

# Yokogawa Electric Corporation

	Companies' approach
Background and purpose of accounting	<ul> <li>It has been found from life cycle assessment that emissions from the supply chain (Scope 3) are higher and have a greater impact on the environment than emissions from the company itself (Scopes 1 and 2).</li> <li>We are currently working with our customers to increase their efficiency in order to reduce our supply chain emissions and intend to use the accounting results as basic data for measuring the effectiveness of such activities.</li> <li>We will also disclose the data to various stakeholders upon request.</li> </ul>
Utilization of accounting results	<ul> <li>The accounting results are utilized to:</li> <li>disclose our supply chain emissions via our website and sustainability reports; and</li> <li>provide data that we refer to when answering questions from various stakeholders.</li> </ul>
Benefits of accounting	<ul> <li>The accounting enables us to:</li> <li>measure the environmental impact of our supply chain and evaluate the level of improvement achieved over a time frame of years; and</li> <li>develop communication with stakeholders by disclosing information appropriately.</li> </ul>
□ Internal system for accounting	The data are gathered from accounting, procurement, business, and other divisions     and calculated and compiled by the secretariat.

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# Yokogawa Electric Corporation

	Companies' approach
<ul> <li>Efforts to reduce supply chain emissions</li> </ul>	<ul> <li>We are focusing our efforts on:</li> <li>enhancing the energy-efficiency of our products to decrease emissions in Category 11 (Use of sold products);</li> <li>promoting a modal shift and green packaging to decrease emissions in Category 4 (Transportation and delivery [upstream]); and</li> <li>reducing our product weight to decrease emissions in Category 1 (Purchased goods and services), Category 4 (Transportation and delivery [upstream]), and Category 12 (End-of-life treatment of sold products).</li> </ul>
□ Issues in supply chain emissions accounting	<ul> <li>Since our products range widely from components to systems, it is difficult to establish accounting rules for emissions during the use of products.</li> <li>Since the accounting uses many assumptions, there is a possibility that the accounting results may deviate from the actual emissions and improvements.</li> <li>Since accounting methods and emissions unit values adopted differ among accounting/reporting companies, the accounting results can mislead the public in their understanding of each company's emissions.</li> </ul>
D Other	<ul> <li>We are in the middle of calculating emissions for Category 1 (Purchased goods and services), Category 4 (Transportation and delivery [upstream]), Category 11 (Use of sold products), and Category 12 (End-of-life treatment of sold products), which we were not able to account for in the past, under the Ministry of the Environment's "Support for Supply Chain Emissions Accounting" program.</li> </ul>

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Catagony	Accounting methods		
Category	Activity data	Emission factor	
Category 1: Purchased goods and services	Value of raw materials and materials purchased	<ul> <li>Embodied Energy and Emission Intensity Data (3EID)</li> </ul>	
Category 2: Capital goods	Value of capital goods purchased	<ul> <li>Embodied Energy and Emission Intensity Data (3EID)</li> </ul>	
Category 3: Fuel and energy related activities not included in Scope 1 or 2	Amount of energy procured by type	• Emissions unit value by type of energy	
Category 4: Transportation and delivery (upstream)	Shipment scenario, shipment weight	• Emissions unit value during transportation	
Category 5: Waste generated in operations	<ul> <li>Amount of waste generated by type and disposal method</li> </ul>	<ul> <li>Emissions unit value by type of waste and disposal method</li> </ul>	
Category 6: Business travel	Transportation expenses paid by means of transport	• Emissions unit value by means of transport	
Category 7: Employee commuting	Transportation expenses paid by means of transport	Emissions unit value by means of transport	
Category 8: Leased assets (upstream)	• N/A	• N/A	
Category 9: Transportation and delivery (downstream)	• N/A	• N/A	
Category 10: Processing of sold products	• N/A	• N/A	
Category 11: Use of sold products	Electricity consumption during the period of use	Emissions unit value of electricity consumption	
Category 12: End-of-life treatment of sold products	Weight of each material used for products sold	• Emissions unit value by disposal method	
Category 13: Leased assets (downstream)	• N/A	• N/A	
Category 14: Franchises	• N/A	• N/A	
Category 15: Investments	• N/A	• N/A	
Other	• N/A	● N/A	

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#### Accounting results for FY 2016

Category	Supply chain emissions (t CO <sub>2</sub> -eq)
Category 1: Purchased goods and services	Calculation underway for major products
Category 2: Capital goods	19,517
Category 3: Fuel and energy related activities not included in Scope 1 or 2	4,511
Category 4: Transportation and delivery (upstream)	Calculation underway for major products
Category 5: Waste generated in operations	849
Category 6: Business travel	5,903*
Category 7: Employee commuting	2,896*
Category 8: Leased assets (upstream)	N/A
Category 9: Transportation and delivery (downstream)	N/A
Category 10: Processing of sold products	N/A
Category 11: Use of sold products	Calculation underway for major products
Category 12: End-of-life treatment of sold products	Calculation underway for major products
Category 13: Leased assets (downstream)	N/A
Category 14: Franchises	N/A
Category 15: Investments	N/A
Other	N/A

\* Scope of accounting: Yokogawa Electric, Yokogawa Solution Service, Yokogawa Manufacturing