

sustainable actions risk – emissions – engagement

Europa – Ireland Emissions Study February 2023









Executive summary



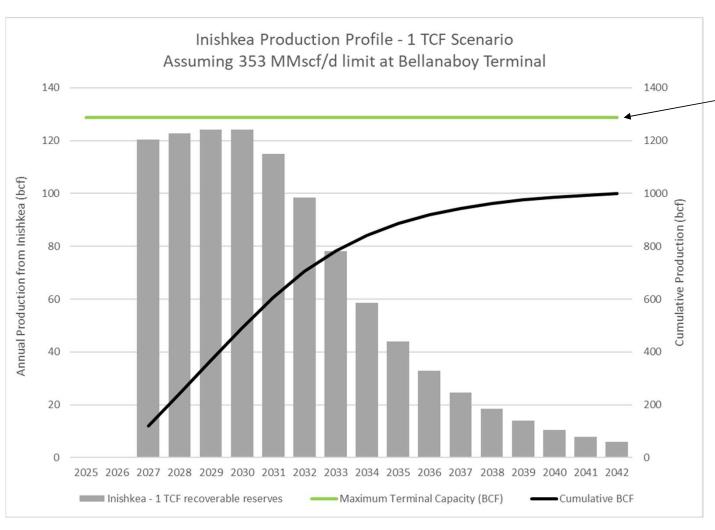
- Average <u>operational</u> life-of-field emissions intensities calculated for Corrib and Inishkea Fields are:
 - Corrib only: 5.0 kgCO2e/boe
 - Corrib + Inishkea (1 TCF): 3.7 kgCO2e/boe
 - Incremental emissions Inishkea only (1 TCF): 2.8 kgCO2e/boe
- Average Emissions Intensity of imported gas from UK to Ireland (including compression and export)
 36 kgCO2e/boe
- Average Emissions Intensity of imported gas from US (LNG) to the UK = 145 kgCO2e/boe (does not include export to Ireland)
- Weighted average of all LNG imports to UK (multiple sources) = 87 kgCO2e/boe
- Based on these numbers (and assumptions detailed in this study), gas produced from the Corrib and Inishkea Fields and supplied to the Irish domestic market is:
 - 11% of the El compared to imported gas from the UK to Ireland
 - 3% of the EI compared to imported LNG from US to the UK
- Therefore, domestic gas production from Corrib and Inishkea will have a significantly lower emissions intensity compared to UK and US imported gas



1. Emissions from Corrib & Inishkea Fields



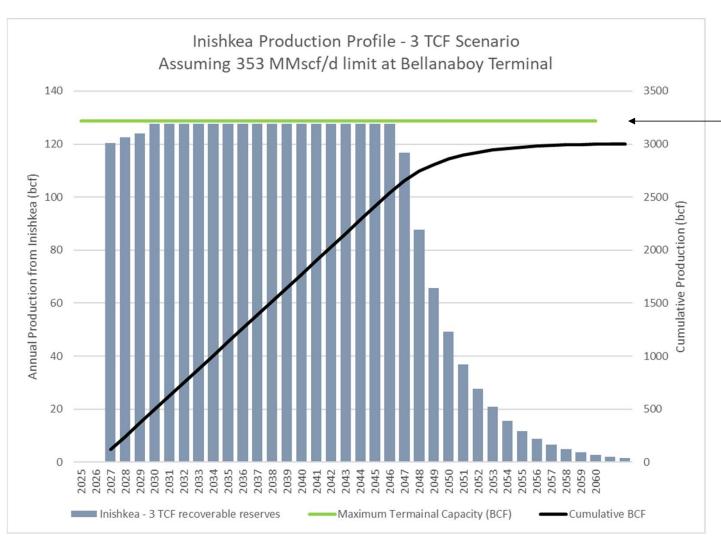




- Modelled annual production for 1 TCF scenario
- Accounts for capacity of the Bellanaboy Terminal of 353 MMscf/d (128 bcf p.a.).
- Assumes
 - 3-year overlap in production with Corrib
 - Short plateau and 25% annual decline
 - 15 year field life
 - Total cumulative production 1 TCF

Inishkea Field – 3 TCF Scenario modelled gas production

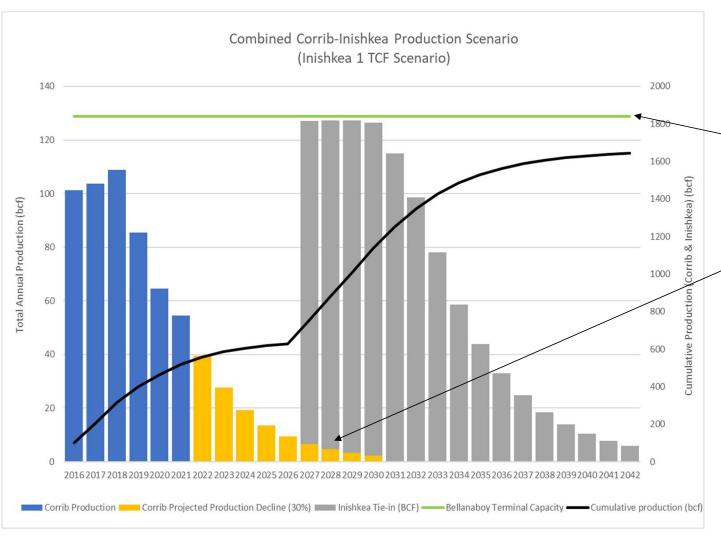




- Modelled annual production for 3 TCF scenario,
- Accounts for capacity of the Bellanaboy Terminal of 353 MMscf/d – no upgrading of facilities.
- Assumes
 - · 25% annual decline
 - 35 year field life
 - Total cumulative production 3 TCF
- Upgrading capacity at terminal in 3 TCF case likely required.



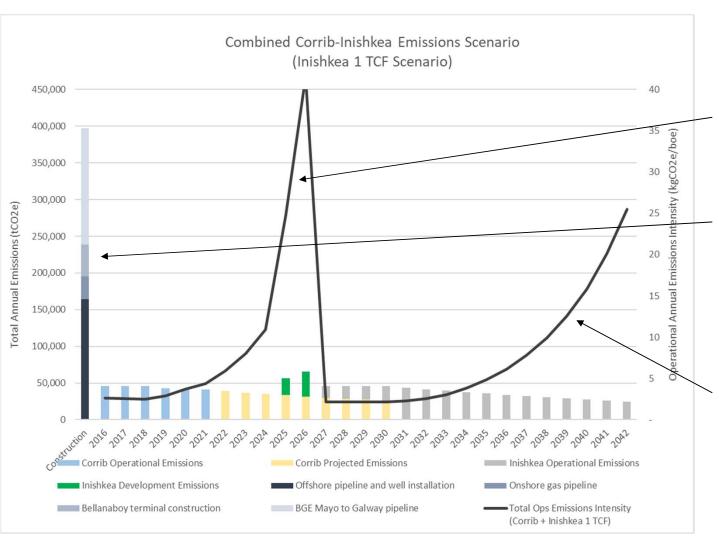
Corrib & Inishkea Fields – Combined scenario for gas production



- Combined production scenario for Corrib and Inishkea
- 1 TCF scenario for Inishkea, taking into account capacity of the Bellanaboy Terminal – no upgrading of facilities.
- Model assumes some overlap in production between Corrib and Inishkea
- Based on assumptions and models from previous slides.



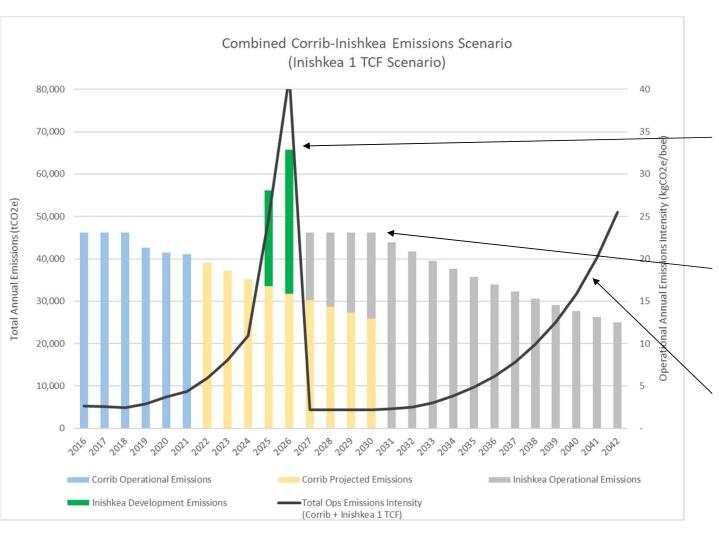




- Total construction and annual operational emissions from Corrib and Inishkea
- Spike in Corrib's emissions intensity as production declines to low levels before Inishkea comes online
- Emissions associated with construction of Corrib facilities
- Inishkea operational emissions initially assumed to be the same as when Corrib was at/near peak production
- Emissions intensity in fields increases as production declines.

Corrib & Inishkea Fields – Combined operational emissions

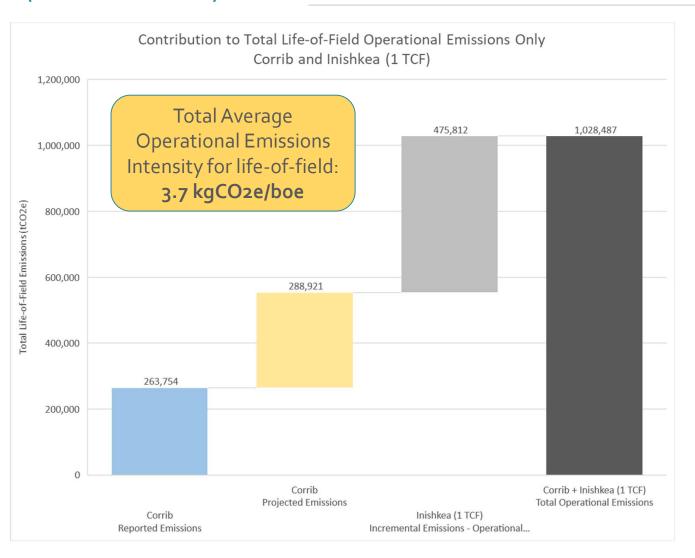




- Total annual operational emissions from Corrib and Inishkea
- Spike in Corrib's emissions intensity as production declines to low levels before Inishkea comes online
- Inishkea operational emissions initially assumed to be the same as when Corrib was at/near peak production
- Emissions intensity in fields increases as production declines.

Corrib & Inishkea Fields – Life-of-Field operational emissions (Inishkea 1 TCF)





- Total operational emissions from Corrib and Inishkea over full life of both fields
- Development and construction emissions not included
- Emissions calculated based on combined production scenario for Corrib and Inishkea (1 TCF Scenario)
- Average Life-of-Field Emissions Intensities:
- · Corrib only:
 - 5.0 kgCO2e/boe
- · Corrib + Inishkea (1 TCF):
 - 3.7 kgCO2e/boe