Calculation method for FY 2022 actual scope 3 emissions

Category	Summary	Calculation method	Emissions intensity * 1
1	Purchased goods	(1) Purchase amount (1 million yen) x emission	Ministry of the Environment's * 1 [5] Emissions intensity based on
	and services	Intensity of each product	
		Data for domestic manufacturing sites is based on	Emissions intensity on a monetary basis for each product (buyer
		Scope1, 2 and 3 of some suppliers. (For products	price basis)
		and services purchased for the manufacture of	
		our own products.)	
2	Capital goods	Acquisition cost of capital goods (Facilities, etc.)	Ministry of the Environment's DB * 1 [6] Emissions intensity per
		(1 million yen) x emissions intensity of each capital	price of capital goods
		goods	
3	Fuel and energy	Energy consumption in Scopes 1 and 2 × emissions	Scope 1: LCI Data base IDEAv2
	related activities	intensity for each energy	Scope 2: Ministry of the Environment's DB * 1 [7] Emission
	(not included in		intensity per electricity and heat usage. Emission intensity at the
	scope 1 and scope		time of fuel procurement
	2)		
4	Upstream	Domestic operations:	Domestic operations:
	transportation and	(1) Calculation method of CO2 emissions from save	(1) " Greenhouse gas emission calculation / reporting manual"
	distribution	energy sources related to freight transportation by	(2) Ministry of the Environment's DB * 1 [5] Emissions intensity
		shippers, as stipulated by the Energy Conservation	based on the input-output table
		Law	Road freight transportation: 3.93 t-CO 2 eq/1-million-yen
		(2) Annual transportation cost (1 million yen) $ imes$	
		emission intensity	Overseas operations:
			Ministry of the Environment's DB * 1 [5] Emissions intensity
		Overseas operations:	based on the input-output table
		Transportation cost (1 million yen) × emission	Emissions intensity on a monetary basis for each product (buyer
		intensity for each transportation method	price basis)

			Road freight transportation: 3.93 t-CO 2 eq/1 million yen
			Railway freight transportation: 4.90 t-CO 2 eq/1 million yen
			Air transportation: 12.14 t-CO 2 eq/1 million yen
			Ocean transport: 27.33 t-CO 2 eq/1 million yen
			Unclassified: 3.19 t-CO 2 eq/1 million yen
5	Waste generated in	<emissions from="" industrial="" transportation="" waste=""></emissions>	<emissions from="" industrial="" transportation="" waste=""></emissions>
	operations	Domestic operations:	Domestic operations:
		Calculation method of CO2 emissions from save	" Greenhouse gas emission calculation / reporting manual"
		energy sources related to freight transportation by	Overseas: Ministry of the Environment's DB * 1 [5] Emissions
		shippers, as stipulated by the Energy Conservation	intensity based on the input-output table
		Law	Road freight transportation: 3.93 t-CO 2 eq/1 million yen
		Overseas operations:	
		Transportation cost (1 million yen) × emission	<emissions disposal="" from="" industrial="" waste=""></emissions>
		intensity	Domestic operations: Ministry of the Environment's database * 1
		Domestic operations:	(8)
		Industrial waste emissions ×	Emission intensity by type of waste (Exclude the waste transport
		emission intensity Overseas operations: Industrial	stage)
		waste	Overseas: Ministry of the Environment's DB * 1 [5] Emissions
		disposal cost (1 million yen) × emission intensity	intensity
			based on the input-output table
		<emissions disposal="" from="" industrial="" waste=""></emissions>	Emissions intensity on a monetary basis for each product (buyer
		Domestic operations:	price basis)
		Industrial waste emissions × emission intensity	Waste disposal (industry): 7.81 t-CO 2 eq/1 million yen
		Overseas operations:	
		Industrial waste disposal cost (1 million yen) ×	
		emission intensity	

6	Business travel	Domestic operations:	Domestic operations:
		Number of employees × emission facto	Ministry of the Environment's database * 1 [13] Unit emissions
			per employee
		Overseas operations:	
		(1) Number of days by type of business trip	Overseas operations:
		(Domestic daytrips, domestic overnight stays and	(1) Ministry of the Environment's database * 1 [13] Emissions
		overseas business trips)	intensity per total number of business trip days for employees
		× emission intensity	(2) Ministry of the Environment's database * 1 [13] Emissions
		(2) Number of employees × emission factor	intensity per employee
7	Employee	<domestic operations=""></domestic>	Fuel consumption of cars and motorcycle:
	commuting	Cars and motorcycles:	Fuel consumption as specified in company regulations
		Round trip commuting distance x average number	"Standards for
		of working days per month \times 12 ÷ fuel consumption	Payment of Commuting Allowance by Private Car"
		×emission factor	Motorcycle: 25 km/l
			Cars: 11 km/l
		Public Transportation:	
		Number of public transportation users × basic unit of	Fuel emission factor:
		emissions by work type (offices and factories) and	Ministry of the Environment's * 1 [2] Gasoline emission intensity
		city	based on the transport ton-kilometer method: 2.32 t-CO2 /kl
		category (Large cities, medium cities, etc.)	Public Transportation:
			Ministry of the Environment's DB * 1 [14] emission intensity per
		<overseas operations=""></overseas>	employee (number of working days)
		Calculation method similar to that of domestic public	
		transportation	

9	Downstream	Calculation method of energy-derived CO2	"Greenhouse Gas Emissions Calculation and Reporting Manual"
	transportation	emissions related to cargo transportation by	
		shippers* specified by the Energy Conservation Act	
		in Japan	
		* Shippers: Transportation of three specified	
		customers was included in the calculation.	
11	Use of Products for	Annual power consumption per unit of each product	< CO2 emissions per unit of power consumption>
	Sale	×	EA Emissions Factors 2022
		CO2 emissions intensity per unit of power used x	Global 2021年 0.4591 ㎏-CO ₂ /kWh
		useful life	
		of each product x number of units shipped in the	
		fiscal year	
12	End-of-life	CO2 emissions at the time of disposal of each	CO2 emissions at the time of product disposal: Calculated based
	processing of sold	product ×	on the
	products	the number of units shipped of each product in the	company's LCA results from the weight of waste assumed for
	-	fiscal	each product,
		year concerned	disposal method, transportation distance, and means of
		*For some products, substitute values for similar	transportation.
		products.	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. 3.3) is used