CONNECTING RENEWABLE ENERGY PROJECTS

Renewable sources are being harnessed to deliver our increasing demands for energy and reduce our reliance on fossil fuels. Solar, wind, hydro and biomass projects around the world are powering industry, and our cables are integral to their efficient energy production.

We perform | We connect | We deliver
It starts with the cable but there’s so much more to it. We take into consideration the installation environment, the country’s regulatory requirements, and the specifics of the renewable energy installation. One size does not fit all.

Our portfolio covers low and medium voltage power, instrumentation and control cables for renewable projects. We can support your project with cables that are:

**UV RESISTANT**

Specifying certain compounds of sheathing materials can provide protection from the sun’s UV radiation for cables used externally. Traditionally black in colour, we can deliver UV resistance in all colours.

**WATER RESISTANT**

Water resistant and submersible cables are required where cables are laid either intermittently or permanently in water, both potable and saline.

**IEC APPROVED**

Specifying international standards can help future-proof your renewable design, allowing for easier access to cables for both ongoing maintenance and expansion projects.

**UK DNO APPROVED**

G81-approved Distribution Network Operator medium voltage cables are required for the UK energy grid and for connection to private networks.

**THIRD-PARTY ACCREDITED**

Independent third-party certification marks provide valuable assurance of quality for specifiers. This includes the BSI Kitemark on individual cables or as project-wide testing, as well as geo-specific and industry-relevant approvals.
Quality and Compliance are at the heart of mitigating the risk of unplanned maintenance and downtime.

Our commitment to supplying high quality, high performance cables sees us work with quality-conscious organisations around the world.

Commissioning and delivering any project sees you juggling a myriad of responsibilities. Due diligence means when appointing supply partners you want to identify companies that will make the job easier and that you can trust to deliver a product that meets all your expectations.

Our strict quality assurance processes are backed by cable testing in a world-class laboratory. We take our responsibilities as cable experts seriously and do all we can to ensure only quality, compliant products are available in the marketplace, including offering compliance testing on third-party cables. It means you can have total trust that your cables and accessories meet the highest standards.

**INDUSTRY-LEADING QUALITY ASSURANCE**

Rigorous quality checks ensure our cables are in optimum condition to be despatched to you. From audits of our manufacturing partner sites to the inbound goods testing and pre-export checks, we tightly control the cables and accessories we supply.

**COMPLIANCE TESTING IN THE CABLE LAB®**

Our on-site ISO/IEC 17025 UKAS accredited laboratory tests cables, providing consistent, impartial results to determine quality and compliance. Extensive capabilities include vertical flame testing, tensile & elongation, conductor resistance, properties before and after ageing, and RoHS compliance.

**SPECIALIST TESTING - UV STABILITY**

Renewable projects are a long-term investment and the longevity of the cables is critical. Testing for UV Stability, including testing after accelerated ageing, demonstrates our cables meet your expectations for quality and performance.

**BSI KITEMARK™ TESTING**

Described by BSI as ‘a new benchmark in cable compliance’ this in-depth testing certifies the performance safety standards of the cable. Takes specific manufacturing runs across core size and construction configurations for a globally-recognised third-party mark of quality. 

“As the first company to achieve the BSI Cable Testing Verification Kitemark, Eland Cables sets a new benchmark in cable compliance.”
TRUSTED TO CONNECT
Please see our website for the wider portfolio and technical specifications, or speak to one of our team about the cables needed for your specific project and application.

Creating the grid network

**MEDIUM VOLTAGE - BRITISH STANDARD ARMOURED**
3.3/6.6kV | 6.35/11kV | 12.7/22kV | 19/33kV

- **BS 6622 (PVC) and BS 7835 (LSZH)**
  - Single core AWA or multi core SWA armoured cable suitable for direct burial. Normally supplied with Class 2 stranded copper conductors but aluminium also available. Suitable for laying direct into the ground.

- **MEDIUM VOLTAGE - EUROPEAN STANDARD UNARMOURED**
  - 6/10kV | 12/20kV | 18/30kV

- **N2XSY (PVC) and N2XSH (LSZH) (COPPER)**
  - Single core XLPE insulated and PVC or LSZH sheathed power cable with copper wire screen suitable for outdoor static installation without heavy mechanical or tensile strain.

- **N2XS2Y (COPPER) and NA2XS2Y (ALUMINIUM)**
  - Single core XLPE insulated and Medium Density Polyethylene (MDPE) sheathed cable with copper wire screen suitable for in-ground installation or in cable ducts with water present. Optional dual longitudinal water-blocking tapes available.

**UK DNO-APPROVED NETWORKS**
G81 manufacturer cable conforming to UK Distribution Network Operator requirements, for UKPN, SSE, WPD, ENW, NPG & SPEN. Medium Voltage 11kV (single core, triplex and 3-core) and 33kV single core cables. Suitable for installation in sealed ducts. LV Waveform cables also available.

- **BS7870 (COPPER/ALUMINIUM) (PVC/LSZH)**
  - Available as concentric or split concentric cable and with copper or aluminium conductors for connection from the distribution main. Suitable for direct burial.

**LOW VOLTAGE - BRITISH STANDARD ARMOURED**
0.6/1kV | 1.9/3.3kV

- **N2XFGbY (COPPER) (PVC)**
  - XLPE insulated, PVC sheathed low voltage cable with dual mechanical protection from flat steel wires and galvanised steel tape. Suitable for installations subject to higher tensile stresses.
NYBY and N2XY (COPPER) (PVC)
Galvanised steel tape armoured low voltage cable with PVC or XLPE insulation suitable for use where mechanical stresses are present.

LOW VOLTAGE FLEXIBLE POWER
0.6/1kV

N2XY / N2XH (COPPER) and NA2XY / NA2XH (ALUMINIUM) (PVC / LSZH)
Low voltage European power cable with Class 1 solid (to 25mm²) or Class 2 stranded conductor. Single core and multi core configurations. Not suitable for direct burial.

N2XCY/N2XCH (COPPER) NA2XCY/NA2XCH (ALUMINIUM) (PVC/LSZH)
Class 1 solid or Class 2 stranded conductors with copper wires and tape concentric conductor. Suitable for installation in plaster but not for direct burial without additional mechanical protection.

NYY (COPPER) NAYY (ALUMINIUM)
Insulated and sheathed single core or multi-core power cable available with or without green/yellow earth wire (-J or -O). Widely used in European installations, suitable for use indoors or outdoors and in concrete.

RZ1-K/ARZ1-K (COPPER/ALUMINIUM) (LSZH)
Flexible power cable for internal fixed installation and underground (protected) supply networks.

N2XH FLEX ENHANCED (COPPER) (LSZH)
Custom designed by The Cable Lab®, this halogen-free cable offers enhanced flexibility & improved strippability to aid swift installation into compact and restricted spaces, saving time & effort. BSI Kitemark tested. KEMA Approved.

H07ZZ-F (LSZH) (RUBBER)
Robust multi core cable offering flexibility with LSZH rubber sheathing for applications under moderate amounts of stress. BSI Kitemark tested.

H07RN-F and H07RN8-F (RUBBER)
Heavy-duty EPR insulated flexible rubber cable for trailing power applications under moderate mechanical and thermal stresses. H07RN8-F suitable for permanent submersion in water to 10m.
Controlling and monitoring operations

**CONTROL**

**VERIFLEX® YY YSLY (PVC) and HSLH (LSZH)**
Flexible unscreened LSZH cable for power and signal transmission available in conductor cross-sectional area sizes of 0.5mm² and above. Multi-core cable also available as a 0.6/1kV power supply. BSI Kitemark tested.

**VERIFLEX® CY YSLCY (PVC) and HSLCH (LSZH)**
Flexible cable with tinned copper wire braid screen for electromagnetic compatibility EMC in control and regulation applications. Also available as screened bedded CY control and in 0.6/1kV voltage for power supply. BSI Kitemark tested.

**VERIFLEX® SY YSLSY (PVC)**
Flexible cable with additional inner sheath and steel wire braid to provide a more robust construction. BSI Kitemark tested.

**VERIFLEX® PUR-CONTROL CABLE**
Suitable for dry, ambient and wet environments. They are resistant to oils, chemicals, abrasions and tears. Suitable for ‘clean rooms’.

**DATA AND SIGNAL TRANSMISSION**

**LIYY / LIHH (PVC/LSZH)**
European industrial cable for internal data and signal transmission applications. Class 5 flexible multi-core cable available in 2-24 cores as standard and from 0.14mm² upwards.

**LIYC / LIHC (PVC/LSZH)**
EMC screened version of the LIYY/LIHH cable, with tinned copper wire braid to provide signal integrity. Available as multicore cable to 30 cores as standard and twisted pair cable on request.

**VERIFLEX® PROFIBUS DP FC L2/FIP (PVC/LSZH)**
A fieldbus standard that supports a wide variety of Profibus DP (Decentralized Peripherals) applications in automated manufacturing. BSI Kitemark tested.

**VERIFLEX® PROFIBUS PA (PVC/LSZH)**
Industrial fieldbus transmission cable for Process Automation (PA) applications. Suitable for the connection of control systems to field instruments. BSI Kitemark tested.
WORTH NOTING

Cables to suit and match any installation design requirement can be supplied against short manufacturing lead-times, and against relevant national, European or International standards as required.

Accessories for connecting and terminating into specialist equipment are also available.

Connecting specialist applications

PV H1Z2Z2-K PHOTOVOLTAIC
Our 0.6/1kV photovoltaic (PV) cables are intended for interconnecting power supplies within renewable energy photovoltaic systems such as solar panel arrays in solar energy farms. Sizes from 2.5mm² to 240mm², suitable for domestic and industrial applications.

DRINCABLE 800
Suitable for permanent submersion in potable water up to a depth of 800m. Can be used where improved chemical and abrasion resistance is required. Cables suitable for submersion to alternate depths, or for use in saline water, also available.

BARE EARTH
19-strand Class 2 bare copper conductor for route-to-earth connection.

WORTH NOTING

Cables can be customised to suit the application. Most are available with copper or aluminium conductors, but the choice of insulation material, sheathing, and any additional EMC screening, brading, or armouring can be added to counter specific challenges posed by the installation environment. Similarly, criteria such as UV resistance can be built into the cable at point of manufacture.
CASE STUDIES

We’re proud to be involved in major renewable energy industry projects all around the world. A few are highlighted here.

ØRSTED
UK

Blowing a gale off the coast

PROJECT SCOPE:
Construction of the world’s largest offshore wind farm, Hornsea 1, in the North Sea, with 174 Siemens Gamesa 7MW turbines and 3 offshore substations.

REQUIREMENT:
LV & MV Power, Data, Instrumentation and Control cables for turbine operations.

ELAND CABLES’ SOLUTION:
Cable design customised by The Cable Lab to reflect the offshore/salt-water exposure (airborne), with additional technical specification support provided from project outset.

Cables were fully tested in our UKAS laboratory before being installed in turbines which in turn are connected to a shore-based process-up plant. First turbines commissioned and delivering power to the UK grid since February 2019.

“We are always pleased with the service from Eland Cables. Fast response, exact delivery dates, complete documentation, and their ability to help with urgent or large orders makes Eland an excellent company to work with.”

SIEMENS
The sweet taste of clean energy

**PROJECT SCOPE:**
Construction of a sugarcane-based bioenergy facility to supply up to 15MW of power to the country’s National Grid.

**REQUIREMENT:**
Complete cable supply to include power, control and instrumentation cables meeting British standards.

**ELAND CABLES SOLUTION:**
Eland Cables’ technical experts worked closely with the client’s design team to determine the cables specifications for each element of the plant, as well as the corresponding accessories that would be required.

Over 20 containers of cables were provided over a two-year period in this multi-million pound requirement.

This landmark renewable energy plant, capable of supplying 20% of the needs of the country’s national grid, was completed on time.

“Eland Cables remain a few steps ahead of anyone else in their market. Attention to detail, customer service, flexibility, stockholding, bespoke cables, expedited delivery and technical support. It’s all there in abundance. I wouldn’t hesitate to recommend them.”

**CASE STUDY**
ADDAX BIOENERGY SIERRA LEONE

Using solar power to tackle energy shortages

**PROJECT SCOPE:**
Construction of a utility-sized solar plant capable of generating 10% (15MW) of Mauritania’s energy requirements, making it the largest solar installation in Africa.

**REQUIREMENT:**
Broad range of IEC standard data and communications cables for monitoring and reporting on plant production.

**ELAND CABLES’ SOLUTION:**
Cables available from stock for immediate despatch. Cut to custom lengths to facilitate installation and minimise wastage. Packaged using heat-treated wooden packaging in compliance with the country’s ISPM 15 regulations.

**CASE STUDY**
MASDAR MAURITANIA

Wanjii Hydro Power

**PROJECT SCOPE:**
Major refurbishment of hydro power plant which has been operational for over 60 years.

**REQUIREMENT:**
British standard low and medium voltage armoured cables.

**ELAND CABLES’ SOLUTION:**
Single core and multi-core PVC sheathed BS5467 and BS6622 standard cables with AWA and SWA available from stock as part of our core portfolio in broad range of conductor cross-sectional area sizes.

Chosen range holds third-party approval from BASEC and was subject to additional quality and compliance testing in The Cable Lab prior to release.

Cables swiftly packaged and shipped in line with project schedule to Hamburg before being linked up with additional equipment for onward shipment to Kenya.

**CASE STUDY**
WANJII HYDRO POWER KENYA
TRUSTED TO DELIVER
You know renewable energies. We know renewable energy cables. Together our expertise can deliver a solution that works for you.

Our project support services are focused on adding value to your project, delivered by an experienced team. We work in partnership with consultants and electrical contractors to carry out a build run against agreed project milestones.

You need to work with a team who takes responsibility; that can be flexible, and who understand that getting the right cable to the right place at the right time is paramount to success. You need to work with experts in their field so that you have access to the information you need to keep the project on-track.

TECHNICAL SUPPORT
Our technical experts are on hand at every stage, from specification to completion, to provide answers to your cable questions. With strong manufacturing backgrounds they now sit on national standards bodies and committees and can advise on the suitability of a cable across matters of construction, electrical design and compliance.

PROACTIVE PROJECT MANAGEMENT
Our renewable energy industry specialists use all their own technical knowledge and experience to ensure your project runs smoothly, providing the support, flexibility and reactive approach that makes us the partner of choice on large-scale projects.

TAILORED LOGISTICS
We’ll deliver your cables where and when you need them. Phased and planned just-in-time deliveries can be supplemented by ad-hoc requirements.

PROJECT DISTRIBUTION HUBS
To aid accessibility for large-scale builds we establish dedicated distribution hubs where cables can be stored ready for local delivery when site requires. It minimises on-site storage and space demands, reduces security risks, and can provide a buffer for unforeseen demands.
**CABLE GLANDS**

Our nylon, brass and nickel-plated glands provide high quality connections. Includes glands for braided, armoured and EMC screened cables. Rated IP54 and IP68.

**CABLE CLEATS**

Support your infrastructure with our premium range of cleats, available in stainless steel or LSZH for public and enclosed spaces. Trefoil and Quad formation cleats also supplied.

**CABLE LUGS**

Create secure terminations with our copper lugs. Long palm and dual hole fixings available to suit the installation needs. Cable terminations (cord end terminals) also supplied.

**CABLE ASSEMBLIES**

Designed against specific installation plans, pre-cut lengths of cable complete with chosen connector or termination can be supplied when large quantities of the same construction are required.

**SPECIALIST INDUSTRY ACCESSORIES**

Other cable accessories also available including industry-specific products such as solar connectors. Accessories can be tailored to meet specific installation demands. Please speak to the team for more information.

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**END-TO-END QUALITY**

Seamless installation with accessories

It’s essential that your cable accessories are sized correctly - it can have a significant impact on the time and ability to terminate the installation. We manufacture the cables to stringent tolerances so that accompanying accessories are matched accordingly.

Quality matters with cable accessories too. Our premium brand accessories deliver the assurance of electrical integrity from start to finish.
CUSTOMISED CABLES

For when you need something different

Sometimes an off-the-shelf cable isn’t right. We can design, manufacture and test a cable that works for your installation.

Whether it’s adapting an existing cable or designing from scratch to your unique specification, we can provide the cable that works for you. Designed by our technical experts to relevant standards, it is manufactured then tested in The Cable Lab®.

It might be you need additional water-blocking properties, an extra layer of screening, or mechanical protection from armour; re-sheathing or over-sheathing can adapt a cable to the installation environment; or you may need to design a composite cable running power and data to fit the installation space available.

Geo-specific and industry-specific cable approvals and certifications are sometimes required for installation compliance. Where required, we can support submissions for third-party certifications and regulatory compliance as needed.

Whatever the requirements, we’ll supply the new cable meeting your precise needs with speed and efficiency.
TRUSTED FOR COMPLETE CABLE SOLUTIONS

We’re the cable supply partner the major projects work with.

The ‘Eland Experience’ is a combination of quality products, expert technical support, and services that add value without adding to your workload.

Our solutions for renewable energy operations are built around a collaborative approach with a team that’s always available, whenever you need them. We’ve delivered projects and continue to support operations across the globe - for each project we’ve ensured quality, compliance and full traceability, meeting strict development time-lines to bring systems online.

We’re the cable supplier the industry trusts.

“Clean, renewable energy is essential to meet our growing power demands, but it requires a robust, reliable cable network to efficiently distribute and a network of high performance cables to transmit data, control systems and monitor operations. Quality and performance matter greatly if we’re to effectively harness these energy sources.”

Ivan Cleere, Head of Technical/QA
Supporting projects globally

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