

Calculation method for FY 2020 actual scope 3 emissions

Categories	Summary	Calculation Method	Emissions intensity * 1
1	Purchased goods and services	(1)Purchase amount (1 million yen) x emission intensity of each product (2)Data for domestic manufacturing sites is based on Scope 1 and 2 of some suppliers.	Ministry of the Environment's * 1 [5] Emissions intensity based on the input-output table Emissions intensity on a monetary basis for each product (buyer price basis)
2	Capital goods	Acquisition cost of capital goods (Facilities, etc.) (1 million yen) x emissions intensity of each capital goods	Ministry of the Environment's DB * 1 [6] Emissions intensity per price of capital goods Emissions intensity on a monetary basis for each product
3	Fuel and energy-related activities (not included in scope 1 or scope 2)	Energy consumption in Scopes 1 and 2 × emissions intensity for each energy	Scope 1: Carbon Footprint Communication Program Basic Database ver. 1.01 (domestic data) Scope 2: Ministry of the Environment's DB * 1 [7] Emission intensity per electricity and heat usage. Emission intensity at the time of fuel procurement
4	Upstream transportation and distribution	< Domestic operations > (1) Calculation method of CO2 emissions from save energy sources related to freight transportation by shippers, as stipulated by the Energy Conservation Law (2) Annual transportation cost (1 million yen) × emission intensity <Overseas operations > Transportation cost (1 million yen) × emission intensity	Domestic operation: (1) " Greenhouse gas emission calculation / reporting manual" (2)Ministry of the Environment's DB * 1 [5] Emissions intensity based on the input-output table Road freight transportation: 3.93 t-CO 2 eq/1-million-yen Overseas operation: Ministry of the Environment's DB * 1 [5] Emissions intensity based on the input-output table

		for each transportation method	<p>Emissions intensity on a monetary basis for each product (buyer price basis)</p> <p>Road freight transportation: 3.93 t-CO₂ eq/1 million yen</p> <p>Railway freight transportation: 4.90 t-CO₂ eq/1 million yen</p> <p>Air transportation: 12.14 t-CO₂ eq/1 million yen</p> <p>Ocean transport: 27.33 t-CO₂ eq/1 million yen</p> <p>Unclassified: 3.19 t-CO₂ eq/1 million yen</p>
5	Waste generated in operations	<p><Emissions from industrial waste transportation></p> <p>Domestic operations: Calculation method of CO₂ emissions from save energy sources related to freight transportation by shippers, as stipulated by the Energy Conservation Law</p> <p>Overseas operations: Transportation cost (1 million yen) × emission intensity</p> <p>Domestic operations : Industrial waste emissions × emission intensity Overseas operations: Industrial waste disposal cost (1 million yen) × emission intensity</p> <p><Emissions from Industrial Waste Disposal></p> <p>Domestic operations : Industrial waste emissions × emission intensity</p> <p>Overseas operations: Industrial waste disposal cost (1 million yen) × emission</p>	<p><Emissions from industrial waste transportation></p> <p>Domestic operations: " Greenhouse gas emission calculation / reporting manual"</p> <p>Overseas: Ministry of the Environment's DB * 1 [5] Emissions intensity based on the input-output table</p> <p>Road freight transportation: 3.93 t-CO₂ eq/1 million yen</p> <p><Emissions from Industrial Waste Disposal></p> <p>Domestic operations: Ministry of the Environment's database * 1 (8) Emission intensity by type of waste (Exclude the waste transport stage)</p> <p>Overseas: Ministry of the Environment's DB * 1 [5] Emissions intensity based on the input-output table</p> <p>Emissions intensity on a monetary basis for each product (buyer price basis)</p> <p>Waste disposal (industry): 7.81 t-CO₂ eq/1 million yen</p>

		intensity	
6	Business travel	<p><Domestic operations></p> <p>Number of employees × emission factor</p> <p><Overseas operations></p> <p>(1) Number of days by type of business trip (Domestic day trips, domestic overnight stays and overseas business trips) × emission intensity</p> <p>(2) Number of employees × emission factor</p>	<p>Domestic operations:</p> <p>Ministry of the Environment's database * 1 [13] Unit emissions per employee</p> <p>Overseas operations:</p> <p>(1) Ministry of the Environment's database * 1 [13] Emissions intensity per total number of business trip days for employees</p> <p>(2) Ministry of the Environment's database * 1 [13] Emissions intensity per employee</p>
7	Employee commuting	<p><Domestic operations></p> <p>Cars and motorcycles:</p> <p>Round trip commuting distance × average number of working days per month × 12 ÷ fuel consumption × emission factor</p> <p>Public Transportation:</p> <p>Number of public transportation users × basic unit of emissions by work type (offices and factories) and city category (Large cities, medium cities, etc.)</p> <p><Overseas operations></p> <p>Calculation method similar to that of domestic public transportation</p>	<p>Fuel consumption of cars and motorcycle:</p> <p>Fuel consumption as specified in company regulations "Standards for Payment of Commuting Allowance by Private Car"</p> <p>Motorcycle: 25 km/l</p> <p>Cars: 10.7 km/l</p> <p>Fuel emission factor:</p> <p>Ministry of the Environment's * 1 [2] Gasoline emission intensity based on the transport ton-kilometer method: 2.32 t-CO₂ /kl</p> <p>Public Transportation:</p> <p>Ministry of the Environment's DB * 1 [14] emission intensity per employee (number of working days)</p>

11	Use of sold products	Annual power consumption per unit of each product × CO2 emissions intensity per unit of power used x useful life of each product x number of units shipped in the fiscal year *For some products, substitute values for similar products.	< CO2 emissions per unit of power consumption> IEA 'CO 2 Emissions from Fuel Combustion 2013' Global 2010 0.53 kg-CO 2/kWh
12	End-of-life treatment of sold products	CO2 emissions at the time of disposal of each product × the number of units shipped of each product in the fiscal year concerned *For some products, substitute values for similar products.	CO2 emissions at the time of product disposal: Calculated based on the company's LCA results from the weight of waste assumed for each product, disposal method, transportation distance, and means of transportation. Basic unit of waste transportation: IDEA (Inventory Database for Lifecycle Analysis) 10 t Truck 0.126 t-CO 2/t-km Basic unit for disposal and shredding: IDEA (Inventory Database for Lifecycle Analysis) 0.00382 t-CO 2/t

Note: Categories not listed above are excluded from the scope of Scope3.

*(1) A database of emission intensity used for calculating supply chain emissions (Ver. 3.1) is used