



EDS HV Group

24/7 Monitoring and HV Control Centre

Expertise **matters**

About us

EDS HV Group (EDS), part of James Fisher Renewables, offers high voltage engineering solutions to the renewables industry, from conceptual design, through to installation and operation & maintenance. Our mission is to help the industry maximise high voltage network availability.

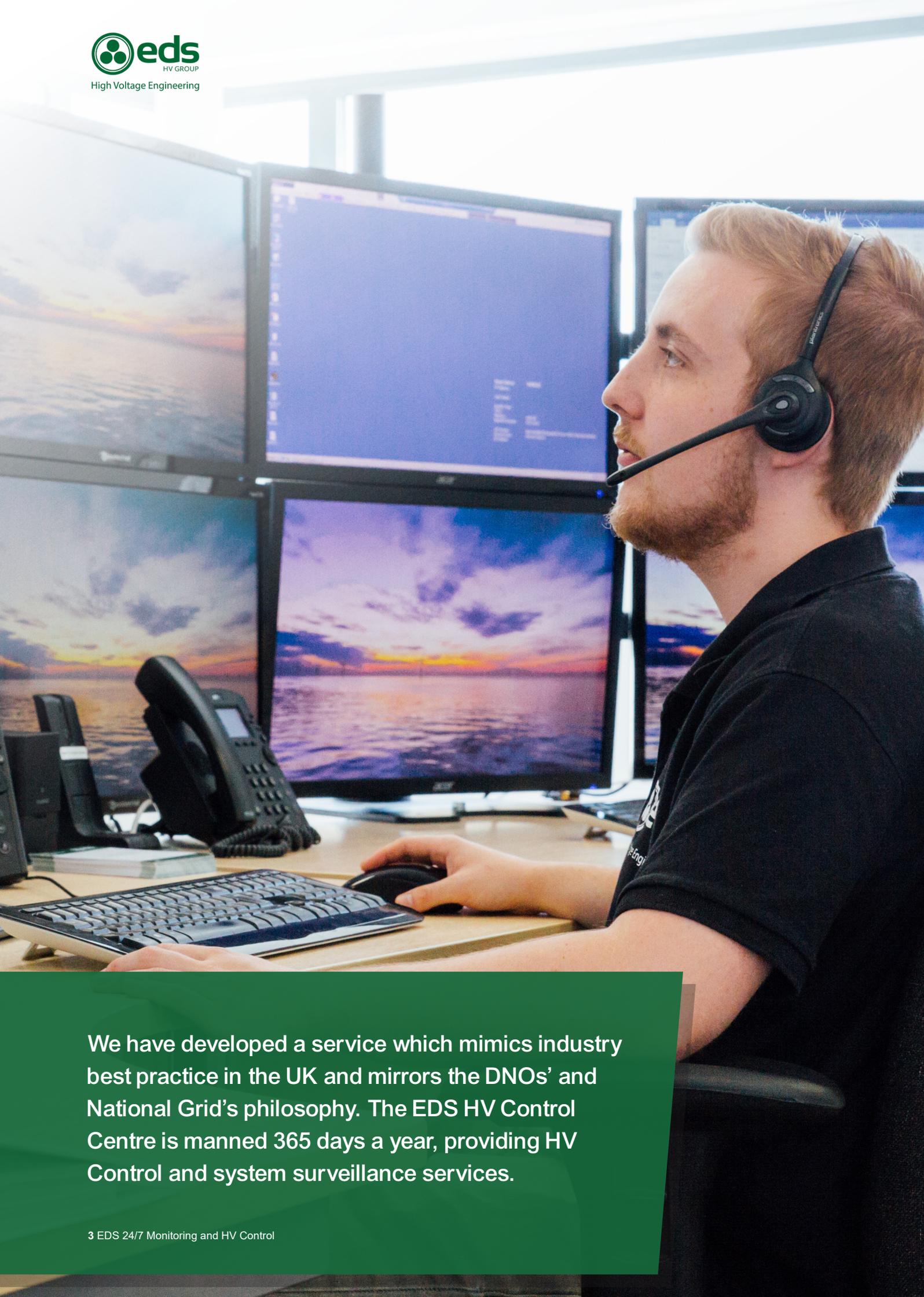
The company has extensive experience operating both on and offshore wind farms in the UK, Taiwan and Europe, including some of the world's largest offshore wind farms located in the UK. To find a comprehensive list visit:

<https://www.edshv.com/our-work/>

EDS is dedicated to keeping wind farms connected to the grid providing services such as: Wind farm asset management, cable fault and emergency repair response, high voltage commissioning, termination and

testing, high voltage operation and maintenance, including routine servicing, statutory inspections, repair and replacement.





We have developed a service which mimics industry best practice in the UK and mirrors the DNOs' and National Grid's philosophy. The EDS HV Control Centre is manned 365 days a year, providing HV Control and system surveillance services.



24/7 Monitoring and HV Control

EDS operate a 24/7 Control Centre. and is uniquely positioned to provide highly experienced, fully authorised Control Persons through the central HV Control Centre, with a portfolio of over 8GW of assets.

We provide monitoring and control worldwide for sites 24/7-365 in support of the Operation & Maintenance, and Construction of offshore wind farms, battery storage and grid balancing.

Our offering comprises:

- 24/7 SCADA surveillance
- 24/7 Remote Switching (up to 400kV)
- Alarm and Fault monitoring
- Marine Coordination (OWMS / MERMAID)
- TSO Interface
- Operation & maintenance coordination
- Local regional Grid Interface management and Points of control
- Project management and Feasibility studies
- Reporting and data analysis
- Commissioning support

Control Centre

The Control Centre co-ordinates all safety or operational switching. All necessary documentation is also co-ordinated through the Control Centre such as Switching Schedules, Permits to Work, Safety Rules Clearance Certificates etc. This work is controlled through EDS's proprietary software ControlPoint™.

Liaison with National Grid, DNOs & TSOs is managed through the Control Centre to fulfil the requirements under the STC. Services include Emergency Switching, Reactive Power set point changes, Equipment Release under Transmission Status Certificate process, and Safety – Co-ordinator duties as per Record of Inter System Safety Precautions process.

TSO Interface

Our HV Control Centre has all the necessary requirements in place for control centre interactions with the NGENSO Control Centre. This includes a dedicated EDS-NGESO hotline for uncontested communications between both facilitates on a 24/7 basis therefore requests from NGENSO to change system parameters can be dealt with instantly.

A 24/7 alarm monitoring service is also provided from the control centre which involves monitoring the live SCADA feed from wind farms and transmission assets. Alarms are actioned according to priority levels and agreed response plan.



HV
CONTROL ROOM



Communications between site and the Control Centre are made by landline, mobile phone, satellite phone or UHF/VHF trunked radio communication using a web-based dispatcher system.



control
POINT
powered by eds

data
POINT
powered by eds



EDS HV has logged over 25,000 operations to date, providing clients with access to comprehensive records of all site operations.



ControlPoint™ software

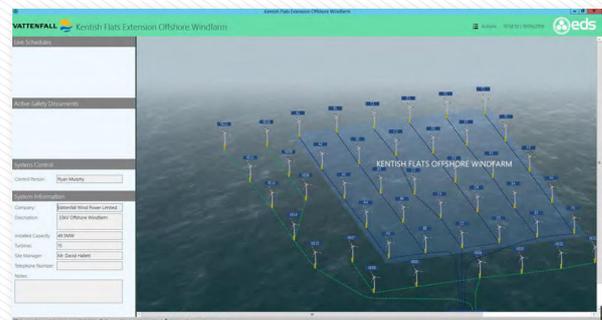
ControlPoint™ ensures full document control is in place for all HV operations with a comprehensive audit trail of all HV works and forms an integral part of our Safe System of Work.

All HV documentation is processed in this manner to provide a Safe System of Work as required under the Electricity at Work Regulations 1989 and associated legislation.

ControlPoint™ is designed to include a realtime mimic of the HV network providing one controlled HV network diagram. This provides an accurate up to date representation of the HV network at all times with additional controls inherent in the software to ensure only one Control Person has access at any one time; a principle enshrined in current HV Safety Rules.

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SCADA monitoring

EDS surveillance officers are trained to understand and implement High Voltage Safety Rules and can support projects worldwide. We are able to integrate and operate site SCADA into our systems and provide reporting and analysis for your HV network operations.

Alarms are flagged and monitored and where appropriate we initiate and co-ordinate network shutdowns, fault response team attendance, and manage these works to resolve operational challenges, and ensure network availability is maximised.

HV Monitoring

EDS provides remote switching and SAP control services up to 400kV around the clock, 24 hours a day, 365 days a year.

Due to increased demand from sites in construction to operate double shift working patterns to make the most of weather windows, EDS has embedded 400kV Authorised SAPs in the control room to coordinate and manage remote switching and ensure works can be carried out whenever the weather allows.

This has led to significant savings in terms of weather off time, and mob/de-mob costs for clients, allowing works to progress quickly, safely, and efficiently.



We establish trigger points and baseline operational parameters which are then used to guide site operations.



Security and resilience are a key part of our control room services.



Resilience and Security

As one of the largest independent HV infrastructure operators in the world with over 8GW under management, we prioritise security and resilience as a key part of our control room services.

Managing our portfolio effectively is a matter of national security and we ensure all staff receive regular IT threat recognition training and that our systems are constantly updated to meet the challenge of ever-changing IT security head on.

Commissioning & Energisation Phase

Co-ordinate and log all site activities, ensure safety through switching coordination and issuing of work permits, allow contraction to proceed 24hrs a day.

O&M Phase

Manage switching remotely to maximise operational weather windows.

As part of our continuity and resilience planning, we have the following in place in provide reliable and secure 24/7 monitoring:

- Safety rules integration
- HV safety management services
- EDS electrical and mechanical safety rules
- Training and Authorisations – Senior Authorised Persons and Authorised Persons
- Training and Authorisations – Competent Persons and Persons
- Safety rules audits
- Operations and maintenance
- Inspection and maintenance
- Fault response testing
- Cable fault repair



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Expertise matters

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A part of James Fisher Renewables