**REO Test Equipment Project Management**

According to the UK's [Climate Change Committee](https://www.theccc.org.uk/) (CCC), the drive towards Net Zero offers the potential for significant job creation in the UK, with estimates of between 135,000 and 725,000 new jobs in sectors such as building retrofit, renewable energy generation, and electric vehicles. This transition will necessitate a proactive redirection of the workforce, particularly in key areas like electrical engineering. However, a recent study by the German VDE highlights a concerning perception among young people who see electrical engineers as 'bent over laying cables or installing Christmas lights.' This underscores the urgent need for reskilling and repositioning in the engineering sector.

While governments and educational facilities need help presenting engineering in general, issues due to COVID and the general streamlining of workforces have seen fewer engineers being retained in job roles that require specialist knowledge of testing standards and requirements for applications as diverse as:-

**Motor Testing**: Where voltage tolerance, phase currents, and winding temperature can be measured.

**Fuse/Switch/Cable Testing**: The variety of currents and standards these products must adhere to means that testing is essential and at the rated current. REO can also help with loads to provide necessary inductance levels if required.

**Power for maintenance**: Ships and trains have many tertiary systems, like HVAC, door activation, and passenger information displays; these require energy to perform maintenance functions, even when the central power systems are offline. A REO Variable Transformer-based power supply allows safe use, even in challenging environments.

**Drive Testing**: Allowing a slow power increase to capacitors and bridge rectifiers in a Variable Speed Drive (VSD) or substituting the DC link altogether allows flexibility and safety in VSD repair or validation environments.

**Semiconductor/Diode Validation:**

Reverse breakdown of diodes is often tested by increasing an applied voltage and measuring current flow. High-voltage diodes are also used in specialist applications and benefit from the gradual application of a voltage in test environments.

REO has been utilising variable transformers since 1925, to provide robust control of AC voltages and currents. These transformers are preferred whenever smooth adjustment of output voltages at high currents and constant sine form is needed.

REO – Variable column-type transformers use low-loss core material; the insulated flat copper conductor is edge wound and fixed onto epoxy fiberglass tubes, vacuum-impregnated, and dried. The Roller brush system is fitted with electro-graphitized pure carbon rollers, which provide excellent conduction and minimal wear. Multiple Columns can be series or parallel connected for increased voltage or current handling capacity. This versatility is not the only benefit; full-rated current can be drawn independently of the brush position, and variable column-type transformers are not just designed for continuous operation; they can also handle high levels of overload; for example, a REO Variable column-type Transformer can typically operate at ten times their nominal rating for several seconds, demonstrating their reliability and durability.

This AC can easily be transformed into DC at different voltages and currents depending on the application's requirements by incorporating rectifiers and fixed transformers. REO has gained and retained knowledge about rating, mounting, and application of complete systems, which customers can use with their equipment.

REO Variable Transformers are usually motorised, so they can be adjusted to increase or decrease voltage or even regulate power according to changing load requirements. However, the use of large control wheels for adjustment has been superseded by the use of internationally recognised interfaces such as Modbus/TCP, Profibus, or Profinet, which can be provided as an additional option to allow the external operation of the equipment.

REO celebrates its centenary in 2025 and extends its offer to provide a wide range of options for customers who require AC or DC voltages and currents. REO can generally manufacture turnkey testing solutions with power ratings up to 1 MVA (800 kW), voltages up to 12 kV DC, and currents up to 10000 A AC.

REO is exhibiting at the upcoming [EMC & CI 2024](http://www.emcandci.com) event in Newbury. Or visit <https://www.reo.co.uk/solution/electrical-test-solutions/> for more information.

**Ends:** 653 words

**Editor’s note:** If you want to ensure you keep up to date with press material, opinion-focused blog content, and case studies from REO UK, you can visit their news page: <http://www.reo.co.uk/news>

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**About REO:** REO manufactures a wide range of electronic power controllers, resistive and inductive wound components for use in industrial applications, especially for challenging environments and applications. The company is becoming increasingly involved in renewable energy technology, where power quality is of overriding importance. REO has manufacturing operations in Germany, the US, China and India.