

# HIGH VOLTAGE POWER ENGINEERING EXPERTS





# **CAPABILITY STATEMENT**

Design to End of Life
EPCM
Equipment Selection
Protection Study
Installation & Commissioning
Auditing
Maintenance

# **INDUSTRIES & CLIENTS**

# We understand what you do

Bitumen Plants

Chemicals

**Coal Mining & Processing** 

Coal Seam Gas

**Data Centres** 

**Liquid Natural Gas** 

Materials Handling

Minerals Processing

Oil & Gas Platforms

Oil Refineries

Ports

Power Transmission & Distribution

**Power Generation** 

Renewable Energy

Rail & Traction

Sugar Mills

Tunnels & Underground Mining

**Water Desalination Plants** 

VOLTEX POWER ENGINEERS are experienced with major clients and projects in the industries in which you operate. This means that we communicate with you in your language. We have vast experience in many industries, and specialise in power supplies and systems.

## High Voltage & Hazardous Area Power Engineering

Short on time, people, resources?

Let VOLTEX POWER ENGINEERS assist you with design, evaluation, protection, commissioning, auditing, maintenance and asset management.

Avoid design issues, performance shortfalls, budget overruns, legislative impediments and industrial or environmental difficulties.

We are familiar with industry compliance requirements, legislative standards (AS, IEC, IEEE, ANSI and others), mining regulations, hazardous areas, and general Health Safety and Environment (HSE) issues.

# Reduce Risk, Improve Reliability

VOLTEX POWER ENGINEERS manage electrical risk and improve plant reliability.

The rapid growth in the resources sector over the last few years in Australia accentuated demand on all levels of technical and engineering expertise, with the skills shortage prominent in experienced electrical power engineering (ref. IE Australia 2006 Census). The planned boom in Oil and Gas projects, including CSG, is set to expose a shortage of electrical contractors trained in hazardous areas (ref. Master Electricians Australia, Summer 2010).

The electrical component of most major projects is around 10% by value, yet most companies budget a lot less on management of their electrical assets - and then throw whatever it takes at crisis management in the event of a breakdown.

# **EQUIPMENT**

# We understand your equipment!

With personnel who have worked for and with all the major manufacturers, you don't pay for us to "learn on the job". We are familiar with all types of electrical power equipment, including:

#### Typical Equipment

- Circuit Breakers
- Contactors
- Generators
- Motors
- Protection Relays
- Reclosers
- RMU's
- Starters
- Switchboards
- Switchgear
- Transformers
- UPS
- Variable Speed Drives

#### **Typical Manufacturers**

- ABB
- Areva
- Alstom / GEC
- Basler
- Converteam
- GE Multilin
- Schneider/Merlin Gerin/Sepam
- SEL
- Siemens
- Stucke
- Tamco
- Toshiba
- Woodward



# **PLANT & SYSTEMS**

Design for an entire project encompasses many and varied engineering disciplines – mechanical, electrical, process, chemical and mining. HV electrical engineering demands experience and understanding of the design of plant and systems as well as power equipment and earthing. Inexperience can result in safety and compliance issues or performance concerns. Alternatively, over-design driven by lack of confidence leads to budget overruns. VOLTEX POWER ENGINEERS knowledge of your plant and systems ensures reliability and functionally safe operation of:

- Blowers and Fans
- Centrifuges
- Compressors
- Conveyors & Feeders
- Crushers
- Extruders
- Mills
- Mixers & Agitators
- Pumps
- Shiploaders & Stacker
- Reclaimers



# **VOLTEX SOLUTIONS**

VOLTEX POWER ENGINEERS specialise in HV Power, from Design to End-of-Life. We aim to be at the centre of your world - we call it the "Voltex Vortex".

By partnering with a select team of engineers committed to improving the bottom line throughout the lifecycle of your electrical assets, you gain the competitive advantage of our technical knowledge and experience during Design, Procurement, Selection, Engineering and Commissioning, through to Maintenance, Modernisation and Upgrade.

- Design to End of Life Management **Feasibility Studies** HV Design & Earthing
- EPCM Project Management Client Representative Due Diligence & Equipment Evaluation
- Equipment Selection Risk Analysis **Technical Manuals** Specifications
- Protection Study Protection & Discrimination Design
- Installation & Commissioning **Protection Systems HV** Testing Start up
- Auditing Statutory Compliance Certification
- Maintenance **Protection Testing** Asset Management Energy Efficiency **EEM Services**

- Hazardous Areas Classification & Design
- Electrical Consulting
- Machine Commissioning Drives, Motors, Generators
- Switching and Access Permits
- Technical & Operating Manuals Meet HSE requirements for SOP's or JSA's
- Fault Finding and Analysis Trouble shooting, nuisance tripping, discrimination issues, power quality
- Thermography
- EEM Services **Qld Coal Mines**
- Risk Management For people, production & equipment
- System Optimisation
- Energy Efficiency Reduce carbon footprint
- Asset Management Life cycle analysis and modernisation

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