



Oil & Gas
Authority

Net Zero

Stewardship Expectation 11

March 2021

1. Expectation

The Oil and Gas Authority (“OGA”) expects the Upstream Oil and Gas Industry (“Industry”) to reduce, as far as reasonable in the circumstances, Greenhouse Gas (“GHG”) emissions from all aspects of their upstream operations. This includes: the development of new hydrocarbon projects; existing producing assets; the abandonment and decommissioning of fields; and the progression of potential energy integration/net zero solutions to assist the Secretary of State in meeting the Net Zero Target.

1.1 This Expectation focuses on the following areas:

- Creating a culture of GHG emissions reduction within the UKCS
- Ensuring that GHG emissions reduction is considered throughout Industry lifecycle activities, supported by, amongst other things, improved energy efficiency, continued focus on maintenance, and a high level of production efficiency
- Collaboration between all relevant parties (including with the renewables sector) to support and progress potential energy integration developments such as electrification, carbon capture and storage and hydrogen to maximise emissions abatement potential

2. Reason for the Expectation

- 2.1 In 2019, the UK and Scottish governments both passed legislation for net zero targets for carbon emissions by 2050 and 2045 respectively.
- 2.2 In 2021, the OGA revised its Strategy to incorporate within its Central Obligation an obligation on relevant persons in taking the steps necessary to secure that the maximum value of economically recoverable petroleum is recovered from the strata beneath relevant UK waters, to take appropriate steps to assist the Secretary of State in meeting the Net Zero Target. This includes reducing as far as reasonable in the circumstances greenhouse gas emissions from sources such as flaring and venting and power generation and supporting carbon capture and storage projects.
- 2.3 The OGA considers that maximising the economic recovery of oil and gas need not be in conflict with the transition to net zero and that the Industry has the skills, technology and capital to help unlock solutions required to help the UK achieve the net zero target. However, the OGA takes the view that Industry should go considerably faster and farther in reducing their own carbon footprint, or risk losing their social licence to operate.
- 2.4 This Stewardship Expectation sets out the OGA’s view as to how Industry should manage existing operations and new developments in order to reduce their GHG emissions and support delivery of the UK’s net zero target.
- 2.5 This Expectation supports the OGA Strategy, in particular through the Central Obligation (paragraph 2) and the Supporting Obligations relating to development (paragraph 8), asset stewardship (paragraphs 10 and 11), technology (paragraph 13), decommissioning (paragraph 15) and carbon capture and storage projects (paragraph 22).

3. Delivering the Expectation

The OGA expects that Industry will demonstrate through - its corporate culture, commitment and demonstrable action through all stages of project lifecycle - that it is delivering against this Expectation and any applicable OGA guidance in place at the relevant time. This would include (but not be limited to), for example:

A: Measuring, reporting and tracking

- A.1 Embed atmospheric emissions reduction throughout the organisation
- A.2 Implement Key Performance Indicators (“KPIs”), metrics and targets relating to GHG emissions and GHG emissions intensity

- A.3 Align with, and track performance against, targets set by government, the OGA and/or Industry
- A.4 Invest and deploy appropriate GHG emissions measurement technologies

B: Corporate behaviours and decision making

- B.1 Incorporate consideration and quantification of the societal costs of GHG emissions into company decision making
- B.2 Seek continuous improvement across all areas of GHG emissions reduction

C: General

- C.1 Develop, implement and maintain asset and/or infrastructure hubs GHG Emissions Reduction Action Plans
- C.2 Meet obligations in relation to any applicable OGA Plans
- C.3 Collaborate with industry peers to deliver GHG Emissions Reduction Action Plans
- C.4 Commit to investment in skills & technology (e.g. digitalisation, machine learning)
- C.5 Assess and where appropriate deploy in a timely manner available abatement technologies

D: Lifecycle Phases

Exploration and Appraisal Phase

- D.1 At licence application stage, provide an indicative evaluation of the GHG emissions impact of the work programme and project lifecycle
- D.2 Assess the emissions of all GHGs from proposed activities and options and seek opportunities to collaborate with other licensees to reduce the GHG emissions of activities such as shared seismic surveys, shared drilling programmes (e.g. minimising mobilisations and demobilisations)
- D.3 Fully consider acquiring information which could enable future energy projects such as CCS, hydrogen, windfarms
- D.4 Evaluate the opportunity to incorporate in well design and plugging and abandonment (“P&A”) the potential for their reuse
- D.5 Well tests, Extended Well Tests and well clean-ups be designed to achieve their goals whilst appropriately reducing GHG emissions (e.g. optimal duration, reduced flaring/venting)

Development Phase

- D.6 Assessment phase of field development planning to demonstrate consideration and economic assessment of GHG Emissions Reduction Action Plans, such as:
 - Low GHG emission operations e.g. low carbon power generation, low carbon hydrocarbon export
 - Zero routine non-safety related flaring/venting
 - Gas recovery systems
 - Measurement of GHG emissions
 - Technology and digitalisation to reduce GHG emissions
 - Possibilities for Energy Hubs
 - Collaboration with peers in area
- D.7 Quantification of GHG emissions of selected concept vs alternative concepts, to include:
 - Re-use/re-purposing of infrastructure and facilities
 - Evaluation of GHG emissions impacts on selected host infrastructure
- D.8 Authorisation phase of field development planning demonstrates:
 - A forecast of the field’s energy consumption and GHG emissions
 - The selection of energy efficient equipment for power generation
 - The incorporation of accurate instrumentation for the measurement of GHG emissions

- A provision for tie-in of future technologies to reduce GHG emissions
- Consideration of and where appropriate incorporating flexibility for future re-use/repurposing of the reservoir, infrastructure and equipment
- Consideration is given in well design to provide flexibility where appropriate for potential re-use
- A well emissions monitoring regime, designed to provide sufficient information to inform future energy transition activities
- Their Supply Chain Action Plan (“SCAP”) incorporates opportunities to share supply chain and logistics synergies to reduce GHG emissions
- Consideration given to GHG emissions of project construction and logistics in suppliers proposals
- Commissioning plan evaluates the GHG emission profiles of different commissioning strategies
- Well tests, Extended Well Tests and well clean-ups should be designed to achieve their goals whilst reducing GHG emissions (e.g. optimal duration, minimised flaring/venting)

Production Phase

- D.9 Asset and/or Energy Hubs should have a GHG emissions reduction action plan & GHG emissions reduction project “hopper”
- D.10 GHG Emissions Reduction Action Plan should have an associated SCAP
- D.11 Zero routine flaring and venting and the use of the lowest GHG emission fuels should be the base case for power generation and GHG emissions targets
- D.12 Daily/weekly asset reporting should incorporate power/energy consumption and GHG emissions
- D.13 Measuring and monitoring of power generation efficiency through regular energy surveys.
- D.14 Maintenance and inspection strategies that utilise technology to reduce downtimes/start-ups e.g. predictive rather than time based.
- D.15 Active flare reduction strategy with, for example:
- Flare measurement including tracking of “unlit” periods and composition analysis
 - Protocol for GHG emissions management during “trips”
 - Monitoring of flare combustion efficiency
- D.16 Active vent reduction strategy
- D.17 Logistics operations strategy should seek to minimise GHG emissions through collaboration with other operators and sectors.
- D.18 KPIs and targets incorporated into asset performance reporting

Late-life/pre-cessation of Production Phase

- D.19 Six years before cessation of production - identify and evaluate infrastructure for CCS and H2 and other re-use opportunities (ref. SE10)
- D.20 Actively consult with regulatory bodies and other stakeholders regarding infrastructure re-use or re-purpose
- D.21 Openly collaborate and share data with 3rd parties interested in reuse or re-purposing infrastructure/equipment, subject to applicable competition law requirements
- D.22 Evaluate process system, utility and power requirements in late life and post-cessation of production to optimise power requirements and reduce associated GHG emissions
- D.23 Assess new and emerging technologies which could reduce emissions pre and post-cessation of production
- D.24 Ensure a well emissions monitoring regime which minimises GHG emissions

Decommissioning Phase

- D.25 Plan and execute decommissioning activities to minimise GHG emissions (which may include investing in new

technologies and/or undertaking some decommissioning activities ahead of cessation of production e.g. well decommissioning)

- D.26 Evaluate materials and resources required during decommissioning to identify environmental synergies across other projects both within and beyond the licensee's portfolio
- D.27 Actively engage with Industry to reduce GHG emissions through campaigning and scope aggregation
- D.28 Understand infrastructure and equipment with re-use/re-purposing potential and where appropriate plan decommissioning such that the opportunity can be later realised e.g. decommissioning of wells to facilitate future storage projects
- D.29 Trial and utilise new technology where available
- D.30 Work with removal and drilling contractors to optimise decommissioning operations to reduce GHG emissions

4. Demonstrating Delivery

- 4.1 The OGA engages with Industry and the investment community on a number of levels and in a number of ways, and information obtained from those engagements helps inform the OGA of the extent to which Industry relevant persons may be delivering this Expectation. These include, for example:

Annual UKCS Stewardship Survey

- 4.1.1 The OGA's Annual UKCS Stewardship Survey collects a range of data from licensees and operators for each production licence in the UKCS. The OGA may request some additional information or reports to demonstrate delivery. The OGA generally uses its powers under section 34 of the Energy Act 2016 to obtain such survey data and additional information.

Performance Benchmarking

- 4.1.2 The OGA may produce benchmarking data on a variety of metrics derived from the Stewardship Survey data and other information provided to it. These data will generally be presented to industry in aggregated form and used in Tier Reviews with companies to improve performance.

Tier Reviews

- 4.1.3 The OGA will request an operator's participation in Tier Reviews in accordance with the OGA's Stewardship Review Guidance. That guidance provides further detail on the Tier Review structure, prioritisation, planning, execution and follow-up. The OGA will set the agenda for the Tier Review to focus on issues it considers present the greatest stewardship impact, based on data received in the Annual UKCS Stewardship Survey.

OGA consent and authorisation processes

- 4.1.4 The OGA may, where appropriate, consider the extent to which a relevant person may be delivering this Expectation as part of its regulatory decision making and other considerations. This includes, but is not limited to the following matters:
 - Consents (e.g. production, flaring, and venting)
 - Concept Select
 - Development and Production consent Plan process (FDP/FDP'a)
 - Well Operation (Well Operation Notifications)
 - License Assignments/Changes of control process
 - Operator approval
 - Cessation of Production process

5. Glossary

Carbon Capture Storage (CCS)

CCS refers to a variety of processes which capture and store carbon dioxide emissions, generally from industrial processes. The carbon dioxide can then be transported, including via repurposed gas pipelines, and stored, for example within rock formations in the UKCS, including depleted oil and gas reservoirs.

Emissions sources considered as part of this stewardship expectation

This stewardship expectation focuses on emissions from the development of new hydrocarbon projects, their existing producing assets and the abandonment and decommissioning of fields, this includes:

- direct emissions from sources that are owned or controlled by the organisation
- indirect emissions from the generation of purchased or acquired energy. This includes purchased electricity, heat, steam or cooling
- the OGA may also consider other indirect emissions that occur in the value chain of an Upstream Oil and Gas Industry company where that company can influence or control emissions – such emissions sources may for example include: UK onshore terminals processing UKCS oil and gas, offshore shipping supporting UKCS oil and gas production (logistics and drilling rigs) and aviation transportation (helicopter journeys)

Energy Hubs

A centralised hub or area cluster where the production, conversion, storage, and consumption of various energy vectors such as natural gas, hydrogen and electricity are carried out and synergies are realised from scale, efficiency which provide cost and/or emission reductions.

Extended Well Tests (EWT)

The OGA generally considers any well test with a total flow duration of more than 96 hours or which produces a total of more than 2,000 tonnes of oil/oil equivalent to be an EWT. For oil volumes over the 2,000 tonnes threshold, consideration should be given to saving the produced oil rather than flaring it.

Usually the OGA will treat the discrete well zones and side-tracks as separate well tests, although it may require an EWT consent to be applied for where it considers one is appropriate.

The OGA may consider long clean-up flows from development wells to temporary facilities to be an EWT, even if there is no explicit data gathering objective.

GHG Emissions Reduction Action Plan

A plan of actions/projects/investments which the licensees plan to undertake to reduce the emissions of their operations. This plan should be asset based, annualised with projects costed and accountabilities for delivery assigned.

Greenhouse Gases (GHG)

Greenhouse gases under consideration in this Stewardship Expectation include:

- carbon dioxide
- methane
- nitrous oxide
- hydrofluorocarbons
- perfluorocarbons
- sulphur hexafluoride

Net Zero Target

“Net Zero Target” means the net UK carbon account for the year 2050, as set out in section 1 of the Climate Change Act 2008 (as amended).

OGA Plan

The OGA may produce or adopt a plan or plans which set out its view of how any of the obligations in this Strategy may be met (paragraph 18 of the OGA Strategy). Such plans may address circumstances particular to a single or small group of relevant persons or may address circumstances at a regional level.

Upstream Oil and Gas Industry

This Expectation seeks to reduce emissions from the upstream oil and gas industry as a whole, which includes the following:

- Relevant Persons listed in Section 9A(b) of the Petroleum Act 1998:
 - holders of petroleum licences
 - operators under petroleum licences
 - owners of upstream petroleum infrastructure
 - persons planning and carrying out the commissioning of upstream petroleum infrastructure (incl. onshore terminals processing UKCS petroleum)
 - owners of relevant offshore installations
- Activities carried out on behalf of the relevant persons above (incl. offshore shipping, logistics, drilling rigs etc., transport services (for example helicopter transportation) etc. contracted in support of UKCS petroleum production)

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