



# JOB DESCRIPTION

**Job Title:** EC&I Engineer  
**Location:** Central to cover England and Wales  
**Department:** Operations

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## BACKGROUND:

Conrad Energy is an independent power producer primarily focused on building and operating highly flexible small-mid scale embedded peaking generation and battery storage projects in the UK, connected at 11kV and above.

Conrad Energy typically installs reciprocating gas engine or battery storage plants between 2-10MW at 11kV grid level, with a number of larger plants 20 - 34 MW at 33kV grid level.

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## PRINCIPAL RESPONSIBILITIES:

Responsible for safe and efficient operation and maintenance of the company's flexible power generation plant and associated equipment

Your duties as an EC&I Engineer will include reporting to the Head of Operational Support and you will be responsible for the following:

- Electrical fault-finding on engine/plant breakdowns.
  - Fault-finding at site level on devices such as PLCs, HMI screens, edge device computers and controllers.
  - Plant inspections, maintenance and record keeping on a variety of equipment, including automated equipment, transducers, instrumentation (temperature, flow, pressure, etc), and control systems (DCS/SCADA/PLC).
  - Instrument and equipment calibration.
  - Planning and carrying out all EC&I activities including the scheduling of regular maintenance works, outages shutdowns and plant improvement projects, ensuring all work is carried out safely to maximise plant availability.
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## REPORTING RELATIONSHIPS:

**Responsible to:** Senior EC&I Engineer

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## **KEY JOB ELEMENTS**

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1. To carry out all your duties with health and safety as number one priority. Responsibilities for your own Health and Safety, for the Health and Safety of your work colleagues and any others who may be affected by the operations under your responsibility or control.
2. Ensure that plant and equipment is run efficiently and safely as scheduled by the trading team and in accordance with H&S systems / procedures, including technical OEM operating literature. To operate and maintain and identify the efficiency of the sites' flexible power generation equipment, carrying out necessary repairs as required.
3. Optimisation of plant availability and uptime at specific sites, attending site for unplanned breakdowns to bring plant online with minimal downtime.
4. Ability to read and interpret electrical and control schematic drawings and P&ID drawings, using these to diagnose and rectify faults. Provision of technical support to wider operational team, purchasing of spare parts and inventory control for all EC&I equipment.
5. Identification and resolution of problems, escalation to management in a timely fashion. This includes both safety observations / near misses / NCRs, and technical issues with the plant.
6. An appreciation of electrical power systems at 11kV and 33kV, assisting in the management of specialist contractors in these disciplines.  
  
A basic knowledge of information technology (IT) and telecommunications in industrial settings.  
  
An understanding of three phase AC generators and motors up to 11kV and supporting systems such as excitation, voltage control and protection systems.
7. Good communication and management of information from specific sites and assets to the central Operations Desk of changes to availability, test runs etc.
8. Management and supervision of external suppliers and contractors working on specific sites.
9. To support the handover of newly constructed sites into operations, providing Operations Input at site level during commissioning and performance testing.
10. Adherence to all Company Policies & Procedures (including but not limited to) those specified in the Employment Handbook, H&S Policy, Electrical Safety Rules, Environmental Management Systems, Integrated Management Systems, Management Guide and any financial/accounting systems.
11. Apart from the duties summarised in your Role Profile, the company reserve the right to include other reasonable duties which are part of, and incidental to, this type of work.

## **PRINCIPAL SKILLS**

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1. Extensive, hands-on experience of reciprocating gas generators, including extensive knowledge of maintenance and troubleshooting of assets.
2. Knowledge of EC&I equipment gained in a heavy process industry, ideally power generation. Other industries such as chemical, refining, steel etc will also be considered.
3. The ability to work individually and as part of a team.
4. Driving license and ability to travel.

## **KNOWLEDGE, SKILLS & EXPERIENCE**

<p><b><u>KNOWLEDGE</u></b>  <b>Essential</b>  A detailed understanding of MWM, Jenbacher, Siemens, MTU, Cummins or CATERPILLAR gas engine management and control systems, and operation and maintenance of such plants.</p> <p><b>Desirable</b>  Siemens S7-100 PLC experience.  Experience of solar and battery storage applications.</p> <p>Knowledgeable on ComAp Controllers with the ability to modify, setting, programming and configuration.</p> <p>An appreciation of High Voltage authorisations and procedures.</p> <p>An understanding of synchronous alternators up to 11kV, 3 MW.</p>	<p><b><u>SKILLS</u></b>  <b>Essential</b>  Computer literate, basic working knowledge of CMMS and Microsoft Office.</p> <p>Working knowledge of tuning / adjusting A/F ratio settings on gas engines.</p> <p>Good EC&amp;I fault diagnosis skills  Resilient and self-motivated.</p> <p>Calm under pressure.</p> <p>Able to work as part of a team and under own initiative.</p> <p>Motivated self-starter.</p>
<p><b><u>EXPERIENCE</u></b>  <b>Essential</b>  Have detailed experience of Internal Combustion Engines, to include base-load power generation plant and equipment.</p> <p>Ability to read and interpret electrical and control schematics and fault-finding methodology.</p> <p><b>Desirable</b>  A working knowledge of PLC logic with the ability to write PLC code</p>	<p><b><u>QUALIFICATIONS</u></b>  <b>Essential</b>  Educated to at least ONC level or equivalent, or qualified by experience (for example, time-served) in Plant Engineering or relevant discipline  Current full driving licence</p> <p><b>Desirable</b>  CITB Competence Scheme Card  IOSH Working Safely</p>