

Technical Due Diligence and Advisory Services

Oil & Gas



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DORIS Group Company



Technical Due Diligence Service

ODE provides independent expertise to the Oil & Gas industry.

Recognised as an international leader in Oil & Gas consultancy and engineering, ODE has experience in many jurisdictions across a wide range of technologies and scales of deployment.

We offer a comprehensive technical due diligence service to all stakeholders in the Oil & Gas Industry.

It is essential to understand and mitigate technical risks when investing in offshore projects. Our technical due diligence service will help to:

- Assess the technical feasibility of your project
- Identify technical risks that might affect the project profitability
- Ensure that all factors have been considered in the development process

ODE works with investors, developers, oil and gas companies, Government bodies, and local authorities on all aspects of oil and gas developments.

The scope of the service is flexible and can be adapted to suit your needs.

St George's House
St George's Road
Wimbledon
London SW19 4DR

T: +44 (0)20 8481 1190
F: +44 (0)20 8546 4346
bd@ode-ltd.co.uk
www.ode-ltd.co.uk

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What we offer



Our technical due diligence services can include any or all of the following items:

- Data gathering and assessment from data rooms, operator facilities or operator interviews.
- Structural and other Asset Integrity Condition surveys (short of classification) and Site Condition Assessments (short of geotechnical and seabed surveys).
- Structured review of technical and commercial reports and data
- Market Analysis, Insight and Research
- Project and Productivity Benchmarking
- Conceptual Sizing, Layout and Cost Estimating for future developments or options
- Preparation of study reports and presentations to suit or involve a variety of stakeholder types
- Schedule Assessment and Critical Path Analysis and Assessment including Logistics and Support.
- Project Organisation Assessment including Contract Style, Split and Scope, Gap and Responsibility Analysis.
- Licences, Permits and Agreements and Compliance Reviews
- Project Audits and Readiness Reviews
- Operations and Asset Management Inputs for Planning and Budgeting
- Construction, Installation and Decommissioning Methodology Reviews
- Full Complement of Technical Safety Capabilities relevant to offshore projects
- Strategic Decision Support and Development Planning
- Contractual Issues and Liability Assessment
- Technical Risk Assessment, Traffic Light / Red Flag Reporting, highlighting issues with provided technical report input data, methodology or conclusions. Providing estimates for values at risk for gaps in reviewed project information.

Why Choose ODE

ODE's technical due diligence capabilities are comprehensive, supporting some of the world's most challenging and technically complex marine renewable projects

- **Independence:** We do not license technology and can provide a truly objective view.
- **Responsiveness:** We can ensure quick turnaround and understand client demands. We are happy to reassign or relocate individuals to support short term due diligence work and understand the time critical nature of these projects.
- **Flexibility:** Whilst we have our own processes, we are not averse to following client led methodologies. We are happy to discuss what a client needs to achieve their objectives.
- **Long-standing Industry Presence:** We have over 50 years in the offshore industry – a highly experienced team and knowledge base.
- **Breadth and Depth of Experience and Knowledge of Assets and Life-Cycle:** As well as involvement in conventional projects, we have been involved in some of the more unusual and niche areas of offshore engineering, and not just in concept, but on assets now operating.

ODE Can Help With:

- Wellhead to Flare Tip
- Subsea Templates, Manifolds, Risers, Flowlines and Pipelines
- Floating Production, Drilling and Storage
- FPSO, FRSU, FSU, Barge Style, Jack-Ups
- Drilling Facilities
- Fixed Piled Steel, Gravity Structures, and Conventional Jackets
- Articulated Towers, TLPs
- Integrated Production and Accommodation Decks
- Hybrid Gas to Wire
- Onshore Terminals

All Engineering Disciplines Represented Electrical, Mechanical, Technical Safety, Structural, Civil, Control & Instruments, Procurement, Construction, Naval Architecture, Operations.



Our breadth of knowledge means that when a problem is identified we can point to mitigations or strategies for a solution. We find that clients value this approach as it helps quantify their risk exposure and ensure consistency with their project or business model.

Where We Get Involved:

- **Potential Investments**
- **Final Investment Decisions and Option Selection**
- **Distressed Projects or Asset Sales**
- **Joint Venture / Stakeholder Independent Checks**
- **Operational Efficiency Audits**
- **Geotechnical or Seabed Surveys (suitcase ROV surveys by arrangement)**
- **Chemical, subsea or seabed sampling, corrosion monitoring and testing**
- **Environmental Impact, Noise and ecological studies.**
- **Reservoir Reserve and Subsurface Well Production/ Injection Performance Modelling.**
- **Decommissioning Liability Assessments**

Due Diligence Experience

Our business covers both renewables and oil and gas, including hybrid developments. We cover both fixed and floating offshore wind, having had significant, early and continued involvement in offshore wind farm developments in the UK and internationally. We have extensive experience as OWF owners' engineers and managing installation.

Our experience covers all types of offshore oil and gas facilities in the full range of water depths, from shallow water in 30m depth to deep water in of over 1500m. Our experience covers fixed platforms, gravity base platforms, and floating production and storage systems. Many of our offshore projects have included terminal onshore related works. From our Great Yarmouth operating centre, we provide significant support to the nearby Bacton, Thedlethorpe and Dimlington Terminals. ODE's operations group has day to day responsibility for managing, operating and maintaining a wide range of conventional assets in the relatively shallow water of the Southern North Sea (30 – 65m) including fixed productions platforms, wellhead platforms, NUIs (normally unmanned installations) and subsea facilities.

In deep water, ODE draws on DORIS Group experience covering floating production storage and offloading vessels (FPSOs) and floating storage systems (FSU), tension leg TLPs, articulated columns and gravity base structures and facilities mounted on mobile Jack Up vessels.

ODE demonstrates a breadth and depth of knowledge across asset types with the successful delivery of Due Diligence scopes for both Oil & Gas and Offshore Wind projects.

Client	Asset
Bankset Energy (Data room review) Renewables	West of Scotland
Transmission Capital	Various - Renewables
Mainstream Round 3 (UK OWF Licence Round)	Options review
Ecotricity Round 3	OWF Licence Round Tender Submissions
Clipper Round Three	OWF Licence Round Tender Submissions
Naikun Wind Development	Naikun OWF (Canada)
Baryonyx	Go Wind Demonstration Project (Gulf of Mexico)
Scottish Power Round 3	OWF Licence Round Tender Submissions
Perenco, Exxon & Shell	Various North Sea Assets (ABEX DD)
HHI (Technical DD of FEED)	Adma-Opco Supercomplex
Summit Petroleum	Alba
Total E & P (Capex using @Risk)	New Development
Trans Globe	West Backra
Apache	BP North Sea Assets
Burlington Resources	Calder & Millom West
Various	Carbon Capture and Sequestration
E.ON	Ravenspurn North
Shell	Barque PB (OPEX)
BG T&T	Poinsettia
AOC	NW October
Ithaca	Jacky
Loss Adjuster (insurance claim)	UK Gas Storage Facility
Port Meridian Energy Ltd	Project Stakeholder Risk and Gap Analysis
SLLP 134 Ltd	Offshore Production Buoy Design Review
Jee	Technical due diligence of Tolmount Platform FEED
Confidential Investor	Package of 11 Offshore assets in Egypt
Confidential M&A Oil company	Package of Norwegian assets
Equis	Technical due diligence for Fuhai OWF Taiwan
Confidential M&A Investor	Package of UK Oil and Gas assets
Confidential IOC	LNG Import Terminal Feasibility Study SEA

Confidential M&A Investor

Asset Package Purchase, UKCS

Technical review of dataroom material and assessment of the asset portfolio on offer.

Working for a major international institutional investor to assess the value and future liabilities of a portfolio of mature assets in the UK North Sea.

Services provided: Technical Due Diligence, Decommissioning liability assessment



European LNG Terminal

Risk Workshop, UKCS

A Risk Workshop was facilitated with all project partners to consider technical and commercial gaps in the project with an aim to capture all individual risks with capital value of \$1M or more.

The workshop highlighted important gaps in the project and relied-upon information which was subsequently addressed during ODE's studies, providing justifications to reduce the onshore terminal scope. Mitigations to cover frost heave and identify critical pipeline locations were also developed.

International Institutional Investor

Asset Package Purchase Middle East

ODE conducted a due diligence exercise on an International Oil Major's assets covering 5 different fields in Middle East. ODE's scope was to inform the client from a technical point of view of the value of these assets and discuss risks related to these fields.

The asset package consisted of 5 fields, 9 complexes, 75 satellite platforms, and 222 producing wells.

Included high level integrity review, OPEX and CAPEX review and forward projection and "red flag" study

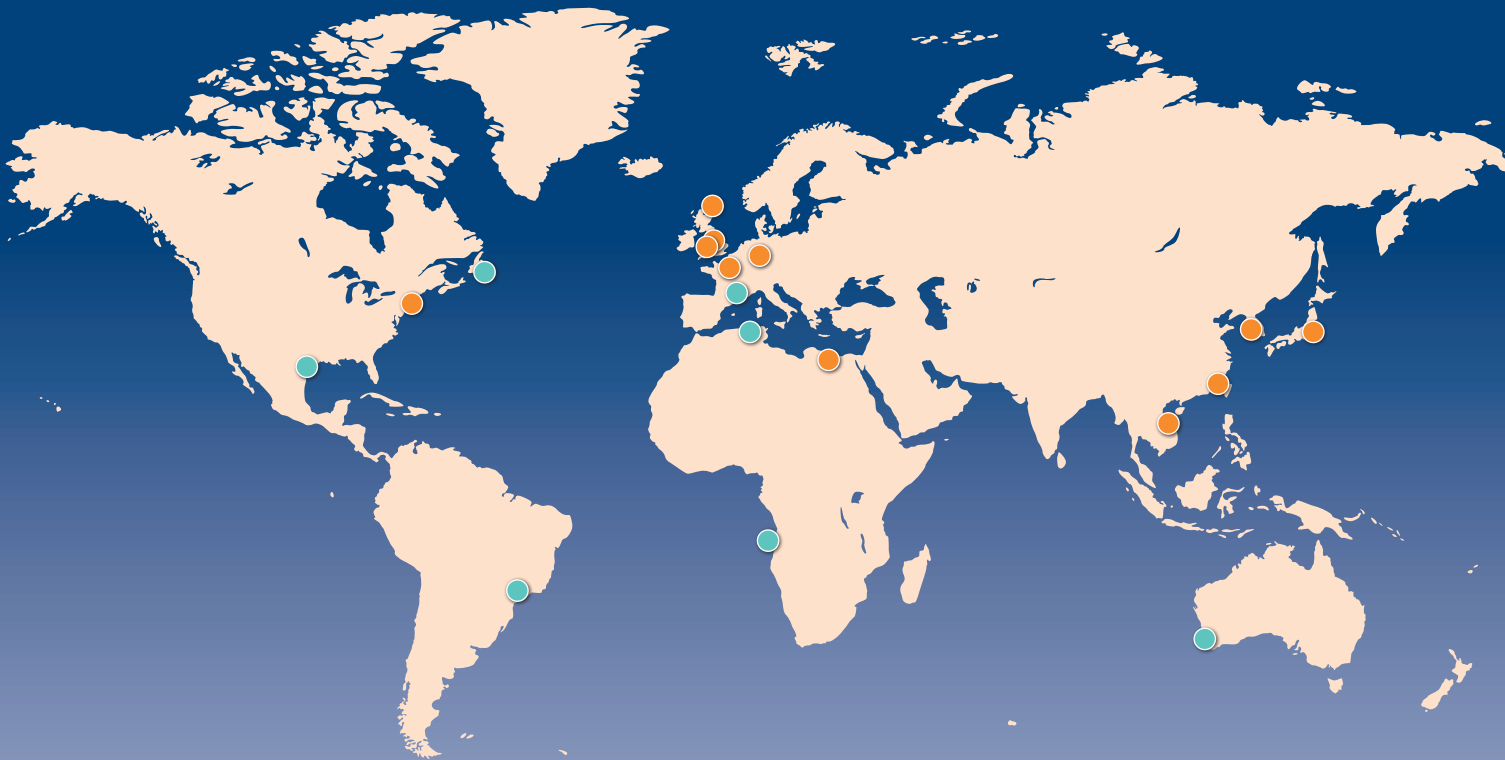


International Oil Company

Decommissioning Liability Study, NCS

ODE conducted a due diligence exercise on the decommissioning cost estimate for a concrete gravity base platform in the Norwegian sector of the North Sea. If partly left in situ during decommissioning, the operation is subject to derogation from the OSPAR regulations. ODE's work was to discuss the different options allowed by the current regulations (substructure left in place, partly removed or removed completely) and quantify the financial impact of these options in order to assess the consequences of not obtaining a derogation to leave Platform's concrete column in the water.

Energy is changing and we are the energy for change



London
St George's House
5 St George's Road
Wimbledon
London SW19 4DR
T: +44 (0) 20 8481 1190

Aberdeen
The Exchange No.1
62-104 Market Street
Aberdeen AB11 5PJ
T: +44 (0) 1224 001630

Great Yarmouth
Marine Base
88 South Denes Road
Great Yarmouth
Norfolk NR30 3QF
T: +44 (0) 1493 845100

Paris
DORIS Engineering
58A Rue Dessous des
Berges, 75013 Paris
France
T: +33 1 44 06 10 00

Hamburg
ODE GmbH
Chilehaus A
Fischertwiete 2
20095 Hamburg
Germany
T: +49 176 42 62 99 53

Taipei 海德益
Suite A, Floor 14
167 Dunhau North
Road, Taipei City
Taiwan (ROC)
T: +886 2 8712 3707

Tokyo
Shinagawa Intercity A
28F, Konan 2-15-1,
Minato-ku,
Tokyo 108-6028, Japan
T: +81 (0) 3 6717 4393

Seoul
15F-16F, 7 Jongro 5-gil
Jongoro-gu
Seoul, 03157
South Korea
T: +82 (0)10 8673 2416

Hanoi
13F Hanoi Tower
49 Hai Ba Trung Street
Hoan Kiem District
Hanoi, Vietnam
T: +84 243 3266 3293

Boston
ODE Renewables LLC
75 Arlington Street
#500 Boston
Massachusetts 02116
T: +1857 241 3600

ODE is a subsidiary of DORIS,
a leading engineering services provider in
the energy industry.

info@ode-ltd.co.uk
www.ode-ltd.co.uk

ode
A DORIS Group Company