

UKCS Oil and Gas Production, Conversion Factors and Oil Equivalent Production

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Crude Oil and NGLs (1)

- There is no standard conversion factor between barrels (volume) and tonnes (mass)
- However, ***average*** factors for UKCS crude/NGLs in 2004 are:
 - crude oil: 1 tonne \approx 7.56 barrels
 - NGLs: 1 tonne \approx 11.5 barrels
 - "oil": 1 tonne \approx 7.89 barrels

Crude Oil and NGLs (2)

- 1 tonne oil (mass) \neq 1 tonne oil equivalent (toe – energy measure)
- ***Average*** conversion factors for UKCS oil in 2004 are:
 - crude oil: 1 tonne \approx 1.090 toe
 - NGLs: 1 tonne \approx 1.160 toe
 - "oil": 1 tonne \approx 1.096 toe

Crude Oil and NGLs (3)

- There is no agreed standard conversion factor between tonnes of oil equivalent (toe) and barrels of oil equivalent (boe)
- If production is being presented in terms of boe, I therefore suggest measuring oil production in barrels
- That means using the original reporting units (if barrels) or converting from tonnes to barrels, **not** converting from toe to boe

Natural Gas

- There is no standard conversion factor between volume measures (e.g. cubic metres, cubic feet) and energy measures (e.g. therms, GWh, tonnes of oil equivalent)
- However, **average** factors for UKCS natural gas in 2004 are:
 - 1 cubic metre \approx 35.315 cubic feet
 - 1 billion cubic metres \approx 11.0 TWh
 - 1 billion therms = 29.3071 TWh
 - 1 toe = 11.63 TWh (i.e. 1 toe = 396.83 therms)
 - 5,800 scf \approx 1 boe (i.e. 1 TWh \approx 0.5541 million boe)

DTI Data on 2004 Production

- **Oil Production 95.374 million tonnes**
 - of which:
 - crude oil 87.516 million tonnes
 - NGLs 7.858 million tonnes
 - ≈ **2.06 million barrels/day**
- **Gas Production 1,038,845 GWh**
 - of which:
 - gross production 1,115,744 GWh
 - producers' own use 76,899 GWh
 - ≈ 94.534 bcm
 - ≈ **1.57 million boe/day**
- **Oil and Gas Production ≈ 3.63 million boe/day**