

Centrica Storage Ltd

Natural Gas and Condensate Processing

Easington Terminal



Who are we?

Centrica Storage Ltd (CSL) is a wholly owned subsidiary of Centrica plc. We own and operate the Rough gas storage field, the largest gas storage facility in the UK, representing some 70% of the nation's gas storage capacity and capable of supplying up to 10% of the country's peak day demand.

As Centrica Onshore Processing UK Ltd. (COPL), an affiliate of CSL, we provide additional processing services to a number of third parties. This includes the operation of the Langede Receiving Facilities, capable of delivering up to 20% of the UK peak day demand, on behalf of the Norwegian network operator Gassco, and the operation of the Easington Terminal, which processes gas from both Rough and a number of third-party operated production fields located in the Southern North Sea basin.

Centrica plc is one of the largest energy companies in the UK, employing over 30,000 people worldwide with significant expertise in both the upstream and downstream sectors.

- Centrica own and operate two major gas terminal complexes – Easington and Barrow
- Centrica holds equity in 21 UKCS producing Fields
- 27 million gas and electricity customers under our Brand name, *British Gas*
- Significant portfolio of gas fired power stations, with growing renewables business.

Location

The Easington Terminal is strategically located on the East Yorkshire coast, approximately 20 miles east of Hull and across the Humber estuary from the port of Immingham.

The onshore facility is connected by gas pipelines to the NGG-operated National Transmission System (Easington Entry Point), and by condensate pipeline to the petrochemical receiving facilities at Immingham and Saltend, Hull.

We have an operation support and engineering office in Hedon, close to Hull and a commercial head office located in Staines, outside London.



Our vision

We are determined to be the best provider of safe, reliable gas storage and processing services, creating value for our people, our customers and our communities.

We will continuously strive to maintain the highest possible health, safety and environmental standards in our operations, offshore and onshore.

We aim to provide a flexible and reliable service to our customers.

We believe that meeting and exceeding our responsibilities to society contributes to sustainable commercial success

Organisational Capability

Centrica Storage employs c. 250 highly skilled and motivated staff both onshore and offshore in the East Yorkshire area, with a commercial head office based in Staines, near London.

Health, Safety and the Environment

The safety and well-being of our employees and others who may be affected by our activities and the way in which we manage our impacts on the environment are fundamental to the sustainability and continued success of our business.

Our approach to managing HS&E is contained in a structured management system that incorporates the key elements of recognised best practice. The responsibilities for implementing this system are specifically assigned to ensure that pro-active measures are taken and that performance is continually reviewed.



The Easington Terminal is a top-tier COMAH and PPC regulated site and we adhere to the highest standards of health and safety.

Our environmental management system is accredited to ISO14001 and we are a member of the EU Emissions Trading Scheme.

Operational

The Easington Terminal has been receiving and processing gas and liquids since the first North Sea Gas was landed in the UK in 1967. We have 40+ years experience in the operation and maintenance of onshore and offshore gas and liquid processing, and pipeline infrastructure.

The Terminal has been expanded to process gas and liquids from the 1,500 mmscfd Rough Storage Field, from third party-operated fields in the Southern North Sea basin, and to incorporate the new 2,500 mmscfd Langede Receiving Facilities.

The success of managing such a diverse operation throughout the lifecycle of the facilities, including extending the asset life, whilst achieving the highest levels of HSE, asset integrity, operational and financial performance is an achievement of which CSL is rightly proud.

CSL views our people as our most important asset and we actively seek to encourage and promote the learning and development of all our employees to help us achieve our business objectives.



Engineering and Project Management

Centrica have significant experience in the management of major gas engineering projects, the most recent being the design and construction of the Langed Receiving Facilities, commissioned in 2006.

In addition to new-build Projects, we also have significant brown-field engineering expertise, through the modification and expansion of our existing infrastructure. We have a fundamental commitment to continuous improvement throughout our entire organisation and our technical expertise ensures that our assets are kept up to date with industry best practice.

In addition to our own in-house technical support, project management and engineering teams, CSL are able to draw upon the global expertise and resources within Centrica plc.

Asset Performance

Our core business is storing and processing natural gas for energy producers, traders and suppliers.

Our operational successes come from enabling our customers to have confidence in our operation and provide the reliability and flexibility which they require to allow them to use our assets optimally to enhance their own businesses. The Langed Receiving Facilities, for example, was designed for, and regularly achieves process plant availability in excess of 99.8%.



Our asset performance team optimises and integrates the performance of our assets by bringing together our business skills and processes, ensuring that key risks and opportunities are identified and managed such that the business is grown sustainably for the benefit of all our customers.

Commercial

Our head office in Staines, near London, is the base for our commercial, financial, and legal teams. The teams have significant experience in operating within the UK regulatory environment.

We provide a 24/7 365-day service. Our support desks are permanently manned to enable us to react promptly and effectively, ensuring that our customers' needs are fulfilled in a continually and rapidly changing business environment.

Support Functions

In addition we have a logistics support centre at Killingholme, Immingham docks, close to the helicopter base at Humberside, providing support to both our onshore and offshore operations.

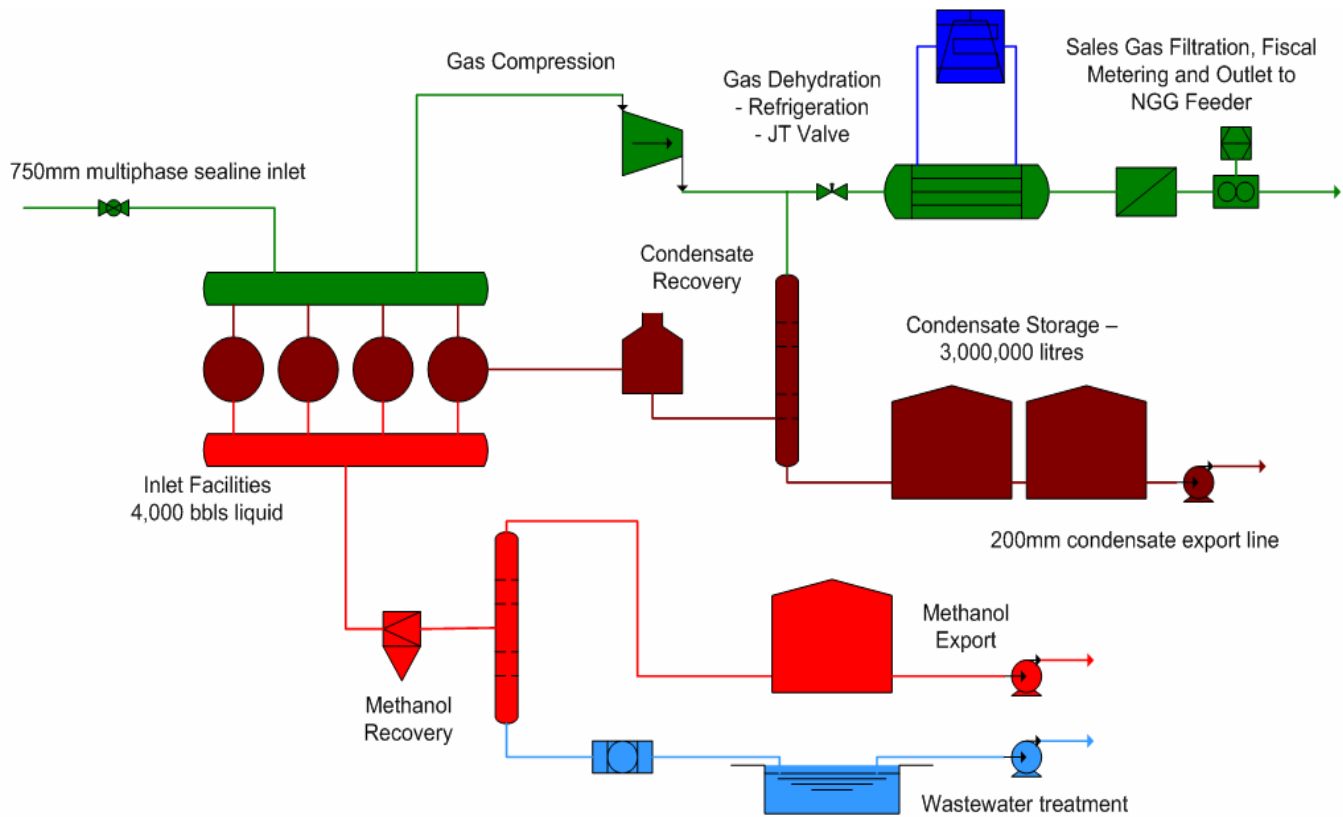
CSL recognise the role that our support functions play in ensuring the continued success of our business. In 2007 we invested in a new dual-role support vessel, the £7.5m Centrica Pride.



Third-Party processing Capacity

The Easington Terminal is capable of receiving, processing and re-delivering third party fluids via a dedicated processing system, at a capacity of up to:

- 500 mmscfd natural gas
- 300,000 litres per day of condensate
- 100,000 litres per day of produced water



The main features of the Easington Terminal's third party processing capability includes:

- Multiphase (gas, liquids) reception, separation and sphere handling
- Natural gas compression
- Natural gas dehydration using Refrigeration and Joules-Thomson technology
- Sales gas filtration and fiscal metering
- Condensate stabilisation
- Condensate storage and export via a dedicated 200mm line to Immingham
- Flash gas recovery and recycling
- Methanol recovery
- Corrosion inhibitor injection
- Formation water removal, treatment and disposal

Natural gas, processed to meet GM(S)R and network entry agreement specifications, is re-delivered into the NGG-operated National Transmission System at the Easington Entry Point (Feeders 9 and 19).

Stabilised natural gas condensate can be re-delivered to the BP Chemicals complex at Saltend near Hull, or via a dedicated 200mm condensate line to the Simon Storage Terminal at Immingham on the south bank of the Humber.

Third Party Access

COPL will attempt to satisfy all reasonable requests for commercial terms at Easington within the relevant provisions of the UK Oil and Gas Infrastructure Code of Practice ("Code"), should the application follow the same Code.

Indicative tariffs are provided based on standard arrangements. Actual tariffs will vary as a function of a number of parameters including gas quality, water content and modification costs. An indicative tariff range for transportation, processing gas, measuring and redelivering gas where capacity is available throughout the profile and where no other special conditions apply is 2 p/therm.

On an indicative basis, condensate is charged at £30/tonne.

Any tariff is indexed bi-annually based on a standard index published by the Central Statistical Office (PPI).

Tie-Ins and Additional Equipment

Where tie-ins or additional onshore equipment is required to process third party gas, the associated capital expenditure (capex) is charged directly to the service user. Where equipment is exclusive to a particular user, then the associated operating expenditure (opex) for such equipment will be charged at their sole cost.

The redelivery point will be into the NTS. COPL does not guarantee to redeliver NTS specification gas. A typical specification requirement for all gas delivered to Easington is as follows:

Inlet Pressure	17.2 barg
Wobbe Index	48.2 – 51.2 MJ/sm ³
Gross Calorific Value	36.9 – 42.2 MJ/sm ³
Hydrogen Sulphide	0
Oxygen	<0.001 (mol%)
Hydrogen	<0.1 (mol%)
Carbon Dioxide	<0.66(mol%)
Nitrogen	<1.66 (mol%)
Total Inerts (mol%)	<7 (mol%)



Note that the Easington Facilities are not designed to remove sour gases (CO₂/H₂S). Gas must be free from objectionable odours and from materials and dust or other solid fluid matter, waxes, gums or gum-forming constituents and any solids. No other chemicals or other substances may be introduced into the gas, which might be carried over into Easington without the agreement of COPL (such agreement not to be reasonably withheld).

Capacity Booking & Send or Pay

A capacity booking is required for each contract period (October-March and April – September) and each booking will normally be made 3 months in advance of the start of the contract period. These bookings will have Send or Pay obligations (or minimum bill) at a level of 75% of the firm capacity booking for each contract period. Force Majeure relief and maintenance relief is allowed and carry forward provisions apply.

Allocation System

Gas delivered to and processed at Easington comes from a number of fields with differing owners. Therefore, an allocation and attribution system is in place. This ensures that each party receives its correct share of the volume of gas redelivered. The facilities have a common allocation system which spans the entire transportation and processing systems. Different allocation arrangements from alternative sources could be considered.

Priority Rights

During periods of system restriction, priority for services is given to Rough storage gas, then Amethyst field gas, and finally to other Third Party Gas.

Maintenance

During planned shutdown and modification periods, Easington may require the full or partial withdrawal services. COPL makes every effort to reduce such periods and to liaise with NGG and field operators to co-ordinate timing of the shutdowns.

Standard allowable maintenance days are 20 days per year, to take place during the summer months, with a period for modifications of up to a further 40 days with a 50% reduction in available capacity subject to 12 months notice. Maintenance periods qualify for relief against "send or pay" obligations.

Liabilities

No claims against the other party in respect of property loss or consequential loss relating to performance under an agreement with the exception of wilful misconduct. Each party indemnifies and holds harmless the other party in respect of injury or death of employees in connection with any agreement.

Contact us:

For more information on our third party processing services, or other enquiry about Centrica Storage Ltd., please contact us using the details below, or visit our website www.centrica-sl.co.uk

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Legal Notice

You will find in this document and on the web site information relating to the facilities operated by COPL and CSL at Easington. This includes technical information and outline terms and conditions for the provision of services.

Please note that COPL does not warrant the accuracy or completeness of the contents of this document or the web site and does not accept responsibility for any use you may make of such contents. COPL will from time to time revise the contents of this document and reserves the right to make such changes without any obligation to notify past, current or prospective users of this document.

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Note on Arrangements for Third Party Access to the Rough Storage Facilities owned and operated by Centrica Storage Limited

Centrica Storage Ltd ("CSL") owns the Rough Storage Assets ("Rough") consisting of the 47/3B platforms in licence block 47 3D, the 47/8A platform in the 47 8B licence block and the Easington Terminal which processes Rough storage gas and gas from third parties. The main 36" sealine transports gas the 20 miles from the 3B platform to the Easington terminal, with an 18" sealine linking the 47/8A and 47/3B platforms. There is also a 16" gas/condensate pipeline, which is currently shut-in, linking the 47/8A platform to the Easington Terminal.

CSL, through Undertakings given by Centrica plc and CSL to the Secretary of State for Trade and Industry in December 2003 must offer annual and multi year storage services from the capacity of the Rough asset. These Undertakings require a "Minimum Rough Capacity" of 455 million SBUs or 455GWh/d of deliverability to be sold as storage services under standard contract terms. Additional and interruptible capacity is also made available to users. Details of obtaining Rough capacity can be found on this website in 'About Our Services' or by contacting CSL at the same address given in section 2.

Any use of the Rough facilities for transporting or processing third party gas other than under the standard storage service contract would be subject to CSL consideration with regulators of the impact on CSL's obligations under the storage service contract and the terms of the Undertakings.