# **ELAND**<sup>®</sup> CABLES

# RENEWABLE ENERGY

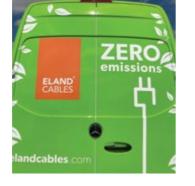
Powering a sustainable future



# rGd+

# FUTURE FIRST HVO FUEL REDUCING CO2e BY 90%











# WHY US?



### Jean-Sébastien Pelland

**Executive Director** 

Eland Cables is in the exciting position of being at the centre of a generational shift-change in the energy landscape. The Green Energy transition is happening at pace, with new power generation projects being commissioned alongside electrification, digitisation, and industrial automation works: cables are essential for all of them.

There are ambitious global targets to reduce carbon emissions and fight global warming, and Renewable Energy is key to delivering on them.

www.elandcables.com

We're working on projects across EMEA and beyond that are harnessing the power of the sun and wind; and that generate energy from tidal and hydro projects. Our cables are connecting biomass and bioenergy production facilities; and we're supporting clean energy projects and CCS too.

It's not just the site of generation itself, it's the wider infrastructure too - from connecting medium voltage grid networks, to supporting battery storage solutions and EV infrastructure builds.

What stands us apart from others is not just our track record of delivering cable solutions to industry, but our commitment to excellence. It's in every interaction with you: from our customer service to the unapologetically rigorous testing regime conducted on our cables before we'll release them for delivery to site; and in our sustainability actions that see us taking a leading role in our industry.

Why Eland Cables? With us you combine global reach with a trusted 'local' service. Our multilingual teams are focused on providing the cables, accessories, and support services your project needs, going the extra mile each and every time.

When cables are part of your project's critical infrastructure, and project success is dependent on meeting timelines and delivering reliability in operations, we're the cable partner that will help you deliver.

Selland

# **OUR APPROACH**



Eland Cables is a power, data, control and instrumentation cable supplier working closely with consultants, contractors, and customers to deliver high quality solutions worldwide. We combine our cables with technical expertise, tailored logistics, project management, and a strong drive for sustainability. We have an extensive stockholding available for immediate despatch, and we offer some of the shortest manufacturing lead-times in the industry.

Our quality assurance is truly unique. The Cable Lab<sup>®</sup>, our specialist in-house testing facility, provides a rigorous regime accredited to IECEE CBTL and ISO/IEC 17025, whilst our medium and high voltage cables have an additional level of scrutiny under the BSI Cable Verification Kitemark ™.

We have always put customers first. We've done this by investing in our people and creating a culture of excellence. We constantly innovate and through collaboration with our stakeholders we deliver exceptional results.

#### A tailored solution on a global scale

# YOUR PROJECT

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, where for each project we've ensured quality, compliance and full traceability, meeting strict development timelines to bring systems online.







# CUSTOMER FOCUSED SERVICES

Our project support services are focused on adding value to your project. We work in partnership with you to carry out a build that's run against agreed project milestones. By working with experts in their field you have access to the information you need to keep the project on-track.

# WORLD-LEADING LABORATORY

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

# SUSTAINABILITY ACTIONS

Our actions can bring benefits to your project. Environmental sustainability is just part of our wider ESG commitments – focusing on sustainable, ethical operations that look after our people, and support our communities to bring social value.

# **YOUR SUPPLY CHAIN**

Sustainability and the protection of our environment is a responsibility shared throughout the supply chain. For Renewable Energy projects in particular, the green credentials of your supply partners matter.



We can support your project sustainability goals in a number of practical ways, including:



# **CUT TO LENGTH CABLES**

By cutting cables to length it speeds up installation and reduces cable waste.



### **ON-TIME DELIVERIES**

Late deliveries mean contractors sit idle and plant equipment runs unnecessarily. Reduce carbon emissions from journeys to site and equipment operation with on-time arrivals.



### LIFECYCLE ANALYSIS REPORTS

Understanding the amount of embodied carbon (tCO2e) in a cable can help influence project design and procurement choices.



### EMPTY DRUM COLLECTION

By collecting empty cable drums and any cable waste from site it frees up space, reduces the need for secure storage, and returns materials to the circular economy.

**Renewable Energy** 

# **MADE GREENER**

We are committed to operating ethically and responsibly, taking steps to minimise and mitigate our carbon emissions, and to working with our upstream supply chain to encourage nature net-positive changes wherever possible as we push towards Net-Zero.

### **POSITIVE ACTIONS**







www.elandcables.com

### SOLAR PANELS FOR CLEAN ENERGY

The solar panels installed at our Operations sites generate as much electricity as we consume annually.

### SUSTAINABLE HVO BIOFUELS

Our fleet of HGVs is fuelled with sustainable HVO biofuels instead of diesel, significantly reducing carbon emissions associated with cable delivery.

### ELECTRIC VEHICLES

Our fleet also includes EVs and delivering with these electric vans means zero emissions - they're charged using our onsite solar power too.

### **RECYCLED & RECYCLABLE PACKAGING**

All our packaging is recyclable or biodegradable, including our pallet wrap. All our plastics, paper, cardboard and wood waste is crushed, baled or chipped on site.

### CABLE RECYCLING PLANT

Our cable recycling facility sees us process copper & aluminium conductor cables, stripping, granulating and processing the different material layers so they can be reused and recycled for other products.

### ZERO LANDFILL WASTE OPERATIONS SITES

We operate zero landfill waste sites where any waste not suitable for recycling, even floor sweepings, gets processed into biofuel pellets.

# CABLES

Please see our website for the wider portfolio and to download technical datasheets.

Connecting the grid network MEDIUM VOLTAGE POWER DISTRIBUTION



Single core unarmoured MDPE Medium Voltage Copper or Aluminium power distribution cable for external and buried installation. Three-core variants available.



IEC 60502-2 - 6kV to 30kV

Single core unarmoured Low Smoke Zero Halogen Medium Voltage power distribution cable for internal/external installation. Copper or Aluminium conductors. Three-core variants available. CPR Compliant.



Single core unarmoured PVC Medium Voltage power distribution cable for internal/external installation. Three-core variants also available. Copper or Aluminium conductors. CPR Compliant.

Connecting the grid network LOW VOLTAGE POWER DISTRIBUTION



(LSZH) - 0.6/1kV

AWA and SWA armoured power with Class 2 stranded Copper cores. Single core to 1000mm<sup>2</sup> and multi-core to 400mm<sup>2</sup> . BASEC Approved. Suitable for direct burial. CPR Compliant.



NA2XRY (PVC) / NA2XRH (LSZH) 0.6/1kV

AWA and SWA armoured power with Aluminium conductors, made generally in accordance with IEC 60502-1. Suitable for direct burial. CPR Compliant.



11kV & 33kV DNO-APPROVED

Medium Voltage 11kV (single core, triplex and 3-core) and 33kV single core cables. Suitable for installation in sealed ducts. Includes G81manufacturer cable conforming to UK DNO requirements.



(LSZH) - 6.6kV to 33kV

Single core AWA or multi core SWA armoured Medium Voltage power cable with Class 2 stranded copper conductors (aluminium also available). Suitable for direct burial. CPR Compliant.



Longitudinal (F) and radial (FL) layers of waterblocking tapes can be applied to provide additional protection against water ingress on MDPE, PVC and LSZH cables. PVC & LSZH variants are CPR Compliant.



Low voltage LSZH European Copper power cable to IEC 60502-1 with Class 1 (to 25mm<sup>2</sup>). Class 2 or flexible Class 5 conductors. Easy-strip design. Single core and multi core variants. Flex variant is KEMA approved & BSI Kitemark tested. CPR Compliant.



0.6/1kV & 1.8/3kV

Flexible flame retardant LSZH sheathed cable in accordance with Spanish standard UNE 21123-4. Suitable for internal fixed wiring. UV resistant. CPR Compliant.

### Speak to our team about the cables needed for your specific project and application.



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. H07RN-F (to EN 50525-2-21) is CPR Compliant.



Flexible PVC sheathed cable to UNE 21123-2 for internal /external fixed installation and underground (protected) supply networks. For cable ducts or direct burial without additional protection. AD8 water resistant. Aluminium variants available. CPR Compliant.

Our technical knowledge includes cross-border standards comparisons to support compliant installations.

#### Connecting the grid network LOW VOLTAGE POWER DISTRIBUTION



Insulated and sheathed single or multi-core Copper or Aluminium power cable available with or without green/ yellow earth wire (-) or -O). Suitable for use indoors or outdoors and in concrete. CPR Compliant.



Low Smoke Zero Halogen cable to IEC 60502-1 with single or multicore solid/stranded Aluminium conductors. For internal or external power distribution. CPR Compliant.



PVC Copper or Aluminium power cable with Class 1 solid (to 25mm<sup>2</sup>) or Class 2 stranded conductor. Single core and multicore configurations. Not suitable for direct burial. CPR Compliant.

Our team can guide you in cable specification to best suit the performance demands, installation design, and environmental challenges faced onsite, and support operational longevity.

### Connecting the grid network LOW VOLTAGE POWER DISTRIBUTION



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



Flexible single core earthing cable referenced as H05Z-K/ H07Z-K (LSZH) to EN 50525-3-41 and H05V-K/H07V-K (PVC) to EN 50525-2-31. Also used as flexible panel wiring. CPR Compliant.

#### Specialist Industry SOLAR & BATTERY STORAGE



Flexible multicore cable with robust LSZH Rubber sheathing for applications under moderate amounts of stress. In accordance with EN 50525-3-41. BSI Kitemark

tested. CPR Compliant.



& 1.8/3kV

Lightweight low voltage single core aluminium cables to IEC60502-1 with outer sheathing according to environmental needs. LSZH and PVC options CPR Compliant.



Service cable for distributed networks to provide the final connection to domestic properties. Also suitable for sub-main distribution and particularly used within high-rise buildings and street lighting systems.



Photovoltaic (PV) cables for interconnecting power supplies within solar panel arrays, including where water is present (AD8 rated). Sizes from 2.5mm<sup>2</sup> to 240mm<sup>2</sup>. Suitable for domestic and industrial applications. To EN 50618. TÜV Approved. CPR Compliant.

Flexible EPR Insulated Rubber sheathed power and general wiring cable also used in earth-fault-proof routings. In accordance with DIN VDE 0250.



Rigid stranded single core earthing cable for fixed wiring protected installations. Also known as H07Z-R (LSZH) and H07V-R/H07V-U (PVC). In accordance with EN 50525-2-31 and EN 50525-3-41. CPR Compliant.





EMC screened Battery cables for Energy Storage applications. Sizes range from 2.5 - 6mm<sup>2</sup> for the XLPO insulated FHLR91XC13X cable, and from 8 - 150mm<sup>2</sup> for the EVA insulated FHLR4GC13X.

Our experience and track record in delivering projects across the Renewables landscape, all over the world, stands us apart from our competitors.

#### Specialist Industry WIND TURBINES



Low Voltage power cables suitable for onshore and offshore wind turbines, offering mechanical protection, resistance to torsional stresses, and environmental conditions. Loop screened variants available.



For medium voltage flexible cable applications under high to extreme torsional/mechanical stresses, e.g. high travel speeds, dynamic tensile loads, multiple changes of direction into different planes and torsional stresses. In accordance with DIN VDE 0250.

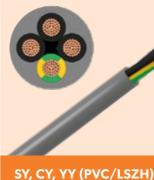


Low Voltage power cables designed for use under medium mechanical stress in accordance with UL758 and DIN VDE 0282. Available in chlorinated rubber (EMC screened) and halogen free, low smoke versions.

#### Managing Operations CONTROL & INSTRUMENTATION



European instrumentation cable (superseded BS5308) referenced as RE-2X(st)Y or RE-2X(st)H. Screened pairs configuration - PiMF/TiMF variants also available. Fire rated and 500V variants available on request.



**CONTROL - 300/500V** 

Flexible cable for control and regulation applications available with additional tinned copper braid for EMC (CY) or steel wire braid for mechanical protection (SY). CPR Compliant. BSI Kitemark tested.

#### Signals and Monitoring DATA



High speed data transmission cables manufactured by Belden or to Equivalent standards. Suitable for communications and signalling, and available in a range of constructions and materials. CPR Compliant.



Fieldbus standard supporting Profibus PA (Process Automation) and DP (Decentralized Peripherals) applications in automation. CPR Compliant. BSI Kitemark tested.



Structured cabling for data transmission suitable for external installation including in cable ducts. Pairs configuration, PE sheathing. UV resistant. Cat5e and Cat6A also available for compatibility.



Unscreened flexible cables for control applications with PVC or LSZH sheathing. Small gauge Copper cable in configurations to 24 cores and beyond.



**CONTROL 300/500V** 

For data processing, measurement and control engineering including use in computer and instrumentation systems. Cores, pairs or twisted pairs configurations. CPR Compliant.





Flexible 1kV power cable with tinned copper wire braid for electromagnetic compatibility for quick connection of Computer Numerical Control (CNC) machines, intelligent servo drives and temperature control units. CPR Compliant. BSI Kitemark tested.

# LIYCY / LIHCH (PVC/LSZH)



VFD cables with electromagnetic compatibility for adjustable speed drives on 3-phase AC electric engines. Available with PE, XLPE, and Polypropylene insulation. 3+3 or 4 core configurations. CPR Compliant.

# **TECHNICAL EXPERTS &**

Combining technical expertise with specialists in industry, compliance, and sustainability gives you access to a wealth of information. Our technical experts sit on national and international cable standards committees and can answer even the most complex cable questions, whilst our sector and industry specialists ensure they remain up to date with regulations and best practice to help you deliver your project efficiently and with longevity to operations.



MATIAS RAMON I MENDIOLA Head of Renewables

It takes a team to deliver large-scale projects. The people named here are just some of those you can call on for support and guidance.

From our Customs and Transport teams, to our Laboratory technicians, to our Customer Service, **Project Delivery and Project Management** colleagues - we're all committed to excellence.



**IVAN CLEERE** Head of QA/Technical



**NEIL FOSTER** EV & Energy Storage Specialist



DEBORAH Sustainability Lead



**KEVIN CHAPMAN** GRAHAM-WILSON CPR Compliance Expert

# **RICHARD WESCOTT** Solar Specialist

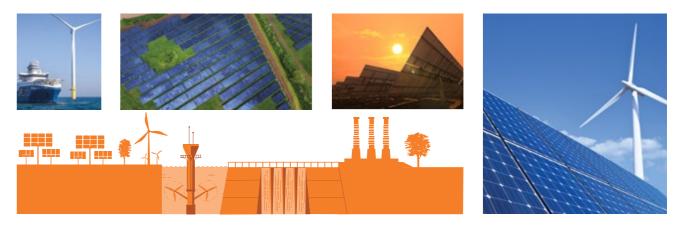
MARK FROGGATT

Head of Technical Training, Learning & Development

# **INDUSTRY SPECIALISTS**

With no two projects exactly alike, we can support you in identifying the most appropriate cable for your installation, adapting the specification to the system performance needs, installation design, environmental challenges, and the country regulatory requirements.

The correct specification aids operational efficiency and reduces the risk of premature cable failure.





### PERFORMANCE DEMANDS

Does the cable need to be screened to offer signal integrity or electromagnetic compatibility? Is single core triplex the right configuration? What voltage is best suited to deliver the system requirements?



# INSTALLATION DESIGN

Would a flexible conductor make routing the cable easier? Are there space restrictions to consider? Is the cable for internal or external use - are low smoke zero halogen materials to protect in the event of fire appropriate?

**Renewable Energy** 



# **ENVIRONMENTAL CHALLENGES**

Consider if the cable is UV resistant to the degree required. Is the cable liable to be in waterlogged ducts and so would benefit from additional water blocking measures? Are there other climatic or environmental factors to protect against?



# **REGULATORY REQUIREMENTS**

Does the project need to be compliant with the Construction Products Regulation (CPR)? Are there third-party approvals that are required such as TÜV or KEMA? Are there geographic standards and compliance requirements to meet?

# **WORLD-LEADING**

As a world-class centre of technical excellence, our facility tests hundreds of cables each week across a range of over 30 accredited tests. The rigorous assessments cover the completed cable and component layers against relevant standards to provide assurances of quality, performance and compliance.





### **QUALITY & PERFORMANCE**

Does the cable deliver against expectations? Anything less would mean your installation is at risk of failure. Even the smallest margins can make a difference to your wider system performance.



### STANDARDS COMPLIANCE

With each material layer having applicable standards, as well as an over-arching cable standard, the intensive testing ensures you are installing a compliant product.



### **REGULATORY COMPLIANCE**

From RoHS to Reach, to CPR, CE marking, European Directives, and more, there's numerous requirements beyond the construction of the cable that need to be met and verified.



### ACCELERATED AGEING

Assuring quality and performance at the point of installation is one thing, but will it withstand a lifetime of operations? Accelerated ageing techniques help us assess the suitability of the cable throughout its lifespan.

**Renewable Energy** 

**LABORATORY TESTING** 

# QUALITY & COMPLIANCE ARE THE KEY TO MINIMISING DOWNTIME

With compliance key to contractors delivering projects on-time, and for end users avoiding maintenance and downtime, it means you can have total trust that your cables and accessories meet the highest standards.

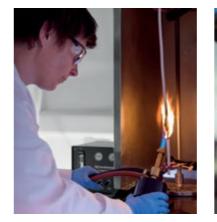
Our high quality, high performance cables face the strictest quality assurance processes, underpinned by cable testing in a laboratory globally recognised for its capabilities. Our tests include:

- Vertical Flame (IEC/EN 60332-1-2)
- Construction & Dimensional (relevant standard)
- Tensile & Elongation (EN 60811-501)
- Hot Set and Heat Shock (EN 60811-507/509)
- Ozone Resistance (IEC 60811-403)











www.elandcables.com

- UV Accelerated Weathering (EN 50618)
- Gas Emissions (IEC/EN 60754-1/2)
- RoHS Spectrometry (RoHS 3 EU 2015/863)
- VLF Testing (IEC 60502 / IEE 400.2)
- Conductor Resistance (EN 60228)



# **YOUR DELIVERY**

Delivery is a vital part of any order and it's an integral part of our service. We're focused on the 'last mile' to site, ensuring your cables reach you on time, in optimum condition.

### A DEDICATED TRANSPORT TEAM

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. Our Pan European fleet has on-time delivery rates of 99.9%.

### OUR FORS SILVER ACCREDITED FLEET & DRIVERS

Our modern Euro6 fleet of articulated and rigid trucks and specialist unloading vehicles are FORS Silver and ISO 39001 accredited. Our drivers are trained in cable handling and customer service. Our Transport Compliance team and JAUPT accredited driver school ensure our drivers remain up-to-date with all requirements including the Certificate of Professional Competency, and our maintenance workshop keeps our vehicles in prime condition.

# FULL TRACEABILITY & INSTANT POD

Our drivers are connected and in constant contact with our transport team, allowing up-to-the-minute location tracking for site ETAs and instant PODs on delivery. All products supplied have full traceability in the event it is required.

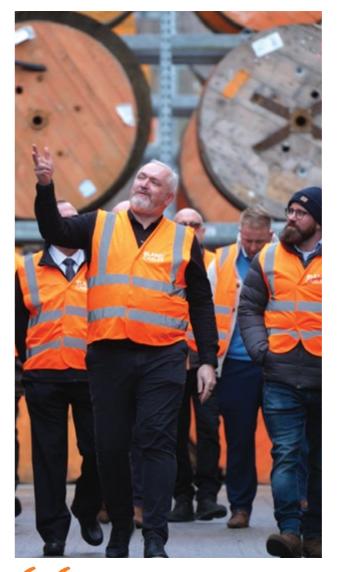
# **GREEN ROUTES, BIOFUELS & EVS**

Delivery routes are planned for efficiency, whether its our Electric Vans charged from our own onsite renewable energy, or our 50+ strong fleet of HGVs running on sustainable HVO biofuel.



# **CPD CABLE TRAINING**

We're always keen to share our knowledge. We offer training to companies that combines technical knowhow with a practical, commercial approach to give attendees a rounded understanding of the subject.



We found the MV Cable CPD training extremely useful. It is certainly one of the best wire and cable training courses we have had so far.

**Renewable Energy** 

www.elandcables.com

Ť

# TRAINING FROM EXPERTS

Our courses are delivered by cable experts and industry specialists who can tailor the subject to your requirements. Their in-depth knowledge means they're able to answer all your cable questions.



These are some of the courses we offer, all earning the attendee CPD points.

- Cable Construction, Materials & Applications
- Medium Voltage Cables
- Renewable Energy Project Cables
- Fire Performance Cables & their Standards
- Sustainability for Electrical Cables
- Cable Testing

We encourage people to visit one of our sites for training as it allows access to The Cable Lab and to the cables themselves.

We appreciate this isn't always feasible so offer 'breakfast briefings' and 'lunch and learn' sessions at client offices, or online. It's all part of our commitment to improved electrical compliance in the wider marketplace.

# **CASE STUDIES**



### **PROJECT OVERVIEW**

Construction of the world's largest offshore wind farm, Hornsea 1 in the North Sea, with 174 Siemens Gamesa 7MW turbines and three offshore substations.

# CLIENT NAME :

Orsted

PROJECT NAME : Hornsea 1

### THE REQUIREMENT

Low & Medium Voltage Power, Data, Instrumentation and Control cables for turbine operations.

### THE 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.



CLIENT NAME :	MASDAR 🏀
PROJECT NAME :	Sheikh Zayed Solar Plant

### **PROJECT OVERVIEW**

Construction of a grid-scale solar plant capable of generating 10% (15MW) of Mauritania's energy requirements, making it the largest solar installation in Africa.

# **OTHER REFERENCE PROJECTS**



SunEdison UK



Addax BioEnergy Sierra Leone



Nigeria



Solar Nigeria Programme Wanji Hydro Kenya



# **CLIENT TESTIMONIAL**



www.elandcables.com

### THE REQUIREMENT

A broad range of IEC standard data and communications cables for monitoring and reporting on plant production.

# THE SOLUTION

Cables were available from stock for immediate despatch. They were cut to custom lengths to facilitate installation and minimise wastage.

All cables were packaged using heat-treated wooden drums in compliance with the country's ISPM-15 regulations.

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

# **WORKING TOGETHER**



# **FOR PROJECT SUCCESS**

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

Look to us for innovation, advancement and commercial gains: together we can deliver solutions that offer cost or labour savings or improve the profile of an installation.

Let us identify the opportunity: as part of your supply chain we can offer improvements, whether in quality and compliance, on product volume, or in service.

Trust in a reliable service and resilient operation: we're scalable and global, offering every account a tailored service that meets their needs.

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







# CONTACT US

#### UK & IRELAND :

+44 (0) 20 7241 8787 sales@elandcables.com

#### INTERNATIONAL :

+44 (0) 20 7241 8740 international@elandcables.com

#### WEBSITE :

www.elandcables.com

