



# OCU

## Power Capability Statement

Generation | Transmission | Distribution | Renewables

Power Systems Design & Engineering

Underground Cables | Overhead Lines | Substations



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## 1. Overview

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The OCU Power business has established an enviable reputation as a specialist provider of services for the design, installation and commissioning of underground cable systems, overhead line networks and substations, to include the associated civil engineering, electrical, mechanical and protection and control activities. For more than 25 years, during this tenure, OCU has developed a wealth of experience and the capability to deliver both long-term framework contracts and complex one-off major projects up to and including 400kV across the UK and Ireland. Our full NERS (National Electricity Registration Scheme) accreditation means we can provide fully independent electricity network solutions. Our professionals are authorities in design and construction, technical consultation and site surveying; utilising industry leading processes and innovations to deliver complex electrical; infrastructure projects up to 132kV. Our offering combines innovation, best practice and technological advances in what is a very challenging, highly regulated working environment. Our robust solutions add long-term value and merge safety, reliability, efficiency and cost-effectiveness into our clients' operations of underground cable systems, overhead line networks and substations.

### Sector Expertise

- Transmission up to and including 400kV
- Distribution up to and including 132kV
- Renewables
- Connections
- Diversions
- HV & EHV Faults
- Maintenance, Repairs and Decommissioning, including Fluid Filled Cable Systems

### Sector Activities

- Front End Engineering & Design (FEED)
- In-house cable system design
- Temporary Works Design
- Project planning and management including P6 Programming
- NRSWA noticing
- Trench excavations and joint bay construction
- Duct and cable installation
- Cable jointing and terminations
- Construction of Cable Sealing End Compounds
- Tower mounted Cable Sealing Ends
- Permanent reinstatement
- Client support to secure consents & wayleaves
- Stakeholder engagement
- In-house CAD Traffic Management Plans and As-builts
- Substation civils and building
- Protection and controls

OCU are experienced in undertaking the role and responsibility of Principal Contractor under the CDM Regulations, where we have robust processes for compliance and co-ordination of supply chain partners and other contractors. In addition, OCU holds the Network Rail Principal Contractor Licence (PCL) which we have used to act as Principal Contractor on several projects over the years for power and telecom installations, both trackside and for works that interface with the Public Highway.

## 2. Our Contracts

Selection of OCU current Power Framework Contracts:-

### 2.1 Northern Powergrid



<b>Contract Name:</b>	Cable Engineering Services
<b>Contract Duration:</b>	8 years
<b>Contract Start Date:</b>	July 2016
<b>Contract End Date:</b>	July 2024
<b>Contract Value:</b>	c. £40m per annum
<b>Geography:</b>	<p>Our works cover the whole of NPgrid's operational area from Northumberland and County Durham in the north to South Yorkshire and South Lincolnshire in the south.</p> 
<b>Brief Description:</b>	<p>Excavation, installation of LV and HV cable, jointing, backfilling, reinstatement and full project management of specific workstreams up to 33kV, including;</p> <ul style="list-style-type: none"> <li>• Asset Replacement and Reinforcement</li> <li>• Restoration, Repairs and Fault Response</li> <li>• New Connections and Diversions</li> <li>• Service Alterations</li> <li>• Customer-driven Activities</li> </ul>
<b>Contract Name:</b>	Extra High Voltage (EHV) Cable Supply and Capital Works Framework up to 132kV
<b>Contract Duration:</b>	4 years
<b>Contract Start Date:</b>	March 2018
<b>Contract End Date:</b>	March 2022
<b>Contract Value:</b>	No fixed amount; projects are tendered for on an individual basis
<b>Geography:</b>	Our works cover the whole of NPgrid's operational area from Northumberland and County Durham in the north to South Yorkshire and South Lincolnshire in the south.




<b>Brief Description:</b>	<p>Including all elements of EHV cable works associated with the engineering design, project development and delivery of works, including;</p> <ul style="list-style-type: none"> <li>• Cable Route Proving</li> <li>• Cable System and Overhead Line Design</li> <li>• Route Excavation, Cable/Duct Installation, Backfilling and Reinstatement</li> <li>• Cable Jointing and Cable System Ancillary Testing</li> <li>• Network Overlays, Diversions and Reinforcements</li> </ul>
<b>Contract Name:</b>	Switchgear and Substation Replacement
<b>Contract Duration:</b>	2 years
<b>Contract Start Date:</b>	June 2020
<b>Contract End Date:</b>	June 2022
<b>Contract Value:</b>	c. £2m per annum
<b>Geography:</b>	Our works cover the whole of NPgrid’s operational area from Northumberland and County Durham in the north to South Yorkshire and South Lincolnshire in the south.
<b>Brief Description:</b>	<p>Large batches of projects within indoor and outdoor substations, covering a mixture of equipment types; including;</p> <ul style="list-style-type: none"> <li>• 11kV Switchgear Replacements</li> <li>• LV Board Transfers</li> <li>• Transformer Replacements</li> <li>• Installation of UDE's</li> <li>• Installation of Link Boxes</li> </ul>

## 2.2 Electricity North West




<b>Contract Name:</b>	Underground Cable Works Framework
<b>Contract Duration:</b>	4 years
<b>Contract Start Date:</b>	March 2020
<b>Contract End Date:</b>	March 2024
<b>Contract Value:</b>	c. £25m per annum

<b>Geography:</b>	<p>The southern area of ENWL's network, including Greater Manchester, Warrington, High Peak and Buxton</p> 
<b>Brief Description:</b>	<p>The scope includes a variety of works associated with underground cable and excavation works, including;</p> <ul style="list-style-type: none"> <li>• New Connections</li> <li>• Capital Delivery Services</li> <li>• Asset Replacements</li> <li>• Operations and Maintenance</li> <li>• Diversions</li> <li>• Service Alterations</li> <li>• Faults and Repairs</li> <li>• Disconnections</li> </ul>


### 2.3 Scottish Power Energy Networks



<b>Contract Name:</b>	Framework Agreement for Excavation, Backfilling, Reinstatement and Installation of Electric and Ancillary Cables and Jointing up to 33kV
<b>Contract Duration:</b>	6 years
<b>Contract Start Date:</b>	November 2015
<b>Contract End Date:</b>	November 2021
<b>Contract Value:</b>	c. £7m per annum
<b>Geography:</b>	<p>North Wales, Dee Valley and Mid Wales; covering an area of 3,500 square miles in a mix of rural and urban environments.</p> 
<b>Brief Description:</b>	Underground Cable and emergency fault response works within the defined SPEN Manweb region.





## 2.4 Scottish & Southern Electricity Networks

<b>Contract Name:</b>	New Connections Framework
<b>Contract Duration:</b>	5 years
<b>Contract Start Date:</b>	April 2020
<b>Contract End Date:</b>	March 2025
<b>Contract Value:</b>	c. £40m per annum
<b>Geography:</b>	Southern England and Thames Valley region. 
<b>Brief Description:</b>	Lot 1 New Connections up to and including 33kV civils, cabling, jointing and reinstatement works, and Lot 2 New Connections for design and build up to and including 132kV



## 2.5 National Grid Electricity Distribution (Formerly Western Power Distribution)

<b>Contract Name:</b>	66kV & 132kV Underground Cable Works Framework
<b>Contract Duration:</b>	5 years
<b>Contract Start Date:</b>	April 2017
<b>Contract End Date:</b>	March 2022
<b>Contract Value:</b>	No fixed amount; projects tendered on an individual basis
<b>Geography:</b>	Midlands, Mid Wales, South Wales, South West and Peninsula. 
<b>Brief Description:</b>	Installation of 66kV and/or 132kV cable circuits and associated earth wires / continuity conductors inclusive of all jointing, testing and commissioning

<b>Contract Name:</b>	Substation Civil Works Framework
<b>Contract Duration:</b>	3 years
<b>Contract Start Date:</b>	April 2020
<b>Contract End Date:</b>	March 2023
<b>Contract Value:</b>	No fixed amount; projects are tendered for on an individual basis
<b>Geography:</b>	East & West Midlands. 
<b>Brief Description:</b>	Construction of new substations including refurbishment and/or extension to existing substation sites, inclusion of enabling works, foundations, civils and building works and construction or enhancement of site access roads and security fencing.

### 3. Resources

OCU are specialists in providing LV, HV and EHV power systems design and engineering services, we employ over 1,000 people from senior management, authorised personnel, design engineers, technicians, jointers, overhead linesman and civil engineering operatives working on a range of framework contract arrangements and major projects for most of the UK's TNO's and DNO's plus private renewable energy clients on Wind and Battery Energy Storage Solution projects. Our highly committed workforce undergoes continual assessment and training to ensure we maintain industry competencies and expand their skill sets to meet changes in product technologies and construction methodologies etc, and by doing so OCU is able to maintain a safety record that we are very proud of.

All of our depots have storage facilities that enable us to hold our own or clients' vested stocks of specialist materials, i.e., jointing accessories, cable and ducting. These facilities assist us to respond quickly to our clients' requirements. We have an extensive fleet of wholly owned and maintained plant and transport, to include specialist equipment such a Horizontal Directional Drilling (HDD) rigs, and a range of specialist vehicles that enables us to operate in remote and difficult locations, including the provision of reactive support and resources for clients during significant weather events.

### 4. Underground Cable Systems

OCU's service offering includes design, installation and commissioning of underground cable systems up to and including 400kV, where our clients include the Transmission and Distribution Network Operators, Renewable Energy Developers and Investors, Original Equipment Manufacturers (OEM's) and Main Contractors, where we can equally undertake the roles of both Principal Contractor and specialist subcontractor for complex projects or long-term frameworks.





### Design & Engineering

- In-house HV & EHV Design Manager & Cable System Designers
- In-house Civils Design
- In-house Temporary Works Design
- Cable system design using Cyme software
- OCU Design Procedure and Guidance Document on the use of:-
  - Project Dashboard (capture evaluation of client's requirements)
  - Engineering Recommendations (final design)
  - Design Risk Register
- Civil and electrical design support from leading UK Designers
- Collaboration with UK and International cable manufacturers
- Design Manual (updated throughout construction phase)
- Design Assurance by independent body for external validation

### Civils

- Haul road construction
- Trench and joint bay excavations, backfilling and permanent reinstatement
- Heavy civils including temporary works
- Traffic management

### Electrical

- Cable installation; fully ducted systems, tunnels and direct buried
- Cable jointing and terminations
- Cable management and containment systems
- Cable system monitoring, earthing and bonding installations
- Test and commissioning
- As-built records and H&S Files

## 5. Overhead Line Networks

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OCU has dedicated Overhead Line Teams competent in the design, installation and commissioning of overhead line networks up to and including 132kV for a number of the UK's Distribution Network Operators, where we undertake the role of Principal Contractor for both reinforcement and replacement projects. Our overhead line expertise covers both wood pole and steel tower installations.



### OHL Design & Engineering

- In-house EHV Design Manager & Cable System Designers
- In-house Temporary Works Design
- Cable System Design using CYMCAP modelling software
- OCU Design Procedure and Guidance Document on the use of:-
  - Project Dashboard (capture evaluation of client's requirements)
  - Engineering Recommendations (final design)
  - Design Risk Register
- Civil and electrical design support from leading UK Designers
- Collaboration with UK and International conductor manufacturers
- Design Manual (updated throughout construction phase)
- Design Assurance by independent body for external validation

### OHL Civils

- Haul road construction
- Tower mounted sealing end compounds
- Piling, foundation plinths
- Trench and joint bay excavations, backfilling and permanent reinstatement
- Heavy civils including Temporary Works Design

### OHL Electrical

- Conductor installation
- Contract lifts and equipment movements
- Construction of tower mounted sealing end platforms
- Tower mounted sealing end structures
- Cable sealing end terminations
- Cable management and containment systems
- Overhead line system monitoring, earthing and bonding installations
- Test and commissioning
- As-built records and H&S Files

## 6. Substation Design & Build

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OCU's civil engineering expertise includes the construction of substations and sealing end compounds to include new builds, refurbishments, extensions, decommissioning and demolition projects, where supported by specialist supply chain partners and design consultants OCU can provide a turnkey service up to 400kV. Our diverse range of services also includes transformer and switchgear installations working in collaboration with the Original Equipment Manufacturers (OEM's) to provide clients with a total substation solution.



### Substation Design & Engineering

- Civil and building design support from leading UK Designers
- In-house EHV Design Manager & Cable System Designers
- In-house Temporary Works Design
- OCU EHV Design Procedure and Guidance Document on the use of:-
  - Project Dashboard (capture evaluation of client's requirements)
  - Engineering Recommendations (final design)
  - Design Risk Register
- Collaboration with Original Equipment Manufacturers (OEM's)
- Design Manual (updated throughout construction phase)
- Design Assurance by independent body for external validation

### Substation Civils

- New builds, refurbishments and extensions
- Construction of sealing end compounds
- Access roads
- Cable trough and gatic cover installations
- Perimeter and internal security fencing
- Decommissioning and demolition to include removal of ancillary equipment

### Substation Electrical

- Switchgear and distribution equipment installations
- SCADA, control and protection
- Earthing and bonding
- Local power, lighting and heating
- Test and commissioning
- As-built records and H&S Files

## 7. Financials

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The OCU turnover exceeds £300m per annum and our Power business successfully delivers complex major projects in excess of £10m along with multiple schemes within framework contracts typically generating over £100m per annum. Detailed report and account information is available and can be provided on request.



## 8. Insurances

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Insurance cover held by OCU is renewed on 1<sup>st</sup> March annually by our brokers UK & Ireland includes [but is not limited to]:-

- Contractor's all risks: £25m
- Employers liability: £10m
- Professional indemnity: <£10m
- Public liability and products: £20m

Full details of this and other specialist insurance cover held by OCU are available on request.

## 9. Assurances

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### Rail Sector

- Network Rail Principal Contractor Licence Holder
- Railway Group Standards (RSSB), Company Standards (Network Rail) and National Hazard Directory - Direct online access
- Network Rail's Possession Planning System (PPS) - Direct online access
- OCU also employs a number of Contractor's Responsible Engineers (CREs) for both design and installation roles

## 10. Project Management Office (PMO)

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### Project Controls & Planning

OCU employs dedicated and experienced Project Planners within our PMO with cross-matrix responsibilities for both the individual project teams and the planning function. The planning process is embedded into the organisation from Tender stage through to project completion in an integrative manner involving all stakeholders. It is closely linked to meeting both internal and client requirements in terms of Programme Management and Project Control. Supporting the process, Primavera is the standard planning software for the organisation, providing robust time and resource management for each individual project. Furthermore, the portfolios of project programmes are managed using the Enterprise functionality allowing the organisation to provide the ultimate service across the board. With P6 also being used extensively throughout the rail industry, our capability and experience allows close integration with the client in turn contributing to overall success. The following tools and techniques are used and incorporated into the process:-

- Work Breakdown Structure
- Critical Path Analysis
- Earned Value Analysis
- Resource/Cost Loading
- Programme Configuration Control

## 11. Design

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OCU has experience of utilising BIM/CAD and we are fully conversant in the following CAD applications:-

- Cable System Design CYMCAP
- Bentley Microstation V8i - Full 3D/BIM capability
- Bentley Building Electrical (3D/BIM)
- Bentley Building Mechanical (3D/BIM)
- Bentley Acosim (3D/BIM)
- AutoCAD Revit (3D/BIM)

- Cad Duct
- Projectwise Management System (Bentley)

## 12. Memberships

- British Quality Foundation
- BSI Standards Membership
- Building Services Research and Information Association (BSRIA)
- COMIT (Construction Opportunities for Mobile IT)
- Constructing Excellence
- Constructionline
- CompeteFor
- Council of Registered Gas Installers (CORGI)
- Electrical Contractors' Association
- Engineering Construction Industry Training Board
- Heating and Ventilating Contractors Association (HVCA)
- Institute of Customer Service
- Institution of Electrical Engineers
- Joint Industry Board
- National Inspection Council for Electrical Installation (NICEIC)
- SELECT
- United Kingdom for the Society of Trenchless Technology (UKSTT)
- UK Green Building Council
- CIBSE Patron

In addition, OCU has a number of employees that are Chartered Members/Members of the following professional bodies and regularly attend their meetings as part of their on-going Continuing Professional Development (CPD):-

- Association for Project Management (APM)
- Chartered Institute of Building (CIOB)
- Institute of Civil Engineering (ICE)
- Chartered Institute of Purchasing & Supply
- Chartered Institution of Highways and Transportation
- Institution of Occupational Safety & Health
- Institute of Engineering and Technology IET
- Chartered Institute of Building Service Engineers CIBSE
- Chartered Management Institute (CMI)

## 13. Sustainability




### ECO Sustainability Strategy

ECO - Building Sustainable Infrastructure for future Generations

Environment	Communities	Operations
		
Reducing Impact	Enhancing Lives	Working Viably



ECO is the OCU Sustainability Strategy based upon 3 Pillars encompassing Environment to reduce the impact of our operations on the planet, Communities to enhance the lives of our employees and local communities in which we operate & Operations to ensure that we work efficiently and innovate to continually improve for a sustainable future. Each of these pillars is supported by 3 strategic objectives aligned with the guiding principles of the United Nations Sustainability Development Goals.

Environment - Reducing our Impact					
Reducing Emissions		Preventing Damage		Conserving Natural Resources	
	Reduction of Greenhouse Gas emissions towards Government targets of Carbon net Zero by 2050.		Avoiding detrimental activities to Land, Water, Heritage, and Eco-systems.  Reducing use of Hazardous materials.		Monitoring and reducing water usage.  Protecting & Enhancing Natural Resources.
Communities - Enhancing Lives					
Valuing & developing our workforce		Ensuring personal Wellbeing		Supporting Communities	
	Paying a Living Wage. Ensuring Equality & Diversity in our workforce.  Training & Development of our workforce.		Ensuring the Health & Safety of our workforce and those who may be affected by our operations.  Protecting Human Rights in our supply chain.		Providing local Jobs for local people.  Using Local Suppliers.  Adding value through Volunteering, Charitable Work & Donations.
Operations - Working Viably					
Reducing Waste		Encouraging Innovation		Collaborating with Stakeholders	
	Zero avoidable waste to Landfill.		Identification and Development of sustainable solutions.		Working with Clients and Supply Chain to achieve common goals.



## 14. Supply Chain Management

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The key role for our procurement activities is to create a sustained competitive edge for OCU by managing the acquisition of all externally supplied resources upon which the business depends both now and in the future. The Senior Leadership Team believes that applying best – practice methods to the process of selecting and managing our suppliers is a major contributor to our long – term business success. This will be seen in better solutions for our clients, faster deployment of innovation, low total costs, lower risk and enhanced contribution to our goals. The Procurement Team is responsible for ensuring best value is achieved for OCU, this applies to goods and services associated with operational or overhead spend. To ensure we consistently achieve best value: we operate an approved supplier list, agree T&C's and pricing, work with internal stakeholders to review and monitor supplier performance, carry out audits on suppliers, continually review potential new products and sources of supply. We work across many different departments and recognise that each has their own exacting needs and demands from the supply chain, we provide specialist support, advice and expertise to Project Managers.

Our Supply Chain Management Teams are MCIPS qualified and utilise accepted best practice to drive innovation and achieve a differentiation from our supply base. We also aggregate our spend portfolio group-wide in order to leverage the market more effectively, this ensures we are maximising our utilisation of optimum suppliers and delivering best value throughout the project cycle. All projects are allocated a procurement lead prior to design commencement (or pre-commencement where the client has already undertaken the design) this individual's responsibility is to develop the project procurement strategy and ensure we achieve the best commercial and technological results for the project. Key projects are allocated procurement resource who will be site based as appropriate to ensure a consistent approach OCU's procurement procedures are cascaded from group level and utilise best practice from across industry to ensure we achieve differentiation from our supply chain, as well as effectively protecting the interests of ourselves and our clients. The OCU Procurement Teams are actively involved with the construction planning process to ensure timely deliveries of key materials (especially those sitting on the critical path). At the initial programme development stage the procurement lead is responsible for the issuing of manufacturers lead-in times to the project planner, these are then incorporated into the baseline construction programme. At all stages through the project this document is utilised as the key tool to ensure the procurement and expediting of materials is undertaken as timely and efficiently as possible. These key dates will also include any commissioning/erection periods as required.





**Contact:**

OCU Head Office | OCU (North) Ltd  
Artemis House,  
6 to 8 Greek Street,  
Stockport,  
SK3 8AB

**T:** 0161 248 9922  
**E:** [enquiries@ocugroup.com](mailto:enquiries@ocugroup.com)  
**W:** [www.ocugroup.com](http://www.ocugroup.com)

OCU (South) Ltd  
Unit 1, Borehamwood Ind Park  
Rowley Lane,  
Borehamwood,  
WD6 5PZ

**T:** 0208 731 4600  
**E:** [enquiries@ocugroup.com](mailto:enquiries@ocugroup.com)  
**W:** [www.ocugroup.com](http://www.ocugroup.com)

**Coverage:**



With depots strategically  
located throughout the UK,  
OCU can offer a Nationwide  
Service

**Sectors:**

OCU offers infrastructure  
services across the following  
sectors:

- Power
  - Energy Transition
  - Water & Wastewater
  - Telecoms
  - Rail
  - Trenchless
-