

Non-financial data (environmental)

Total CO₂ emissions (Scope 1/2/3, JR-West Group)

Item	Target and calculation method*3	FY2021*6			FY2022*6			FY2023*1		
		Non-consolidated	Group companies*2	Total	Non-consolidated	Group companies*2	Total	Non-consolidated	Group companies*2	Total
(Restated) Scope 1+2+3	The sum of Scope 1, 2, and 3	3,211,681	1,274,337	4,486,017	3,051,247	1,397,268	4,448,516	3,084,498★	1,551,292★	4,635,790★
(Restated) Scope 1+2	The sum of Scope 1 and 2	1,370,636	190,040	1,560,676	1,323,874	202,778	1,526,652	1,285,956★	206,248★	1,492,204★
Scope 1	Total CO ₂ directly emitted by the JR-West Group from combustion of fuels, such as diesel oil for diesel train operation, and kerosene and heavy oil for operational purposes (includes the CO ₂ equivalent mass for leaked fluorocarbons)	85,884	53,200	139,084	81,378	60,783	142,161	79,795★	64,808★	144,604★
Scope 2*4	Total CO ₂ emitted indirectly by the JR-West Group from the use of power and heat purchased from power companies and others	1,284,753	136,840	1,421,592	1,242,496	141,995	1,384,491	1,206,160★	141,440★	1,347,600★
Scope 3	Total CO ₂ emitted from other companies in relation to the JR-West Group's business activities (indirect emissions other than Scope 1 and Scope 2)	1,841,044	1,084,297	2,925,342	1,727,373	1,194,491	2,921,864	1,798,542★	1,345,043★	3,143,585★
Cat.1 Purchased goods and services	Calculated by multiplying the annual amount (monetary value) of products procured from outside the JR-West Group by the relevant emission factor	891,604	654,257	1,545,861	810,510	696,810	1,507,320	845,897★	853,667★	1,699,564★
Cat.2 Capital goods	Calculated by multiplying the annual amount of capital investment by the relevant emission factor	724,993	202,356	927,349	698,535	234,894	933,429	728,225★	230,620★	958,845★
Cat.3 Fuel- and energy-related activities not included in Scope 1 or Scope 2	Calculated by multiplying the annual amount of each type of energy consumed by the relevant emission factor	215,943	47,232	263,174	207,748	49,262	257,010	210,138★	52,159★	262,297★
Cat.5 Waste generated in operations	Calculated by multiplying the annual amount of waste (by type and by treatment method) by the relevant emission factor	2,131	36,872	39,003	4,197	24,896	29,093	6,207★	23,586★	29,793★
Cat.6 Business travel	Calculated by multiplying the number of employees by the relevant emission factor and then adding in the distance of business trips	608	613	1,220	925	987	1,912	2,833★	3,022★	5,855★
Cat.7 Employee commuting	Calculated by multiplying the number of employees/number of working days by the relevant emission factor	5,766	5,780	11,546	5,458	5,777	11,235	5,242★	5,569★	10,811★
Cat.11 Use of sold products	Calculated by multiplying the total floor area of sold property by the relevant emission factor	-	12,082	12,082	-	11,468	11,468	-	9,201	9,201
Cat.12 End-of-life treatment of sold products*5	Calculated by multiplying the total floor area of the property sold by the relevant emission factor	-	252	252	-	300	300	-	2,089	2,089
Cat.13 Downstream leased assets	For rental properties, this is calculated by multiplying the total floor area of the rental property by the relevant emission factor. For hired cars and other leased assets that are not buildings, this is calculated by multiplying the number of leased assets by the relevant emission factor.	-	124,853	124,853	-	170,098	170,098	-	165,131★	165,131★

*1 Items covered by third-party assurance on page 93 are marked with a ★. The same applies to "Water resources" and "Fiscal 2023 environmental impact of business activities (consolidated)."

*2 The scope of calculation for group companies encompasses all consolidated subsidiaries and Osaka Energy Service Co., Ltd. (equity method affiliate), a group company with particularly large energy consumption.

*3 Based on the Act on Promotion of Global Warming Countermeasures, scope- and category-specific calculation of CO₂ emissions is carried out in line with the Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain ver. 2.5 published by the Ministry of Economy, Trade and Industry and the Ministry of the Environment. Emission factors were taken from the Ministry of the Environment's Database of Emission Unit Values ver. 3.3 and the IDEA LCI Database ver. 2.3 (Sustainable Management Promotion Organization).

*4 Scope 2 CO₂ emissions are market standards.

*5 For the emission factor in Cat.12, we referred to the "Emission factors by major structures and items associated with building demolition" given in the Architectural Institute of Japan's guidelines for building LCA.

*6 The figures for fiscal 2021 and 2022 differ from the figures announced last fiscal year due to changes in the scope of calculation for group companies.

Note: Cat.4, 8, 9, 10, 14, and 15 of Scope 3 are omitted for the following reasons.

Cat.4 (upstream transportation and distribution), Cat.9 (downstream transportation and distribution), Cat.10 (processing of sold products): Because of the nature of the JR-West Group's business, the impact from this has been determined to be negligible.

Cat.8 (upstream leased assets): Because this is accounted for in Scope 1 and/or Scope 2.

Cat.14 (franchises): Because franchise business is not part of the JR-West Group's business.

Cat.15 (investments): Because the JR-West Group does not hold any investment management shares.

Water resources

Item	Target and calculation method*2	FY2021*3			FY2022*3			FY2023		
		Non-consolidated	Group companies*1	Total	Non-consolidated	Group companies*1	Total	Non-consolidated	Group companies*1	Total
Total water withdrawal	Total for public water supply, groundwater, and industrial-use water	4,313	2,410	6,724	4,089	2,986	7,075	3,988★	4,183★	8,171★
Public water supply	Aggregate the usage amount on the bill from the waterworks bureau	-	-	-	3,172	2,637	5,809	3,082	3,344	6,425
Groundwater	Aggregate the measured values from meters managed in accordance with the Measurement Act	-	-	-	600	346	946	606	838	1,444
Industrial-use water	Aggregate the usage amount on the bill from the waterworks bureau	-	-	-	317	3	320	300	1	301
Recycled water		-	-	-	94	67	162	124	141	264
Total amount of wastewater	Total discharge into rivers and sewerage	3,991	2,739	6,730	3,835	3,217	7,052	4,028	4,019	8,047
Total discharge into rivers		-	-	-	455	21	477	410	28	438
Sewerage		-	-	-	3,380	3,196	6,576	3,618	3,991	7,609

*1 The scope of calculation for group companies encompasses all consolidated subsidiaries and Osaka Energy Service Co., Ltd. (equity method affiliate), a group company with particularly large energy consumption.

*2 Calculations are made with reference to the Environmental Reporting Guidelines of the Ministry of the Environment.

*3 The figures for fiscal 2021 and 2022 differ from the figures announced last fiscal year due to changes in the scope of calculation for group companies.

Fiscal 2023 environmental impact of business activities (consolidated)

Figures in [] are the non-consolidated amount of the consolidated figures

INPUT (Energy usage)*1*2	
Total energy consumption*3	34,907 thousand GJ★ [30,063 thousand GJ★]
Electricity	3.24 billion kWh [2.90 billion kWh]
Kerosene	2,850 kl [2,759 kl]
Gasoline	2,308 kl [844 kl]
Propane gas	336 t [318 t]
Diesel oil	35,224 kl [23,883 kl]
Class A heavy oil	1,631 kl [825 kl]
Utility gas	15,059 thousand m ³ [1,828 thousand m ³]

OUTPUT (Industrial waste)*1*2	
Used materials (facility construction)	228.2 thousand tons
Recycled volume	223.5 thousand tons
Recycled rate	97.9%
Used materials (rolling stock)	12.0 thousand tons
Recycled volume	11.6 thousand tons
Recycled rate	96.6%
Industrial waste*4	221.0 thousand tons★ [9.2 thousand tons★]
Hazardous waste (PCBs)	1,065 t
Industrial waste, of which is plastic industrial waste*5	10.1 thousand tons [4.0 thousand tons]
Station and onboard garbage	8.8 thousand tons
Of which is recyclable	3.8 thousand tons
Recycled volume	3.8 thousand tons
Recycled rate	99.7%
Amount of products provided that use specified plastics*6	57.8 t [0.0 t]

*1 The scope of calculation for group companies encompasses all consolidated subsidiaries and Osaka Energy Service Co., Ltd. (equity method affiliate), a group company with particularly large energy consumption. However, used materials (facility construction), used materials (rolling stock), hazardous waste (PCBs), and station and onboard garbage are tabulated individually.

*2 Input (energy usage) is calculated with reference to the Greenhouse Gas Emissions Calculation and Reporting Manual provided by the Ministry of the Environment and the Ministry of Economy, Trade and Industry and the Act on Rationalizing Energy Use and Shifting to Non-Fossil Energy. Output (industrial waste) is calculated with reference to the Waste Management and Public Cleansing Act (Waste Management Act).

*3 Total energy consumption is the sum of energy consumption for electricity, fuel, and heat consumption.

*4 Industrial waste refers to waste as defined by the Waste Management Act (waste discharged by businesses). It is calculated by summing the figures listed in manifests stipulated by the Waste Management Act.

Manifest: A management form that is required to be issued when outsourcing the transportation and treatment of waste to an outside company under the Waste Management Act. It gives the weight of the waste, the treatment method, and other information.

*5 The weight of mixed waste containing waste plastic and other waste that cannot be sorted into other types of waste is included in the total for plastic industrial waste. Group company output includes waste generated from construction work ordered by JR-West.

*6 The amount of products provided that use specified plastics is calculated from the total amount of target products provided in target industries under the Plastic Resource Circulation Act.

Third-party assurance



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.

October 11, 2023

Independent Assurance Report

TO:
Mr Kazuaki Hasegawa
President and Representative Director
West Japan Railway Company, Ltd.

Kenji Sawami
Engagement Partner
Ernst & Young ShinNihon LLC, Tokyo, Japan

We, Ernst & Young ShinNihon LLC, have been commissioned by West Japan Railway Company, Ltd (hereafter the "Company") and have carried out a limited assurance engagement on the Key Non-Financial Data (Environmental) (hereafter the "Indicators") of the Company and its major subsidiaries for the year ended March 31, 2023 as included in Integrated Report 2023 in the Company's website (hereafter the "Report"). The scope of our assurance procedures was limited to the Indicators marked with the symbol "★" in the Report.

1. The Company's Responsibilities

The Company is responsible for preparing the Indicators in accordance with the Company's own criteria, which it determined with consideration of Japanese environmental regulations as presented in the Report. Greenhouse gas (GHG) emissions are estimated using emissions factors, which are subject to scientific and estimation uncertainties given instruments for measuring GHG emissions may vary in characteristics, in terms of functions and assumed parameters.

2. Our Independence and Quality Control

We have met the independence requirements of the *Code of Ethics for Professional Accountants* issued by the International Ethics Standards Board for Accountants, which is based on the fundamental principles of integrity, objectiveness, professional competence and due care, confidentiality, and professional behavior.

In addition, we maintain a comprehensive quality control system, including documented policies and procedures for compliance with ethical rules, professional standards, and applicable laws and regulations in accordance with the *International Standard on Quality Management (ISQM) 1* issued by the International Auditing and Assurance Standards Board.

3. Our responsibilities

Our responsibility is to express a limited assurance conclusion on the Indicators included in the Report based on the procedures we have performed and the evidence we have obtained.

We conducted our limited assurance engagement in accordance with the *International Standard on Assurance Engagements: 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. The procedures, which we have performed according to our professional judgment, include inquiries, document inspection, analytical procedures, reconciliation between source documents and Indicators in the Report, and the following:

- Making inquiries regarding the Company's own criteria that it determined with consideration of Japanese environmental regulations, and evaluating the appropriateness thereof;
- Inspecting relevant documents with regard to the design of the Company's internal controls related to the Indicators, and inquiring of personnel responsible thereof at the Company and one subsidiary visited;
- Performing analytical procedures concerning the Indicators at the Company and one subsidiary visited; and
- Testing, on a sample basis, underlying source information and conducting relevant re-calculations at the Company and one subsidiary visited.

The procedures performed in a limited assurance engagement are more limited in nature, timing and extent than a reasonable assurance engagement. As a result, the level of assurance obtained in a limited assurance engagement is lower than would have been obtained if we had performed a reasonable assurance engagement.

4. Conclusion

Based on the procedures performed and evidence obtained, nothing has come to our attention that causes us to believe that the Indicators included in the Report have not been measured and reported in accordance with the Company's own criteria that it determined with consideration of Japanese environmental regulations.