

Independent Third-Party Assurance Report

Environmental impact data marked with a ★ have been reviewed by Ernst & Young ShinNihon LLC to enhance reliability, and we have received an Independent Third-Party Assurance Report from them.



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Translation

The following is an English translation of an independent assurance report prepared in Japanese and is for information and reference purposes only. In the event of a discrepancy between the Japanese and English versions, the Japanese version will prevail.

Independent practitioner's assurance report

Mr. Hitoshi Kanno
Representative Director President and Chief Executive Officer
Electric Power Development Co., Ltd

Scope

We have been engaged by Electric Power Development Co., Ltd., (hereafter the "Company") to perform a 'limited assurance engagement,' as defined by International Standards on Assurance Engagements, here after referred to as the engagement, to report on the Key Environmental Performance Indicators (the "Subject Matter") contained in the Company's "ESG Data " on the J-POWER Group Integrated Report 2024 (the "Report") for the period from April 1, 2023 to March 31, 2024. The scope of our assurance procedures was limited to the indicators marked with the symbol "★" in the Report.

Criteria applied by the Company

In preparing the Subject Matter, the Company applied the Criteria, that it determined with consideration of laws and regulations applicable to the Company as presented on the Calculation Standards of Environmental Information as presented in the Integrated Reports.

The Company's responsibilities

The Company's management is responsible for selecting the Criteria, and for presenting the Subject Matter in accordance with that Criteria, in all material respects. This responsibility includes establishing and maintaining internal controls, maintaining adequate records and making estimates that are relevant to the preparation of the subject matter, such that it is free from material misstatement, whether due to fraud or error. Greenhouse gas (GHG) emissions are estimated using emissions factors, and the scientific knowledge on which such emission factors are based has not been established. GHG quantification is subject to inherent uncertainty.

EY's responsibilities

Our responsibility is to express a conclusion on the presentation of the Subject Matter based on the evidence we have obtained.

We conducted our engagement in accordance with the *International Standard for Assurance Engagements Other Than Audits or Reviews of Historical Financial Information* ("ISAE 3000 (Revised)") and with respect to GHG emissions, the *International Standard on Assurance Engagements: Assurance Engagements on Greenhouse Gas Statements* ("ISAE 3410"), issued by the International Auditing and Assurance Standards Board, and the terms of reference for this engagement as agreed with the Company on March 29, 2024. Those standards require that we plan and perform our engagement to express a conclusion on whether we are aware of any material modifications that need to be made to the Subject Matter in order for it to be in accordance with the Criteria, and to issue a report. The nature, timing, and extent of the

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procedures selected depend on our judgment, including an assessment of the risk of material misstatement, whether due to fraud or error.

We believe that the evidence obtained is sufficient and appropriate to provide a basis for our limited assurance conclusions.

Our independence and quality management

We have maintained our independence and confirm that we have met the requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants and have the required competencies and experience to conduct this assurance engagement.

EY also applies International Standard on Quality Management 1, *Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services engagements*, which requires that we design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Description of procedures performed

Procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Our procedures were designed to obtain a limited level of assurance on which to base our conclusion and do not provide all the evidence that would be required to provide a reasonable level of assurance.

Although we considered the effectiveness of management's internal controls when determining the nature and extent of our procedures, our assurance engagement was not designed to provide assurance on internal controls. Our procedures did not include testing controls or performing procedures relating to checking aggregation or calculation of data within IT systems.

A limited assurance engagement consists of making enquiries, primarily of persons responsible for preparing the Subject Matter and related information, and applying analytical and other appropriate procedures.

Our procedures included:

- * Making enquiries regarding the Company's own criteria that it determined with consideration of laws and regulations applicable to the Company and evaluating the appropriateness thereof.
- * Inspecting relevant documents with regard to the design of the Company's internal controls related to the Subject Matter and enquiring of personnel responsible thereof.
- * Performing analytical procedures concerning the Subject Matter.
- * Testing, on a sample basis, underlying source information, matching indicators with the evidence and conducting relevant re-calculations.
- * Visiting one major power plant to perform procedures for indicators in the report.

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We also performed such other procedures as we considered necessary in the circumstances.

Conclusion

Based on our procedures and the evidence obtained, we are not aware of any material modifications that should be made to the Subject Matter for the period from April 1, 2023 to March 31, 2024 in order for it to be in accordance with the Criteria.

Takefumi Kawasaki
Yasuo Maeda
Engagement Partners
August 30, 2024
Ernst & Young ShinNihon LLC
Tokyo, Japan

Note: The original of the above Assurance report is kept separately by the Company.

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ESG Data

ESG Data

Environment

Environmental impact data marked with ★ are reviewed by Ernst & Young ShinNihon LLC and we received the Independent Assurance Report. For the standards and scope of the calculations, please refer to p. 111–112.

Environmental Impact Data for Domestic Operations

	Unit	FY2021	FY2022	FY2023★
Power generation volume				
Power generation volume	billion kWh	62.3	59.6	52.6
Electricity sales volume	billion kWh	57.6	54.8	47.9
Energy consumed				
Coal [Dry coal: 28 GJ/t equivalent] (usage intensity)	million tons (t/million kWh)	15.65 (3.34)	15.14 (3.37)	12.76 (3.39)
Natural gas	million Nm ³	44	0	0
Heavy oil	thousand kl	37	25	24
Light oil	thousand kl	28	24	29
Biomass	thousand tons	32	122	129
Purchased electric power	billion kWh	0.118	0.098	0.132
Water resources				
Industrial use water	million m ³	8.50	9.29	8.40
Volume of water used	million m ³	0.30	0.27	0.27
Volume of water discharged	million m ³	4.91	4.43	3.47
Waste				
Volume generated (effective utilization rate)	million tons (%)	1.98 (98%)	1.95 (96%)	1.53 (95%)
Of which is coal ash (effective utilization rate)	million tons (%)	1.65 (98%)	1.64 (96%)	1.27 (95%)
Of which is gypsum (effective utilization rate)	million tons (%)	0.27 (97%)	0.28 (100%)	0.22 (100%)
Amount of industrial waste disposed	thousand tons	46	75	79
Of which is specially-controlled	thousand tons	0.7	0.3	0.5
General waste disposal volume (used paper)	t	20	18	31
Emissions into the atmosphere				
NOx emissions (emission intensity)	thousand (t g/kWh)	23.0 (0.46)	23.0 (0.48)	18.8 (0.47)
SOx emissions (emission intensity)	thousand (t g/kWh)	10.5 (0.21)	9.3 (0.19)	7.5 (0.19)
Dust emissions (emission intensity)	thousand (t g/kWh)	0.5 (0.01)	0.7 (0.01)	0.5 (0.01)
N ₂ O	t-CO ₂ e	160,000	90,000	80,000
SF ₆	t-CO ₂ e	8,300	3,200	22,000

*Coal intensity is the amount of coal consumed divided by the electricity sales volume of thermal power plants.

*The basic unit for NOx, SOx, and soot and dust is calculated based on the amount of electricity generated at thermal power plants, which are the source of emissions.

*For N₂O and SF₆, we have revised the emission coefficient, global warming coefficient and emission activities covered by the accounting and reporting system from the FY2023 data, in response to the revision to the ministerial ordinance on GHG emission calculation based on the Act on Promotion of Global Warming Countermeasures.

Greenhouse Gas Emissions*1, 2

	Unit	FY2021	FY2022	FY2023★
Scope 1		47.95	48.91	44.39
Domestic power generation business		41.62	40.64	33.68
Overseas power generation business		4.9	7.94	10.27
Other		1.42	0.33	0.43
Scope 2 (Location criteria)		0.14	0.15	0.14
Scope 2 (Market criteria)		–	0.15	0.14
Scope 3		13.60	13.17	13.31
(1) Purchased goods and services	(million t-CO ₂)	0.31	0.27	0.26
(2) Capital goods		0.44	0.40	0.40
(3) Fuel and energy-related activities not included in Scope 1 and 2		3.84	4.43	3.76
(5) Waste generated in operations		0.08	0.10	0.09
(6) Business travels		0.001	0.001	0.001
(7) Employee commuting		0.002	0.002	0.002
(9) Down-stream transportation and distribution		1.02	0.15	0.16
(11) Use of sold products		6.21	6.37	7.01
(15) Investments		1.69	1.45	1.64
Total		61.68	62.23	57.84

Electricity Sales Volume per Unit of CO₂ Emissions

	Unit	FY2021	FY2022	FY2023★
Domestic and overseas power generation business	kg-CO ₂ /kWh	0.64	0.64	0.61
Domestic power generation business		0.70	0.71	0.67

*1 The scope of coverage includes J-POWER and its consolidated subsidiaries and equity-method affiliates in the Electric Power Business and Oversea Business. Consolidated subsidiaries and equity-method affiliates are aggregated for the portion equivalent to J-POWER's equity stake.

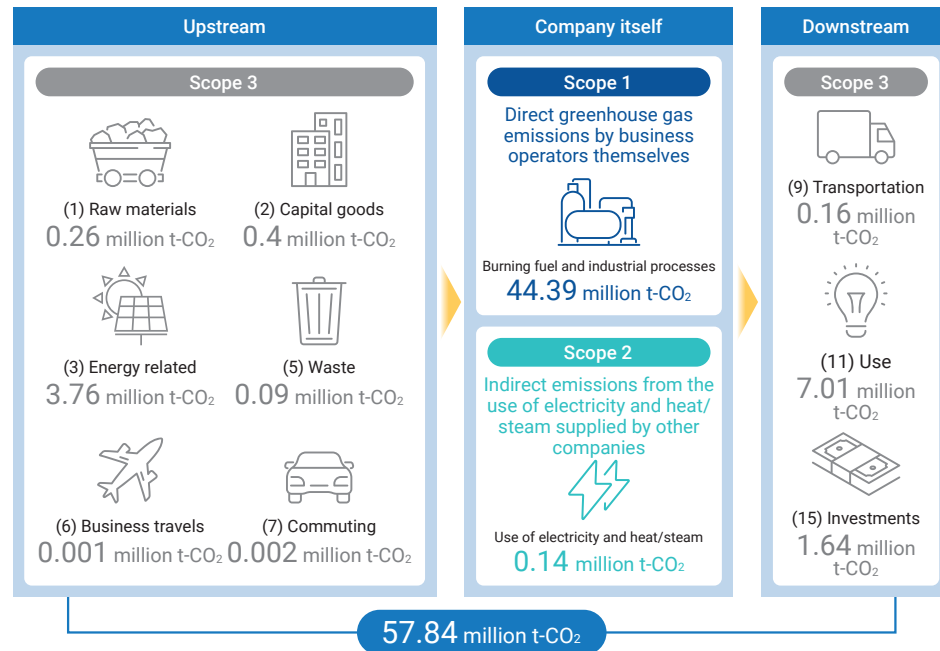
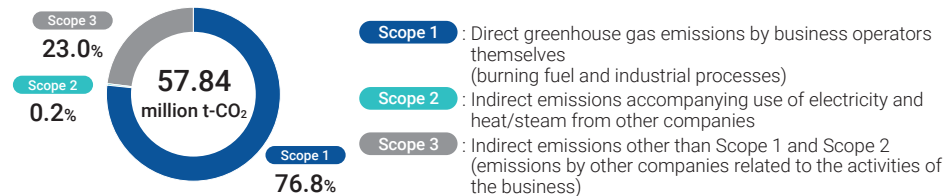
*2 Due to the nature of the products and services sold and the nature of the business, there is no energy consumption in the following categories.

(4) Transportation and distribution (upstream), (8) Leased assets (upstream), (10) Processing of sold products
(12) Disposal of sold products, (13) Leased assets (downstream), (14) Franchise

ESG Data

ESG Data

FY2023 Greenhouse Gas Emission Results



Calculation Methods in Each Scope 3 Category

- Calculated by multiplying each product or service purchased by respective emission factor
- Calculated by multiplying the capital investment by the emission intensity
- Sum of the following two values
 - Emissions from production and transportation of fuel used by the company
 - Calculated by multiplying the amount of electricity procured from sources other than the company by the emission intensity
- Calculated by multiplying the amount of emissions by waste type by the emission intensity of each treatment method
- Calculated by multiplying the number of employees by the emission intensity
- Calculated by multiplying the number of employees and number of business days by type of work and by rank of employee, respectively, by the emission intensity
- Calculated by multiplying the ton-kilometers of sold coal transported by the emission intensity
- Calculated by multiplying the volume of coal sold by the emission intensity
- CO₂ emissions from power plants in which J-POWER's equity portion is less than 20%

Scope of the Calculations of Environmental Impact Data

Scope of the calculations of GHG emissions Scope of reporting environmental impact data

Domestic Business

Electric Power Business (Transmission)	
J-POWER Transmission Network Co., Ltd.	100 %
Electric Power-Related Business	
J-POWER HYTEC Co., Ltd.	100 %
J-POWER Generation Service Co., Ltd.	100 %
J-POWER Business Service Corporation	100 %
J-POWER Telecommunication Service Co., Ltd.	100 %
J-POWER Design Co., Ltd.	100 %
J-POWER Insurance Service Corporation	(100 %)
J-POWER EnTech Inc.	100 %
JM Activated Coke, Inc.	90 %
J-Wind Service Co., Ltd.	100 %
Miyazaki Wood Pellet Co., Ltd.	98.33 %
Other business	
Kaihatsu Hiryou Co., Ltd.	100 %
Omuta Plant Service Co., Ltd.*1	100 %
Biocoal Osaka-Hirano Co., Ltd.	60 %
Green Coal Saikai Co., Ltd.	60 %
Biocoal Yokohama-South Co., Ltd.	60 %
Electric Power Business (Power generation)	
Electric Power Development Co., Ltd.	—
J-Wind Co., Ltd.	100 %
J-Wind KUZUMAKI Co., Ltd.	100 %
Nagasaki-Shikamachi Wind Power Co., Ltd.	70 %
J-Wind SETANA Co., Ltd.	100 %
Esashi Green Energy Co., Ltd.	70 %
Ishikari Green Energy Co., Ltd.*2	70 %
TOSA POWER Inc.	45 %
Kashima Power Co., Ltd.	50 %
Yuzawa Geothermal Power Generation Corporation	50 %
Appi Geothermal Energy Corporation*3	15 %

*1 Omuta Plant Service Co., Ltd. was liquidated in February 2024.

*2 Ishikari Green Energy Co., Ltd. started operation in March 2024.

*3 Appi Geothermal Energy Corporation started operation in March 2024.

*4 Lake Mainit Hydro Holdings Corporation started operation in March 2023.

*5 Jackson Generation, LLC's ownership of voting rights decreased to 51% due to the partial transfer of its interest on February 27, 2023.

*6 China Resources Power (Hezhou) Co., Ltd. was sold on March 28, 2024.

Overseas Business

Thailand	
Gulf JP UT Co., Ltd.	(60 %)
Gulf JP NS Co., Ltd.	(60 %)
Gulf JP NNK Co., Ltd.	(60 %)
Gulf JP CRN Co., Ltd.	(60 %)
Gulf JP NK2 Co., Ltd.	(60 %)
Gulf JP TLC Co., Ltd.	(60 %)
Gulf JP KP1 Co., Ltd.	(60 %)
Gulf JP KP2 Co., Ltd.	(60 %)
Gulf JP NLL Co., Ltd.	(44.99%)
EGCO Cogeneration Co., Ltd.	(20 %)
Roi-Et Green Co., Ltd.	(24.7 %)
Gulf Yala Green Co., Ltd.	(49 %)
Gulf JP1 Co., Ltd.	(60 %)
Gulf Power Generation Co., Ltd.	(49 %)
Indonesia	
PT.BHIMASENA POWER INDONESIA	(34 %)
Philippines	
CBK Power Co., Ltd.	(50 %)
Lake Mainit Hydro Holdings Corporation**4	(40 %)
United States	
Jackson Generation, LLC*5	(51 %)
Tenaska Frontier Partners, Ltd.	(31 %)
Elwood Energy, LLC	(50 %)
Green Country Energy, LLC	(50 %)
Pinelawn Power LLC	(50 %)
Equus Power I, L.P.	(50 %)
Tenaska Virginia Partners, L.P.	(15 %)
Edgewood Energy, LLC	(50 %)
Shoreham Energy, LLC	(50 %)
Orange Grove Energy, L.P.	(50 %)
Tenaska Pennsylvania Partners, LLC	(25 %)
The United Kingdom	
Triton Knoll Offshore Wind Farm Ltd.	(25 %)
Australia	
Clermont Coal Joint Venture	(22.2 %)
Narrabri Joint Venture	(7.5 %)
Maules Creek Joint Venture	(10 %)
China	
Shaanxi Hanjiang Investment & Development Co., Ltd.	(27 %)
China Resources Power (Hezhou) Co., Ltd.*6	(17 %)

*Figures in % indicate the share of equity held by J-POWER, while those in parentheses () indicate the share of equity held by subsidiaries and affiliates.

ESG Data

ESG Data

Environmental Index Calculation Standards

Greenhouse gas emissions	
Scope 1 emissions N ₂ O emissions	Calculated by multiplying the amount of each fuel used by the relevant emission factor based on the method specified in the Act on Promotion of Global Warming Countermeasures.
SF ₆ emissions	Calculated by multiplying the amount of leakage (annual amount of SF ₆ filled into relevant equipment) by the relevant emission factor according to the method specified by the Act on Promotion of Global Warming Countermeasures.
Scope 2 emissions (Location criteria)	Calculated by multiplying the amount of electricity purchased by the emission factor for the area
Scope 2 emissions (Market criteria)	Calculated by multiplying the amount of electricity purchased by the emission factor of each purchasing power company.
Scope 3 emissions	Calculated based on the method defined in the "Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain"
Category 1 Purchased goods and services	Calculated by multiplying the quantity data of chemicals (limestone and ammonia) purchased and acquired by the company, as well as repair and outsourcing costs, by the relevant emission intensity.
Category 2 Capital goods	Calculated by multiplying the total capital investment by the emission intensity
Category 3 Fuel and energy-related activities not included in Scope 1 and 2	Total emissions from production of fuel for power generation, procurement of electricity for resale, and transportation of coal <ul style="list-style-type: none"> • Calculated by multiplying the quantity data of fuel purchased by the company by the emission intensity. • Calculated by multiplying the electricity input data to the company by the average emission intensity of all power sources. • Calculated by multiplying the ton-kilometers of transports by rail, ship, and air by the emission intensity of each transportation agency based on the ton-kilometer method.
Category 5 Waste generated in operations	Calculated by multiplying the amount of industrial waste consigned for treatment (including the amount of effective utilization) by the emission intensity
Category 6 Business travels	Calculated by multiplying the number of employees by the emission intensity
Category 7 Employee commuting	Calculated by multiplying the number of employees of each work type and city class by the number of business days and emission intensity
Category 9 Downstream transportation and distribution	Emissions from coal transport from coal mines <ul style="list-style-type: none"> • Calculated by multiplying the ton-kilometers of transports by rail, ship, and air by the emission intensity of each transportation agency based on the ton-kilometer method.
Category 11 Use of sold products	Emissions from the sale of coal produced in coal mines <ul style="list-style-type: none"> • Calculated by multiplying the total sales volume of fuel, etc. by the emission intensity.
Category 15 Investments	Calculated by multiplying each investment's emissions by its equity.

Power generation and energy use

Electricity generated and sold	The data is automatically collected by the measuring instruments. The measuring instruments are calibrated in accordance with regulations.
Various fuels and purchased electricity	Calculated in accordance with the Act on Rationalizing Energy Use and Shifting to Non-fossil Energy.

Emissions into the atmosphere

Soot and smoke emissions (NO _x , SO _x , dust)	Calculated using data automatically collected by the measuring instruments based on the Air Pollution Control Act. The measuring instruments are calibrated in accordance with regulations.
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Use of water resources

Industrial water usage	The billing data from public water bureau or the data automatically measured by the instrument is aggregated. The measuring instruments are verified in accordance with Article 72 of the Measurement Act.
Water usage	The volume used on billing data from public water bureau or as measured by the instrument is aggregated.
Wastewater volume	The volume used as measured by the instrument is aggregated.

Generation and effective utilization of industrial waste

Industrial waste generated	The quantities listed on the manifest* as stipulated by the Act on Waste Management and Public Cleansing are aggregated. Driftwood was counted by volume of material collected from the dam lakes.
Effective utilization rate of industrial waste	Ratio of the amount of waste recycled or reused and the amount of valuable materials sold to outside vendors, to the amount generated.

*Manifest: A control slip that must be issued when outsourcing the collection, transportation, and disposal of waste materials to an outside contractor. The weight and disposal method of the waste are described.

ESG Data

ESG Data

Society

Category	Accounting Metric		Unit	Result		
				FY2021	FY2022	FY2023
Human resources*1	Number of employees (consolidated)*2	Male	Persons	6,229	6,147	6,115
		Female	Persons	917	931	968
		Total	Persons	7,146	7,078	7,083
	Managers	Male	Persons	1,385	1,398	1,485
		Female	Persons	19	20	26
		Percentage of women	%	1.4	1.4	1.7
	Number of new graduates hired	Male	Persons	89	81	79
		Female	Persons	15	16	21
		Total	Persons	104	97	100
	Number of mid-career hires	Male	Persons	2	18	16
		Female	Persons	1	2	2
		Total	Persons	3	20	18
	Percentage of mid-career hires		%	5	19	16
	Percentage of people with disabilities employed*3		%	2.45	2.42	2.34
	Average length of continuous service, years*4	Male	Years	20.4	19.7	19.8
		Female	Years	9.8	9.6	9.8
		Total	Years	19.7	19.0	19.1
	Average annual salary*4,5	Total	Yen	7,939,362	8,045,816	10,459,535
	Ratio of women's to men's wages*6,7	20s and younger	%	96.3	96.1	97.8
		30s	%	95.7	97.9	100.8
		40s and over	%	103.6	105.7	102.3
		Total	%			
	Turnover rate for the three years after joining		%	4.4	6.4	2.0
	Total actual working hours per person*4		Hours	1,976	1,951	1,968
	Overtime hours worked per person*4		Hours/Month	21.8	21.4	21.2
	Days of paid vacation taken per person*4		Days	15.4	16.4	16.8
	Percentage of employees taking childcare leave*8	Male	%	-	86	100
		Female	%	-	100	100
		Total	%	-	88	100
	Average age*4		Age	42.0	41.5	41.7
	Average hours of training per employee*9		Hours	34.2	33.9	36.4
	Training cost per employee*9		Thousand yen/person	232	245	236

*1 Unless specified otherwise, data on human resource is based on those enrolled in J-POWER

*2 J-POWER Group employees (excluding temporary employees)

*3 As of June 1 of each fiscal year

*4 J-POWER employees (excluding those on secondment)

*5 Average annual salary includes non-standard wages and bonuses. Management and other employees not included until FY2022 are now included from FY2023.

*6 Comparison of base salaries of employees in a career-track position. Ratio of female to male wages.

*7 (Reference) Difference in wages between male and female workers calculated based on the Act on the Promotion of Women's Active Engagement in Professional Life, all employees (59.0%), regular employees (58.8%), non-regular employees (70.0%)

*8 The Company manages the utilization rate of childcare leave for each fiscal year of the birth of an employee's child, and such rate of employees whose children become two years old in the relevant fiscal year is shown.

Category	Accounting Metric		Unit	Result		
				FY2021	FY2022	FY2023
Occupational health and safety	Number of occupational accidents*10					
	Fatal accidents	J-POWER and J-POWER Transmission Network Co., Ltd.	Persons	0	0	0
		Major five companies*11 + cooperating companies	Persons	0	0	0
		Total	Persons	0	0	0
	Serious injuries	J-POWER and J-POWER Transmission Network Co., Ltd.	Persons	0	0	0
		Major five companies*11 + cooperating companies	Persons	11	8	7
		Total	Persons	11	8	7
	Minor injuries	J-POWER, J-POWER Transmission Network Co., Ltd.	Persons	0	2	2
		Major five companies*11 + cooperating companies	Persons	11	5	15
		Total	Persons	11	7	17
	Frequency*12	J-POWER and J-POWER Transmission Network Co., Ltd. + Major five companies*11 + cooperating companies		1.27	0.91	1.39
		Industry-wide*14		2.09	2.06	2.14
		Total				
	Severity*13	J-POWER and J-POWER Transmission Network Co., Ltd. + Major five companies*11 + cooperating companies		0.06	0.05	0.04
		Industry-wide*14		0.09	0.09	0.09
		Total				

*9 Employees enrolled in J-POWER (excluding some on secondment)

*10 The number of fatalities and lost-workday injuries among occupational accidents involving J-POWER and J-POWER Transmission Network employees and occupational accidents involving contractors (primary contractors and subcontractors) involved in construction and operations ordered by the companies

*11 Major consolidated subsidiaries to which J-POWER outsources facilities maintenance. J-POWER Business Service Corporation, J-POWER HYTEC Co., Ltd., J-POWER Generation Service Co., Ltd., J-POWER Telecommunication Service Co., Ltd., J-POWER Design Co., Ltd.

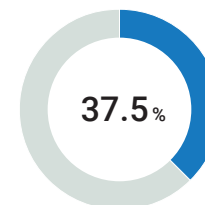
*12 Frequency = number of fatalities and injuries due to occupational accidents / total number of actual hours worked × 1,000,000. Contract workers are outside the reporting scope of "Industry-wide" data (directly hired workers are only included in the data) while the data of "J-POWER and J-POWER Transmission Network Co., Ltd. + major five companies + cooperating companies" includes contract workers.

*13 Severity = total number of days of labor loss / total number of actual hours worked × 1,000. Contract workers are outside the reporting scope of "Industry-wide" data (directly hired workers are only included in the data) while the data of "J-POWER and J-POWER Transmission Network Co., Ltd. + major five companies + cooperating companies" includes contract workers.

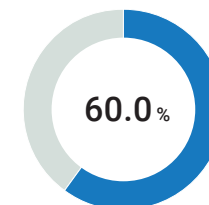
*14 Source: Ministry of Health, Labour and Welfare, *Overview of Survey on Industrial Accidents in 2023 (survey on establishments with 100 or more regular employees and survey on general construction)*, May 31, 2024 (release date). <https://www.mhlw.go.jp/toukei/tiran/roudou/saigai/23/>

Governance (As of June 26, 2024)

Percentage of Outside Directors on the Board of Directors



Percentage of Outside Officers on the Nomination and Compensation Committee



Composition of Directors

