

HIGH VOLTAGE POWER ENGINEERING EXPERTS



Asset Management Program

- Asset Audit
- Condition Assessment
- Energy Efficiency
- Corrective Actions
- Project Management
- Commissioning

ASSET MANAGEMENT

We
understand
your
equipment

Circuit Breakers

Contactors

Generators

Motors

Protection Relays

Reclosers

RMU's

Starters

Switchboards

Switchgear

Transformers

UPS

Variable Speed Drives

Optimal performance from your Electrical Systems

Your electrical systems represent a significant percentage of your capital assets, yet probably remain neglected until a critical failure occurs, and the power stops production. Repair costs then blow out the budget.

Will critical spares be available to "flick the switch" ?

We will work closely with your staff in equipment lifecycle and failure analyses to identify your risks to people, plant and production, and to plan more effective maintenance. We can prepare cost benefit analyses of equipment upgrades, critical to ensure that your operation doesn't depend on obsolete equipment.

Reduce Risk, Improve Reliability

With more than 75 years of combined experience in managing electrical risk and improve plant reliability, VOLTEX POWER ENGINEERS will work with you, sharing our knowledge of your plant and systems to identify issues including:

Risks

- Compliance
- Safety
- Criticality
- Equipment obsolescence
- Spares availability

Reliability

- Failure Mode & Effects Analysis (FMEA)
- Mean Time Between Failures (MTBF)
- Equipment condition assessment
- Unplanned outages

Energy Efficiency

Poor Power Quality can result from low power factor, high harmonic distortion, line disturbances, inefficient equipment, or simply poor design or operational changes to power usage. The result is reduced efficiency, higher running costs, and even damage to equipment from overheating or increased voltage stresses.

During a VOLTEX Power Quality study, our engineers will measure and identify "waste" energy, design issues, and operational losses with methods that could:

- Reduce energy costs
- Reduce Greenhouse Gas emissions and carbon footprint
- Improve power quality and protect equipment
- Deliver more power capacity within existing equipment!



RELIABILITY CENTRED MAINTENANCE

Prevention is better than cure!

Leaking pumps, noisy bearings, damaged belts and the like are the “squeaky wheels” of your plant and machinery, and no doubt get fixed urgently. Electricity is invisible of course, but your electrical assets suffer just as much wear and tear as mechanical ones, but only show the obvious signs on failure (e.g. failing insulation, disabled protection, voltage surges and spikes).

Run to failure mode of operation would be rare for large, expensive or critical mechanical equipment, yet this is often the case with valuable electrical equipment. A VOLTEX ASSET MANAGEMENT PLAN will use condition monitoring tests and predictive maintenance planning to identify most faults before they become catastrophic failures, allowing you to plan remedial actions during planned shutdowns.

Typical Program Stages

Asset Audit

- ID Equipment
HV Network, Switchyards, Substations, Switchgear, Transformers, Generators, Motors, Capacitor Banks & Cables

Equipment Condition Assessment

- Compliance Risks
- Arc Flash Study
- Protection Study
Relay Settings, Fault Level Analysis, Load Flows
- Reliability Assessment
Equipment Performance Life Cycle Study, FMEA & MTBF

Energy Efficiency

- Operations & Energy Optimisation
- Power Quality study

Corrective Actions

- Design Solutions
Modifications, Retrofits & Upgrades
- Cost Benefit Analysis, KPI's

Project Management

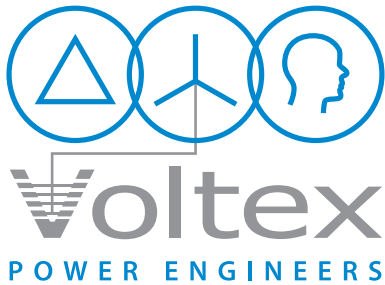
- Equipment Selection
- Installation
- Compliance & Certification
- Drawing Updates

Commissioning

- Protection & HV Testing
- Power Quality Monitoring

Voltex will continue to provide assistance with future Maintenance Planning to ensure ongoing reliability and KPI's.





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.

- **HV Design**
Prefeasibility, Verification, Earthing
- **Hazardous Areas**
Classification & Design
- **Feasibility Studies**
- **Electrical Consulting**
- **Client Representative**
Independent design input, specification, submissions review
- **Equipment Selection**
Independent specification & evaluation
- **Protection Studies**
- **Installation & Commissioning**
Generators, Motors, Drives, Substations, Switchgear, Protection Relays
- **Project Management**
Including projects in distress
- **Compliance Audits**
HV and Hazardous Areas
- **Switching & Access Permits**
- **Technical & Operating Manuals**
Meet HSE requirements for SOP's or JSA's. Electronic format, fully indexed & searchable
- **Protection Testing**
- **Fault Finding and Analysis**
Trouble shooting, nuisance tripping, discrimination issues, power quality
- **Thermography**
- **Electrical Engineering Manager (EEM) Services**
Qld Coal Mines
- **Risk Management**
For people, production & equipment

Products

- **ETAP**
Leading Power Systems Software
- **Stucke Elektronik**
SYMAP® Protection Relays

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