



MPA ENGINEERING CAPABILITY STATEMENT



Key Personnel

Directors

Greg Johnston (Managing Director)
Peter Gilchrist (Chairman)

Managers

Martin Willemse (National Operations Manager)
Greg Kelly (WH&S Manager)

Company Secretary

Philip Coghlan



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Company Goals

- To maximise our customer's productivity by providing the most appropriate and cost effective automation solutions to meet their requirements.
- To provide long-term commitment and support to our customers.
- To remain at the cutting edge of automation and information technology and to combine this knowledge with the highest standards of engineering practice.
- To achieve the highest level of innovation, skill and competence in our field.
- To be the leading authority in industrial automation systems within Australia.



Company Overview and Background

MPA Engineering is a multi-disciplined engineering, project delivery and electrical contracting company undertaking projects across Australia and internationally. It is also one of Australia's leading electrical system integrators specialising in sophisticated machine and plant automation solutions. MPA Engineering services clients through its head office in Ipswich, QLD and its regional offices in Townsville, Caboolture, Melbourne, Chinchilla and Sydney, and via its international facility in Thailand. MPA Engineering is a wholly owned subsidiary of Aquatec Maxcon Group.

Established in 1990, MPA Engineering has over 27 years experience in delivering specialist electrical engineering solutions including design, control, switchboards, industrial installation, service and maintenance, to the following market sectors:

- Water and Waste Water Treatment
- Manufacturing
- Food and Beverages
- Pharmaceuticals
- Mining
- Power and Energy

Our highly trained and experienced team of engineers, technicians and trades-people are able to execute a diverse range of projects from concept, right through to commissioning and delivery. Additionally, our dedicated customer focused staff have the capability to provide ongoing support and maintenance services for the complete operational life cycle of a project or facility.

MPA Engineering prides itself on providing its customers with technical expertise, innovation and flexibility in electrical design, installation and maintenance packages. We provide a range of project delivery methods from the more traditional design, bid and build model, through to alliance partnerships and relationship contracting. As an organisation, our passion and satisfaction comes from understanding our clients needs. We are committed to ensuring our customers receive the best possible customer service from all of our divisions and we constantly strive to meet our company goals.

The company is divided into eight main areas of operation:

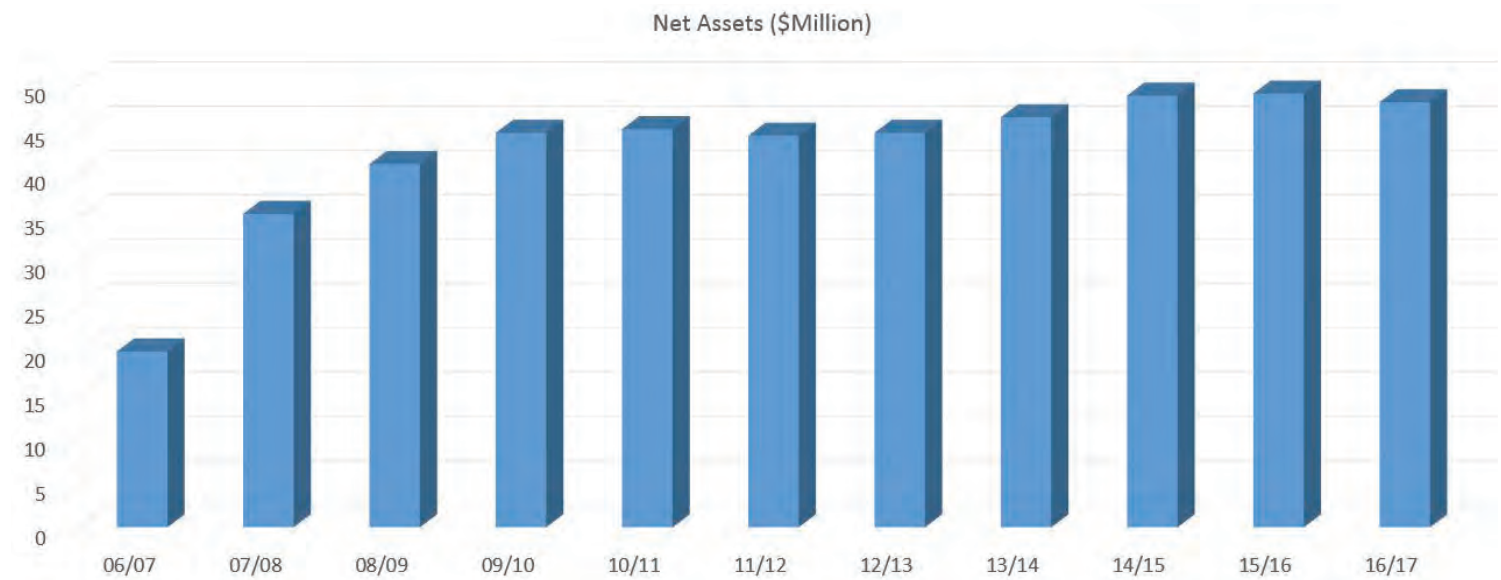
- 1. Electrical Engineering Services**
- 2. Electrical Design Drafting**
- 3. Electrical Installation**
- 4. Switchboard Manufacture**
- 5. Electrical Service Repair and Maintenance, including 24hr Standby Service**
- 6. Product Sales (Siemens/Allen Bradley/Parker etc)**
- 7. Renewable Energy Design, Installation and Maintenance**
- 8. Hazardous Area Assessment and Electrical Design**



Company Information

Financial Summary

MPA Engineering, as part of the Aquatec Maxcon Group, adopts a conservative financial strategy with a substantial asset base. The Group has Net Assets over \$48 million and has had audited accounts prepared annually since 1985. The company is an unlisted public company with 570 Shareholders.



Quality Assurance, Health, Safety and Environmental Management Policies

MPA Engineering is fully committed to:

- Ensuring a safe work place for its employees.
- Continually striving to improve safety performance.
- Instilling a cultural mind set in the company to achieve an accident and incident free work environment.

This is achieved by identifying and rectifying any potentially unsafe work conditions and/or practices, as well as actively promoting safe working conditions.

MPA Engineering operates a Management System into which the Safety, Quality and Environmental objectives are fully integrated. We are committed to safe outcomes for our staff, subcontractors, customers and the community. We are third party accredited to ISO 9001:2008; AS/NZS 4801:2001; BS OHSAS 18001:2007; and ISO 14001:2004.

MPA Engineering is focused on continually improving our performance to minimise risks and safeguard our employees, subcontractors, clients and the community.

MPA Engineering is committed to delivering excellence in environmental outcomes and to date has never recorded a reportable environmental incident.





Main Areas of Operation

Electrical Engineering Services

Our electrical engineering capability spans over 27 years of design and construction delivery across commercial and industrial businesses. Our key capabilities in this area include Electrical design, Project Management, PLC and SCADA services, Environmental Health and Safety services.

Electrical Design

MPA Engineering's design staff consists of highly qualified and experienced electrical engineers and technicians as well as electrical draftspersons. This team is able to provide professional engineering and design services for our customers as part of the delivery of a project or for one-off applications. Our design and engineering team has practical experience in the selection, design, installation, calibration and maintenance of third party electrical equipment. Our engineers are highly skilled in instrumentation, drive and advanced control systems and our product sales division stocks and distributes a wide variety of automation equipment. Specifically, MPA Engineering offers the following electrical engineering services:

- HV and LV Electrical systems design
- Review of electrical equipment – referencing condition and suitability
- Equipment selection and procurement
- Power systems design for control and computer equipment
- Electrical equipment integration into supervisory control systems (SCADA)
- Electrical drafting services
- Electrical switchboard, control panel and distribution board design
- Switchboard certification testing and procedures
- Communications and data network design
- Electrical feasibility and budget studies
- Electrical drafting and Computer Aided Design (CAD) services
- Cost estimation and management advice
- Designs certified by a RPEQ Engineer

PLC and SCADA Services

Our control system engineering capability covers most modern PLC (Programmable Logic Controller) and SCADA (Supervisory Control and Data Acquisition) platforms. MPA Engineering works closely with our clients to deliver a tailored solution to their specific requirements throughout the project life cycle, from inception to handover. Our key capabilities in this area include:

- Preliminary engineering studies
- PLC software design
- HMI (Human Machine Interface) design
- SCADA system design
- RTU system design
- PLC and SCADA system programming and implementation
- Industrial communications design
- Factory and site acceptance testing
- Commissioning and handover services
- Instrumentation design
- Process control optimisation
- Design, testing and training documentation
- Feasibility and study report
- Control management

Our team of specialist control engineers and technicians are fully versed in system integration using SCADA packages, including but not limited to: Citect, GE iFix (Proficy), Siemens (WinCC, WinCC Flex), Clear SCADA, Honeywell Experion, Allen Bradley (RSview) and Wonderware. We have experience programming many brands of PLCs, HMIs and RTUs including: Siemens (S5,S7-400, S7-300, S7-200, S7-1200), Allen-Bradley

(MicroLogix, CompactLogix, ControlLogix), Mitsubishi (FX1S,FX1N, FX2N, AN, QN, GOT, Alpha and Alpha XL), GE (90-30, RX3i), Kingfisher (CP30, CP11), Omron (CS1, CJ1, C200) and Schneider (Modicon 984, M340, Premium, Quantum).

MPA Engineering also has experience with communications protocols such as Modbus, Profibus DP/PA, DNP3, Profinet, Controlnet, DeviceNET, Ethernet and HART as well as data collection and telemetry systems. Our PC programming skills include Microsoft Visual Studio (VB.NET, c#.net, C++, Java) and VBA (Excel and Access).

Project Management

In order to manage major electrical engineering projects successfully, it is essential to manage the delivery of complex technical solutions within the often conflicting requirements of time, cost and quality. MPA Engineering provides specialist project managers who are able to demonstrate their experience in successfully delivering control system projects on time and to budget.

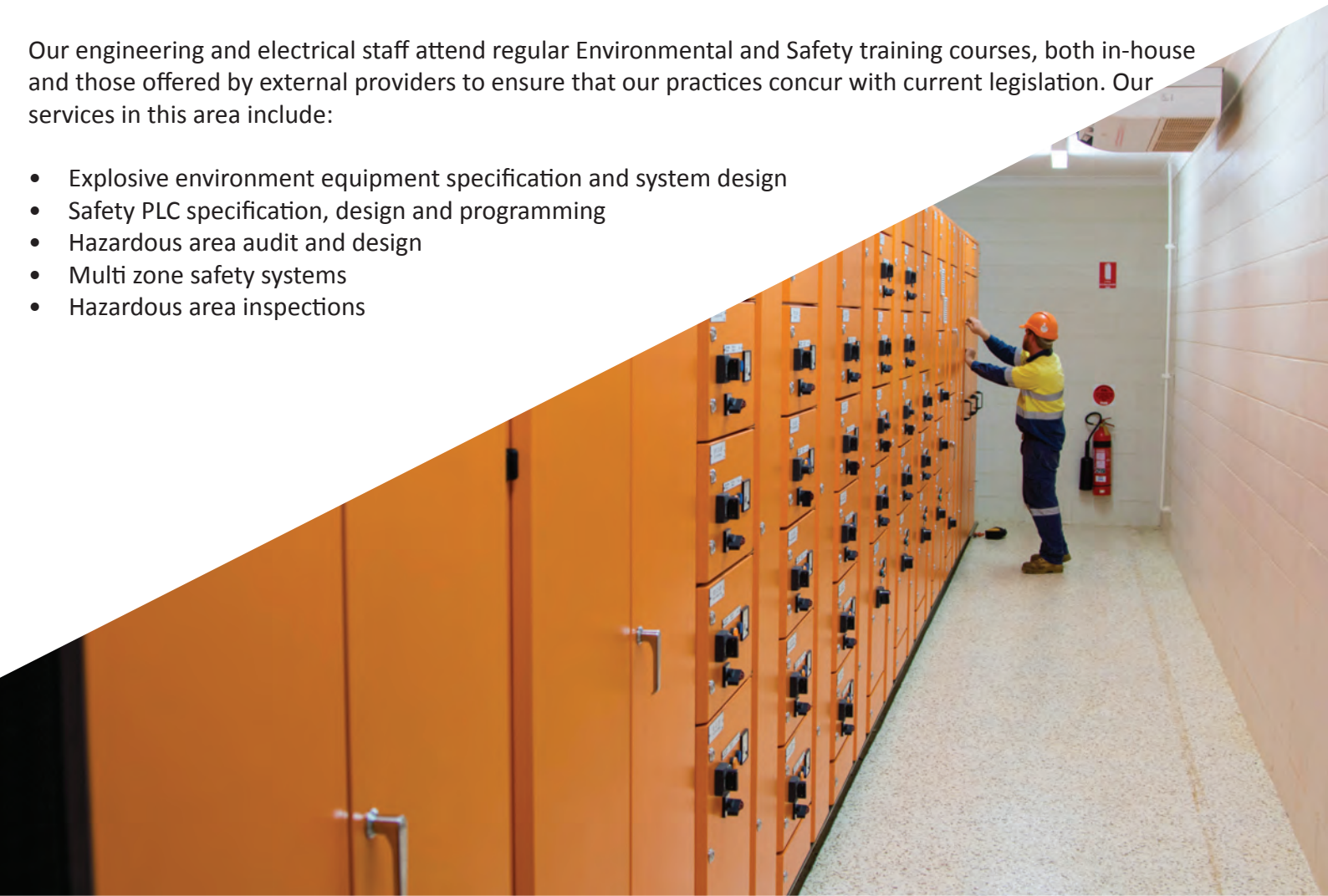
This experience encompasses both greenfield and upgrade projects utilising all major process control technologies – from significant DCS (Distributed Control Systems) and PLC/SCADA system installations and upgrades to specialised and smaller PLC projects. All of MPA Engineering’s project managers have a background in hands-on implementation and commissioning of control systems and are therefore able to commit to successful project management with on time delivery, resulting in significantly reduced life-cycle costs.

Environmental Health and Safety Services

Many of our engineering team are also highly skilled and trained in machine safety, hazardous area installation and inspection techniques. These additional in-house skills ensure that designs are formulated with a full appreciation of total system requirements which can therefore be addressed in their entirety when delivering a project. Quality outcomes can be ensured for our clients from outset to completion, as all MPA Engineering projects adhere to current Environmental Health and Safety requirements and legislation.

Our engineering and electrical staff attend regular Environmental and Safety training courses, both in-house and those offered by external providers to ensure that our practices concur with current legislation. Our services in this area include:

- Explosive environment equipment specification and system design
- Safety PLC specification, design and programming
- Hazardous area audit and design
- Multi zone safety systems
- Hazardous area inspections





Main Areas of Operation

Electrical Installation

MPA Engineering holds Electrical Contractor Licences in Queensland, New South Wales and Victoria and has dedicated installation teams comprising of qualified electricians, technicians, engineers and apprentices. Our trained teams cover all aspects of industrial work offering a complete installation package. Our services include, but are not limited to:

- Transportable switchroom build and installation
- Installation of control and instrumentation equipment
- Radio telemetry installation
- Process and control system installations
- Cable, fibre and wireless network installation
- Installation and commissioning of industrial plants
- Small project installations
- General electrical maintenance and electrical break-down projects
- General electrical auditing for AS/NZ compliance
- Hazardous area installations

Switchboard Manufacture

MPA Engineering's electrical workshops provide clients with a complete industrial and commercial switchboard design, manufacture, installation and commissioning service. From the very largest of motor control centres to smaller control panels for OEMs, the workshop teams build high quality switchboards to client specifications which include mild steel, stainless steel, aluminium, push button stations and type tested switchboards, from small local control panels to Form 4b >12m back to back.

We also construct double skinned switchboards for the most arduous of conditions and highest IP requirements. Our workshops construct switchboards with distribution capacities of up to 6000A and have developed and type tested an in-house modular switchboard, in both steel and aluminium, to fault levels of 63kA. All boards are manufactured to meet Australian Standard AS/NZS 61439:2016 requirements and the MPA Engineering workshops incorporate CAD drawings and test certificates with all of its work. The seamless design of our switchboard construction, electrical site installation, engineering design and project management service, ensures a totally integrated turn-key result. This provides the best, most efficient and effective solution for our clients.

Electrical Service, Repair and Maintenance

MPA Engineering's technical service division specialises in the repair and maintenance of electrical equipment and provides a 24 hour, 7 day on-call service to customers. The team delivers on-call service support for all areas of maintenance from reactive and breakdown maintenance to commercial, industrial, data and communication applications. We have a fully equipped fleet of mobile service vehicles together with a team of engineers, technicians and electricians experienced in all aspects of electrical services and applications.

Services include:

- Facilities and scheduled maintenance
- Installations, breakdowns and repair services
- Industrial process control support
- PLC, drive and associated automation equipment repairs and maintenance
- Routine electrical appliance testing and tagging
- Power factor and Harmonic mitigation, analysis and correction
- On-site service contracts

Main Areas of Operation

Product Sales

MPA Engineering stocks and distributes a comprehensive range of electrical automation and control equipment as well as accessories to suit most industrial applications. The product range is specifically tailored to meet the needs of our diverse client base and is available either as standard off-the-shelf products or customised to meet specific requirements. With technical support from our in-house team of engineers and electricians, our product sales team provides a complete automation solution for customers.

We ensure we stay at the forefront of the latest trends and developments in automation products to ensure that we offer the most up-to-date products to our customers.

Renewable Energy Design, Installation and Maintenance

MPA Engineering is committed to renewable energy practices both in-house, to reduce our own carbon emissions, and externally to assist clients to maximise the benefits of many of the green products and services available to industrial, mining and governmental clients. MPA Engineering also practices what it installs, with low energy lighting, paper recycling and solar installations in its Melbourne, Sydney and Ipswich offices.

With its in-house engineering capabilities, MPA Engineering is responsible for the installation, commissioning and after-sales service for a full range of specialist products including Himoina turbines, Trojan UV and ECT, Ozonia ozone generators, and the CSOTechnik range of Biogest technologies including Vacflush and Crown Cell Lysis equipment, Vortisand rapid sand filters and HV Turbo air compressors. Given the teams experience in electrical engineering, SCADA programming and BMS, MPA Engineering is able to provide superior customer service in terms of technical support and periodic maintenance. Additionally, with sole distributorship rights to supply Himoina gas turbines in Australasia through our parent company Aquatec Maxcon, MPA Engineering is also able to offer microturbine technology solutions as a further source of distributed power generation.

Thermal Imaging, Reporting and Repair

MPA Engineering also extends into the region of thermal imaging. This advanced maintenance technique assists in finding faults before they occur and repairs them prior to costly downtime.

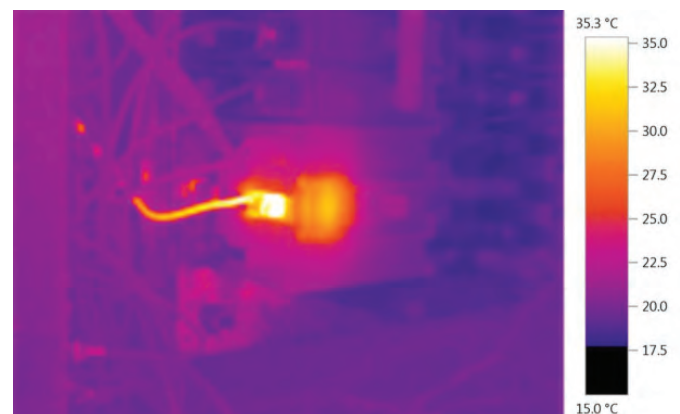
MPA Engineering is perfectly positioned to inspect faults and repair the serious faults before leaving site.

What can be detected:

- Loose/deteriorated connections
- Overloads
- Imbalanced loads
- Open circuits
- Inductive heating
- Harmonics
- Defective equipment

Benefits:

- Locate problems quickly, without interrupting service
- Drastically reduce costly, unscheduled power outages
- Minimise preventive maintenance time and maximise troubleshooting effectiveness
- Prevent premature failure and extend equipment life
- Identify potentially dangerous and hazardous equipment
- Reduce insurance premiums and deductible payments







Supported Industries

MPA Engineering's client base includes industrial manufacturers, end users, government utilities, and mining companies. The industries include, but are not limited to, the following:

Water and Waste Water

MPA Engineering has been operating for over 27 years and has a proven track record in delivering water and wastewater projects and products to both urban and remote regions. We have a solid core of experienced personnel to deliver a wide variety of water and wastewater projects and offer clients an unrivalled breadth and depth of specialist experience in the water sector. From greenfield sites, to site audits, retrofits and upgrades, MPA Engineering has assisted many water and wastewater companies and councils.

Food and Beverage

Food and beverage products have become more complex and expensive to produce while globalisation and regulatory requirements continue to limit margins. To remain competitive, companies must find innovative ways to produce their products faster and at lower cost, with minimal waste. MPA Engineering has assisted this industry in gaining a competitive advantage through better control of the factory floor and better integration of manufacturing information. MPA Engineering's specialists provide a range of products and services such as consulting, HSE compliance, design and installation of production processes and electrical maintenance support to food and beverage companies.

Manufacturing

Similar to the food and beverage industry, all manufacturers need to innovate, reduce costs and eliminate waste to remain competitive. MPA Engineering has assisted and sold products to a range of manufacturing companies.

MPA Engineering's team have the knowledge and experience required to tackle the most difficult challenges in the manufacturing industry. From working with plant operational teams, to identifying opportunities for process improvement, to instrumentation and electrical design and engineering through to commissioning.

Mining

MPA Engineering can provide full engineering services to the mining industry including: full electrical design covering power supply and distribution, SCADA / PLC systems, telemetry systems, hardware procurement, construction management, maintenance support and project management for minor plant upgrades to large scale infrastructure projects. We also supply automation products to many mining end clients.

Our understanding of the design, construction and maintenance of mine site infrastructure has helped us successfully complete projects over the past 27 years in a diverse range of locations across Australia for mining companies.

Industrial Sector

In the industrials sector, product time-to-market has to be extremely short, the production highly efficient and the product quality impeccable. Development and production of products requires the consistent planning and documentation of all processes over the entire plant and product life cycle. There is high pressure to reduce costs because patent protection terms are short and the cost for product development is increasing. With over 27 years of experience in the industry, MPA Engineering understands the time and cost demands of the industrial sector. We provide a range of electrical engineering services and products to such companies.

Key Projects

Water and Wastewater

KINGAROY WASTEWATER TREATMENT PLANT

Client: South Burnett Regional Council
Capacity: 12,500EP
Value: \$2.5 m (Electrical)

The Kingaroy WWTP is the first Australian Plant to utilise Nereda® aerobic granular sludge technology, which delivers more sustainable outcomes, as it uses smaller structures and requires less energy and chemicals.



THABEBAN WASTEWATER TREATMENT PLANT

Client: Bundaberg Regional Council
Capacity: 9,000 EP
Value: \$1.7 m (Electrical)

MPA Engineering, together with Aquatec Maxcon and QCGC, delivered the Biological Nutrient Removal (BNR) plant in Bundaberg. MPA Engineering provided detailed design, switchboards, electrical installation and the control system for the plant.



GLENMORE WTP HIGH LIFT PUMP STATION

Client: Rockhampton Regional Council
Capacity: 100ML/Day
Value: \$4.5 m (Electrical)

The Glenmore WTP plant has been optimised to the highest level to prevent the power consumption levels peaking; with our upgrades and clever design gaining the council a saving of 30% on power in comparison to the old billing.



OXLEY CREEK FLOOD RESILIENCE

Client: Queensland Urban Utilities
Value: \$6 m (Electrical)

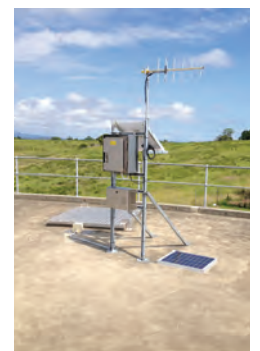
The Oxley Wastewater Treatment Plant was flooded during the 2011 Brisbane Floods. The flood resilience project involved the lifting of each and every switchboard to above the flood level. To complicate the situation, the majority of works needed to be done at night, whilst maintaining plant operation.



MACKAY REMOTE TERMINAL UNITS (RTUs)

Client: Mackay Regional Council
Scope: 81 RTU Sites Upgraded
Value: \$1.1 m (Electrical)

Mackay Regional Council installed a new digital radio repeater network with two separate repeaters. The previous Radtel RTUs and analogue radios needed to be replaced with SCADA Pack and Viper radios.



QUU 32 SCADA NETWORK & EFFLUENT MONITORING

Client: Queensland Urban Utilities
Scope: 41 RTU Systems added to the QUU Network
QUU had a number of sites in the Scenic Rim, Somerset and Lockyer Valley service delivery areas that had no telemetry or visibility to the then existing SCADA system. These sites included sewage pump stations, sewage treatment plants and water reservoirs.



MORANBAH SEWAGE TREATMENT PLANT

Client: Arrow Energy
Capacity: 2.0mL/d
Value: \$880,000 (Electrical)
A Water Treatment Facility was designed and constructed for the Moranbah gas project. The treated water was used for irrigation and dust suppression.



Mining

QGC NORTHERN WATER TREATMENT PLANT PTDP

Client: Queensland Gas Company
Capacity: 20ML/D - 100ML/D
Value: \$2 m (Electrical)
Water associated with coal seam gas mining in the region is processed via reverse osmosis at the NWTP before entering the PTDP. The PTDP plant instantaneous flow rate can vary between 20ML/day and 100ML/day.



ORIGIN APLNG SUPPLY OF C30 MICROTURBINES

Client: Origin Energy Limited
Capacity: 3.0MW
Value: \$20 m (Electrical)
Supply, delivery, installation and maintenance of 200+ Dual mode low pressure natural gas Capstone C30 (30Kw) Micoturbines for the Talinga Project.



Rail and Infrastructure

FABRICATION & ASSEMBLY OF CUSTOM SWITCHBOARDS

Client: Queensland Rail

Design and supply of various main switchboards, main distribution switchboards and distribution switchboards for the replacement of existing boards.



Key Projects

Industrials Sector

GORDONBROOK WATER TREATMENT PLANT

Client: South Burnett Regional Council

Capacity: 9.1ML/day

Value: \$1.2 m (Electrical)

Full upgrade of a very outdated WTP. A challenging design and construct project that required the old plant to be running while the new one was being built. The result is a modern WTP that utilises up to date technology that increases plant/equipment reliability and decreases operator attendance.



SP BREWERY REFRIGEARATION UPGRADE

Client: Scantec Refrigeration

Value: \$332,000 (Electrical)

Expansion of the existing refrigeration plant to cater for extra refrigeration capacity required for increased production. The project included switchboard manufacture, electrical installation, PLC/HMI/SCADA programming and commissioning in two different cities in Papua New Guinea.



SMITHS WATER TREATMENT PLANT

Client: The Smith's Snackfood Company Ltd

Capacity: 1.3ML/day

Value: \$1.5 m

Design and construction of a Wastewater reuse plant to substantially decrease trade waste and increase potable water savings by using purified water. MPA Engineering provided the new MCC PLC integration and electrical onsite installation.



B7 PCSS7 UPGRADE

Client: Bayer Crop Science

Value: \$240,000 (Electrical)

Installation of two new Buhler Bead mills, one new 5000L mixing tank, a new Ystral powder loading system and automation of the existing system via a Siemens DCS system. The new Buhler mills were designed to improve the milling process by 30% and the newly automated equipment allows the operators control over the system via 3 HMI Screens.



Service and Maintenance Support

QUU MULTIPLE SITE SERVICE ARRANGEMENT

Client: QUU Service Arrangement

24/7 Service and Maintenance support to Queensland Urban Utilities at several sites across the South side of Brisbane. These services were completed by MPA Engineering after our assistance with the 2010/2011 floods.



UNITY WATER SERVICE ARRANGEMENT

Client: Unitywater Panel of Providers Electrical

24/7 Service and Maintenance support to cover up to 600 sites from Brendale, Brisbane to Maroochydore on the Sunshine Coast. This agreement includes breakdown response and planned maintenance.



BREAKDOWN RESPONSE

Client: Multiple Clients

Capacity: 24/7 support to a variety of clients

Support for PLC, DCS, VSD, instrumentation and general electrical in all sectors. MPA Engineering are capable of assisting, solving and recommending solutions to old and new technologies.



Renewable Power/Energy

WASTE TO ENERGY FACILITY

Client: Yarra Valley Water

Capacity: 1MW total export capacity

Value: \$2.5 m (Electrical)

The Waste to Energy (WtE) facility was designed and constructed to generate electricity by feeding organic waste, typically disposed to landfill, into a biological process and using the methane-rich biogas produced to fuel generators.

The WtE facility receives 100t of waste each day and produces approximately 1MW of electricity; enough to provide its own power, as well as supply the adjacent sewage treatment plant at Aurora, with the excess electricity exported to the grid as renewable energy.





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