Using Mer UK to drive additional Value into Project Delivery

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Oil & Gas Authority

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Government proactive role

Governments thinking ahead

Oil and Gas Authority – Progressive regulator

The OGA regulates:
the exploration and development of the UK’s offshore and England’s onshore oil and gas; the UK’s carbon storage; and gas storage and offloading activities

The OGA influences:
culture of greater collaboration on the UKCS, improve commercial behaviours, help enable a more efficient industry and to support and influence the UK’s transition to a low carbon economy

The OGA promotes:
Investment in the UKCS, promote the opportunities that the transition to a lower carbon economy will bring, create value in the UK through exports and develop the prosperity of the industry including wider supply chain

OGA is a progressive regulator
UKCS snapshot

Infrastructure

- 7800+ wells drilled
- 250+ subsea systems
- 20,000 kms+ pipelines
- 320+ installations

Operating Costs

- UOC (£/boe)
- OPEX (£ billion)

Production: mmboe/d

- Production efficiency: 65% 71% 73% 74% 75%
- MMBOE: 1.42 1.57 1.63 1.63 1.7
- 2014 2015 2016 2017 2018

Exploration

- UKCS projects: 2017 2018
  - Number of projects: 7 19
  - CAPEX (£ billion): 0.7 3.8
  - Reserves (mmboe): 100 470
  - NPV10 (£ billion): 1.1 4.2

For indicative purposes only

Resources

- Remaining potential: 10bn - 20bn+

Supply chain

- £27bn turnover
- 40% through exports
- 80% of oil and gas jobs

Jobs

- 280 UK jobs

Performance turned around
Promoting exploration

- **Seismic – SNS area**
  - 23,000 km²
  - Post-stack migrated
  - Publicly Available
  - Formerly PGS SNS Megamerger
  - Expected release: Q3 2019

- **Subsea success project**

- **Technology – Vital Factor**
  - 58% technologies ‘existing’, however usage not widespread
  - 25% technologies ‘being developed’
  - Fundamental role of Supply Chain in providing technology solutions
  - Total number of technologies from Plans
  - Technology delivery
UK Offshore Decommissioning

£1.5 – 2.5 bn

Estimated annual decom spend for the next 20 years

>400 fields
With remaining decom activity

>320 platforms
To be re-used/removed

>2,000,000 tonnes
Topsides

>1,000,000 tonnes
Substructures

~75,000 tonnes
Subsea structures to be removed

>4000 wells
To be decommissioned

>20,000 km
Pipelines to be re-purposed/decommissioned

Projected Annual Decom Spend
Decom Workflow & Regulatory Bodies

Decommissioning Cost

1. DP approval
2. DP execution and progress monitoring
3. Offshore Safety Case adherence with regular amendments
4. Engagement & agreement on disposal method options
5. Active waste management plan
6. Onshore H&S regs

- Review
- Monitoring
- Dismantling
- Removal
- Cold stack/suspension
- Warm stack/suspension
- Late life operation

MER UK, Re-Use options

Late life operation

Warm stack/suspension

Cold stack/suspension

Removal

Dismantling

Monitoring
Debate more polarised than ever – quality dialogue and evidence based action required
UKCS is a critical energy asset

Huge opportunity ahead
Significance of the supply chain

**OGA Supporting**

- **Project Pathfinder**
  - Online project data

- **Meet the Buyer/ Hackathons**
  - Operators provide opportunities and challenges to service sector

- **UK/Norway and UK/Netherlands**
  - Engagement and collaboration ‘One North Sea’

- **Working with DIT, SDI, UKEF and EIC**
  - UK industry to grow by additional £290bn – exports from 3.7% to 7.4%

**UK supply chain/exports turnover**

<table>
<thead>
<tr>
<th>Year</th>
<th>Value (£bn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>35</td>
</tr>
<tr>
<td>2016</td>
<td>30</td>
</tr>
<tr>
<td>2017</td>
<td>27</td>
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</tbody>
</table>

Vision 2035: Up to £500 billion pounds in export value by 2035

**SCAPs**

Supply Chain Action Plans (SCAP), now an integral and mandatory part of the FDP and Decommissioning Programme approval process, require operators to demonstrate how they are:

- Delivering maximum value from project activity
- Delivering Field Development Plan & Decommissioning Programme commitments
- Contributing to Total Value Add (TVA) through supply chain engagement

Develop a capable and competitive Supply Chain to support the lifecycle of UKCS activity.
Supply Chain Action Plans supporting resource maturation

Mandatory for all FDP/DP approvals from 1st April 2018

Validates Operator’s Supply Chain activities and promotes non-adversarial relationships that deliver best value
- Monitor trends and cost fluctuations, challenge and promote best practice, lessons learned, reporting, understand project cost and schedule overruns, promote collaboration

To date the OGA has received 60+ SCAPs

50/50 split between decommissioning and FDP/A

Q1 2019 - workshops held with 20+ operators and 10+ other stakeholders to discuss changes to process and requirements

SCAP process now streamlined with creation of template and updated guidelines

Replacing adversarial relationships with value adding practices
Connecting Operators and Suppliers with innovative solutions

Project and contract information including Challenge/opportunity areas

Available to all industry – subscribe process

Provide visibility of up coming activity giving confidence to the service sector to invest in innovation, solutions and skills

Comprehensive One stop shop for operators and the supply chain

Oil and Gas Pathfinder Portal

A requirement of Supply Chain Action Plans

Oil & Gas Authority
Pathfinder example

Project Type: Decommissioning  
Project Title: Minke Decommissioning

Field details
- Field Name: Minke
- Field Type: Gas Condensate
- Water Depth (m): 40m LAT
- DEVUK Field
- Location: Block 44/24a
- FDP Approved

Contact details
- Name: David Hunt
- Email Address: David.Hunt@neptuneenergy.com
- Job Title: Subsea Project Manager
- Telephone Number: 01224 281075

Construction details
- Under Construction?

Project Summary
The Minke Field is located in the Southern Basin of the UKCS in Block 44/24a and lies about 19km south-west of the D15-FA platform located in the Dutch sector. The field was developed via a single subsea well tied back by a ~18km 6” diameter production pipeline to the D15-FA platform. Control between the D15-FA platform and the Minke well is via a dedicated subsea electro-hydraulic control and chemical injection umbilical. The well and approximately 3.7km of the pipeline is within the UK sector, the D15-FA platform and remaining 11.3km of the pipeline is located in the Dutch Sector, block D15. The Minke pipeline and umbilical were trench and buried for protection.

High level schedule:
- Pipeline Flushing, Cleaning & Disconnect 2019 - 2020
- Facilities Removal Window mid 2019 - 2020
- Plug & Abandonment 2020 - 2021
- Monitoring Surveys as required

Challenge(s)

Enter details of any challenge(s) faced with this Project that you want to bring to the attention of the service sector.

Contracts Awarded

Enter details of any contracts, once awarded, that are relevant to this Project. These details will be publicly available.

<table>
<thead>
<tr>
<th>Description</th>
<th>Contractor Name</th>
<th>Contractor Primary Contact</th>
<th>Date Awarded</th>
<th>Contract Band</th>
<th>Telephone Number</th>
<th>Email Address</th>
<th>Actions</th>
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<tbody>
<tr>
<td>Construction Vessel Services</td>
<td>Boskalis Subsea</td>
<td>Alan Gebbie</td>
<td>02-SEP-2019</td>
<td>Small (&lt;£10m)</td>
<td>01224 60 600</td>
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