



Rosebank: Investing in energy security and powering a just transition

Exploring the anticipated socio-economic
impacts of the Rosebank oil and gas field

About this report

Rosebank is an oil and gas field 130 kilometres off the coast of the Shetland Islands. Equinor acquired the operatorship in 2019 and has been working with partners to implement a suitable development solution for the field. Development of the field is in line with the UK Government North Sea Transition Deal (NSTD), bringing much needed energy security and investment to the UK while supporting the UK's net zero targets.

Equinor is committed to fostering the skills needed to continue oil and gas development whilst building the energy workforce of the future, able to work on offshore wind farms and other low carbon business areas. Equinor is working with the supply chain to ensure that a substantial part of the project's value comes to Scotland and the UK, rather than abroad. Recently, Equinor hosted a supplier day in Aberdeen, in partnership with EIC, to increase the number of local suppliers invited to tender.

This report looks at some of the anticipated economic and societal impacts that would be generated by the Rosebank project. The economic contribution and anticipated employment analysis was undertaken by Wood Mackenzie and Shetland-based Voar Energy consultants.

About Equinor

Equinor is a broad energy company powering the UK, creating jobs and accelerating the energy transition. Equinor has been operating in the UK for nearly 40 years and today employs over 650 people in the UK, working with over 700 suppliers across the country to support our oil and gas, renewables and low carbon solutions businesses. Equinor is committed to long term value creation in a low carbon future and aims to be a net zero company by 2050.

Equinor supplies energy from Norway to the UK. In fact, over 40% of total UK gas demand, and over one fifth of UK oil demand was met by Equinor in 2022. Equinor is proud to have one of the lowest oil and gas carbon footprints in the industry.

In addition, Equinor is working to develop and produce domestic oil and gas to bring energy security to the UK through its Rosebank and Mariner oil fields. Mariner is one of the largest and most digitally advanced offshore investments in the UK over the last decade.

In the UK, Equinor already powers around 750,000 homes through its three wind farms; Sheringham Shoal, Dudgeon, and Hywind Scotland, the world's first floating wind farm. Alongside partners, Equinor is building Dogger Bank, the largest offshore wind farm in the world and developing plans to extend both the Dudgeon and Sheringham Shoal wind farms.

In addition to the renewables and oil and gas businesses, Equinor is also working to develop hydrogen and carbon capture projects in The Humber, Teesside and Scotland.



“At peak production the annual GVA of the field is estimated to be £2.1 billion, equivalent to 1% of the Scottish GDP. Meanwhile, the development is projected to support nearly 1,600 jobs at its peak.”

Foreword

“Rosebank is an incredibly exciting project, with long-term investment, development and engineering potential which will create value for the UK economy and help provide energy security for decades to come.

Equinor is a broad, diversified energy company, which has been operating in the North Sea for 50 years. With an ambition to be a net zero company by 2050, we understand the role oil and gas producers play in meeting the UK's net zero target. While fossil fuels are an important element in the energy mix, operators must do all they can to ensure they produce hydrocarbons sustainably. Rosebank will help meet UK's demand for a secure supply of oil and gas, while drawing on experience from our projects in Norway to reduce carbon emissions from its operations.

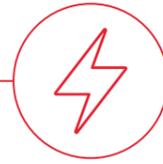
We plan to use electricity from increasingly renewable sources to power the operations on the Rosebank field, helping to reduce the reliance on gas-powered generators and, as such, cutting the biggest source of emissions for offshore oil production.

As part of the project, we will be working with supply chain companies and manufacturers across Scotland and the UK, fostering the skills needed to continue oil and gas development. Many of these skills are transferrable, allowing energy professionals to work in our offshore wind farms and other low carbon solutions businesses, building the energy workforce of the future. At peak production the annual Gross Value Added of the field is estimated to be £2.1 billion, equivalent to 1% of the Scottish GDP. Meanwhile, the development is projected to support nearly 1,600 jobs at its peak.

We hope you find this report valuable and informative in demonstrating the expected socio-economic benefits of the Rosebank project. As we look ahead to operations going live on Rosebank, we are excited to work with our communities, partners and stakeholders to ensure that we can maximise the benefits of this project for the UK today, and future generations.”



Arne Gürtner
SVP Exploration and Production
International, UK and Ireland
Equinor



HOW IS ROSEBANK DIFFERENT?

The key difference of Rosebank compared to other oil fields is that it aims to draw on new technology applications to help reduce carbon emissions from its production, through FPSO electrification.

Building offshore installations that can be powered by electricity reduces reliance on gas powered generators which are the biggest source of production emissions. The electrification of UKCS assets is vital to meeting the North Sea Transition Deal's target of reducing production emissions by 50% by 2030, with a view to being net zero by 2050.

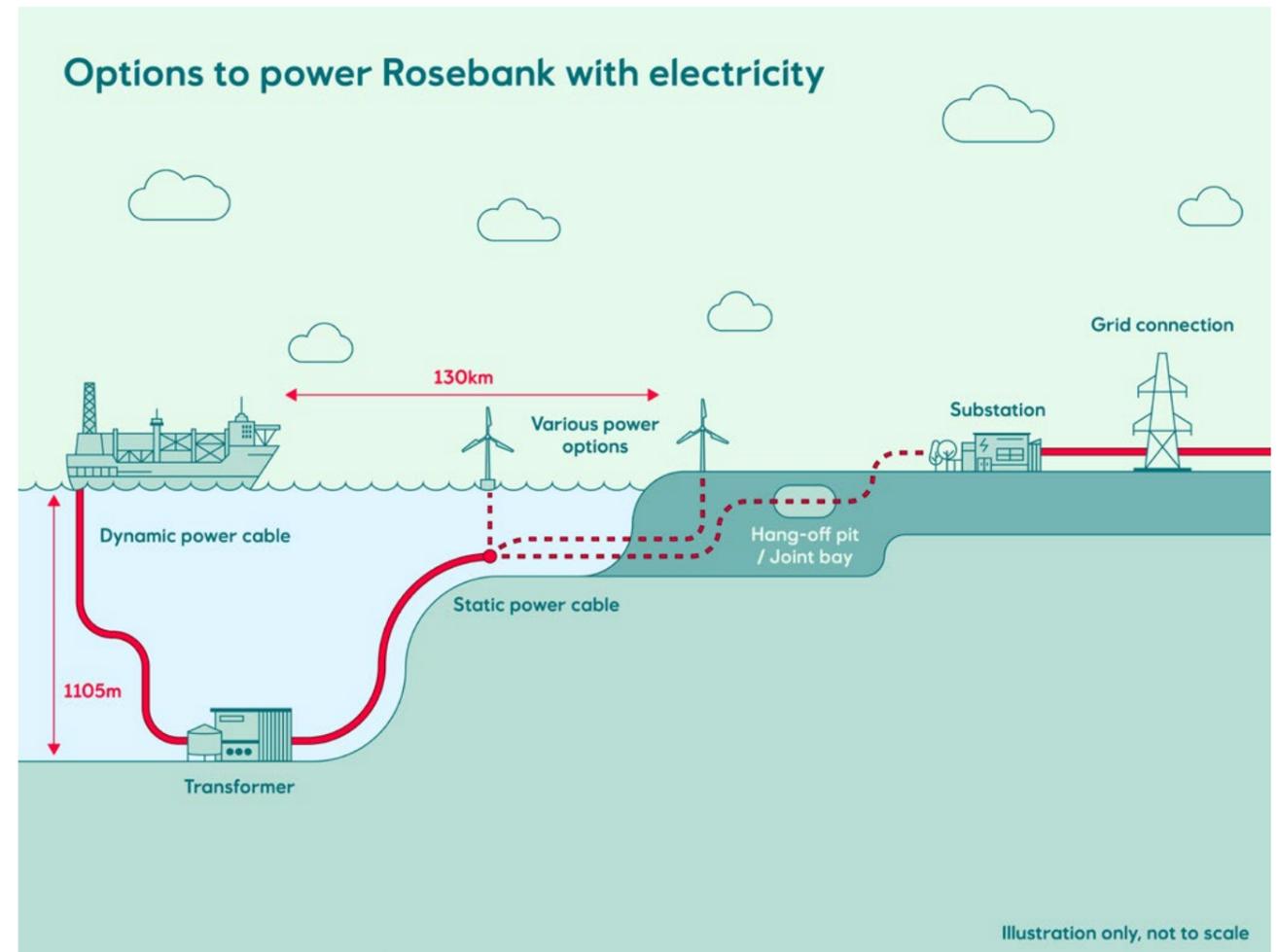
Electrification of Rosebank is a long-term investment that will drastically cut the carbon emissions caused by using the FPSO's gas turbines for power. Using electricity as a power source on Rosebank results in a reduction in emissions equivalent to taking over 650,000 cars off the road for a year compared with importing 300 million barrels of oil from international sources.

About Rosebank

The Rosebank field is a large undeveloped oil and gas asset in the UK with recoverable resources of more than 350 million barrels of oil equivalent. The development, scheduled to start production in 2026, is anticipated to produce through to 2050. Developed using a floating production storage and offloading vessel (FPSO), a ship which separates fluids into oil, natural gas, water and waste liquids, it will be designed for switching from gas-fuelled power to electric. The aim is that Rosebank will be one of the first greenfield oil and gas developments in the UK offshore to be powered by electricity. This would mean that the development would have some of the lowest emission barrels on the UK Continental Shelf (UKCS) and globally.

The Rosebank field sits in the Faroe-Shetland Channel, around 15 kilometres from the UK/Faroese maritime boundary and 130 kilometres from Shetland.

Rosebank was discovered in 2004. Equinor acquired the Rosebank licenses from Chevron in January 2019. Together with our joint venture partners, Suncor Energy and Ithaca Energy we have worked to design a concept that is in line with the North Sea Transition Deal goals and are progressing towards a final investment decision.





An Equinor operator uses a computer generated 3D model (a digital twin) of the Equinor-operated Valemon platform in Norway to plan offshore work. This technology will allow Rosebank operations teams to pre-plan work onshore, reducing the amounts of physical trips to the platform; reducing safety exposure and lowering emissions.



Digitalisation in Equinor
The Mariner operations team in the UK using a digital twin on the offshore platform to carry out checks and perform maintenance more efficiently.



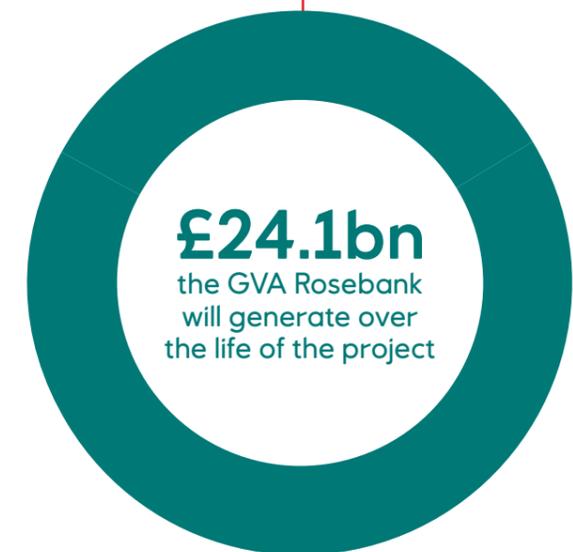
Equinor is one of the most experienced operators in the world when it comes to electrification of oil and gas installations. Previous minister of petroleum and energy Kjell-Børge Freiberg presses the button at the start-up of electrification from land of the Johan Sverdrup development in the Norwegian offshore.



ROSEBANK – INVESTING IN THE UK

It is estimated that it will cost £4.1 billion to develop Rosebank and a further £3.6 billion in operating expenses. This direct investment is projected to also result in significant indirect and induced economic benefits. It is estimated that the gross value add (GVA) of the development will be **£24.1 billion** over the field's life. At peak production the annual GVA of the field is estimated at £2.1 billion, equivalent to **1% of the Scottish GDP**.

The total field investment is £8.1 billion including both the development, operation and decommissioning of the field. The development could play an important role in establishing the infrastructure necessary for the electrification of all West of Shetland oil and gas operations. It also represents an opportunity to train and develop the local supply chain while also developing transferable skills in the manufacturing sector required for the build out of the offshore wind sector.



Source: Wood Mackenzie



JUST TRANSITION – DEVELOPING SKILLS AND PROVIDING JOBS NOW AND IN THE FUTURE

A development of this scale could create substantial employment both across the field development and the production operations which will run until around 2050. The development and operation of the field will create direct jobs, the indirect impact of which will be to create additional roles in the supply chain. Collectively, these will drive further job and wealth creation in the wider economy.

Rosebank is estimated to support nearly **1,200 UK-based full-time equivalent (FTE) jobs at its peak** in Q3 2025 (including direct, indirect, and induced jobs), and **an average of 450 UK-based FTE jobs over the full life of the field** including decommissioning. Multiple workstreams will provide employment through the supply chain in areas such as fabrication of equipment, well drilling and completions, and installation of subsea infrastructure.

By 2031 the development is planned to be fully operational. When all wells are onstream, the development is projected to maintain an average of 390 UK-based FTE jobs for the next twenty years.



Local suppliers meet representatives of Equinor at the Rosebank supplier day held in Aberdeen in June 2022

Estimated jobs



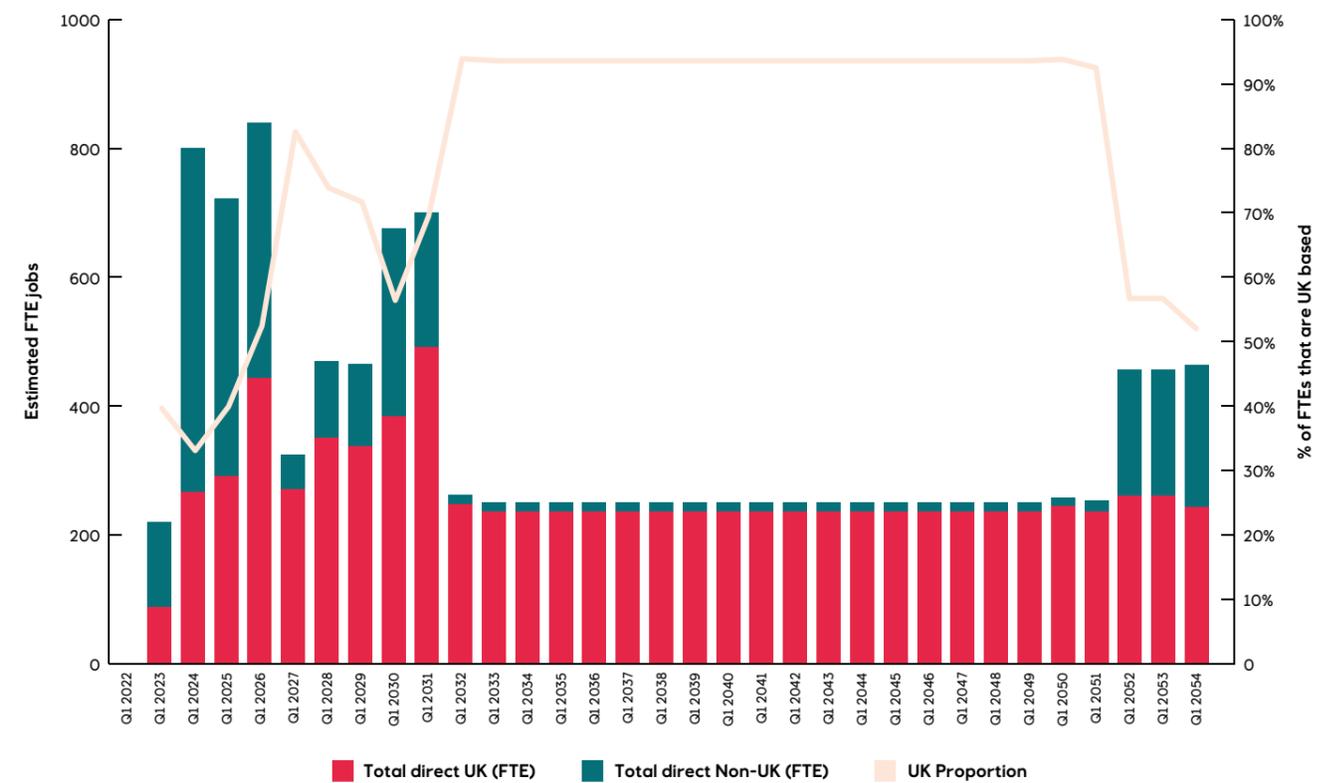
In excess of 1,600 jobs are estimated to be directly employed in the development of the project at the height of the construction phase in Q2 2025. Peak UK-based employment – consisting of nearly 1,200 direct, indirect, and induced jobs – is observed in the following quarter.

Once the first phase of production comes onstream in 2026 it is estimated that there will be nearly 300 FTE roles for 25 years, 90% of which are likely to be UK-based.

Accounting for direct, indirect and induced employment, Rosebank is estimated to support 1,162 UK-based FTE jobs at its Q3 2025 peak.

Over the life of the field it is estimated that there will be 450 *UK-based jobs including 255 direct, 137 indirect, 58 induced.

Fig 1. Estimated full-time Rosebank employees broken down into UK based vs overseas from 2022 to 2054



Source: Wood Mackenzie and Voar Energy



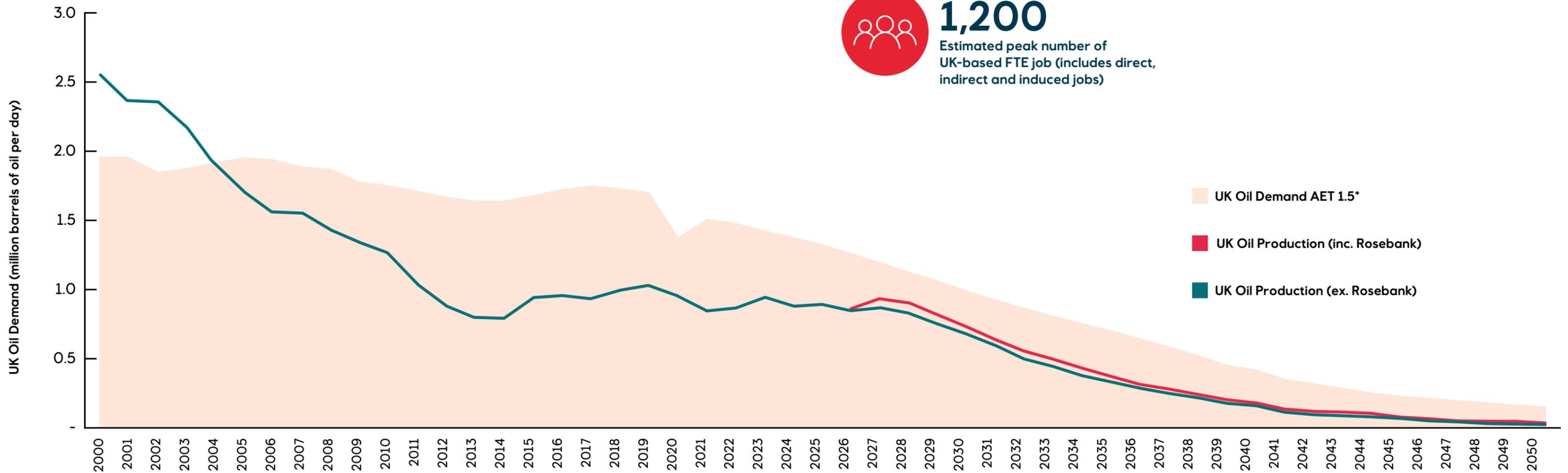
ENERGY SECURITY

At its peak, the field is estimated to produce **77,000 barrels of oil equivalent per day, or 69,000 barrels of oil and 44 million cubic feet of gas per day.** Through to 2030 Rosebank is likely to account for more than **~8% of the UK's oil production.**

In the context of the current energy crisis and growing energy security concerns, this is significant. In 2021 the UK produced 57% and 41% respectively of the oil and gas volumes required to meet domestic demand. Despite the falling demand for oil and gas over the long-term, the outlook is for increasing import dependence. Even under an accelerated energy transition case, necessary to meet a 1.5 degree warming target, the UK remains a net hydrocarbon importer beyond 2050. The development of Rosebank will bolster Europe's production and energy security outlook. Expressed in terms of oil self-sufficiency, from first oil in 2026 through to 2030, Rosebank is estimated to support the UK's oil self-sufficiency by around 5%.

The development of Rosebank will help secure Europe's production and energy security outlook.

Fig 2. UK Oil Supply with and without Rosebank vs UK Oil Demand under AET 1.5 scenario*



*AET 1.5 is Wood Mackenzie's 1.5 degree warming scenario

Source: Wood Mackenzie

IN SUMMARY...

£8.1bn
Total field investment with 78% of this being spent in the UK

8%
Of UK oil production from Rosebank to 2030

1,600
Estimated peak number of direct FTE jobs

39 million cubic feet per day
Average daily gas production over the first 10 years of field life, equivalent to almost twice Aberdeen's daily gas consumption.

£24.1bn
Estimated gross value add

250kt CO₂
Carbon avoided by reusing existing FPSO

1,200
Estimated peak number of UK-based FTE job (includes direct, indirect and induced jobs)

