

ADEA Power Consulting
Pty. Ltd.

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ADEA Profile

ADEA Power Consulting Pty. Ltd. is a private consultancy company established in 1997. The core business of ADEA is consulting, engineering, contracting, trade, R&D, investment, and international services.

With over 20 years of experience in the engineering industry, ADEA offers end-to-end consulting, design, manufacturing, logistical, and financing solutions for the power generation, transmission, and distribution sectors. ADEA's strength lies in our skilled team, consisting of qualified engineers and professionals with vast practical experience in the power industry. The highly professional team at ADEA have been involved in an extensive range of major projects over many years throughout Australia, South-East Asia, the Middle East, Africa and Eastern Europe. These projects have ranged from initial engineering studies through to the planning, design and construction supervision phases of distribution networks, as well as the successful commissioning of HV/MV and EHV substations, transmission lines, and associated control, protection and communications systems.

ADEA prioritises quality, and have set up a complete system of quality assurance, environmental and occupational health management standards in order to ensure the highest quality in our goods and services. Throughout many years of development, ADEA has become a globalised brand with business operations spread all across the globe. As one of Australia's most reputable engineering contractor and service providers, ADEA aims to provide top quality services in order to add value, create business growth and socio-economic benefits.

Our Strategic Objectives

- Provide highest standard of service
- Provide the best solutions and outcomes for our clientele
- Meet all requirements in an efficient and timely manner
- Win market share and gain client loyalty
- Further develop the skills and professionalism of our people
- Attain world best practice performance levels
- Adhere and improve to our Company Policy pertaining to social and environmental responsibility



Range of Services

- Engineering feasibility studies and investigations
- Total project management (TPM)
- Distribution planning and design, rehabilitation and construction supervision
- Substation design, installation, testing and commissioning
- Transmission line design, site supervision, commissioning
- Protection and control system design
- Manufacturing of power equipment
- Preparations of tender specifications and documentation
- Tender evaluation, contract negotiation and administration
- Assistance in the procurement of various equipment and materials for power and infrastructure projects
- Research and development
- Financial services

Each client is unique to us, therefore every aspect of ADEA's services are tailored to meet the individual needs and requirements of the customer.

ADEA also acts as a gateway organisation for international companies in Australia, South-East Asia, the Middle East Africa and Eastern Europe.

ADEA's approach to business can be summed up in a simple sentence:

'Satisfied customers and motivated employees are the keys to our success.'

Our vision is to be 'Your Partner in Power'.



Capability Statement

Engineering Consultancy and Design

Our team of professionals at ADEA Power Consulting hold the professionalism, expertise and proficiency in high standard of quality systems to deliver a full range of consultancy services:

- Design of substations, transmission and distribution lines for low, medium and high voltage systems
- Planning of system developments for the best technical and financial performance
- Preparation of technical specifications and analysis of tenders
- Project management and contract administration
- Marketing service and direct representations
- Procurement services of various equipment and goods

ADEA Power Consulting has established partnerships and associations with internationally recognised companies from different areas of the globe. This allows us to source specific expertise and assistance from our partnerships in order to guarantee delivery on the various and wide-ranging requirements of our clients.

Planning and Design Services

Our planning and design services specialize in electrical, structural and mechanical engineering, broadly encompassed as follows:

- Reliability assessment and load forecast
- Fault level calculation
- Feasibility and development studies
- Conceptual design and design review for substations
- Detailed design and specifications for substations
- Transmission line route selection and review
- Transmission line tower design
- Earthing design
- Preparation and assessment of specification drawings
- Civil work design for substations and transmission lines



Technical Assistance and Project Management for Power Generation, Transmission, Distribution & Alternative Energy Sources

ADEA provides value-added services in the areas of administration and management of both turnkey construction projects as well as specific assignments.

Our team of skilled professionals can offer a full range of services for projects, commencing from feasibility studies through to funding, and commissioning aspects of any given project. Our services include:

- Feasibility studies
- Identification of project scope
- Preparation of cost estimate, project cost and budget
- Assistance in organising financial funds
- Specification preparation
- Preparation of bid document
- Assistance in bid evaluation and contract award
- Reporting on the viability of contracting out client services
- Advising on risk minimisation factors when obtaining contracted services
- Provide management personnel as required
- Ensure that client's project liaison requirements are met
- Ensure works conform to specified requirements
- Process contractual payments
- Site management
- Commissioning, preparation of 'As Built' drawings and project completion report
- Capacity building and training





Alternative Energy, Solar and Wind Energy

ADEA's experts have a commitment to contribute to reduction of global warming and energy wastage. Due to this, we have become extensively involved in number of solar and wind power projects in association with leading companies from Europe and China.

Our services include:

- Engineering feasibility studies and investigations
- Supply/Procurement of various Goods and Equipment
- Construction/Rehabilitation supervision
- Project Management and Contract Administration
- Commissioning and Testing
- Maintenance of the plants
- Personnel training
- Financial management

Assistance in the Procurement Process of Various Equipment and Materials, Inspection of Material, Quality Assurance, Factory Acceptance tests

ADEA delivers marketing as well technical assistance services for international companies in Australia, South-East Asia, the Middle East, Africa and Eastern Europe.

ADEA has forged exclusive collaboration partnerships with a number of Electricity Authorities in Australia and around the world as well suppliers from China, India and Turkey. Our Quality Assurance teams are involved in the monitoring of the complete manufacturing process, ensuring that products meet appropriate standards and our specific client requirements. Our products/services have been successfully supplied for number of years to Australia, the United States, Canada, New Zealand, Brazil, Argentina, Peru, Russia, Korea, Malaysia, Indonesia, South Africa, Uganda, Nigeria and Burma to name a few.





Transmission Lines

ADEA Power Consulting specialises in transmission line works, specifically the provision of the complete engineering package, including design, supply, erection, commissioning and maintenance aspects of the projects. Our strength lies in the team consisting of qualified engineers and professionals with large experience in overhead transmission lines, ranging from 33 kV to 1000 kV.

ADEA Power Consulting is fully committed to provide the highest quality of service to our clients. This commitment is derived from an in-depth understanding of our client's requirements, as well as the continuous development of integrated solutions through investigation and constructive dialogue between parties. A high degree of flexibility readily allows the provision of tailor-made schemes for our clients as requested.

Our permanently employed engineers/managers in ADEA's transmission line department offer vast practical experience in overhead transmission lines, gained through the successful completion of past projects in Iraq/North Iraq, Abu Dhabi, Egypt, Libya, Turkey, Bosnia and Herzegovina, Malaysia, Indonesia, Australia, Ethiopia, Zambia, Tanzania and Sri Lanka.

ADEA Power Consulting are able to be engaged in turnkey construction/rehabilitation projects and specific contracts including the following:

- Feasibility studies
- Detailed overhead transmission line design and engineering
- Supply/Procurement of various goods and equipment
- Construction / Rehabilitation supervision
- Project Management and contract administration
- Commissioning and testing
- Maintenance of the plants
- Personnel training

Whatever the project, wherever the location, ADEA's team of experienced transmission line engineers are able to provide the comprehensive range of services listed above. As well as offering custom tailored projects in any combination required in order to meet our client's project requirements.



Our modern equipped design office has the latest Software & Hardware facilities to provide efficient and high-standard solution of all tasks with reference to overhead Transmission Lines as follows:

- Line design program, totally automated plan & profile/tower spotting sheet drafting including total station instruments
- Design and drafting of Steel Latticed O.H. Transmission Line Towers
- Design and drafting of Reinforced Concrete Foundations for O.H. Transmission Line Towers
- Sags and Tension specialised program for the analysis of a multi-span tension section





Substations

ADEA Power Consulting provides comprehensive consulting and project management services in the power transmission and distribution sector. The professional team at ADEA has been involved in a wide range of substation projects over many years in Australia and overseas, from initial engineering studies through to the planning, design and construction supervision as well as successful commissioning of HV, MV and EHV substations, and associated control, protection and communications systems.

The strength lies in the team consisting of qualified engineers and professionals with huge experience in substations ranging from $11\ kV$ to $1000\ kV$.

As a privately-owned company, without vested interest ties to any larger industry or service provider, ADEA is able to provide completely independent advice to clients with a commitment to achieve genuine strategic and financial benefits for clients through effective and efficient project implementation.

ADEA is fully committed to provide the highest quality of service. The permanently employed engineers/managers in our substations team have vast practical experience gained through the completion of a large number of substation projects over many years in countries including as Iraq/North Iraq, Abu Dhabi, Egypt, Libya, Turkey, Bosnia and Herzegovina, Malaysia, Indonesia, Thailand, Australia, Ethiopia, Zambia, Tanzania, Sri Lanka and Yemen.

ADEA Power Consulting is engaged in turnkey type construction/rehabilitation projects and specific assignment as follows:

- Feasibility studies
- Conceptual design and design review
- On site design
- Preparation of specification and bid document
- Tender evaluation and contract award recommendation
- Inspection and testing of material and equipment
- Project management and contract administration
- Installation/Erection
- Testing and commissioning
- Detail design and 'As Build' documentation
- Capacity building and on-site training



ADEA has taken a leading role in the provision of tailored solutions to meet client's specific needs to ensure the cost-effective design and implementation.



Power Distribution

Distribution Planning & System Rehabilitation

Distribution Planning

Traditional utility planning procedures were primarily based on a 'top down' approach, where future system developments were determined from overall system requirements. In the case of power utilities, emphasis was mainly on generation and transmission networks and perhaps location of the substations to minimise the transmission network costs. Distribution networks have usually been subject to uncontrolled expansion, under or over utilisation and unplanned development. As a result, many problems can be seen identified in the distribution networks of many utilities. These include high losses, inadequate network capacity, poor system reliability, voltage and power quality problems to name a few.

Distribution networks extend to every geographic location covered by the utility providing final connection between the utility and the customer. They are therefore considered the most suitable system to capture localised customer requirements, demand and growth patterns etc. For example, demand growth will be different in different areas, certain areas need high supply reliability etc. The effective planning process therefore begins from distribution system. System requirements are then worked out in upward direction, from identification of distribution network reinforcements/expansions, substation augmentation and new substations to meet these distribution system requirements, as well as transmission line development to meet substation requirement. All of which converge to meet our final objective; which is to meeting our customer's needs and techno-economic optimisation. This is known as the 'bottom-up' approach in utility planning. In modern utility approach, this process is carried out through computer aided network modelling and analysis tools.

ADEA provides our clients with modern planning techniques and computer aided tools, combined with our experience and expertise in the application of these techniques. The planning tools include automated mapping, computer aided network modelling and analysis, computer aided load modelling and demand forecasting, GIS AM/FM, Economic evaluation/justification and techno-economic optimisation of development proposals are also an important aspect of ADEA expertise.



ADEA offers a complete range of services on distribution planning, facility management and customer services covering wide scope of modern utility applications. These include the following;

Requirement Analysis

- Evaluation of existing planning and operational systems
- Identification and development of methodologies and systems to meet future utility needs
- Selection of appropriate tools
- Preparation of feasibility reports

Load Forecasting

- Review and analysis of past demand data
- Identification of suitable load forecasting methodologies
- Use of computer aided load forecasting packages such as Micro Area Load Forecasting, Econometric modelling etc.
- Requirement based load forecasting through distribution network modelling
- Establishment of load forecasting models and carrying load forecast incorporating future development plans

Mapping

- Identification of suitable mapping systems for utility networks
- Establishment of computer databases for network data
- Network digitising and preparation of electronic maps for distribution networks
- Preparation of spatial data models
- Spatial data analysis for network expansion, rural electrification etc.





Distribution System Planning and Design

ADEA offers specialised consultancy services for selection, installation, training and application of leading state the of art software systems for medium voltage and low voltage distribution network modelling and analysis. Our services in this regard are unique as they cover not only the software package but its proper application to carry out integrated planning to develop comprehensive development plans with optimal techno-economic solutions. The analysis carried out includes the following;

- Modelling of network, equipment and loads
- Load flow evaluations including evaluation of losses, voltage profiles etc.
- Fault Analysis
- Optimal switching
- Contingency analysis
- 'What if' analysis
- Optimal Capacitor
- Placement
- Voltage Regulators
- Distribution System
- Reliability Evaluations
- Harmonic Analysis and suppression methods
- Protection Coordination Analysis
- Motor start and locked rotor analysis
- Load balancing

ADEA's staff specialises in integrating results of such above analysis for preparation of:

- Network development master-plans
- Loss reduction programs
- Network reinforcement and expansion programs
- Rural electrification programs
- Distribution network automation
- Reliability improvement programs etc.



Demand Side Management

- Designing and carrying out load research
- Introduction of energy efficient equipment for domestic/commercial and industrial sectors
- Organising consumer education programs
- Development of energy efficient building codes
- Training and conducting energy auditing
- Drafting policy papers for implementation of energy efficient practices

Rural Electrification Planning

- Preparation of computer models for cost benefit evaluation of rural electrification schemes.
- Carrying out techno-economic feasibility assessment for rural electrification programs
- Integrated rural electrification planning and preparation of rural electrification master-plan
- Study of low cost construction techniques, design specifications for rural electrification
- Assessment of viability of renewable energy sources

Engineering Audit

- Assessment of techno-economic performance of plant and equipment against specifications
- Evaluation of losses and assessment of loss reduction measures
- Operational systems analysis and systems improvement
- Power quality assessment and analysis
- Review of tariff systems, marginal costing and marketing policy
- Quality assessment of specifications and construction standards
- Project evaluation and post implementation review

Project Planning and Formulation

- Economic evaluation and assessment of development proposals
- Review and justification of project proposals
- Preparation of implementation programs
- Evaluation of manpower, materials and training requirements
- Preparation of cost estimates and funding requirements
- Recommendation of implementation modalities and progress review methodology
- Carrying out of Environmental Impact assessment studies
- Preparation of project feasibility reports and project reports



System Rehabilitation

Distribution networks are generally large in volume, as it spreads all over the country/area to feed its customers. Since, these networks are usually subject to huge expansions, the utilities are normally facing difficulties with carrying out routine and planned maintenance activities and this sometimes results in a poor voltage and reliability levels to the end consumers and also fast deterioration of the network.

In order to overcome this situation, most of the utilities are going for a complete rehabilitation/refurbishment for its distribution networks, mainly to improve voltage and reliability levels of the system.

ADEA's distribution team have been involved number of distribution rehabilitation projects in different countries, including evaluation of existing system, preparation of Rehabilitation Master-Plans and training on rehabilitation techniques.

ADEA offers a complete range of services in regard to development of specifications and construction standards, system rehabilitation planning, 'On-the-job' training in rehabilitation and project management especially on 'turn-key' construction and rehabilitation projects. These include the following;

Project Management

- Preparation of project documents
- Preparation of tender documents for
- Rehabilitation and Construction projects
- Tender evaluation
- Progress monitoring and evaluation

Development of Standards and Specifications

- Review of existing specifications for distribution materials etc.
- Development of new specifications
- Review of existing construction standards
- Development of new construction standards to suit with the utility requirements
- Preparation of complete Construction Standard Documents for the utility



Quality Assurance

Our dedicated team is fully committed to the principle of quality assurance as an integral part of our company's objective operations. The management team require the active participation of every member of ADEA, in order to continue to develop this system and make quality a vital requirement of every operation or project. ADEA Power Consulting holds Certification for Quality Management System-ISO 9001-2015.



Quality Policy

ADEA Power Consulting Pty Ltd is a provider of products and services to the power sector. Or activities include design, project management, commissioning and supply of material and equip

- Maintain the Quality Management System to fulfil the requirements of ASAZS ISO 9001 "Quality Management Systems Requirements".
- Be totally committed to providing qualify products and services that satisfy the Customer specified requirements, applicable regulatory requirements and the Company requirements in the most appropriate and economical manner.
- Endeavour to satisfy Customer needs and expectations by controlling and optimising quality while considering risks, costs and benefits.

- Work closely with customers and suppliers from tendering to finalisation of design in order to obtain optimal solution for final products or services.

- Monitor the performance of suppliers and subcontractors and actively work with them in order to provide best product and service to the Customer.





ADEA Power Consulting Pty Ltd is a provider of products and services to the power sector. Or activities include design, project management, commissioning and supply of material and equip

ADEA Power Consulting Pty Ltd shall:

- ** Ensure that the Environmental Management System complies with the applicable laws, regul standards that minimise any adverse impact to the environment.

 **Establish and regularly review measurable objectives and targets to reduce the potential environment for each project.
- Ensure that the implementation of Environmental Management Plan on each project is consistent with this
 policy and meets the requirements of the contract.
- Assess the operations and activities to identify environmental risks and allocate resources and responsibilities within Company and project to implement environmental protection and control practices.

- Review and report environmental incidents and accidents as per legislative and contract requirements and follow-up with investigation and resolution of each.
 Monitor the performance of processes and activities to ensure that the environmental regulations are being followed and where applicable, plan and implement improvement initiatives.
- Where applicable, communicate with the community, suppliers and customers, define their individual responsibilities and provide training to relevant personnel on environmental issues.





Occupational Health and Safety Policy

Power Consulting Pty Ltd is a provider of products and services to the power sector. Company's s include design, project management, commissioning and supply of material and equipment.

- Ensure that the implementation of relevant project health and safety plans is consistent with this policy and meets the requirements of the contract, as applicable.

- dentify hazards, carry out risk assessment and put in place processes and procedures to prevent harm to employees, visitors and contractors in the workplace.

 Ensure that contractors work to the conditions of engagement, prepare and implement the necessary safe work plans and practices applicable to their work.
- Regularly review contingency and emergency planning and preparedness to ensure timely action. Co shall provide necessary equipment and training for emergency contrigencies and reproved processary exposured processary exposured processary and exposured processary exposured processa
- Ensure that injured employees receive adequate medical attention and, if necessary, rehabilitation for return
- Communicate this policy to everybody involved (eg. community, customers and suppliers) and consult on this policy, health and safety matters.











Net -

This is to certify that

ADEA Power Consulting Pty Ltd

as implemented and maintains a Quality Management System

Through an audit, documented in a report, it was verified that the management sys fulfills the requirements of the following standard:

ISO 9001 : 2015

50000179 QM 2018-11-21 2018-02-22 2021-02-21



DQS Certification AUSNZ PTY LTD

Accredited Body: DGS Centification AUSNZ PTY LTD Building 2, Level 2, 630 Mitcham Road, Mitcham, Victoria 3132, Australia



Global Presence & Subsidiaries

Our international locations and offices



Subsidiary Companies

- ADEA Powerquips Pvt. Ltd.
- MAS-ADEA Arabia Co. Ltd.
- ADEA India Pvt. Ltd.
- ADEA Uganda Ltd.
- ADEA Engineering Solutions Ltd.



International Recognition & Awards

ADEA has been awarded, recognised and prequalified with the following international institutions and organisations:

- World Bank (DACON registration)
- Asian Development Bank (DACON registration)
- UNDP (United Nations Development Program)
- Australian Aid Organisation
- Australian Export Awards
- Australian Panasonic Business Awards





Our Clientele & Major Partnerships

Our Clientele





















































江苏藤仓亨通光电有眼公司





















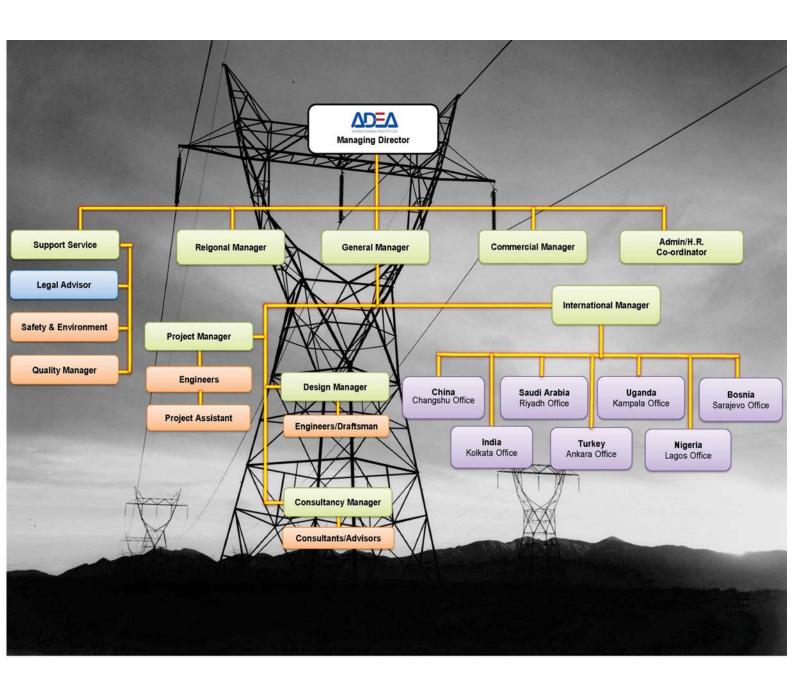


Major Partnerhips & Alliances

- Changshu Fengfan Power Equipment Company, China
- JN Cable, China
- CMEC, China
- Nanjing Electric Group Co., Ltd., China



Organisation Chart





International Representative Offices

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Your Partner in Power



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