Scope 3 emissions calculation methodology

Scope 3 category	Evaluation status	Metric tons CO2-e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
1. **Purchased goods and services**	Relevant, calculated	1,820,495	**Input-output method:** FY20 spend in US dollars was sourced from Fortescue's finance and accounting system. The **GHG Protocol's Quantis Scope 3 evaluator tool** was used to convert spend into emission estimates. Broad sectors of purchase included: pulp, paper, printing and publishing, chemicals and chemical products, rubber and plastics, basic metals and fabricated metal, post and telecommunications, renting of machinery and equipment and other business services, such as health and social work and financial intermediation.	0%	Relevant purchased goods and services (except for mining equipment and activities, reported/covered by other scope 3 categories). No exclusion of emission sources.
2. **Capital goods**	Relevant, calculated	1,570,404	**Input-output method:** FY20 spend in US dollars was sourced from Fortescue's finance & accounting system for capital goods (mining and transport equipment) including freight. The **GHG Protocol's Quantis Scope 3 evaluator tool** was then used to convert spend into emission estimates. Broad sectors of purchase included: mining and quarrying, electrical and optical equipment as well as transport equipment.	0%	Mining, transport, and electrical equipment (not equipment life cycle assessments (LCAs) but a snapshot of emissions relevant to FY20 based on FY20 investment in mining equipment). No exclusion of emission sources.
3. **Fuel and energy related activities (not included in Scope 1 or 2)**	Relevant, calculated	112,838	Emissions attributable to the extraction, production and transport of fuels were estimated using the **NGA Factors 2019** applied to consumption data for diesel, LPG, and natural gas, as well as electricity consumption multiplied by the corresponding Scope 3 emission factor.	0%	Any supplier/contractor emissions are considered in categories 1, 2 and 9. Emissions attributable to LPG and electricity consumption are based on Fortescue's FY19 NGER report. FY20 consumption data collation has not been finalised and is not considered to be materially different to the FY19 activity data. These emissions are immaterial in comparison to other sources of Scope 3 emissions. No exclusion of emission sources.

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4. Upstream transportation and distribution	Not relevant, explanation provided	N/A	N/A	N/A	Covered by categories 2 and 9. Emissions associated with rail transport included in NGER report, other transport costs are included in supplier price.
5. Waste generated in operations	Not relevant, explanation provided	N/A	N/A	N/A	Municipal waste generated by Fortescue's corporate offices and operations is considered immaterial.
6. Business travel	Relevant, calculated	27,149	Domestic and international corporate flight emission estimates were obtained from **Qantas** directly. Hotels, accommodation and taxi use emissions were estimated using the **GHG Protocol's Quantis Scope 3 evaluator tool** to convert spend into emission estimates.	100%	The business travel estimate is based on the Qantas Fly Carbon Neutral Program, which is certified under the Australian Government's Climate Active initiative. No exclusion of emission sources.
7. Employee commuting	Relevant, calculated	40,259	Emission sources included are those from FIFO flight emissions, as well as emissions associated with staff commute to and from the corporate offices. FIFO emissions estimate was obtained from **Qantas** directly. Staff commute to and from corporate offices has been estimated using **Australian Bureau of Statistics (ABS)** data, transport mode usage fractions (WA), fuel types by transport mode, average business commute distance (Perth Metro), and fuel consumption per km by each transport mode. Estimated activity data has been multiplied by emission factors from the **NGER Measurement Determination 2008** for FY2020, **NGA Factors 2019**, as well as the **UK DBEIS Conversion Factors for 2020**.	99.99%	The FIFO estimate is based on the Qantas Fly Carbon Neutral Program, which is certified under the Australian Government's Climate Active initiative. Emissions associated with FIFO-related commute to and from the airport are excluded as this is immaterial compared to other sources of Scope 3 emissions. The need to include these emissions will be reviewed periodically. Exclusion of a small sub-set of business travel activities for which distance data is not available (i.e. staff travel to airport using private vehicles for FIFO flying).
8. Upstream leased assets	Not relevant, explanation provided	N/A	N/A	N/A	An emissions figure is not calculated for this category as Fortescue does not lease upstream assets in the course of normal operations.

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9. **Downstream transportation and distribution**	Relevant, calculated	3,488,783	All shipping data has been sourced from Fortescue, including loading and destination ports, tonnage of cargo, and size of vessel. The **2020 UK DBEIS conversion factor**s were used for tonne.km of shipping (Freighting goods, Bulk carrier). A distance calculator (**https://sea-distances.org/**) was used to calculate port-to-port shipping distances. Where the destination port was not included in the distance calculator, the closest equivalent port was applied with appropriate distance adjustments made for accuracy. Distance was converted from nautical miles to kilometres and subsequently **2020 UK DBEIS conversion factors** were applied.	0%	No exclusion of emission sources
10. **Processing of sold product**	Relevant, calculated	240,967,187	Emissions were estimated using metrics/indicators from the **World Steel Association.** Total iron ore shipped (in million tonnes per annum (mtpa) based on operational data) was converted to a crude steel equivalent using a volume conversion fraction, which was then multiplied by the emission intensity factor for crude steel casting (1.85t CO2-e/t Crude Steel Cast). The volume conversion fraction is based on 'Route 1: integrated steelmaking route' (Blast Furnace and Basic Oxygen Furnace). For Route 1: 1,370kg iron ore is required to make 1,000kg of crude steel corresponding to a conversion fraction of 0.729927.	0%	No exclusion of emission sources
11. **Use of sold products**	Not relevant, explanation provided	N/A	N/A	N/A	Fortescue has no influence over how crude steel is then converted into more sophisticated steel products for eventual end-use.

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12. End of life treatment of sold products	Not relevant, explanation provided	N/A	N/A	N/A	Fortescue has no influence over how crude steel is then converted into more sophisticated steel products and recycled at the end of its use
13. Downstream leased assets	Not relevant, explanation provided	N/A	N/A	N/A	An emissions figure is not calculated for this category as Fortescue does not lease significant downstream assets in the course of normal operations.
14. Franchises	Not relevant, explanation provided	N/A	N/A	N/A	An emissions figure is not calculated for this category as Fortescue does not have franchised operations.
15. Investments	Not relevant, explanation provided	N/A	N/A	N/A	Fortescue is not engaged in any joint venture partnerships where it does not have operational control. Emissions associated with the Iron Bridge joint venture project are incorporated into the relevant Scope 1, 2 and 3 calculations.
Other (upstream)	N/A	N/A	N/A	N/A	N/A
Other (downstream)	N/A	N/A	N/A	N/A	N/A