# Fortescue FY21 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 | 1,837,350 | **Input-output method:** FY21 spend in US dollars was sourced from Fortescue finance and accounting system. The **GHG Protocol's Quantis Scope 3 evaluator tool** was used to convert spend into emissions estimates.<br><br>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).<br><br>No exclusion of emission sources. |
| 2. **Capital goods** | Relevant, calculated | 520,053 | **Input-output method:** FY21 spend in US dollars was sourced from Fortescue finance and accounting system for capital goods (mining and transport equipment). The **GHG Protocol's Quantis Scope 3 evaluator tool** was used to convert spend into emission estimates.<br><br>Broad sectors of purchase included: mining and quarrying, electrical and optical equipment as well as transport equipment. | 0% | Mining, transport and electrical equipment (not an equipment life cycle assessment (LCA) but a snapshot of emissions relevant to FY21 based on FY21 investment in mining equipment).<br><br>No exclusion of emission sources. |
| 3. **Fuel and energy related activities (not included in Scope 1 or 2)** | Relevant, calculated | 116,655 | Emissions attributable to the extraction, production and transport of fuels and electricity transmission and distribution losses were estimated through applying the relevant Scope 3 emission factors from the **NGA Factors 2020** to consumption data for diesel, LPG, natural gas and electricity. | 0% | Any supplier/contractor emissions are considered in categories 1, 2 and 9.<br><br>The consumption of diesel, LPG natural gas and electricity used to estimate Scope 3 emissions was taken from the data used to estimate Scope 1 and Scope 2 emissions for the FY21 NGERs submission.<br><br>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 NGERS reports, 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 | 24,397 | Domestic and international corporate flight emission estimates obtained from **Qantas** directly.<br><br>Hotels, accommodation and taxis use emissions were estimated using the **GHG Protocol's Quantis Scope 3 evaluator tool** to convert spend into emissions 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.<br><br>No exclusion of emission sources. |
| 7. Employee commuting | Relevant, calculated | 55,986 | Emission sources included are those from FIFO flight emissions, as well as emissions associated with staff commute to and from the corporate offices.<br><br>FIFO emissions **estimate obtained from Qantas** directly.<br><br>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 Port Hedland), and fuel consumption/km by each transport mode.<br><br>Estimated activity data has been multiplied by emission factors from the **NGER Measurement Determination 2008** for FY21, **NGA Factors 2020**, as well as the **UK DBEIS Conversion Factors for 2021**. | 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.<br><br>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.<br><br>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 | 3,477,600 | All shipping data has been sourced from Fortescue, including loading and destination ports, tonnage of cargo, and size of vessel.<br><br>The **2021 UK DBEIS conversion factors** were used for tonne.km of shipping (Freighting goods, Bulk carrier).<br><br>A distance calculator (**https://sea-distances.org/**) was used to calculate port-to-port shipping distances. Where the destination port not included in distance calculator, the closest equivalent port was applied with appropriate distance adjustments made for accuracy.<br><br>Distance was converted from nautical miles to kilometres and subsequently **2021 UK DBEIS conversion factors** were applied. | 0% | No exclusion of emission sources. |
| 10. **Processing of sold product** | Relevant, calculated | 246,136,160 | Emissions were estimated using **metrics/indicators from the World Steel Association.**<br><br>Total iron ore shipments (in million tonnes per annum (mtpa) based on operational data) converted to crude steel equivalent using a volume conversion fraction, which then is multiplied by the emission intensity factor for crude steel casting (1.85t CO2-e/t Crude Steel Cast).<br><br>The volume conversion fraction based on 'Route 1: integrated steelmaking route': (i.e. 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. |

## Fortescue Scope 3 emissions calculation methodology for Financial Year 2021

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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 |