Phase 1 Emissions Assessment

August 2021

Chief Executive's foreword

I am very pleased to present the output of our initial Emissions Assessment, undertaken in collaboration with Genesis. This was our primary Environmental, Social and Governance (ESG) objective for 2021, enabling us to confirm IOG as an exceptionally low carbon intensity operator and, more importantly still, to commit to being Scope 1 and 2 Net Zero as of this year. For some time we have seen the opportunity to build a high-return gas business in which low unit costs and low carbon intensity can reinforce each other to deliver sustainable competitive advantage. As the Climate Change and Sustainability (CC&S) policy that we inaugurated in 2020 put it: IOG's ambition is to be a safe, efficient and low-carbon developer and producer of high-value gas.

Before discussing the key takeaways, it is worth recapping why this environmental differentiation is important for us. Firstly, because it aligns with our core values and the kind of organisation we intend to be. We aim to promote a mindset of sustainability, responsibility, ethics and respect for people and the environment throughout everything we do. As we progress our core objective of delivering growth and strong returns to shareholders, we care about doing that in a way that is sustainable, in every sense.

Secondly, as a development and production company, it has never been as critical for our licence to operate – both regulatory and social – as it is today. The rapid evolution both in social awareness and governmental initiatives focused on how we produce and consume energy will transform our industry. The OGA's revised Strategy and Bacton Energy Hub initiative and the UK government's Net Zero emissions target, Ten Point Plan and North Sea Transition Deal collectively reflect a clear ambition to accelerate the UK energy transition. IOG intends to be a positive contributor to that journey.

Finally, we also know the fundamental importance to all our stakeholders as they fulfil their own respective responsibilities. For example we expect low emissions intensity targets to increasingly become a differentiating factor in debt financing for energy companies.

Our 2020 CC&S policy committed us to evaluate projected Scope 1 and 2 emissions and this document is the resulting assessment, summarising some key Phase 1 metrics. We plan to publish a more comprehensive ESG report next year, to capture our first period as a producer. Our emissions assessment work and associated model developed by Genesis offer some clear and compelling conclusions:

- IOG has a very low emissions profile relative to other North Sea operators, thanks primarily to our small, low-impact infrastructure
- Gas is a key transition fuel but from a climate perspective, not all gas is equal: there is a very tangible emissions saving from using IOG gas versus imports (particularly LNG)
- IOG is committed to achieving Scope 1 and 2 Net Zero status as of 2021 by investing in appropriate projects to offset our emissions
- IOG's business model sits firmly at the heart of the latest UK government energy policies and revised OGA Strategy, which aims to maximise the value of economically recoverable reserves whilst helping to meet the Net Zero target
- By incorporating further assets beyond our existing SNS portfolio into our production system in future, we can both increase the amount of domestically produced gas and deliver corresponding emissions savings
- We can use our learnings to date to help design and build an even cleaner business through our further phases of growth
- We are also advantageously positioned to play a relevant role in the OGA-led initiative to develop a low-carbon Bacton Energy Hub

As such, I am delighted to release this report at this important time in our transition from a developer into a material UK gas production company with exciting growth potential and a very robust environmental profile. We are using this study to set actual emissions targets for 2021 and 2022 and to embed a culture of continuous improvement in our environmental footprint.

IOG: a very low emission operating model

GHG assessment demonstrates IOG's low-emissions status

- IOG has completed an assessment of its Scope 1 and 2 greenhouse gas (GHG) emissions in conjunction with Genesis as pledged under its 2020 Climate Change & Sustainability (CC&S) policy
- The resulting model encompasses the Phase 1 project plus corporate activities
- It shows that IOG's emissions profile should be one of the lowest in the industry throughout this decade

Offshore installations: very low GHG emissions intensity

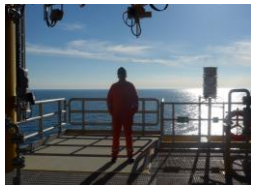
- The Blythe & Southwark unmanned platforms have particularly low emissions intensity over project life
- Over project life, projected platforms cumulative average intensity is just **0.4 $kgCO_2e/boe$**
- Platforms emissions intensity on an annual basis to remain **<1 $kgCO_2e/boe$** over the next decade

Substantial carbon savings from IOG production vs alternatives

- IOG's estimated Phase 1 life-of-project Scope 1 and 2 emissions intensity is **3.97 $kgCO_2e/boe$**, or 4.90 $kgCO_2e$/boe including drilling activities
- The North Sea 2020 average is 20.2 $kgCO_2e$/boe[1] and global offshore average is 17 kgCO2e/boe[2]
- Phase 1 alone has the potential to **save close to 1 million tonnes of CO_2e emissions** vs a weighted average of pipeline and LNG gas imports[3]

Net Zero commitment

- **IOG has committed to Scope 1 and 2 Net Zero status as of 2021**, via investment in nature and/or technology based accredited voluntary offsets



Longer-term considerations

- The choice of compression design and integration of renewable power on future platforms are among the options to reduce longer-term emissions from IOG's SNS operations
- IOG will be evaluating a number of potential compression design options as part of its wider growth planning

1) Based on Phase 1 proportionate share of Field Development Plan base case of gas-fuelled compression from 2026; latest OGA emissions intensity data taken from: www.ogauthority.co.uk/media/7685/oga-annual-report-and-accounts-2020-21.pdf
2) Rystad Energy: www.rystadenergy.com/newsevents/news/press-releases/an-analysis-of-the-upstream-industrys-dirty-laundry-whose-production-has-the-lowest-co2-intensity/
3) Based on OGA data, assuming constant intensity levels over time: www.ogauthority.co.uk/media/6522/emissions-intensity-comparison-of-ukcs-gas-production-and-imported-lng-and-pipelined-gas-v2.png

Introduction

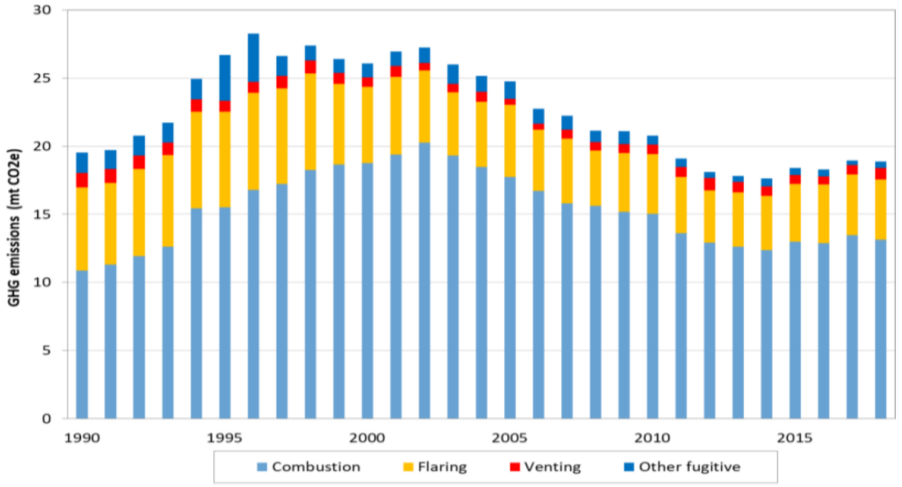
Headlines

- IOG has completed its initial Emissions Assessment (EA) – analysing the expected Scope 1 and 2 greenhouse gas (GHG) emissions and carbon intensity related to its Phase 1 development and corporate activities
- This was a key objective set out in our Climate Change and Sustainability policy put in place in 2020
- It was undertaken in collaboration with Genesis, who developed a bespoke IOG EA model
  - In addition to forecasting emissions this model will be used to compare measured actual data over time
- IOG will also use the EA model to inform planning and engineering for future activities and projects

Emissions Sources

- O&G industry emissions are typically driven by fuel use for compression and processing, plus flaring and venting
- IOG's platforms benefit from low power demand – wind/solar sources could replace diesel as primary power source for future installations
- The choice of compression concept will be a key factor for IOG's emissions profile from mid-2020s onwards

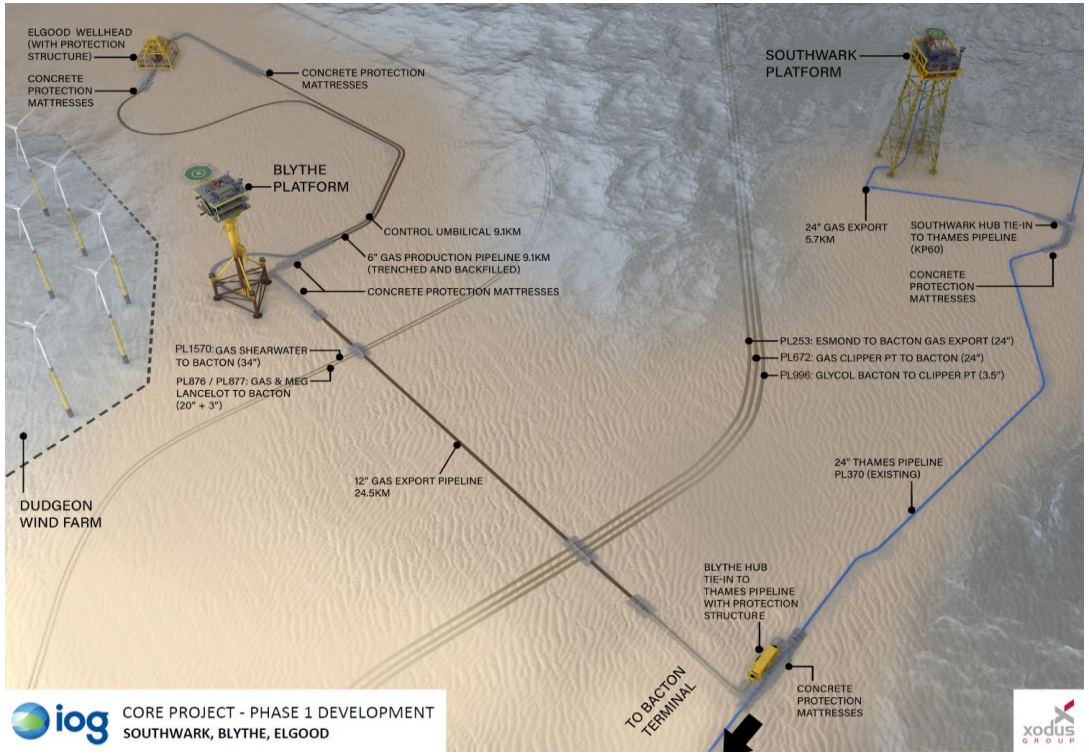
Sources of UKCS Emissions 1990-2018[1]



Source: 1) Oxford Institute for Energy Studies: Net Zero targets and GHG Emission Reduction in the UK and Norwegian Upstream Oil and Gas industry – A Comparative Assessment, UK National Atmospheric Emissions Inventory (NAEI)

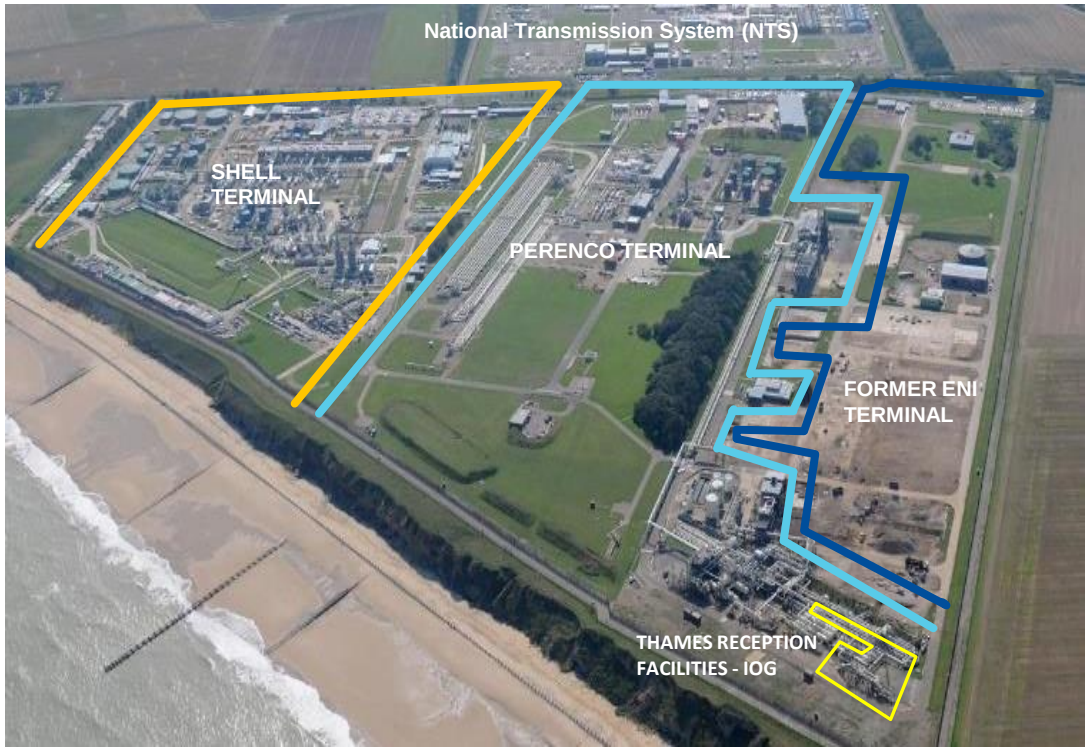
Phase 1 recap: overview of key infrastructure

Offshore platform and pipeline infrastructure



- Blythe, Elgood and Southwark gas fields (83 Bcfe 2P net), operated by IOG (50% working interest, CalEnergy Resources UK Ltd 50%)
- Small, low-impact unmanned platforms, controlled from onshore, standing in average water depth of 27m, with capacity to tie-in further assets in future

Onshore reception facilities at Bacton gas terminal



- Recommissioned Thames pipeline and reception facilities provide direct access into Perenco Bacton terminal and the National Transmission System (NTS)
- Strategic position at Bacton well positioned for cost and carbon efficiency as well as longer-term integrated energy hub potential

Methodology statement

IOG engaged Genesis to support with the development of an accounting and reporting tool to assess its GHG emissions in line with industry guidance. The assessment of GHG emissions was made in line with relevant industry guidance, including IPIECA GHG Reporting Guidelines (2nd edition, May 2011), the API Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Gas Industry, August 2009, and UK offshore guidance on reporting atmospheric emissions, including BEIS, EEMS Atmospheric Emissions Calculations (2008).

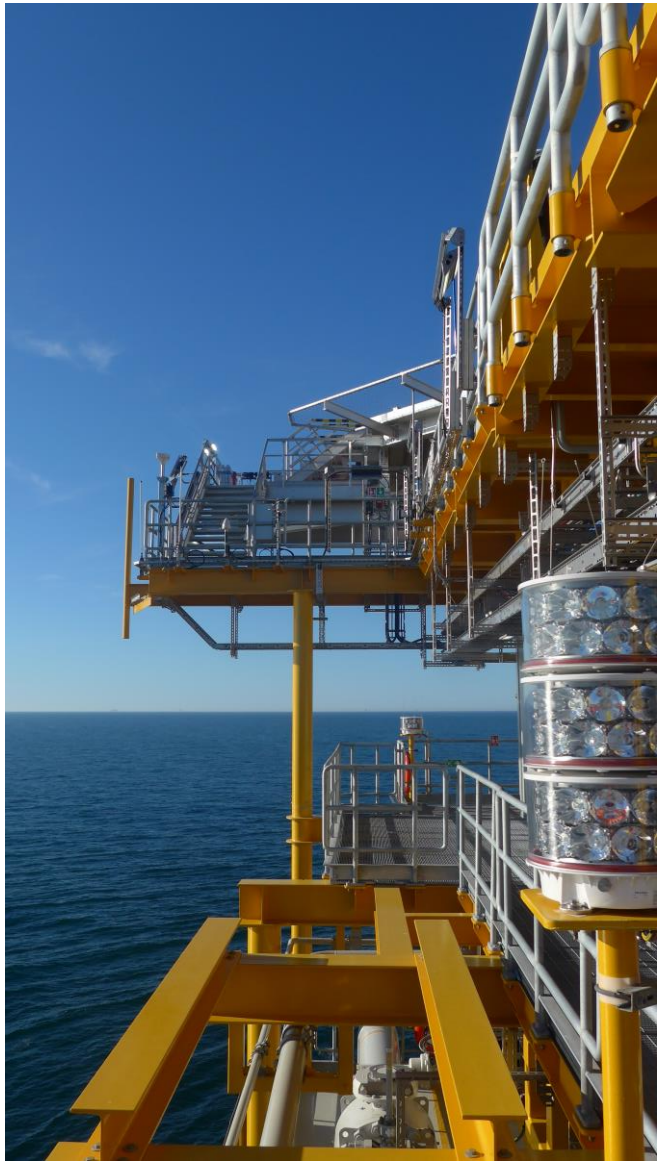
CO_2 and Methane are the predominant GHGs emitted from activities in the oil and gas industry and are the focus of reporting by UKCS operators. Emissions of CO_2 and methane are consolidated on an operational control basis and include Scope 1 and Scope 2 emissions as well as selected Scope 3 emissions. Scope 3 emission sources considered to be materially relevant to the Phase 1 development were included in the assessment in order to facilitate additional projection and disclosure.

- Scope 1 emissions occur from sources that are operated by IOG. These include platform and terminal vents, fugitive emissions, and modest combustion sources.
- Scope 2 emissions occur from electricity consumed at the onshore facilities and offices.
- Scope 3 emissions occur from sources across the value chain. These include leased assets such as vessels and logistics servicing offshore installations, business travel, and emissions from contracted drilling activities.

Using their AIR Framework, Genesis facilitated an internal stakeholder workshop to identify the relevant emissions sources and compile an emissions inventory. The following principles have been applied when consolidating emissions into organisational and operational boundaries:

1) *Transparency* – whether considered a scope 1 or scope 3 source, the rationale is clearly defined and articulated.
2) *Consistency* – wherever possible, the consolidation of emissions is aligned with financial reporting conventions so that financial and emissions metrics can be compared on the same basis. Consolidation of emissions also follows industry guidance and best practice.
3) *Balance* – activities that increases production and hence revenue and financial performance have emissions included in the inventory such that all materially relevant emissions associated with producing hydrocarbons are disclosed accordingly.

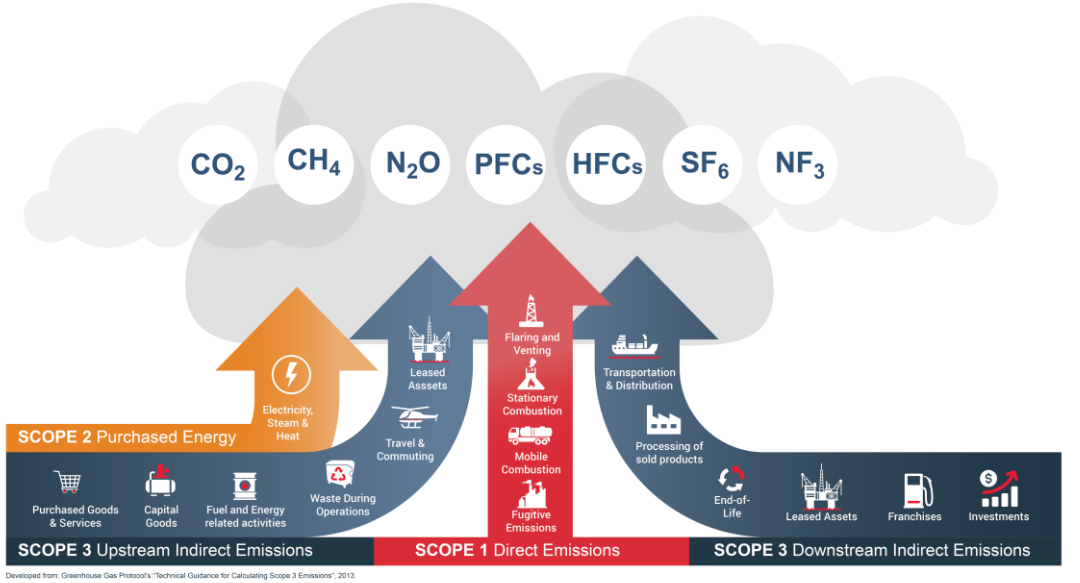
Gas composition was used to determine specific emission factors related to venting and fugitive sources. Standard UK factors are used to estimate emissions from other sources. Methane emissions are also reported on Carbon Dioxide equivalent basis using a GWP_{100} of 25 (as per UN Intergovernmental Panel on Climate Change 5th Assessment Report).



Scope definitions

- Clear scope definitions are a crucial element in ensuring valid, comparable output
- It is important to be transparent and consistent in defining which scopes activities fall into and effective boundaries of ownership and responsibility
- To be transparent, consistent and comparable with its independent E&P sector peer group, IOG reports Scope 1 and 2 emissions
  - i.e. resulting from assets where IOG has operational control
  - This aligns with Global Reporting Initiative and GHG Protocol
- Leased assets are classified as Scope 3 both by the peer group and GHG Protocol – as shown by diagram on right hand side
  - This includes drilling, vessel and logistics activities
- However, for full transparency, in addition to Scope 1 and 2, IOG also plans to report drilling-related emissions given their relative material relevance

Overview of GHG Protocol Scopes and Emissions



Source: Genesis

- **Scope 1**: Direct emissions from owned or controlled sources including facilities and vehicles e.g. fuel usage, flaring or venting
- **Scope 2**: Indirect emissions as a result of purchased energy
- **Scope 3**: All other indirect emissions that occur in a company's value chain, classified as either upstream and downstream activities in relation to Scope 1 emissions e.g. procurement, logistics and product use

Key inputs and projections

Key inputs

- Platform power generation, crane engine, platform fugitive emissions and sphere launcher venting
- Onshore sphere receiver venting, vent stack, metering runs and maintenance venting, onshore fugitive emissions
- Compression gas combustion (assumed from 2026 onwards as per FDP, however evaluation of potential alternative compression concepts over the next 1-2 years may result in a different solution)
- Corporate business travel and office electricity use

Key output projections

	Amount	Unit
Average annual Scope 1 and 2 emissions per platform (gross[1])	315	tCO_2e
Peak total annual Scope 1 and 2 emissions 2021-25 (gross[1])	2,646	tCO_2e
Average Scope 1&2 platform intensity over full life of project	0.4	$kgCO_2e/boe$
Cumulative total Phase 1 Scope 1 and 2 emissions intensity[2]	3.97	$kgCO_2e/boe$
Total Phase 1 + corporate Scope 1 and 2 emissions (gross[1])	404.7	$ktCO_2e$
Total projected Phase 1 drilling emissions[2] (5 wells, gross[1])	95.7	$ktCO_2e$
Cumulative total Scope 1 and 2 Phase 1 + corporate + drilling[3] emissions intensity	4.90	$kgCO_2e/boe$

1) Of which 50% (net) owned by IOG 2) Compression-driven emissions are assumed to be allocated to Phase 1 as a proportion of total projected production, as all production will be routed through the compressor 3) Leased drilling-related activities are classified as Scope 3 but projection is shown here given material relevance

Conclusion: a very low emissions operating system

Small unmanned facilities are a key differentiator

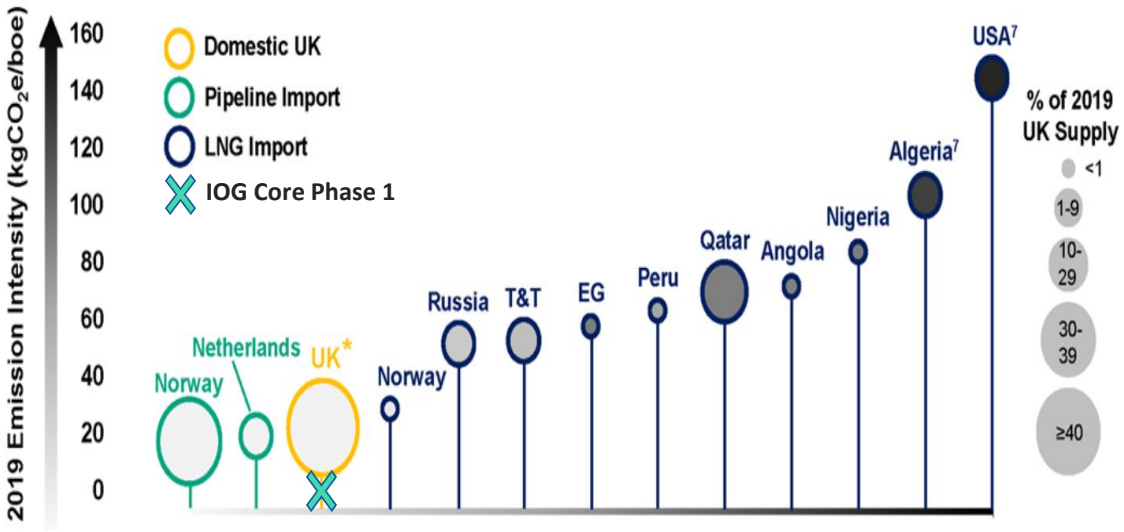
- The Phase 1 offshore platforms have average unmanned power demand of just 33kW – similar to a small electric car – and projected average annual emissions of under 350 tonnes CO_2e
- Key factors are the relatively small size, lack of offshore processing and normally unmanned status
- Potential to make platforms entirely carbon neutral in future phases by integrating wind and solar power

Gas is a key transition fuel, but not all gas is equal

- IOG gas will be considerably less carbon intensive than other UK domestic gas production
- This is even more the case vs gas imports which have higher intensity still as demonstrated below
- For Phase 1 alone, this would save approximately 962,000 tonnes of CO_2e vs a typical blend of pipeline and LNG imports[1]

Blythe platform

Carbon intensity of different gas sources[2]



Sources: 1) Weighted average of pipeline and LNG imports based on the following OGA source, assuming constant intensity levels over time: www.ogauthority.co.uk/media/6522/emissions-intensity-comparison-of-ukcs-gas-production-and-imported-lng-and-pipelined-gas-v2.png 2) WoodMackenzie Upstream Emissions Benchmarking Tool, OGA, PPRS, EEMS Database, EU ETS, BEIS NPD, Thinkstep

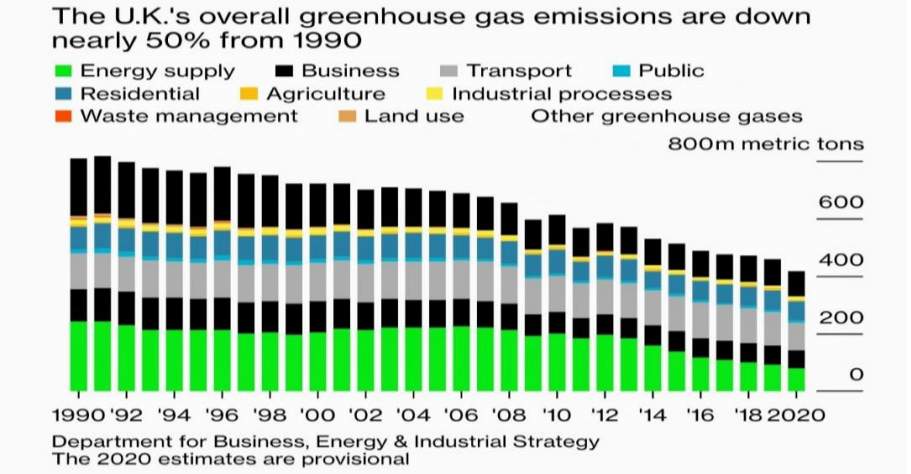
IOG's role within the UK's energy transition

In delivering our strategy, IOG is very aware of the social and regulatory context within which we operate. This underlines why we have assessed our projected emissions and intend to offset them in order to be a Scope 1 and 2 Net Zero operator from 2021 onwards.

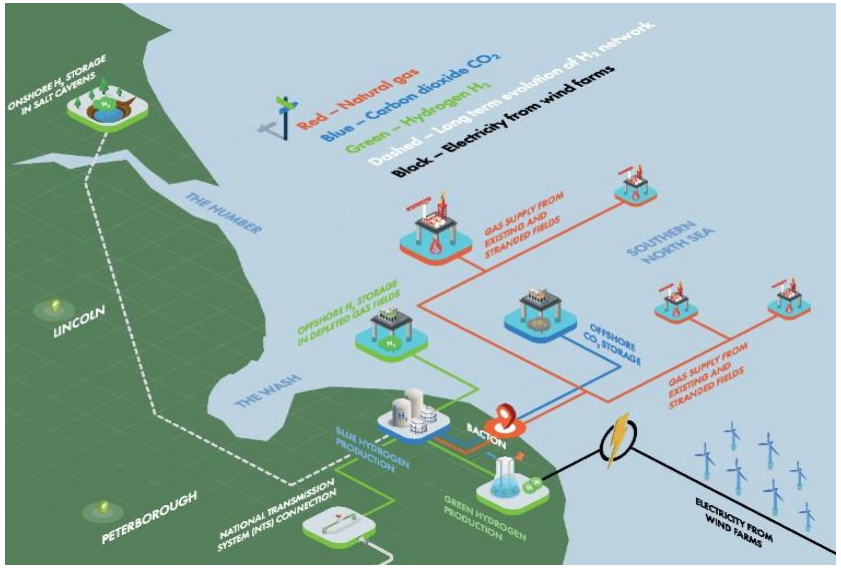
The following are some of the key initiatives set out by government bodies over the past year alone, to which we aim to contribute positively as a Net Zero energy supplier:

1. UK climate: interim targets to help meet the 2050 Net Zero legislation include:
   - 68% drop in emissions (vs 1990 levels) by 2030
   - 78% drop by 2035
2. The revised OGA Strategy:
   - Maximise value of UK resources whilst helping to deliver Net Zero 2050
   - Future licensing to be subject to a Climate Compatibility Checkpoint
   - Expecting industry to measure, report and reduce emissions as far as reasonably possible
3. The UK Government's Ten Point Plan:
   - Setting out major new targets for wind, hydrogen, CCS, nuclear, EVs, heat pumps and other energy/climate related activities
4. The UK North Sea Transition Deal, under which:
   - The UK O&G sector is expected to cut emissions by 50% by 2030
   - £16bn of industry and government investment will be committed to transition projects
5. The OGA-led Bacton Energy Hub initiative
   - Laying the foundations for a decarbonised energy cluster focused around the Bacton terminal and catchment area (see image on right)

UK emissions since 1990



Bacton Catchment Area



Sources: Bloomberg, BEIS, OGA. OGA Strategy: https://www.ogauthority.co.uk/media/6980/annex-2-the-oga-strategy.pdf
Ten Point Plan: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/936567/10_POINT_PLAN_BOOKLET.pdf
North Sea Transition Deal: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/972520/north-sea-transition-deal_A_FINAL.pdf

Appendix: IOG's 2020 Climate Change & Sustainability Policy

IOG's ambition is to be a safe and efficient developer and producer of high-value, low-carbon gas.

IOG appreciates that limiting climate change and transitioning to a more sustainable economy are critical challenges of our time. In that context, we recognise the importance of the UK's 2050 Net Zero target as part of global efforts to meet the goals of the 2015 Paris Accord. IOG aims to contribute positively to the UK's energy transition by helping to supply stable and affordable energy to UK homes and businesses as part of a lower-carbon energy supply mix.

To help achieve this, IOG is committed to:

- Identify and evaluate the existing and projected Scope 1 and 2 greenhouse gas emissions from our sanctioned development assets and ongoing corporate activities
- Evaluate the efficacy of methods to mitigate or offset these existing and projected emissions
- Implement the most effective methods as far as practicably and economically possible
- Use these emissions projections and mitigation methods to calculate a meaningful corporate Carbon Neutrality target for future adoption
- Derive appropriate benchmarks from the emissions analysis and integrate these into future investment decisions, along with any other relevant market factors
- Collaborate with relevant partners, associations and industry bodies as part of a wider industry effort to mitigate emissions and help meet the UK's Net Zero target
- Embed a mindset of sustainability, responsibility, strong ethics and respect for people and the environment throughout our management decisions, operations and future investments
- Communicate effectively and clearly to relevant stakeholders on progress and performance on the objectives set out herein

IOG considers these commitments as essential elements of a robust strategy and good corporate citizenship, in the context of collective efforts to mitigate climate change.

The Board of Directors has assigned executive responsibility to the CEO for the implementation of this policy, which will be continually reviewed and revised in light of future changes in relevant public information, government policy and scientific progress.