

TURNKEY SUBSTATION SOLUTIONS

POWER INFRASTRUCTURE CONSTRUCTION SERVICES

powertx

Capability Statement

www.powertx.com.au

COMPANY PROFILE

PowerTx Pty Ltd specialises in the design and construction, modification and testing of High Voltage electrical systems and related LV reticulation/ infrastructure. RPEQ certified design can be provided by our engineering team.

PowerTX delivers fully integrated EPC substation solutions – combining in-house engineering, procurement and construction to de-risk project delivery from design through to energisation.

End to End EPC Substation Delivery

- Full EPC delivery of HV substations
- Fixed, modular and transportable substation solutions
- Skid mounted switchgear, Metering Stations and Substations
- HV/LV/Comms switchrooms supply and integration
- High voltage equipment selection and procurement, including:
 - Transformers, Circuit Breakers
 - CTs, VTs, Surge Arresters
 - Isolators, Earth Switches
 - Cabling
- NSP liaison for new and existing connection agreements
- Factory acceptance, site integration and final handover

Engineering & Design Capability

- RPEQ certified HV design (Electrical, Civil & Mechanical)
- Develop Owner & Project Functional Specifications aligned with client, NSP & regulatory requirements
- Site surveys, profiling and drainage design
- Soil resistivity testing and earth grid modelling
- Protection studies, relay settings & programming
- Transformer energisation studies
- Lighting and lightning protection design
- Civil, electrical and structural design
- Constructible designs aligned to NSP and client standards

Construction & Commissioning

- Civil construction including, earthworks, crushed rock, asphalt and fencing
- Trenching, conduits, pits and HV/LV cabling
- Earth grid construction and testing
- Step & touch potential verification
- Cable support systems (ladder, tray, conduits)
- Major cable winching operations
- QA Managed Construction and Commissioning supported by ITP and ITRs
- HV & LV terminations and testing
- Fibre optic terminations and testing
- HV system testing and commissioning



INDUSTRY SECTORS:

MINING & RESOURCES

**RENEWABLE PROJECTS:
SOLAR FARMS / WIND FARMS**

INFRASTRUCTURE

POWER STATIONS

WATER & WATER TREATMENT

UTILITIES

OIL & GAS

INDUSTRY ASSOCIATIONS

PowerTx foster strong and lasting relationships with other construction industry leaders and OEM suppliers. This brings synergies and economies producing a broader scale of capabilities and resources, capturing all installation & commissioning requirements including MDR's and critical spares

- MV & HV Primary & Secondary Equipment Providers
- Switchroom Providers
- Civil Contractors
- Overhead Powerline Contractors
- National Electrical & Communications Association

MAJOR PROJECTS COMPLETED BY POWERTX



CLIENT: TASSAL
SITE: PROSERPINE PRAWN FARM

66kV SUBSTATION

EPCM of a 66kV Metering Station and a 66kV/11kV15MVA Substation INC POW CB, Tubular BUS & ABB ZS1 Switch Gear. Scada and PLC control remotely Operated Auto-Reclosures to enable energisation of the farm distribution transformers.



CLIENT: TASSAL
SITE: PROSERPINE PRAWN FARM

66kV METERING STATION

Design supply and commissioning of a Protection & Metering for Tassal Prawn farm.



CLIENT: STANMORE
SITE: POITREL MINE

66kV METERING STATION

Design supply and commissioning of a Protection & Metering Facility' for Millenium / Poitrel Mine.



CLIENT: RAVENSWOOD GOLD
SITE: RAVENSWOOD GOLD

66kV METERING STATION, 66/11kV (20MVA) SUBSTATION & 66/11kV (10MVA) SUBSTATION

Design, manufacture, and installation of three separate 66kV stations, undertaken on both greenfield and brownfield sites. Design and implementation of N.E.R compliant revenue metering. Design, installation, and commissioning of Point on Wave switching and Inter Substation IEC61850 GOOSE communications.



CLIENT: PERSAL & CO FOR STANWELL CORPORATION
SITE: MEANDU MINE

66/66kV ISOLATION SUBSTATION

Design, manufacture, and installation of a 66/66kV (12.5MVA) Isolation substation. Including 66kV 25A Neutral Earthing Resistor to limit the step, touch, and transfer potentials to acceptable limits at the downstream substation and dragline earthing systems.

IEC61850 Sampled Values and GOOSE messaging implementation for protection, control and monitoring of Isolation substation and associated 66kV OHPL.



CLIENT: PERSAL & CO FOR KESTREL COAL
SITE: KESTREL SOUTH MINE

Design, Construct & Project Management of a 66/11kV 25 MVA Substation & associated mine site HV reticulation for the VSA2 Vent Fan & Underground Power Project.



CLIENT: PERSAL & CO FOR KESTREL RESOURCES
SITE: KESTREL MINE

Scope of work covered the complete design, supply, installation, and commissioning of 11 kV borehole compound, earthing & termination & testing of cables.



CLIENT: PERSAL & CO FOR FITZROY AUSTRALIA RESOURCES

SITE: CARBOROUGH DOWNS MINE BOREHOLE CABLE

Scope of work covered the complete design, supply, installation, and commissioning of 11 kV borehole compound, earthing & termination & testing of cables.



CLIENT: PERSAL & CO FOR ANGLO AMERICAN

SITE: AQUILLA MINE BOREHOLE CABLE

Scope of work covered the complete design, supply, installation, and commissioning of a fenced compound, 11kV link box and associated cable tray and an 11 kV borehole compound, earthing & termination & testing of cable to the underground working of the mine.



CLIENT: PERSAL & CO FOR ANGLO AMERICAN

SITE: AQUILLA MINE RMU & TRANSFORMER COMPOUND

Scope of work covered the complete design, supply, installation and commissioning of a fenced compound, 11kV Ring Main Unit and associated cable tray, 11 kV Transformer and all associated 11kv cabling for the mine air compressor installation.



CLIENT: ADANI RENEWABLES

SITE: RUGBY RUN SOLAR FARM

Construction and commissioning of the 33/132kV 100MVA export substation.



CLIENT: PERSAL & CO FOR ANGLO/CAPCOAL

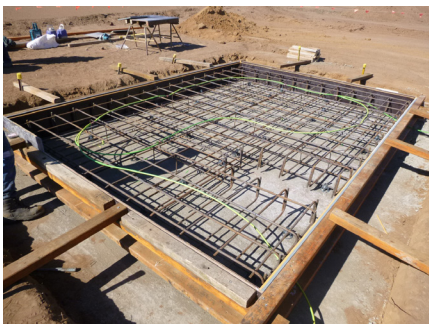
SITE: GRASSTREE UNDERGROUND MINE

Design, Construct & Project Management of a 66/11kV 20 MVA Substation for the Longwall Extension feeder.



Projects senior personnel having had a direct involvement in from estimation, construction to project management during employment with i.Power Solutions Pty Ltd

- Oaky Creek Mine 66/11kv main substation and site power reticulation including 11kv vent fan substation
- Kemmis Creek 132/11kv temporary power substation for Hail Creek Mine
- Hail Creek Mine 66/22kv main substation and site power reticulation
- Newlands North Mine 66/11kv main substation and site power reticulation including 11kv vent fan, MIA and in-pit portal substations
- Crinum East Mine 66/11kv main substation and site power reticulation including 11kv generator, MIA and in-pit portal substations
- Curragh North Mine 66/22kv main substation and site power reticulation
- Carborough Downs Mine 66/11kv main substation and site power reticulation including 11kv vent fan, MIA and portal substations, subsequent augmentation of the substation to facilitate 2 x 25MVA transformers
- Isaac Plains Mine 66/11kv main substation
- Millennium Mine 66/11kv main substation and site power reticulation
- Yarrabee Mine 66/11kv main substation and site power reticulation
- Goonyella/Riverside Mine 66/11kv main substation
- Norwich Park Mine 66/11kv main substation and site power reticulation
- Ergon Energy Aramara 132 kV Switching Station
- Ensham Trial Underground Mine 66/11kv main substation and site power reticulation
- Kestrel Mine Expansion site HV Reticulation
- Xstrata George Fisher Mine 132/11kv Main Switchyard extension
- Daunia Mine 66/11kv main substation and site power reticulation
- Caval Ridge Mine 66/11kv main substation



CABLE MANAGEMENT SYSTEMS



CONCRETE CABLE DUCT



CABLE MANAGEMENT & SEGREGATION SYSTEMS



CONDUITS & PITS





POWERTX EQUIPMENT

PTX have their own fleet of mine site compliant equipment

- Light Vehicles (5* AnCap)
- Telehandler
- Excavator/Track Loader
- Tilt Tray Truck
- Dual Axle Trailers
- Diesel Compressor
- 4x4 Tipper Truck
- Percussion Hammer Drill Rig
- Dry Ice Cleaning

TESTING & COMMISSIONING

We complete our own inhouse testing

- HV Primary Plant Testing & Commissioning
- Secondary System Testing & Commissioning
- Primary & Secondary Injection Testing
- Ductor Testing
- IR & HI Pot Testing
- VLF Testing
- Soil Resistivity
- Earthing system off frequency injection Testing , including step, touch, & transfer potential verification

HEALTH, SAFETY ENVIRONMENTAL QUALITY

- Safety Management System (Site Specific)
- Environmental Plan - PowerTX Pty Ltd (Site Specific)
- Quality Management System Plan - PowerTX Pty Ltd (Site Specific)
- Comprehensive library of ITP's & ITR's (Site Specific)
- Project Execution Plan
- Construction Methodology
- Site Management plan
- Subcontractor Management Plan
- Commissioning Plan
- Legislation Compliance Management

ISO 9001:2015 - Quality Assurance
ISO 14001:2015 - Environmental management systems
ISO 45001:2018 - Occupational health and safety



CLIENTS:

BMA // GLENCORE // STANWELL CORP //
PEABODY // KESTREL COAL RESOURCES //
ABB // EAGLE DOWNS COAL //
ANGLO AMERICAN // ADANI RENEWABLES
Q COAL // EPSA // TERRACOM //
RAVENSWOOD GOLD // FITZROY
RESOURCES // TASSAL





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