audits
- Site Acceptance Testing, and
- Independent Commissioning.

## Products



We work with leading manufacturers to deliver the most reliable and efficient products and solutions tailored to your specific requirements.

### Our Products

- Uninterrupted Power Supplies (UPS)
- Lightning and Surge Protection
- Generators
- Transfer Switches
- Power Factor Correction (PFC)
- Harmonic Filters, and
- EV Charging

## Maintenance



Every Power Protect service engineer carries state of the art testing equipment for fast diagnosis and efficient resolution. Our team works hard to ensure that your systems are maintained, robust and reliable. Contract clients enjoy access to our 24/7 technical support.

### Our Maintenance Solutions

- 24/7 Support Agreements
- Preventative Maintenance
- Comprehensive Maintenance
- Integrated System Testing
- Life Cycle Replacements
- Thermal Imaging, and
- Ad-hoc Servicing and Repairs.



# Our Products

Our solutions make expanding critical facility capacity easy with high-efficiency, modular architecture that offers the highest reliability and availability with genuine redundancy and low total cost of ownership.

Whether replacing existing legacy equipment or implementing a new project, we help customers, contractors, and consulting partners design and execute critical power systems more effectively.

Our UPS systems are integrated with Lithium or Lead-Acid battery storage to meet your specific backup requirements. Our extensive knowledge of related infrastructure ensures that all elements of your critical power system work together to provide the highest possible level of protection from unwanted power issues.

Our specialist in-house team of service engineers support your equipment throughout its life with routine maintenance, minimising the risk of downtime and extending the life of the equipment.



## Uninterruptible Power Supply (UPS)

Central to our product portfolio is a range of the highest quality, class-leading three-phase and single-phase uninterruptible power supplies. Developed to the highest efficiency, availability, scalability, and flexibility, our products are at the forefront of power protection technology.

Committed to helping clients reduce costs and improve their carbon footprint, Power Protect works with you to deliver future-proof systems that reduce upfront costs while minimising the total cost of ownership.

Backed by our national team of factory-trained field service engineers, we offer the most comprehensive and cost-effective service plans available. They ensure your power protection systems are expertly maintained regularly and always ready to support your critical loads.

### UPS Products

- Single Phase UPS from 1kW to 20kW
- Modular UPS Systems from 10kW to 6MW
- Parallel and Redundant Designs
- DC Batteries and Energy Storage Systems.

### Associated Products

- Lithium & Lead-Acid Batteries
- Battery Monitoring Systems
- External Bypass Switches, and
- Remote Monitoring.

### UPS & Battery Services

- Specification, Design and Installation
- Preventative Maintenance
- Repairs and Upgrades
- Load Bank Testing, and
- Battery Performance Checks.

## Lightning & Surge Protection

Our solutions minimise the risk of damage from lightning strikes, transient voltage, and power surges to your sensitive electronic equipment.

Our engineers assess your facility against the Australia Standard for Lightning Protection and provide annual inspections to ensure the systems continue to protect against the harmful effects of lightning events.

Damaging electrical surges can occur due to external and internal factors in an electrical distribution network. We provide comprehensive and multi-level protection systems to reduce the damage that these surges can cause.



### Lightning & Surge Protection Products

- Direct Strike Lightning Protection
- Surge Diverters
- Surge Filters, and
- Earthing and Bonding.

### Lightning & Surge Protection Services

- System Audits
- Annual Inspections
- Earth Testing, and
- Repairs and Upgrades.

## Generators

Our range of reliable and cost-effective generators are quiet, efficient, and suitable for standby or prime power applications. We offer generators from 1 to 3000kVA in the open set, canopy set, and containerised style powered by Kubota, Perkins, and Cummins engines.

Our extensive knowledge of associated equipment allows us to package and support the related diesel storage systems, fuel transfer pumps, dummy load banks, and automatic transfer switches.

Our maintenance solutions are tailored specifically to your risk rating and operational needs to ensure you have reliable standby power. Laboratory analysis of fuel, oil, and coolant conditions extends the service life of fluids and filters, removing unnecessary lubricant and filter changes, resulting in reducing cost and waste.



### Generator Products

- Prime and Standby Diesel Generators
- Automatic Transfer Switches
- Fuel Storage and Transfer Systems
- Generator Controller Upgrades
- Leak Detection Systems
- Fuel Tank Cleaning and Fuel Polishing, and
- Dummy Load Banks.

### Generator Services

- Specification, Design and Installation
- Preventative Maintenance
- Repairs and Load Bank Testing
- ATS Maintenance & Testing
- Black Start Testing, and
- Annual Fire Safety Statement (AFSS) Testing.

## Power Factor Correction (PFC) and Active Harmonic Filters (AHF)

Regular testing and servicing will ensure that PFC systems operate effectively, preventing the increased costs associated with poor power factor. We also provide products that address poor power factor and harmonic distortion in the power system, optimising power usage and reducing power costs.

Our PFC and AHF annual maintenance programs ensure that the system provides the right amount of correction for your electrical installation and ensures that all components are operating within manufacturers specifications.

The annual inspection includes a thermal scan of your PFC unit and a detailed contactor and capacitor health analysis. Our easy to read reports provide a simple overview of system performance and outline any component replacement required immediately and those that are likely to require replacement in the next 1-2 years, allowing you to budget for the upcoming expenditure.

### Power Factor Correction Services

- New Unit Sales
- Power Audits
- Specification
- Installation
- Preventative Maintenance
- Spare Sales, and
- Repairs.

## Electrical Vehicle (EV) Charging

Our EV charging systems use durable components and are managed by intelligent software, providing a future-proof platform compatible with every electric vehicle.

We offer AC wall connectors through to 350kW fast charging and sequential charging systems to match your charging needs to your electrical infrastructure.

Our scheduled maintenance programs and rapid response 24hr support ensure your charging platforms are always available to keep your vehicles on the road.

### EV Charging Services

- AC wall-box installations
- Installing fast-charging DC stations with robust connectivity, and
- Innovative infrastructure such as on-demand electric bus charging systems.

### EV Charging Products

- AC Charging
- DC Charging
- Fast Charging
- Sequential Charging, and
- Heavy Vehicles.



# Case Study

## Federal Government

### 3MW UPS Right-Sizing

#### Background

As the demand for data centres grows, so does the size of the equipment installed. It is typical for equipment to be oversized by a margin to allow growth during the design stage.

This federal government department had a unique challenge as government policy shifts saw a transition from in-house data centres to colocation facilities. As a result, the anticipated IT loads never eventuated. Even though the core data centre functionality had been moved off-site, the building still needed clean, reliable power to the remaining IT infrastructure.

With 3000kW of capacity across seven UPS units and a critical load of approximately 150kW, the UPS systems' operation was very inefficient. This problem was further exacerbated as the UPS's were transformer-based. Estimates placed the cost of this inefficiency as upwards of \$200,000 per year. When combined with the cost of ongoing maintenance for such large UPS systems, it became clear that the department could make substantial savings by replacing the UPS units with equipment sized more appropriately for the critical load it would protect.

The department engaged an electrical engineer to design a brief to remove the existing systems and install much smaller 60kW, 100kW, and 150kW UPS across the various supplies. To do so required major changes to the electrical

infrastructure, downgrading circuit capacities and installing additional switchboards. To carry out these works would be costly, time-consuming, and disruptive to the ongoing operations of the department's national headquarters.

#### Our Solution

After successfully deploying ABB's DPA500 systems in similar applications, the Power Protect team proposed to replace the seven large UPS units with 6x500kW modular frames. The DPA500 platform uses 100kW modules, so the systems could be configured with as many modules as required to support the current load. As the DPA500 frames could meet the project requirement without any changes to electrical infrastructure, the project could be delivered in a shorter timeframe and at a reduced cost, saving the department approximately \$400,000.

#### The Solution's Benefits

The improved energy efficiency of the new units is saving the customer over \$200,000 a year. And, by not changing the electrical infrastructure, as the electrical engineers recommended, the department saved \$400,000 in costs. Additionally, should the department see their critical loads increase, the 500kW frames allows them to quickly scale back up to the original design capacity with minimal cost by simply adding power modules. The modular platform reduces the need for maintenance downtime and drastically reduces the meantime to repair (MTTR).



#### Experience Adds Value

The next challenge came in planning the upgrade. The department required minimal impact to their critical power systems as the headquarters operates 24/7 supporting staff around the globe. The department intended to use their standby generator system for four weeks to protect the site from any outages while undertaking works, resulting in the use of \$150,000 (approximately) in diesel fuel. Our experience with critical power infrastructure allowed our team to engineer a different solution. By installing temporary links between two critical switchboards, most of the work could be carried out on UPS-backed mains, reducing the time on standby generator to two 30 minute windows.

#### Our Result

We carried out the replacement project without any disruptions to the site and a perfect safety record. Detailed switching procedures and project planning put the client at ease while our security cleared staff and in-house logistics team removed and replaced over 80 tonnes of UPS and battery equipment. The improved energy efficiency of the new systems meant ongoing energy savings for the site, and the reduced heat load enabled two precision cooling units in the UPS room to be decommissioned and removed. Finally, in line with our environmental commitment, we broke down the old equipment for recycling.





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