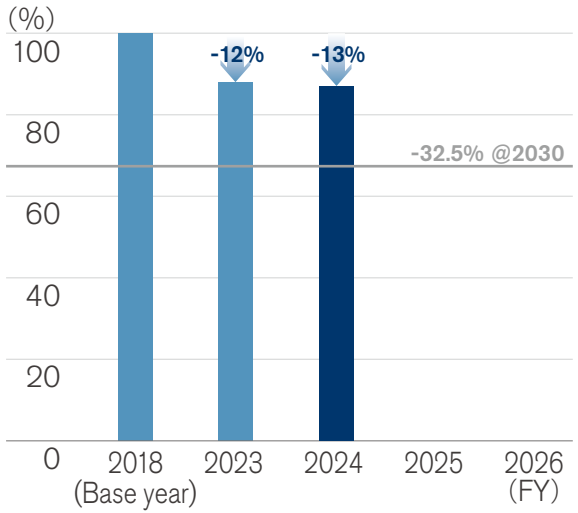
Environmental data

Climate change (Products)

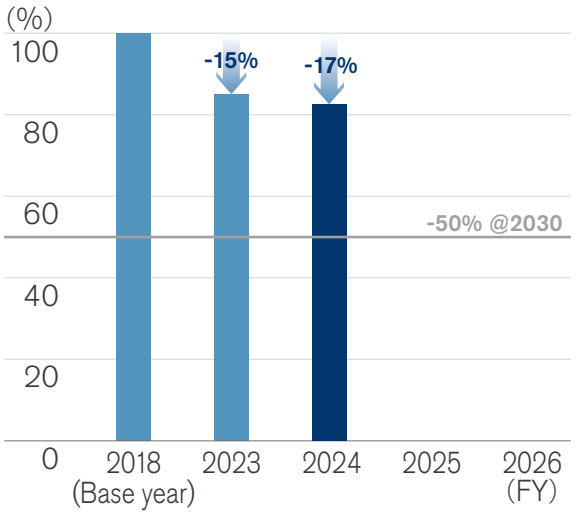
CO_2 emissions reduction rate from new vehicles

Global: -13%; Four regions (Japan, the U.S.A., Europe, China): -17%
CO_2 emissions were reduced by promoting electrification, especially in the four regions.*1

Global

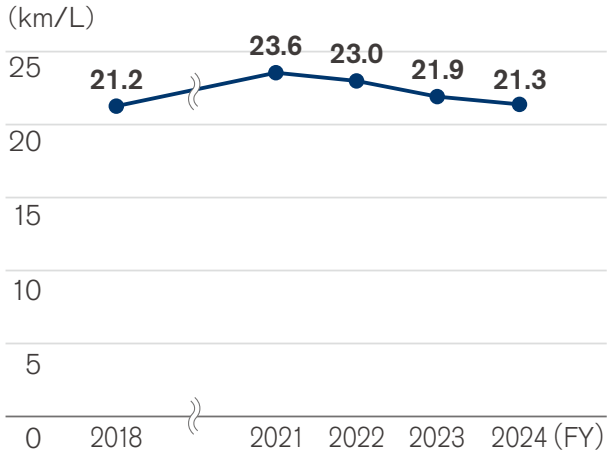


Four regions (Japan, the U.S.A., Europe, China)



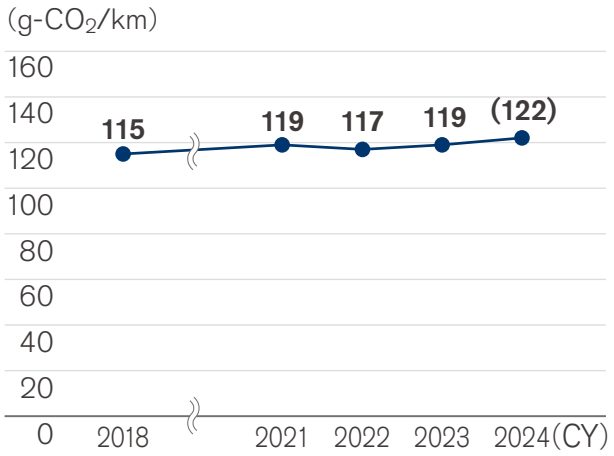
*1 CO_2 emissions are calculated on a Well-to-Wheel (WtW) basis, and the reduction rate is calculated according to Nissan's internal standards.

Corporate average fuel economy (CAFE) in Japan*1



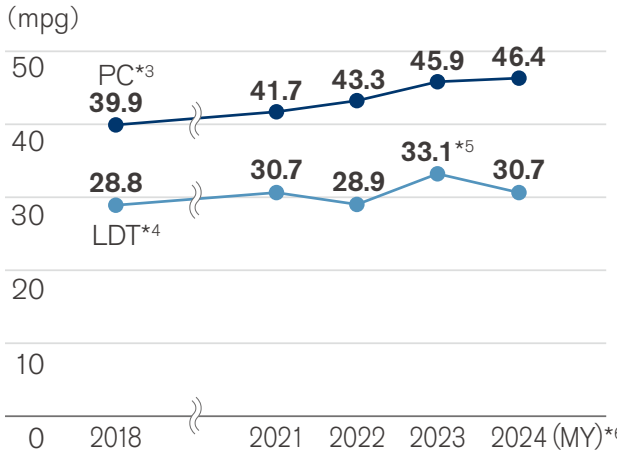
In fiscal year 2024, the company's average fuel economy in Japan was 21.3 km/L.
Strong sales of larger e-POWER vehicles lowered fuel efficiency, but the stable e-POWER ratio helped to maintain the overall level in line with the previous year.

CO_2 emission index from Nissan vehicles in Europe*7



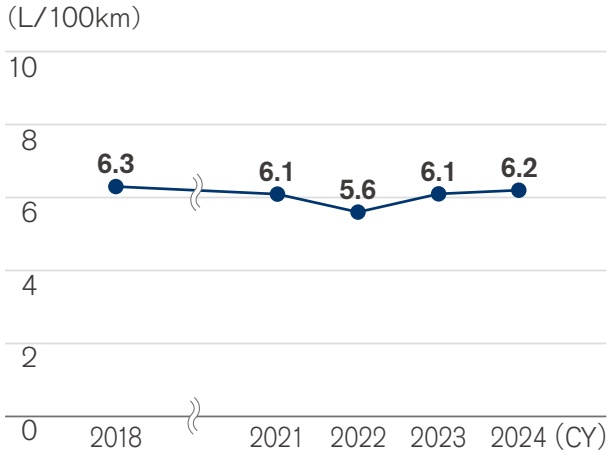
In 2023, the company's average CO_2 emissions were 119 g-CO_2/km. In 2024, although hybrid vehicle sales remained strong, the decline in the e-POWER ratio is expected to result in a slight increase in average CO_2 emissions compared with the previous fiscal year.*8

Corporate average fuel economy (CAFE) in the United States



In fiscal year 2024, the corporate average fuel economy (CAFE) of Nissan's passenger cars in the U.S.A. was 46.4 mpg and 30.7 mpg in the light-duty truck segment. In the passenger car segment, CAFE improved due to an increase in the share of small models, while in the light-duty truck segment, CAFE decreased due to an increase in the share of large models.

Corporate average fuel consumption in China



In 2024, the company's average fuel consumption for domestically produced vehicles in China was 6.2 L/100 km. Despite strong sales of new large SUVs, the increased ratio of electrified vehicles helped maintain overall fuel efficiency at a level comparable to the previous year.

*1 From fiscal year 2022 onward, includes vehicles that have been type-approved using the World-wide harmonized Light duty Test Cycle (WLTC) evaluation mode.
*2 Uses provisional values calculated by Nissan, including WLTC mode fuel economy values
*3 Passenger Car
*4 Light-Duty Truck
*5 Corrected due to an error in 2023 figures.
*6 MY: Model Year
*7 From fiscal year 2021 onward, includes vehicles that have been type-approved using the Worldwide harmonized Light vehicles Test Procedure (WLTP) evaluation mode.
*8 As official values for 2024 have not yet been disclosed, provisional values are shown.

Revenue, global sales volume and production volume data

(¥ billion)

	FY2023	FY2024
Revenue*1	126,857	126,332

(thousand units)

	FY2023	FY2024
Global Sales Volume*2	3,442	3,346
Japan	484	461
North America	1,262	1,303
Europe	361	351
Asia	961	841
Other	374	390

(thousand units)

	FY2023	FY2024
Global Production Volume*2	3,430	3,101
Japan	725	641
North America*3	1,235	1,178
Europe*4	325	276
Asia*5	1,020	895
Other*6	126	110

In Japan and Europe, where customer interest in electrified vehicles is high, the combined share of e-POWER, EVs, and hybrid vehicles*7 has remained at around 70%, consistent with the previous year.
We see this trend as a reflection of the growing role of our sustainable product lineup-centered on environmental value- as a core element of our business.

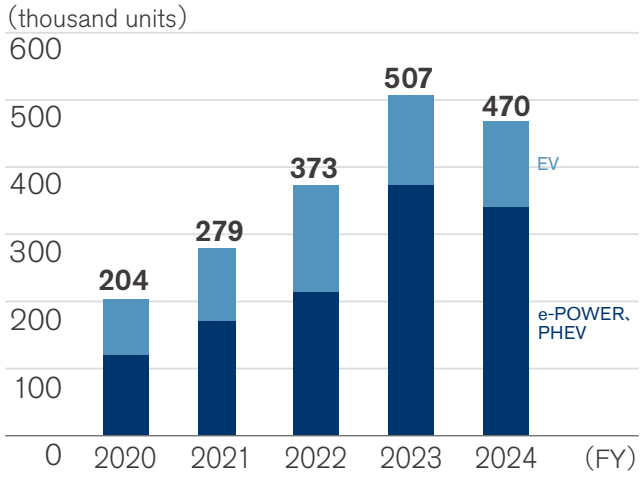
Powertrain type ratios (Shipment-based)

By region	Unit	Gasoline-powered vehicles	Diesel-powered vehicles	e-POWER vehicles	Electric vehicles	Hybrid vehicles
Japan	%	31	0	42	6	21
North America	%	96	0	1	3	0
Europe	%	24	4	25	8	38
Asia	%	88	4	3	3	1
Other	%	79	12	2	0	6
Global	%	75	3	10	4	8

Sales volume of electrified vehicles (EV, e-POWER, PHEV)

Under Nissan Ambition 2030, we aim to expand our electrified vehicle lineup and increase the share of electrified vehicle sales.
In fiscal year 2024, however, the number of electrified vehicles sold declined compared with the previous year, due to production adjustments implemented in certain markets in response to a challenging competitive environment.

Sales volume of EV, e-POWER, PHEV*8



*1 From fiscal year 2024, Chinese joint ventures are treated using the equity method. Accordingly, sales figures for fiscal year 2023 have been revised.
*2 Global sales volume and global production volume for China and Taiwan consider values from January to December.
*3 Production in the U.S.A. and Mexico.
*4 Production in the UK and France.
*5 Production in Taiwan, Thailand, China and India.
*6 Production in South Africa, Brazil, Egypt and Argentina.
*7 Other than e-POWER models.
*8 PHEVs sold in China from fiscal year 2023.

Climate change (Corporate activities)

Energy input*1

(FY)

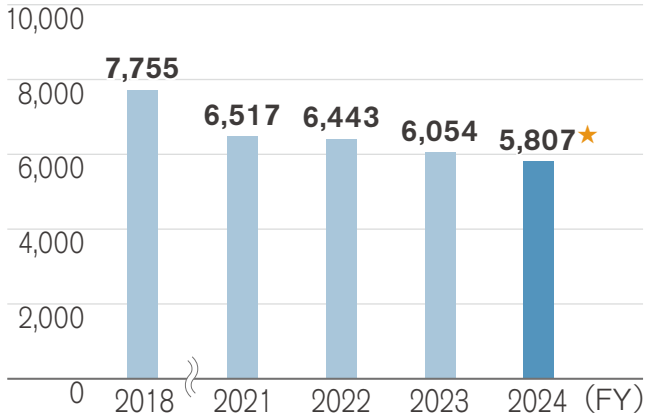
	Unit	2018	2021	2022	2023	2024
Total	MWh	7,755,180	6,516,552	6,442,705	6,053,630	5,807,255★
By region						
Japan	MWh	3,845,585	3,432,988	3,403,180	3,045,909	2,863,146
North America	MWh	2,397,746	1,935,449	1,971,446	2,074,570	2,069,954
Europe	MWh	862,042	557,173	545,092	511,387	474,668
Other	MWh	649,807	590,941	522,987	421,763	399,488
By energy source						
Primary						
Natural gas	MWh	2,882,123	2,374,726	2,396,027	2,049,589	1,934,282
LPG	MWh	199,882	147,084	129,607	109,199	102,694
Coke	MWh	179,226	112,162	111,013	105,823	93,636
Heating oil	MWh	127,258	71,632	57,919	53,602	45,176
Gasoline	MWh	153,630	90,081	94,372	55,898	55,043
Diesel	MWh	57,068	49,218	48,110	9,800	8,818
Heavy oil	MWh	19,101	11,967	10,954	28,837	4,938

(FY)

	Unit	2018	2021	2022	2023	2024
External						
Electricity (purchased)	MWh	4,008,519	3,558,048	3,484,661	3,484,666	3,419,207
Renewable energy*2	MWh	150,623	220,768	239,875	215,351	239,002
Chilled water	MWh	5,473	3,597	3,929	4,643	4,870
Steam	MWh	63,577	74,565	94,423	140,283	123,984
Renewable energy*3	MWh					7,605
Internal						
Electricity (in-house generation)	MWh	59,323	23,473	11,689	11,288	14,607
Renewable energy*4	MWh	59,323	23,473	11,689	11,288	14,607
Total renewable energy	MWh	209,946	244,242	251,563	226,639	261,214

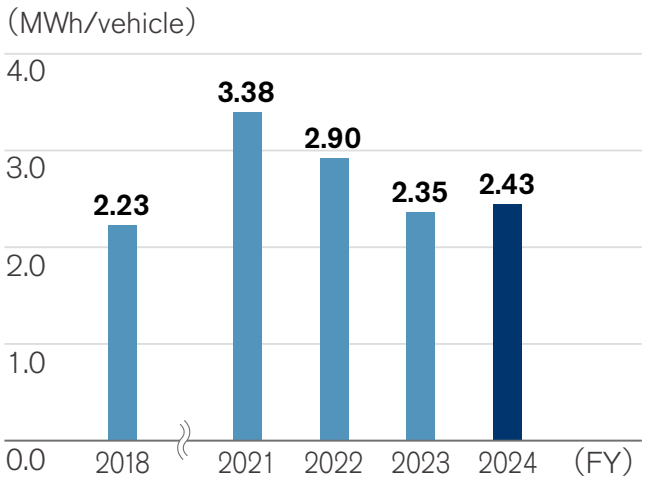
Trend in energy input*1

The total energy input of our global corporate activities during fiscal year 2024 was 5,807 thousand MWh ★, a 4% decrease from 6,054 thousand MWh in fiscal year 2023.



Energy per vehicle produced*5

In fiscal year 2024, energy per vehicle produced was 2.43 MWh, a reduction of 3% compared with fiscal year 2023. Data for the Japan region includes the manufacture of powertrains and other components for overseas assembly. Since the denominator is vehicles produced in the region, this tends to result in higher values for Japan.



(FY)

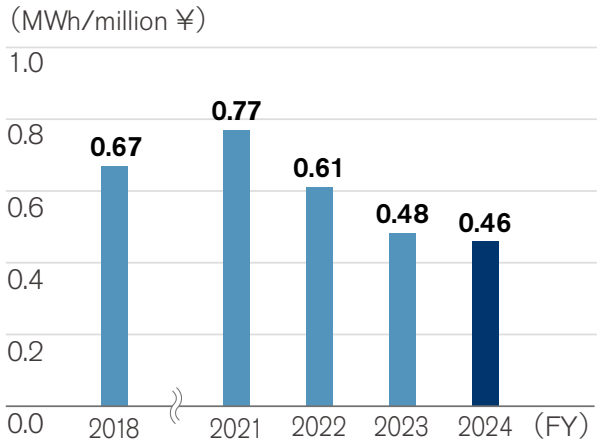
By region	Unit	2024
Japan	MWh/vehicle	4.46
North America	MWh/vehicle	1.78
Europe	MWh/vehicle	1.72
Other	MWh/vehicle	1.30

*1 Changed in line with revisions to fiscal year 2023 performance data.
*2 Volume of renewable energy in electricity purchased by Nissan.
*3 Amount of renewable energy purchased by Nissan for cooling water and steam.
*4 Volume of renewable energy generated by Nissan at its facilities and consumed for its own purposes.
*5 The boundary of data aggregation has been revised to align with the financial consolidated group.

★ This figure is subject to assurance by KPMG AZSA Sustainability Co., Ltd.
For details, please see here. >>> P061

Energy per revenue*1

In fiscal year 2024, global Nissan facilities saw an energy per revenue result of 0.46 MWh, a decrease of 4% from 2023. We are taking ongoing steps toward decoupling financial capital generation from energy use.



Scope 1 and 2 CO_2 emissions*1

In fiscal year 2024, the total of Scope 1 and 2 emissions*2 of our global corporate activities was 1,519 thousand tons ★ (Scope 1 emissions: 442 thousand tons ★; Scope 2 emissions: 1,077 thousand tons ★), a 12% decrease from 1,731 thousand tons in fiscal year 2023.

(FY)

	Unit	2018	2021	2022	2023	2024
Scope 1	kt-CO_2	725	588	585	477	442★
Scope 2	kt-CO_2	1,688	1,238	1,187	1,254	1,077★
Scope 1+2	kt-CO_2	2,413	1,825	1,772	1,731	1,519★
Japan	kt-CO_2	1,277	1,001	994	984	908
North America	kt-CO_2	687	483	502	501	401
Europe	kt-CO_2	131	89	81	86	73
Other	kt-CO_2	318	253	195	161	137

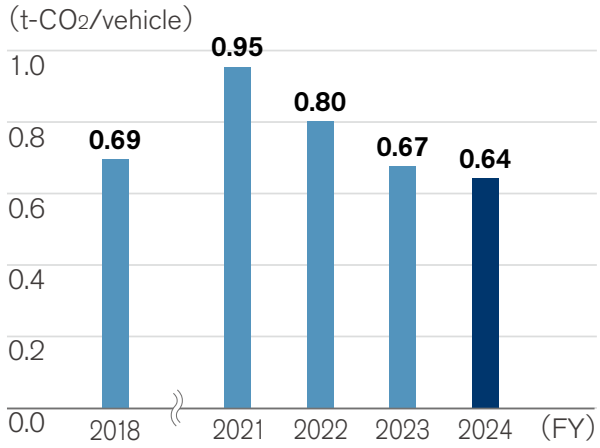
Greenhouse gas (GHG) emissions other than energy-derived CO_2*3

(FY)

By type	Unit	2018	2021	2022	2023	2024
CH_4 (methane)	t-CO_2e	4,846	5,088	5,054	5,705	4,810
N_2O (nitrous oxide)	t-CO_2e	1,425	1,244	1,071	1,801	2,094
HFCs (hydrofluorocarbons)	t-CO_2e	3,594	1,320	1,878	148	121
PFCs (perfluorocarbons)	t-CO_2e	0	0	0	0	0
SF_6 (sulfur hexafluoride)	t-CO_2e	43	43	43	128	117
NF_3 (nitrogen trifluoride)	t-CO_2e	2	1	0	0	0

Scope1 and 2 CO_2 emissions per vehicle produced*4

In fiscal year 2024, overall corporate emissions were 0.64 t-CO_2/vehicle produced.

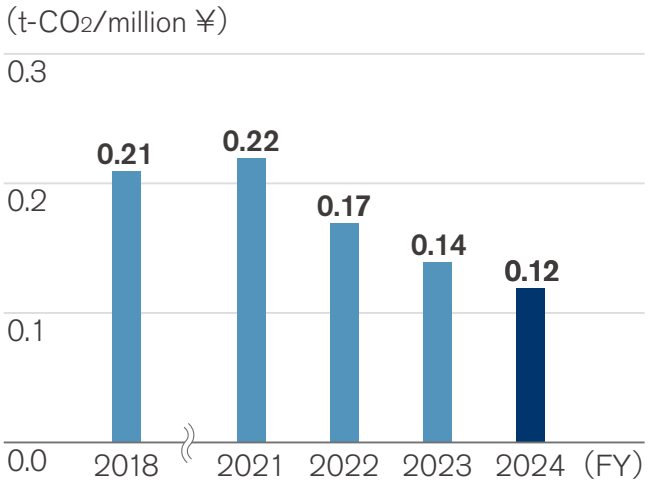


*1 Changed in line with revisions to fiscal year 2023 performance data.
*2 Click here for more information on calculation for CO_2 emissions. >>> P062
*3 GHG emissions from Nissan Motor Co., Ltd. manufacturing sites calculated based on the Act on Promotion of Global Warming Countermeasures.
*4 The boundary of data aggregation has been revised to align with the financial consolidated group.

★ This figure is subject to assurance by KPMG AZSA Sustainability Co., Ltd.
For details, please see here. >>> P061

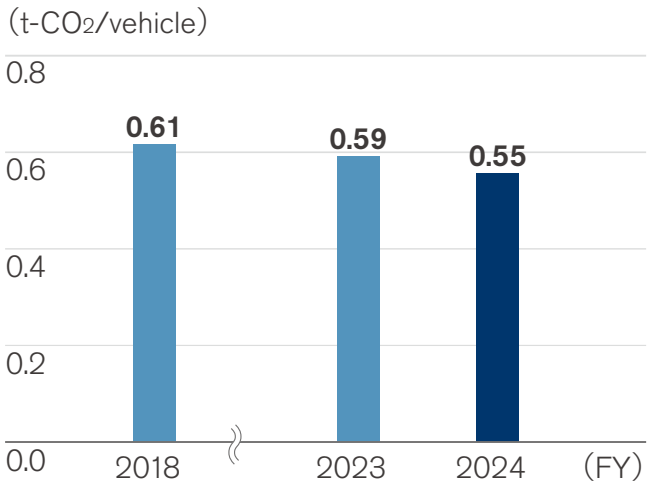
Scope1 and 2 CO_2 emissions per revenue*1

In fiscal year 2024, CO_2 emissions from our global operations were 0.12 ton per ¥1 million of revenue.



Manufacturing CO_2 emissions per vehicle produced*2*3

In fiscal year 2024, our manufacturing CO_2 emissions per vehicle produced were 0.55 tons, 10% less than fiscal year 2018.



*1 Changed in line with revisions to fiscal year 2023 performance data.
*2 CO_2 emissions per vehicle produced in the NGP management scope
*3 The boundary of data aggregation has been revised to align with the financial consolidated group.

Logistics volume

(FY)

	Unit	2018	2021	2022	2023	2024
Total*1*2	mil ton-km	34,973	23,052	25,938	32,893	31,116
Inbound*3	mil ton-km	10,278	7,572	8,720	11,166	11,159
Outbound*4	mil ton-km	24,695	15,480	17,218	21,727	19,957
Sea	%	60.8	61.9	69.9	69.6	70.5
Road	%	23.5	24.0	19.1	20.4	19.2
Rail	%	14.8	13.7	10.7	9.8	10.1
Air	%	0.9	0.4	0.3	0.2	0.2

In fiscal year 2024, global shipping decreased 5% compared with the previous fiscal year, to 31.1 billion tons-km.

CO_2 emissions from logistics

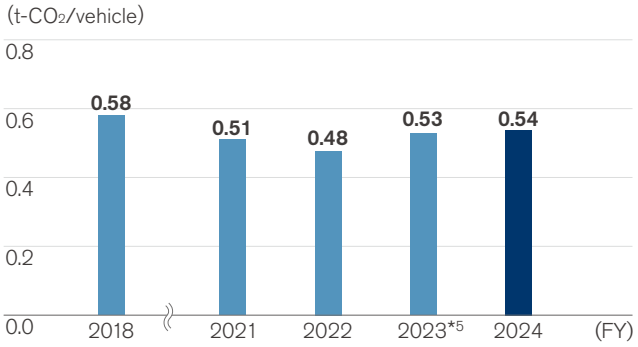
(FY)

	Unit	2018	2021	2022	2023*5	2024
Total*1*2	kt-CO_2	2,471	1,610	1,591	1,981	1,774
Inbound*3	kt-CO_2	891	410	408	552	505
Outbound*4	kt-CO_2	1,580	1,201	1,182	1,429	1,269
Sea	%	29.1	26.4	35.1	37.0	38.1
Road	%	59.8	66.5	58.3	57.3	56.1
Rail	%	3.8	3.9	3.4	3.1	3.4
Air	%	7.2	3.2	3.1	2.6	2.5

In fiscal year 2024, CO_2 emissions from logistics decreased 10% compared with the previous fiscal year, to 1,774k-tons.

CO_2 emissions from logistics (per vehicle produced)

In fiscal year 2024, CO_2 emissions were 0.54 tons per vehicle produced.



*1 Due to the change in global emission factors based on the GHG Protocol, changes have occurred in the figures since fiscal year 2018.
*2 CO_2 emissions include those from transportation of parts to our manufacturing bases and transportation of vehicles from our manufacturing bases to dealerships.
*3 "Inbound" includes parts procurement from suppliers and transportation of knockdown parts.
*4 "Outbound" includes the transportation of complete vehicles and service parts, their transportation to dealerships, and the transportation of waste/scrap materials. The figures for transportation to dealerships and the transportation of waste/scrap materials have been added, commencing from the fiscal year 2022 actuals.
*5 Changed in line with revisions to fiscal year 2023 performance data.

Scope 3 emissions by category

We conducted a study based on standards such as the Corporate Value Chain (Scope 3) Accounting and Reporting Standard from the GHG Protocol and found that about 81% of our Scope 3 emissions were from the use of sold products.

(FY)

Category	Unit	2024
1. Purchased goods & services*1	kt-CO_2	23,365★
2. Capital goods	kt-CO_2	1,271
3. Fuel- and energy-related activities	kt-CO_2	225
4. Upstream transportation & distribution	kt-CO_2	1,643
5. Waste generated in operations	kt-CO_2	109
6. Business travel	kt-CO_2	178
7. Employee commuting	kt-CO_2	153
8. Upstream leased assets	kt-CO_2	-
9. Downstream transportation & distribution	kt-CO_2	607
10. Processing of sold products	kt-CO_2	6
11. Use of sold products*2	kt-CO_2	125,080★
12. End-of-life treatment of sold products	kt-CO_2	232
13. Downstream leased assets	kt-CO_2	497
14. Franchises	kt-CO_2	-
15. Investments	kt-CO_2	122
Total	kt-CO_2	153,489

*1 The calculation method has changed from the fiscal year 2024 result. Click here for the revised calculation method (CO_2 emissions from purchased goods & services). >>> P062
*2 The calculation method has changed from the fiscal year 2024 result. Click here for the revised calculation method (CO_2 emissions from the use of sold products). >>> P062

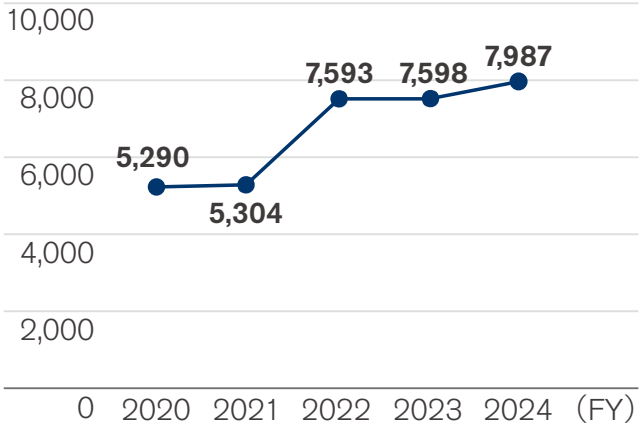
★ This figure is subject to assurance by KPMG AZSA Sustainability Co., Ltd. For details, please see here. >>> P061

Resource dependency: Achievements in reuse

Proper use of regulated chemical substances

Nissan continually reviews its standard for the assessment of hazards and risks related to chemical substances, actively applying restrictions to substances not yet covered by regulations but increasingly subject to consideration around the world. As a result, the number of defined chemical substances covered in fiscal year 2024 rose to 7,987. These steps are thought to be necessary for future efforts in the repair, reuse, remanufacture, and recycle loop for resources.*1

Number of defined chemical substances



Recycled plastic usage in vehicles

We are making efforts to expand the use of recycled plastic in our vehicles and developing technologies for this. Recycled plastic use in fiscal year 2024 was 5%, based on the rate achieved by our best-selling model in Europe.

Automotive shredder residue to landfill ratio

After removing ferrous and nonferrous metals from end-of-life vehicles (ELVs) in accordance with the End-of-Life Vehicle Recycling Law in Japan, the ratio of ASR taken to landfills for final disposal was zero once again in fiscal year 2024.

Material ratio

In 2024, ferrous metals accounted for 60% of the materials used in our automobiles by weight. Nonferrous metals made up another 11% and resins 19%, with miscellaneous materials making up the final 11%. To reduce our use of natural resources, we are advancing initiatives to expand the use of recycled materials in each of these categories.

Recovered bumpers

The number of bumpers collected at Japanese dealerships in fiscal year 2024 was 78,000, a 6% decline in the collection rate from fiscal year 2023.

*1 Click here for more information on chemical substance governance. >>> P018

Resource dependency (Facility waste)

Waste*1

The volume of regular waste*2 generated from global corporate activities in fiscal year 2024 amounted to 150,642 tons, and waste generated from production sites in fiscal year 2024 was 145,678 tons (Non-regular waste*3 from production sites: 10,226 tons).

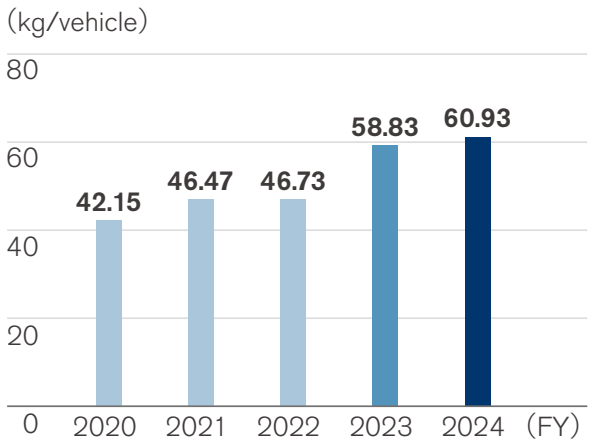
Regular waste generated from corporate activities*4

(FY)

	Unit	2020	2021	2022	2023	2024
Total	ton	153,160	158,199	157,982	155,857	150,642
By region						
Japan	ton	48,921	52,386	51,069	57,646	54,910
North America	ton	48,043	51,062	52,007	50,814	50,856
Europe	ton	31,868	33,895	36,577	44,551	43,142
Other	ton	24,328	20,857	18,329	2,846	1,734
By treatment method						
Recycling	ton	133,168	139,599	139,225	146,332	142,013
Incineration waste	ton	13,453	11,392	10,223	1,997	1,352
Landfill waste	ton	6,539	7,208	8,688	7,528	7,277

Waste per vehicle produced*1

In fiscal year 2024, regular waste per vehicle produced*5 was 60.93 kg.

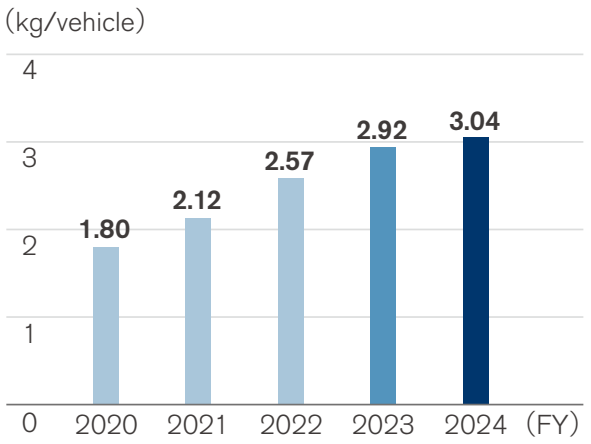


(FY)

By region	Unit	2023	2024
Japan	kg/vehicle	76.53	82.62
North America	kg/vehicle	40.80	41.53
Europe	kg/vehicle	134.72	154.15
Other	kg/vehicle	9.00	5.55

Landfill waste per vehicle produced*1

In fiscal year 2024, the volume of regular landfill waste per vehicle produced was 3.04 kg.



Responding to the Plastic Resource Circulation Act*6

The amount of industrial waste generated from plastic products in Japan during fiscal year 2024 was 6,092 tons.

Plastic-related targets	FY2024 Achievements
Continue actions to reduce waste emissions of plastic packaging, etc.	Continued to reuse returnable containers
Maintain a 100% recycling rate for industrial waste from products using plastic	Maintained a 100% recycling rate

*1 From fiscal year 2023 performance data, the scope of calculations is aligned with the consolidated financial group. Performance data from up to and including fiscal year 2022 includes non-consolidated companies.
*2 Regular waste generated from production, maintenance, and issue resolution activities, etc.
*3 Waste generated irregularly from activities such as installing new processes, relocating equipment, and dismantling facilities.
*4 Regular waste generated from production and office sites, excluding*3.
*5 Amount of regular waste generated at production sites.
*6 Plastic Resource Circulation Act: Law for plastic waste

Water resource management

Water intake for corporate activities*1

In fiscal year 2024, water intake for our global corporate activities was 16,873 thousand m³, the same level as 17,794 thousand m³ in fiscal year 2023.
In fiscal year 2024, water intake from global production sites was 15,761 thousand m³, the same level as 16,620 thousand m³ in fiscal year 2023.

(FY)

By region	Unit	2020	2021	2022	2023	2024
Total	thousand m³	21,159	20,090	20,208	17,794	16,873
Japan	thousand m³	10,797	10,317	10,472	10,724	10,086
North America	thousand m³	3,888	4,047	4,235	4,409	4,321
Europe	thousand m³	1,373	1,404	1,270	1,380	1,402
Other	thousand m³	5,101	4,322	4,231	1,281	1,064

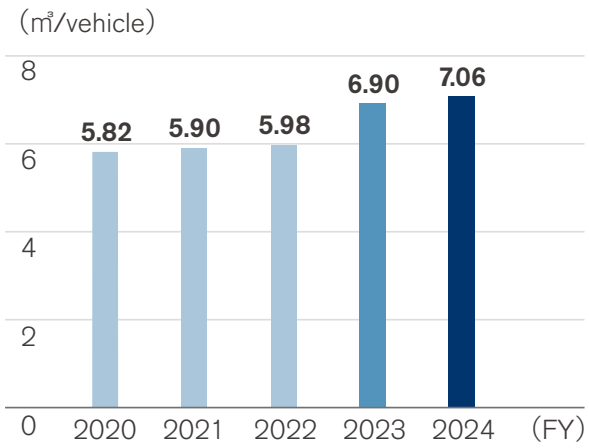
Water withdrawal by source

(FY)

	Unit	2024
Total	thousand m³	16,873
Surface water	thousand m³	1,117
Groundwater	thousand m³	6,118
Third-party water	thousand m³	9,638

Water input for corporate activities (per vehicle produced)*1

In fiscal year 2024, water input for corporate activities (per vehicle produced) was 7.06 m³/vehicle, the same level as 6.90 m³/vehicle in fiscal year 2023.



(FY)

By region	Unit	2023	2024
Japan	m³/vehicle	14.80	15.73
North America	m³/vehicle	3.64	3.71
Europe	m³/vehicle	4.24	5.07
Other	m³/vehicle	4.08	3.45

Water discharge from corporate activities*1

The total amount of water discharged in global corporate activities in fiscal year 2024 was 12,831 thousand m³, the same level as 13,405 thousand m³ in fiscal year 2023.

(FY)

By region	Unit	2020	2021	2022	2023	2024
Total	thousand m³	13,624	13,620	13,319	13,405	12,831
Japan	thousand m³	8,474	8,771	8,902	9,448	9,133
North America	thousand m³	2,351	2,565	2,610	2,837	2,669
Europe	thousand m³	1,094	707	596	724	706
Other	thousand m³	1,705	1,577	1,210	396	324

Water quality

Chemical oxygen demand (COD*2)	kg	18,017	19,941	24,884	24,811	22,536

Water discharge by destination

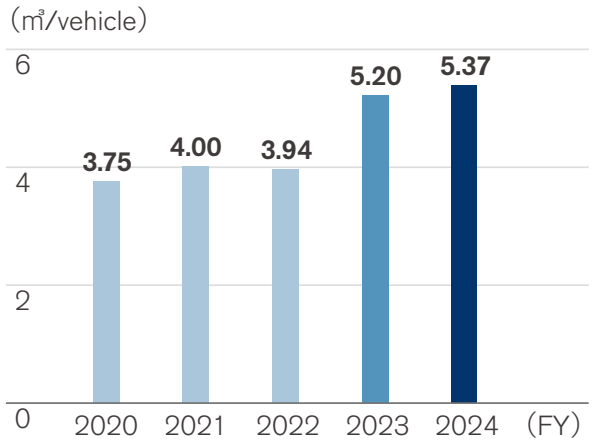
(FY)

	Unit	2024
Total	thousand m³	12,831
Surface water	thousand m³	8,144
Underground seepage	thousand m³	0
Third-party water	thousand m³	4,133
Seawater	thousand m³	554

*1 From fiscal year 2023 performance data, the scope of calculations is aligned with the consolidated financial group. Performance data up to and including fiscal year 2022 includes non-consolidated companies.
*2 Four sites of Nissan Motor and Nissan Motor Kyushu

Water discharge from corporate activities (per vehicle produced)*1

In fiscal year 2024, water discharge per vehicle produced was 5.37 m³, the same level as 5.20 m³ in fiscal year 2023.



(FY)

By region	Unit	2023	2024
Japan	m³/vehicle	13.03	14.24
North America	m³/vehicle	2.34	2.29
Europe	m³/vehicle	2.22	2.56
Other	m³/vehicle	1.26	1.05

Data for the Japan region includes the manufacture of powertrains and other components for overseas assembly. Since the denominator is vehicles produced in the region, this tends to result in higher values for Japan.

Water consumption in corporate activities*1*2

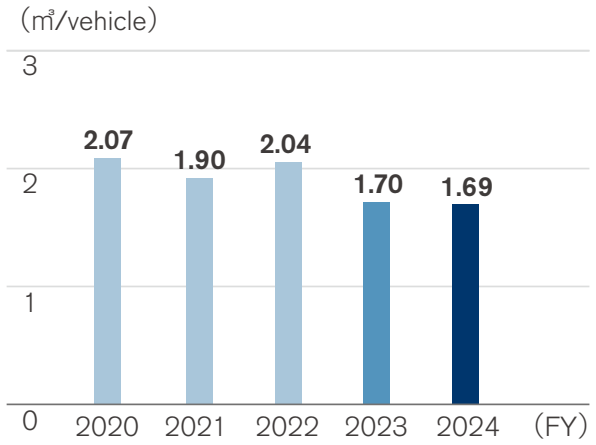
The total amount of water consumed in global corporate activities in fiscal year 2024 was 4,042 thousand m³, a decrease from 4,390 thousand m³ in fiscal year 2023.

(FY)

By region	Unit	2020	2021	2022	2023	2024
Total	thousand m³	7,535	6,470	6,889	4,390	4,042
Japan	thousand m³	2,323	1,546	1,570	1,277	953
North America	thousand m³	1,537	1,481	1,625	1,572	1,653
Europe	thousand m³	279	697	674	656	696
Other	thousand m³	3,396	2,745	3,021	885	740

Water consumption in corporate activities (per vehicle produced)*1

In fiscal year 2024, water discharge per vehicle produced was 1.69 m³, which is the same level as 1.70 m³*1 in fiscal year 2023.



(FY)

By region	Unit	2023	2024
Japan	m³/vehicle	1.76	1.49
North America	m³/vehicle	1.30	1.42
Europe	m³/vehicle	2.02	2.52
Other	m³/vehicle	2.82	2.40

*1 From fiscal year 2023 performance data, the scope of calculations is aligned with the consolidated financial group. Performance data up to and including fiscal year 2022 includes non-consolidated companies.
*2 Based on GRI 303, total water consumption is total water withdrawn minus total water discharged as calculated by Nissan.

Air quality

Emissions of NOx and SOx

In fiscal year 2024, NOx and SOx emissions from Nissan manufacturing facilities*1 were 360 tons and 1 ton, respectively.

(FY)

	Unit	2020	2021	2022	2023	2024
NOx	ton	364	373	340	495	360
SOx	ton	10	7	2	2	1

Volatile organic compounds (VOCs)*2

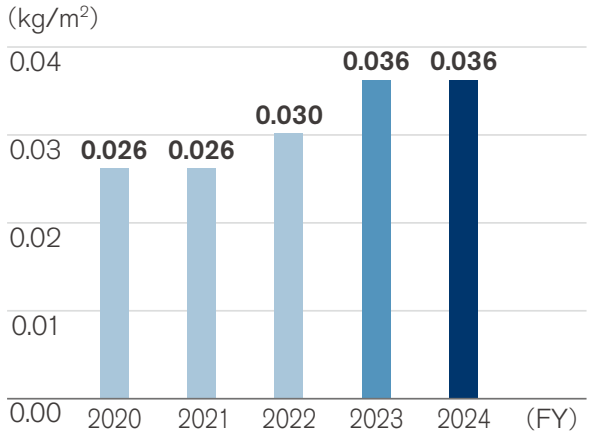
In fiscal year 2024, total VOC emissions amounted to 10,404 tons, a decrease from fiscal year 2023. We continue to engage in activities that include switching to water-based paints and materials with low VOC content.

(FY)

By region	Unit	2020	2021	2022	2023	2024
Total	ton	10,451	10,653	11,104	11,018	10,404
Japan	ton	3,176	3,031	3,987	4,791	4,397
North America	ton	3,097	3,112	3,156	3,294	3,480
Europe	ton	839	519	877	1,023	749
Other	ton	3,339	3,991	3,084	1,910	1,778

VOC emissions per painted area*2

In fiscal year 2024, VOC emissions per painted area were 0.036 kg.



(FY)

By region	Unit	2023	2024
Total	kg/m2	0.036	0.036
Japan	kg/m2	0.052	0.054
North America	kg/m2	0.021	0.024
Europe	kg/m2	0.029	0.024
Other	kg/m2	0.066	0.060

Released substances designated by PRTR Law (Japan)*3

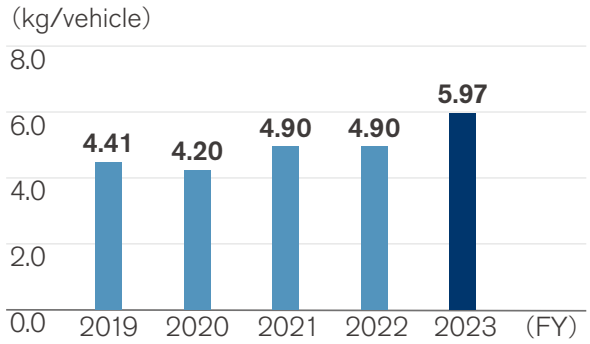
In fiscal year 2023, released substances designated by Pollutant Release and Transfer Register (PRTR) Law in Japan were 4,326 tons, an increase from 2,924 tons in fiscal year 2022 due to factors including an increase in newly designated chemical substances resulting from legal revisions.

(FY)

By region	Unit	2019	2020	2021	2022	2023
Japan site total	ton	3,339	2,173	2,183	2,924	4,326
Oppama	ton	1,022	697	881	959	1,055
Tochigi	ton	467	394	323	567	1,077
Kyushu	ton	1,391	1,042	942	1,369	2,151
Yokohama	ton	21	9	4	8	15
Iwaki	ton	62	6	4	4	7
NTC	ton	351	3	3	3	3
Zama Operation Center	ton	26	22	26	14	18

PRTR emissions per vehicle produced (Japan)

In fiscal year 2023, PRTR emissions per vehicle produced were 5.97 kg, an increase compared with fiscal year 2022.



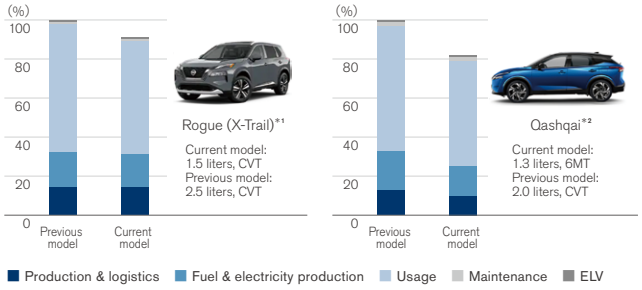
*1 Only consolidated sites in Japan
*2 From fiscal year 2023 performance data, the scope of calculations is aligned with the consolidated financial group. Performance data up to and including fiscal year 2022 includes non-consolidated companies.
*3 The table shows chemical substance emissions calculated based on the Japanese government PRTR guidelines. PRTR emissions show total volume excluding substances adhering to the product.

Strengthening our foundations to address environmental issues

LCA of gasoline models

We have been expanding the application of the LCA method to global sales models. Coverage on a unit basis has reached approximately 80% of models globally and approximately 90% in Europe.
In the case of the Rogue (X-Trail) and Qashqai, CO_2 equivalent emissions have been reduced compared with the previous models by improving powertrain efficiency and reducing vehicle weight.*1

Life cycle CO_2 equivalent emissions

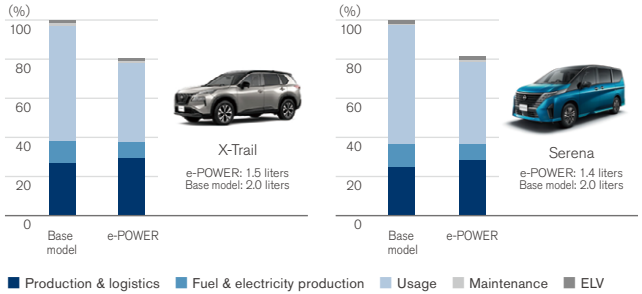


*1 Production in the U.S., 120,000 miles driven in the U.S. (basis for comparison).
*2 Production in EU, 150,000 km driven in EU (basis for comparison).

LCA of e-POWER models

Nissan introduced its new e-POWER powertrain in 2016, marking another significant milestone in the electrification strategy with life cycle emission improvements. Compared with their gasoline-powered counterpart models, the X-Trail e-POWER and Serena e-POWER have both achieved an approximately 20% reductions in CO_2 equivalent emissions.

Life cycle CO_2 equivalent emissions

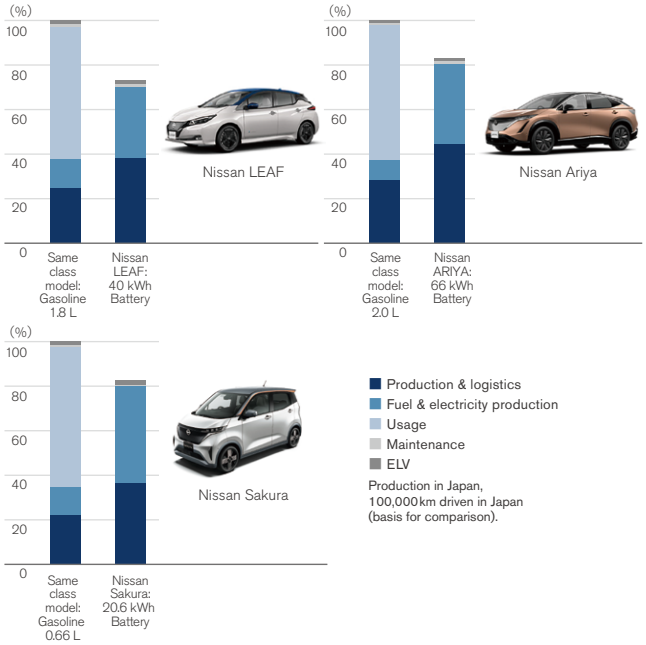


Production in Japan, 100,000 km driven in Japan (basis for comparison).

LCA of EV models

The Nissan LEAF reduces its life cycle CO_2 equivalent emissions by approximately 30% compared to conventional vehicles of the same class in Japan. Launched in 2022, the Nissan Ariya and Nissan Sakura improve EV product appeal and reduce environmental impacts. Compared to Japanese gasoline-powered vehicles in the same class, the Nissan Ariya and Nissan Sakura offer longer cruising ranges while also reducing life cycle CO_2 emissions by approximately 20%.

Life cycle CO_2 equivalent emissions

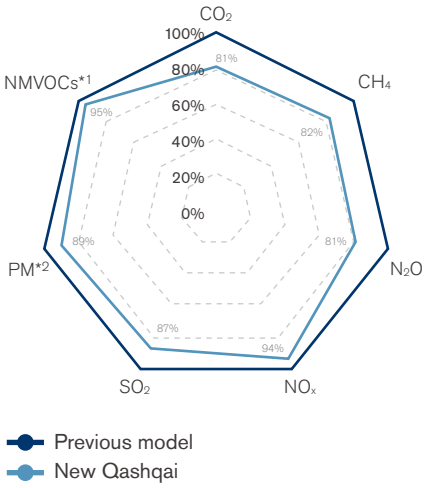


*1 Click here for further details regarding Nissan's LCA https://www.nissan-global.com/EN/SUSTAINABILITY/ENVIRONMENT/GREENPROGRAM/FOUNDATION/LCA/

Life cycle improvements beyond climate change

Nissan is expanding the scope of its life cycle assessments (LCAs) to not only greenhouse gases but also a variety of chemicals.
Our calculations show that the new Qashqai achieves 5-20% reductions in emissions for all targeted chemical substances and reduces environmental impacts throughout its life cycle compared with the previous model.

New Qashqai life cycle assessment (LCA)



Production in EU, 150,000 km driven in EU.

Material balance

Input

(FY)

	Unit	2023	2024
Raw materials*3	ton	3,039,866	2,820,044
Energy	MWh	6,053,220*4	5,807,255
Renewable energy	MWh	226,639*4	261,216
Water withdrawal*3	thousand m³	17,794	16,873

Output

(FY)

	Unit	2023	2024
Vehicles produced			
Global production volume*3	thousands of vehicles	2,577	2,391
CO_2 emissions	kt-CO_2	1,731*4	1,519
Water discharge*3	thousand m³	13,405	12,831
Emissions			
NOx	ton	495	360
SOx	ton	2	1
VOCs*3	ton	11,018	10,404
Waste*3			
Recycling	ton	146,332	142,013
Incineration waste	ton	1,997	1,352
Landfill waste	ton	7,528	7,277

Environmental conservation cost*5

(FY)

		2023		2024	
	Unit	Investment	Cost	Investment	Cost
Total	mil ¥	15,557	165,353	15,887	160,937
Business area	mil ¥	1,908	2,207	751	2,145
Upstream/ downstream	mil ¥	0	406	0	384
Management	mil ¥	0	13,324	0	12,094
R&D	mil ¥	13,649	149,238	15,136	145,888
Social activities	mil ¥	0	48	0	108
Damage repairs	mil ¥	0	130	0	318

Economic impact

(FY)

	Unit	2023	2024
Total	mil ¥	13,996	9,983
Cost reduction	mil ¥	3,293	237
Profit	mil ¥	10,703	9,746

*1 NMVOCs: Non-Methane Volatile Organic Compounds
*2 PM: Particulate Matter
*3 From fiscal year 2023 performance data, the scope of calculations is aligned with the consolidated financial group. Performance data up to and including fiscal year 2022 includes non-consolidated companies.
*4 Changed in line with revisions to fiscal year 2023 performance data.
*5 All environmental costs are based on the guidelines provided by Japan's Ministry of the Environment and calculated for activities in Japan only.