

enzen

achieve | net zero



Engineering the next
generation of electricity
infrastructure



Innovative network solutions for the energy transition

Faced with climate change, extreme weather and the challenges of net zero, it is critical electricity networks invest in more resilient, low-carbon and low-cost infrastructure.

Enzen will help transition your utility to a low-carbon future by applying our engineering expertise to take projects from application to energisation and operation.

We will accelerate your power infrastructure delivery, addressing the complexities of planning and designing infrastructure.

Our solutions encompass substations, overhead lines, power generation plants, energy storage facilities and microgrids,

together with managing their delivery and commissioning.

As the nature of power systems evolves in the 21st century, Enzen is your partner of choice to create a more robust and affordable network. We can support you to:

- accelerate delivery of power infrastructure projects
- improve your return on invested capital
- enhance asset performance.

End-to-end engineering expertise



Sectors of focus

- electricity distribution
- electricity transmission
- renewable energy and power plants
- HVDC
- battery energy storage systems
- microgrids
- industries needing electricity infrastructure



Design of electricity infrastructure

- equipment sizing and selection
- electrical equipment and systems layout
- MV/LV distribution systems design
- HV/MV/LV cable systems design
- design of generator switchgear and transformers
- grounding system design
- lightning protection systems design
- control and protection systems design
- automation and telecommunication systems design
- SCADA/DMS and OT systems design



Power system studies and network modelling

- grid compliance analysis
- connections planning
- battery energy storage system and microgrid analysis
- short circuit and load flow analysis
- transient analysis
- use of industry standard software packages



Capital project management

- project, programme and portfolio management
- planning and scheduling
- risk and opportunity management
- estimating, cost planning and benchmarking, lifecycle costing
- cost, contract and commercial management
- claims management
- value engineering
- complete outcome-focused capital project management

Case studies



UK – Supporting capital delivery with electrical design

A large UK Distribution Network Operator (DNO) has engaged Enzen as a partner for electrical design (11kV to 132kV) primary plant layout, clearances, protection and control, AC and DC schematics, telecommunications, battery chargers, core schedules and earthing. Enzen is working in partnership with the DNO to help design the electricity infrastructure to be delivered as part of its ED2 plans.



UK – Delivering innovative power systems design and engineering solutions for DNOs

Our repeatable model is offering speed, flexibility and additional connection capacity to customers. It involves both EHV and HV demand and generation connections, G99 compliance assessments, design of network reinforcements and flexibility solutions, network modelling and related studies such as load flow and short circuit assessments. We also offer power studies to renewable generation and battery storage companies.



Australia – Owner engineering services for a 500kV transmission new build

An Australian network operator is designing, financing, building and operating a 500 kV electric power transmission network in the Central-West Orana Renewable Energy Zone. The customer has signed an agreement with Enzen to provide owner's engineering services for the design and assurance of the new infrastructure that's being built. The scope of works includes civil and electrical design.



Turkey – Control and protection system design for power plants

Our customer required a more resilient solution for its 400 kV grid. Enzen's solution involved designing a complete control and protection system, including generator protection, synchronisation systems and a fully-automated 400 kV substation. Our system design achieved maximum use of existing cables to save costs, plus minimised out-of-service time.

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To learn more about how Enzen can design the next generation of electricity infrastructure for your network, contact:

Okan Benli
Head of Net Zero Engineering
okan.benli@enzen.com
+90 530 443 0880

Robin Landge
Head of Power Systems
robin.landge@enzen.com
+44 (0) 7958 029 360

enzen.com

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