

Wintershall

Cell: H9

Comment: Rick Heede:

Wintershall Dea's roots reach back more than 100 years: Its predecessor companies Wintershall and DEA Deutsche Erdoel AG were among the pioneers of the German oil and gas industry. Both companies repeatedly made a mark with their technical know-how and skills and also enhanced their portfolio systematically. From the second half of the 20th century on, they increasingly became international players and secured challenging concessions worldwide. They have continued on that path together since the merger in 2019.

Cell: M11

Comment: Rick Heede:

On this worksheet we report extractive data for each company or state-owned enterprise. Three columns under crude oil and natural gas allow for data reported in one of three formats (e.g., thousand barrels per

day, or million barrels per year, or million tonnes per year). Coal is normally reported in short tons or metric tonnes per year.

The subtraction of the fraction typically sequestered in petrochemicals and other non-combusted uses such as road oils, waxes, lubricants, greases, etc. Non-fuel uses are accounted for in the emission factors and applied to each entity in the oil, gas, and coal summary worksheets.

Cell: F12

Comment: Rick Heede:

Total net worldwide crude oil plus natural gas liquids produced by each company or state-owned enterprise. Where data is available, we list net production (after royalty production is deducted).

We rely on company annual reports, Form 10-k, or other company data where available. In some cases -- particularly for state-owned oil and gas companies -- we use production data from the Oil & Gas Journal in its OGJ150 and OGJ100.

Crude production includes natural gas liquids (NGL) unless noted.

Cell: J12

Comment: Rick Heede:

Natural gas is typically reported as dry gas; natural gas liquids are reported under crude oil.

Carbon dioxide is normally removed from the gas flow at the production site (see "Vented Carbon Dioxide"). "SCM/d" = standard cubic meters per day. "cf/d" = cubic feet per day.

Net production typically excludes a number of diverted gas streams. Quantities and fractions vary; ExxonMobil's exclusions are typical of the industry: "Net production available for sale quantities are the volumes withdrawn from ... natural gas reserves, excluding royalties and volumes due to others when produced, and excluding gas purchased from others, gas consumed in producing operations, field processing plant losses, volumes used for gas lift, gas injections and cycling operations, quantities flared, and volume shrinkage due to the removal of condensate or natural gas liquids production." ExxonMobil Corporation (2004) 2003 Financial and Operating Review, www.exxonmobil.com, p. 55.

Cell: D65

Comment: Rick Heede:

BASF Form 20-F for 2001, page 84 (see table below), oil production 1998-2000, in Mb per year. And natural gas, in Bcf.

Cell: D68

Comment: Rick Heede:

BASE Form 20-F for 2003, page 60, Oil production for 2001-2003, in Mb per year, and natural gas in Bcf.

Cell: D71

Comment: Rick Heede:

BASF Form 20-F for 2006, page F-79, CAI did not find production table, and used "production" by year in proved oil and gas reserves for 2004-2006. Oil in Mb and gas in Bcf.

Cell: D78

Comment: Rick Heede:

Oil & Gas Journal OJ100, September 2013. CAI enters production data for Wintershall and RWE Dea AG, in Mb of oil and Bcf of natural gas.

Cell: D83

Comment: Rick Heede:

Oil & Gas Journal 0.1100, September 2018, page 42, CAI enters production data for Wintershall and RWE Dea AG --which merged in tk 2019, Oil in Mb per year.

Cell: H83

Comment: Rick Heede:

Oil & Gas Journal OJ100, September 2018, page 42. CAI enters production data for Wintershall and RWE Dea AG --which merged in tk 2019. Natural gas in Bcf per year.

Cell: L85

Comment: Rick Heede:

BASF Report 2018, page 271 reports oil production in 2018 at 54 Mb, and natural gas production as 117 Mboe. BASF does not state its gas boe factor, but using the common factor of 6,000 cf per bbl this is equivalent to 702 Bcf. Furthermore, gas represents 117 of total 171 Mboe, or 68.42%.