

Westwood Global Energy Group

# The Vital Role of Oil & Gas in the UK's Energy Supply

DEVEX May 2022 Yvonne Telford

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### Agenda

- Historical UKCS production and development trends
- Production outlook
- UKCS challenges
- Key messages



#### Setting the scene

Oil and gas provides 75% of UK energy. Net imports have risen from -17% to c. 35% of total demand since 2000. Soaring prices and recent events have highlighted the importance of energy security.







# Historical sanctions and production trends

Reduced investment, smaller projects and fewer quality opportunities leading to production decline. Recent environmental pressures are creating uncertainty for future developments





Source: Westwood Atlas, capex from NSTA, Brent oil spot price from EIA, NBP spot price from Reuters

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# UKCS production outlook Production expected to re-enter a decline post 2023. Field sizes getting smaller and greater reliance on tie-

backs to existing aging infrastructure



- Declining number of field start-ups and sanctions. Higher activity expected in 2022 as projects are brought onstream following COVID delays ٠
- Average field sizes have been getting smaller, with an increasing dominance of small tie-back developments. However, projects such as Rosebank and Cambo could help arrest the trend
- UK Government stated it will 'fast track project sanctions' and open a licensing round later in the year. Process needs to speed up to deliver ٠
- Additional developments will offset the production decline maybe even achieve another production plateau ٠

### **Future developments**

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Liquids Gas

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Source: Westwood Atlas

2.3 billion boe in 48 undeveloped discoveries. Although plans are progressing for some, many have technical and commercial challenges



• However, many of these discoveries have been around for a long time, so can we overcome challenges to help them progress?

# Exploration contribution 2012 - 2021

Low exploration activity and discovered volumes failing to replace production. Recent larger discoveries are reliant on appraisal



- 123 exploration wells drilled making 23 discoveries with total resources of c. 580, giving an average CSR of 19% (high CSR in 2020 and 2021 but on very low activity)
- Average reserves replacement since 2012 is just 10%
- Near field drilling dominates activity with an average of 67% over the decade
- Only three discoveries ≥50 mmboe since 2012. Appraisal is pending at Isabella and recent poor appraisal at Glendronach and Glengorm has led to severe resource downgrades



## 2022 exploration drilling outlook

Recovery in UK exploration expected following the all-time low of 2020 and 2021. 12 prospects are targeting c. 730 mmboe in pre-drill unrisked resources



- Five appraisal wells with midpoint volumes of c. 195 mmboe, including high impact Isabella
- Despite projected increase in exploration activity and potential of a Licensing Round later ٠ this year, the impact will not be felt in the short term
  - Analysis shows that discoveries made since 2002 have an average time from discovery to first ٠ production of 5 years (range 0 to 16 years)



## **UKCS challenges: commercial viability**

2.3 billion boe potential prize in NTDs and commercial discoveries. Many have stalled due to marginal project economics or lack of investment appetite. 'Getting assets into the right hands' is still valid for project progression



- 55% of resources are technically challenging to develop, which increases capex requirements
- However, lessons learned to date could help improve ٠ project execution and economics



- 24% held by small companies who may struggle to gain access to finance
- Larger companies have competition for capital within domestic and international portfolios
- Environmental strategies influencing investment in oil and gas projects



# UKCS challenges: access to infrastructure Without MER activities to deliver new, incremental reserves, c. 60% of UK hubs are at risk of closing by 2030.

UK operations are sensitive to hydrocarbon prices, up to 75% of hubs ceasing by 2030 at US\$40/bbl



Source: Westwood Atlas

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\*Hub closure is based on Westwood's economic modelling of assets including remaining reserves, production profiles and costs. Base case price = US\$65/bbl, 47p/therm low case = US\$40/bbl, 25 p/therm and high case = US\$80/bbl, 70p/therm

## **UKCS challenges: environmental pressures**

Projects need to meet both companies' internal decision gates as well as increasingly stringent environmental standards and expectations



Source: Westwood Atlas

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- In order to continue to maintain investor appetite, there is a need for clear guidance on the future environmental requirements for developments
- Increasing pressure to reduce emissions. North Sea Transition Deal currently aims for 10% reduction in emissions by 2025, 25% by 2027 and 50% by 2030, relative to 2018 values
- Westwood's forecast suggests total CO<sub>2</sub> emissions reductions are on track, but only as a result of hub closures
- E&P opportunities will need to address CO<sub>2</sub> emissions intensity (kgCO<sub>2</sub>/boe)
- Future ETS pricing will have an increasing impact on operating costs





- Soaring prices and recent events in Ukraine have highlighted energy security and the importance of domestic oil and gas production during the energy transition
- Further investment in brownfield, greenfield and E&A needed to arrest the domestic production decline. Need to meet demand during the growth of the renewables sector
- E&A and development opportunities exist
  - 2022 activity includes 12 exploration wells targeting 730 mmboe and 5 appraisal wells to prove up 195 mmboe
  - 2.3 billion boe in undeveloped discoveries with the potential to be commercialised
- The challenges can be overcome, but is there enough appetite from E&P companies and sufficient support from government bodies to progress developments?



#### **Thank-you for listening!**

#### Q&A



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