Supporting the energy transition

The OGA’s role

Dr Andy Samuel
Chief Executive

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Case for change

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

Huge opportunity ahead
OGA current role on energy transition

Maximising domestic gas production
Increasing operating efficiency: emissions benefits
Offshore flaring and venting
Licensing of carbon storage
Enhanced Oil Recovery
Promoting offshore energy integration
Supporting supply chain

OGA fully supports energy transition as set out in our policy
Carbon capture and storage

2019 important year for CCUS with action plan underway

Positive steps in BEIS policy development
OGA’s CCS role

Working collaboratively with government and industry

Licensing and permitting authority for carbon storage – 
*OGA issued first licence Dec 18*

Consider re-use as part of the OGA Cessation of Production process

Promoting role of CO₂ EOR

CCS as blue hydrogen enabler

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*78 GtCO₂*

total UKCS CO₂ storage resource estimate

*75-175 MtCO₂*

CCC estimate of annual requirement in 2050

*6-15 (12 MtCO₂ per year)*

CCS projects required in 2050

<*$0.5 boe*

to support CCS transport and storage to offset UKCS production emissions

(5% of the reduction in operating costs achieved since 2014)
UKCS Energy Integration project

Funded by £1m grant

Led by OGA, in collaboration with BEIS Crown Estate and Ofgem

Quantify and help unlock UKCS energy integration opportunities

CCS enabler for energy transition – leverage O&G infrastructure

Potential integrating multiple sources: renewables, O&G, and H₂

Oil and gas companies and supply chain will play a critical role in delivery

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<tr>
<th>Activity</th>
<th>Schematic</th>
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<tr>
<td>Platform Electrification</td>
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<td>Reduce costs and emissions</td>
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<td>Gas-to-Wire</td>
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<td>Power from gas offshore, Transmitted to shore</td>
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<tr>
<td>CO₂ transport and storage</td>
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<td>Re-use of infrastructure and fields</td>
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<tr>
<td>Power-to-Gas</td>
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<tr>
<td>Offshore windfarms produce hydrogen</td>
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<tr>
<td>North Sea Wind Power Hub</td>
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<td>Large scale hydrogen production</td>
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Hydrogen: initial findings

Onshore proven but still upside

Offshore to be piloted (Q13a in Netherlands)

Re-use potential: SNS, EIS and NNS

Larger hubs can help capture full potential: Shetland, Orkney, SNS, EIS and NNS

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<tr>
<th>Potential H2 models</th>
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<th>Schematic</th>
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<td>Blue - onshore SMR and H2 storage, offshore CCS</td>
<td>• Onshore: methane reforming&lt;br&gt;• Offshore: wind powered desalination; CO2 storage</td>
<td><img src="image" alt="Blue schematic" /></td>
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<tr>
<td>Green - onshore electrolysis and H2 storage</td>
<td>• Onshore: wind powered electrolysis; H2 storage&lt;br&gt;• Offshore: wind powered desalination</td>
<td><img src="image" alt="Green schematic" /></td>
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<td>Green - offshore electrolysis and H2 storage</td>
<td>• Offshore: wind powered electrolysis on platforms; H2 storage; H2 transportation with re-used pipelines</td>
<td><img src="image" alt="Green offshore schematic" /></td>
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Encouraging industry interest and activity

Flotta & Sullom Voe terminals – H2 Offshore Project + renewable power

Caledonia Clean Energy

H21

HyNet

Electrification

FLEXIS demo area

Norway: Electrification, Floating Wind, H2, CCS

Project Acorn

OGTC NZSC and ONE ET Park

Clean Gas Project

SNS GTW and CCS

Netherlands: H2, electrification, CCS

Zero Carbon Humber

Tracking 60 projects (selection shown) - we all need to work together

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Thank you