117

CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

#### **ENVIRONMENTAL DATA**

Material Balance	117
Energy	117-118
CO <sub>2</sub>	119-120
Water	120-121
Emissions	122-123
Waste	123-124
Logistics	124-126
Supply Chain	126-127
Environmental Accounting	127
Facility	128

Fuel Economy, CO <sub>2</sub>	129-132
Technologies	133-134
Other Emissions	134-135
Lifecycle Assessments (LCAs)	136-137
Materials, Recycling	138
ELV Programs	139

139

140

129

Third-Party Assurance	140
GRI Index	1/1

Japan: Japan North America: United States, Mexico, Canada

• Fiscal year: April 1, 2016, through March 31, 2017.

**Regarding Data for Publication** 

Europe: United Kingdom, Spain, Russia, Germany, Italy, France, Netherlands, Belgium, Hungary, Finland, Switzerland (Russia data

 Scope: All Nissan manufacturing facilities, management offices and subsidiaries worldwide covered under consolidation of Nissan Motor Co., Ltd., and equity method affiliated manufacturing companies. • Environment Management Regions: Managed companies included in the scope are categorized by following regions:

moved from Others and included in Europe from fiscal 2013)
Others: China, Thailand, Indonesia, India, Australia, South Africa, Brazil, Egypt, Vietnam, UAE, others

Calsonic Kansei Corporation became out of scope in fiscal 2016 though it is included in the data for fiscal 2016. However, Calsonic Kansei Corporation is not included in CO<sub>2</sub> emission calculation of scope 3 employee commuting.

#### Restatement of Information Provided in Previous Years

• Fiscal 2015 data were reviewed and some were revised.



See p. 22, Employee Engagement and Education, for additional environment-related information.

CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

#### **CORPORATE INDICATORS**

#### **Material Balance**

Input		(FY)
	Unit	2016
Raw materials	ton	7,537,092
Water	1,000 m <sup>3</sup>	29,118
Energy	MWh	10,189,082

Output		(FY)
	Unit	2016
Vehicles		
Global production volume	unit	5,654,000
Waste	ton	158,939
Waste for disposal	ton	8,707
Recycled	ton	150,231
Wastewater	1,000 m <sup>3</sup>	20,516
CO <sub>2</sub> emissions	t-CO <sub>2</sub>	3,577,689
VOC	ton	11,933
NOx	ton	430
SOx	ton	31



► GRI G4 Indicators
► G4-EN1/G4-EN3/

G4-EN1/G4-EN3/ G4-EN8/G4-EN15/ G4-EN16/G4-EN21/ G4-EN22/G4-EN23 Nissan's midterm environmental action plan, Nissan Green Program 2016 (NGP2016), focused on reducing the environmental impact of corporate activities and pursuing harmony between resource consumption and ecology. To minimize the company's corporate carbon footprint, Nissan aims to reduce CO<sub>2</sub> emissions per vehicle sold and to improve resource efficiency by increasing the recycled material usage ratio. Four key actions, including the above, are implemented throughout Nissan's corporate activities.

#### **CORPORATE INDICATORS - ENERGY**

#### **Energy Input**

						(FY)
	Unit	2012	2013	2014	2015	2016
Total	MWh	8,984,864	9,207,124	9,474,368	9,683,528	10,189,082
Japan	MWh	4,565,499	4,424,486	4,191,517	4,115,353	4,497,562
North America	MWh	2,157,793	2,061,393	2,424,942	2,583,613	2,643,303
Europe	MWh	982,332	1,027,027	1,156,519	1,107,279	1,093,103
Other	MWh	1,279,240	1,694,218	1,701,391	1,877,283	1,955,115
Primary						
Natural gas	MWh	2,847,325	2,894,901	3,060,122	3,346,141	3,537,674
LPG	MWh	360,891	339,751	295,800	303,826	249,426
Coal	MWh	235,239	149,232	199,801	206,307	217,431
Heating oil	MWh	248,445	226,513	225,114	188,943	209,232
Gasoline	MWh	211,449	263,663	322,624	302,564	303,040
Diesel	MWh	72,151	71,371	99,045	55,099	57,488
Heavy oil	MWh	67,967	61,359	58,274	34,289	43,853
External						
Electricity (Purchased)	MWh	4,785,477	5,038,384	5,084,989	4,979,114	5,247,663
Renewable energy	MWh	15,522	118,917	154,515	141,076	157,226
Chilled water	MWh	25,947	11,646	4,239	12,116	12,919
Heated water	MWh	7,492	6,227	4,635	4,630	4,690
Steam	MWh	114,281	133,849	110,953	100,000	136,593
Internal						
Electricity (In-house generation)	MWh	8,199	10,227	8,772	9,423	11,847
Renewable energy	MWh	8,199	10,227	8,772	9,423	11,847
Total renewable energy	MWh	23,721	129,144	163,287	150,499	169,073
Ratio of renewable energy	%	0.26%	1.40%	1.73%	1.55%	1.66%

Despite the extensive energy-saving activities at Nissan facilities, energy usage was 10.19 million MWh in fiscal 2016, a 5.2% increase from fiscal 2015. Energy-saving activities throughout our corporate operations and efficient manufacturing contributed to limiting the rise, given that sales volume increased by 8.7% in the same period. Production sites globally accounted for 8.946 million MWh  $\blacksquare$  of total energy consumption.

Nissan's objective was to increase the usage of renewable energy to 9% of total energy used in global activities by fiscal 2016. Direct use of renewable energy increased to 1.66% as a result of purchasing wind-power-generated electricity at the India plant. Taking into account renewable energy in electricity, the percentage reached 9.2%, achieving the target.

▶ page\_140

 This figure is subject to assurance by KPMG AZSA Sustainability Co., Ltd. For details, please see p.140.

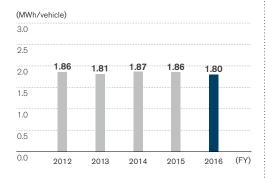


►► GRI G4 Indicators ►► G4-EN3

CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

#### **Energy per Vehicle Produced**

In fiscal 2016 energy per vehicle produced was 1.80 MWh, a 3.2% improvement from fiscal 2015. This result shows our continuous efforts to reduce energy used per vehicle produced.

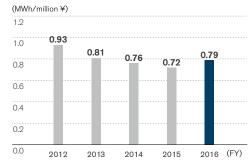


#### (By Region)

2016
4.42
4.43
1.42
1.50
0.95

Data for the Japan region includes manufacturing of powertrains and other components for use in overseas assembly operations. Since the denominator is vehicles produced in the region, this results in intensity tending to show higher values.

#### **Energy per Revenue**



In fiscal 2016, global Nissan facilities saw energy per revenue rise to 0.79 MWh, an increase of 9.5% compared to the previous fiscal year. Nissan is taking continuous steps toward decoupling financial capital generation from energy use; however, an increase of production volume and decrease of revenue result in an increase of energy per revenue.





CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

(FY)

#### **CORPORATE INDICATORS - CO2**

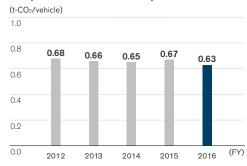
#### **Carbon Footprint**

						(1 1)
	Unit	2012	2013	2014	2015	2016
Scope1	t-CO <sub>2</sub>	835,766	812,062	861,457	926,790	963,661
Scope2	t-CO <sub>2</sub>	2,432,889	2,538,360	2,422,410	2,547,951	2,614,028
Scope1+2	t-CO2	3,268,655	3,350,422	3,283,867	3,474,741	3,577,689
Japan	t-CO2	1,526,182	1,446,871	1,267,676	1,479,572	1,579,089
North America	t-CO2	758,457	698,934	769,696	800,724	823,340
Europe	t-CO2	284,079	259,972	290,109	208,088	176,285
Other	t-CO2	699,937	944,644	956,386	986,359	998,976
Scope3						
Commuting	t-CO2	468,346	426,487	455,510	319,189	304,100
Japan, U.S., Europe	t-CO2	214,619	217,091	227,248	218,137	213,747
Logistics	t-CO2	1,490,050	1,678,903	1,608,582	1,598,891	1,925,281

**▶** page\_140

This figure is subject to assurance by KPMG AZSA Sustainability Co., Ltd. For details, please see p.140. In fiscal 2016, the total of Scope 1 and 2 emissions was 3.58 million tons. Given that sales volume increased by 8.7% in the same period, the increase in CO<sub>2</sub> emissions from Nissan facilities was limited to 2.9% from the previous fiscal year, due to increase of production volume. Total CO<sub>2</sub> emissions from manufacturing processes were 3.139 million tons (Scope 1 emissions: 0.841 million tons, Scope 2 emissions: 2.297 million tons).

### Scope 1 and 2 Emissions per Vehicle Produced



For fiscal 2016, CO<sub>2</sub> emissions per vehicle produced improved 5.3% from the previous fiscal year, with combined Scope 1 and 2 emissions at 0.63 ton. Energy conservation diagnosis and best-practice sharing among global Nissan plants contributed to these significant improvements.

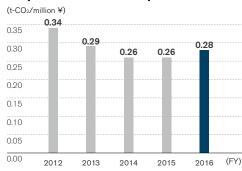
#### (By Region)

		(FY)
	Unit	2016
Japan	t-CO2/vehicle	1.56
North America	t-CO2/vehicle	0.44
Europe	t-CO2/vehicle	0.24
Other	t-CO2/vehicle	0.49

Data for the Japan region includes manufacturing of powertrains and other components for overseas assembly use. Since the denominator is vehicles produced in the region, this results in intensity tending to show higher values.



#### Scope 1 and 2 Emissions per Revenue



In fiscal 2016, as measured by the per revenue  $CO_2$  emissions from our global operations, the result was 0.28 ton per ¥1 million, increased 7.2% from fiscal 2015. A decrease in revenue resulted in this increase of emissions per revenue.



→ GRI G4 Indicators

► G4-EN15/G4-EN16/ G4-EN17/G4-EN19/ G4-EN30



(FY)

CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

#### Corporate Carbon Footprint per Vehicle Sold

In the Nissan Green Program 2016 (NGP2016), the company aimed to reduce CO<sub>2</sub> emissions from corporate activities by 20% compared to fiscal 2005, focusing on manufacturing, logistics, offices and dealerships in Japan. In fiscal 2016, overall corporate emissions were reduced by 22.3% compared to fiscal 2005, achieving the target. Lower CO<sub>2</sub> emissions from manufacturing and dealerships in Japan contributed to emission reduction.



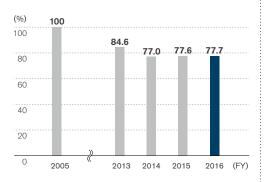
►► GRI G4 Indicators ►► G4-EN15/G4-EN16/ G4-EN18

#### Manufacturing CO<sub>2</sub> per Vehicle Produced

IIn the Nissan Green Program 2016 (NGP2016), the company aimed to reduce  $CO_2$  emissions per vehicle produced from manufacturing activities by 27% in fiscal 2016 compared to fiscal 2005. In fiscal 2016, Nissan's manufacturing  $CO_2$  emissions per vehicle produced reached 0.53 ton, a 27.0% reduction compared to fiscal 2005, achieving the target.



**→** GRI G4 Indicators **→** G4-EN15/G4-EN16/ G4-EN18



#### 

#### **CORPORATE INDICATORS—WATER**

#### **Water Input**

						(1 1)
	Unit	2012	2013	2014	2015	2016
Total	1,000 m <sup>3</sup>	29,537	30,967	29,162	28,570	29,118
Japan	1,000 m <sup>3</sup>	15,956	16,818	15,018	14,990	15,563
North America	1,000 m <sup>3</sup>	4,770	5,176	5,419	5,427	5,483
Europe	1,000 m <sup>3</sup>	2,410	2,404	2,310	2,330	2,299
Other	1,000 m <sup>3</sup>	6,401	6,569	6,415	5,823	5,774

Nissan's objective was to reduce water input by 15% in fiscal 2016 compared with fiscal 2010 in cubic meters per production unit; the target was achieved. In fiscal 2016, water input in our global sites was 29,118 thousand m³, the same level as in fiscal 2015. This is mainly due to water-saving activities in vehicle production plants, as shown in Vehicle Production Plant Water Input per Vehicle Produced on p. 121. Water input from production sites of Nissan Motor Co., Ltd. in Japan is 6,900,254 m³. ▶

#### ▶ page\_140

➤ This figure is subject to assurance by KPMG AZSA Sustainability Co., Ltd. For details, please see p. 140.



➤ GRI G4 Indicators ➤ G4-EN8

#### **Water Discharge**

						(FY)
	Unit	2012	2013	2014	2015	2016
Total	1,000 m <sup>3</sup>	21,228	23,482	20,938	20,680	20,516
Japan	1,000 m <sup>3</sup>	13,710	15,114	13,358	12,976	12,681
North America	1,000 m <sup>3</sup>	3,055	3,658	3,550	3,916	4,028
Europe	1,000 m <sup>3</sup>	2,031	2,054	1,793	1,740	1,767
Other	1,000 m <sup>3</sup>	2,432	2,656	2,237	2,048	2,040

						(FY)
	Unit	2012	2013	2014	2015	2016
Quality						
Chemical oxygen demand (COD)	kg	34,894	32,130	27,883	28,042	29,730

In fiscal 2016, water discharges from our global sites totaled 20,516 thousand m³, which was the same level as in fiscal 2015.



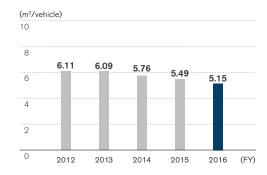
→ GRI G4 Indicators

▶ G4-EN22

CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

#### Water Input per Vehicle Produced

In fiscal 2016, water input per vehicle produced decreased to 5.15 m³, a 6.2% improvement from fiscal 2015. This is mainly due to the watersaving activities in vehicle production plants as shown below.

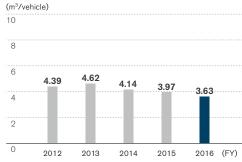


#### (By Region)

		(1 1)
	Unit	2016
Japan	m³/vehicle	15.33
North America	m³/vehicle	2.96
Europe	m³/vehicle	3.15
Other	m³/vehicle	2.81

Data for the Japan region includes manufacturing of powertrains and other components for overseas assembly use. Since the denominator is vehicles produced in the region, this results in intensity tending to show higher values.

### Water Discharge per Vehicle Produced



In fiscal 2016, water discharge per vehicle produced was 3.63 m³, which was a 8.7% improvement from fiscal 2015.

#### (By Region)

(FY)

	(1-1)
Unit	2016
m³/vehicle	12.49
m³/vehicle	2.17
m³/vehicle	2.42
m³/vehicle	0.99
	m³/vehicle m³/vehicle m³/vehicle

(FV)

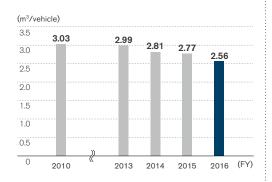
Data for the Japan region includes manufacturing of powertrains and other components for overseas assembly use. Since the denominator is vehicles produced in the region, this results in intensity tending to show higher values.



### → GRI G4 Indicators → G4-EN8

# Vehicle Production Plant Water Input per Vehicle Produced

Nissan's objective was to reduce water input by 15% in fiscal 2016 compared with fiscal 2010 in cubic meters per production unit. In fiscal 2016, water input per vehicle produced in vehicle production plants improved 15.7% compared with fiscal 2010, achieving the target.



CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

#### **CORPORATE INDICATORS—EMISSIONS**

#### **Emissions**

						(FY)
	Unit	2012	2013	2014	2015	2016
NOx	ton	525	450	453	450	430
SOx	ton	43	40	40	37	31



In fiscal 2016, NOx and SOx emissions from Nissan facilities were 430 tons and 31 tons, respectively.

#### **Volatile Organic Compounds (VOCs)**

						(FY)
	Unit	2012	2013	2014	2015	2016
Total	ton	12,305	11,734	11,316	10,820	11,933
Japan	ton	3,623	3,492	2,826	2,850	3,580
North America	ton	5,194	5,338	5,511	5,309	4,851
Europe	ton	3,488	2,904	2,979	2,661	3,502

Nissan's objective was to reduce volatile organic compounds (VOCs) from the body manufacturing process by 15% in fiscal 2016 compared with fiscal 2010 in grams per square meters. In fiscal 2016, VOCs from manufacturing plants were 11,933 tons globally, a 10.3% increase from fiscal 2015. This is mainly due to increase of global production volume.

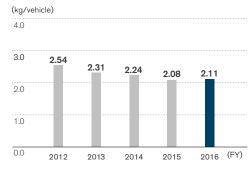


▶ GRI G4 Indicators▶ G4-EN21

#### **VOC Reduction from Paint Shop Technologies**

In 2013, Nissan opened its most advanced paint plant in the world. The state-of-the-art facility in Smyrna, Tennessee, sets new standards for quality, efficiency and environmental impacts, as it is capable of reducing energy consumption by 30%, carbon dioxide emissions by 30% and volatile organic compound (VOCs) emissions by 70%. The plant uses an innovative three-wet paint process that applies all three paint layers in succession, before the vehicle goes into the oven. The plant is Nissan's "Showcase Project" as part of the U.S. Department of Energy's Better Buildings Better Plants Challenge, where Nissan has committed to reducing energy intensity in its three U.S. plants by 25% by 2020.

#### **VOCs per Vehicle Produced**



#### (By Region)

		(FY)
	Unit	2016
Japan	kg/vehicle	3.53
North America	kg/vehicle	2.62
Europe	kg/vehicle	4.80

In fiscal 2016, VOCs per vehicle produced were 2.11 kg, the same level as the previous fiscal year.



CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

#### Released Substances Designated by PRTR Law (Japan)

					(FY)
Unit	2011	2012	2013	2014	2015
ton	4,441	4,158	4,183	3,879	4,129
ton	981	715	676	402	488
ton	915	942	1,155	1,317	1,435
ton	1,390	1,394	1,300	1,152	1,173
ton	555	581	579	547	531
ton	320	183	128	114	132
ton	280	343	347	347	370
	ton ton ton ton ton ton ton ton	ton 4,441 ton 981 ton 915 ton 1,390 ton 555 ton 320	ton 4,441 4,158  ton 981 715  ton 915 942  ton 1,390 1,394  ton 555 581  ton 320 183	ton         4,441         4,158         4,183           ton         981         715         676           ton         915         942         1,155           ton         1,390         1,394         1,300           ton         555         581         579           ton         320         183         128	ton 4,441 4,158 4,183 3,879  ton 981 715 676 402  ton 915 942 1,155 1,317  ton 1,390 1,394 1,300 1,152  ton 555 581 579 547  ton 320 183 128 114

The table shows chemical substance emissions calculated based on the Japanese government PRTR guideline. PRTR emissions show total volume excluding substances adherent to the product.

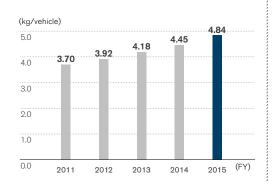
In fiscal 2015, released substances designated by the PRTR (Pollutant Release and Transfer Register) Law in Japan were 4,129 tons, an increase from the previous fiscal year.



► GRI G4 Indicators

# PRTR Emissions per Vehicle Produced (Japan)

In fiscal 2015, PRTR emissions per vehicle produced in Japan were 4.84 kg, an 8.8% increase from the previous fiscal year.



### CORPORATE INDICATORS—WASTE

#### Waste

					(FY)
Unit	2012	2013	2014	2015	2016
ton	168,617	172,849	173,513	159,345	158,939
ton	65,412	61,999	59,808	63,630	61,115
ton	40,208	51,767	58,452	49,129	45,459
ton	50,495	51,295	45,358	37,204	41,110
ton	12,502	7,788	9,895	9,382	11,255
ton	31,187	17,903	13,153	11,355	8,707
ton	137,430	154,946	160,360	147,990	150,231
	ton ton ton ton ton ton ton	ton 168,617 ton 65,412 ton 40,208 ton 50,495 ton 12,502  ton 31,187	ton 168,617 172,849  ton 65,412 61,999  ton 40,208 51,767  ton 50,495 51,295  ton 12,502 7,788  ton 31,187 17,903	ton 168,617 172,849 173,513  ton 65,412 61,999 59,808  ton 40,208 51,767 58,452  ton 50,495 51,295 45,358  ton 12,502 7,788 9,895  ton 31,187 17,903 13,153	ton 168,617 172,849 173,513 159,345  ton 65,412 61,999 59,808 63,630  ton 40,208 51,767 58,452 49,129  ton 50,495 51,295 45,358 37,204  ton 12,502 7,788 9,895 9,382  ton 31,187 17,903 13,153 11,355

Nissan's objective was to reduce waste in manufacturing plants by 2% per year for Japan and 1% per year globally compared to BAU (business as usual); the target was achieved in fiscal 2016. For fiscal 2016, waste generated totaled approximately 159,000 tons, the same level as in fiscal 2015. Contributing to this were waste-reduction activities at manufacturing plants in Mexico and Spain. The boundary of the waste data is limited to global production facilities. Waste generated from production sites of Nissan Motor Co., Ltd. in Japan is 28,842 tons.

#### ▶ page\_140

■ This figure is subject to assurance by KPMG AZSA Sustainability Co., Ltd. For details, please see p. 140.



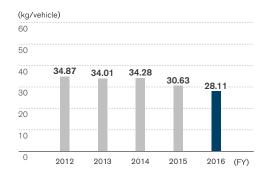


CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

(EV)

#### **Waste per Vehicle Produced**

Waste per vehicle produced was 28.11 kg, an 8.2% decrease from fiscal 2015 and the second straight year of considerable decrease.



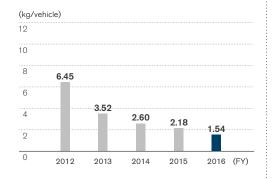
#### (By Region)

2016
60.21
24.51
56.31
5.48



#### Waste for Disposal per Vehicle Produced

In fiscal 2016, Nissan reduced the volume of waste for disposal to a total of 1.54 kg per vehicle produced, a 29% reduction from fiscal 2015. This was mainly due to waste-reduction efforts at the manufacturing plant in Mexico.



#### **CORPORATE INDICATORS - LOGISTICS**

#### **Logistics Volume**

					(FY)
Unit	2012	2013	2014	2015	2016
mil ton-km	35,747	37,719	35,243	35,546	39,930
mil ton-km	12,156	12,883	11,578	11,221	10,634
mil ton-km	23,591	24,836	23,665	24,325	29,296
%	70.7	64.3	62.0	60.1	60.9
%	20.6	24.9	25.0	26.5	24.8
%	8.2	10.5	12.5	13.0	14.0
%	0.5	0.4	0.5	0.3	0.4
	mil ton-km mil ton-km mil ton-km % %	mil ton-km 35,747 mil ton-km 12,156 mil ton-km 23,591  % 70.7 % 20.6 % 8.2	mil ton-km         35,747         37,719           mil ton-km         12,156         12,883           mil ton-km         23,591         24,836           %         70.7         64.3           %         20.6         24.9           %         8.2         10.5	mil ton-km         35,747         37,719         35,243           mil ton-km         12,156         12,883         11,578           mil ton-km         23,591         24,836         23,665           %         70.7         64.3         62.0           %         20.6         24.9         25.0           %         8.2         10.5         12.5	mil ton-km         35,747         37,719         35,243         35,546           mil ton-km         12,156         12,883         11,578         11,221           mil ton-km         23,591         24,836         23,665         24,325           %         70.7         64.3         62.0         60.1           %         20.6         24,9         25.0         26.5           %         8.2         10.5         12.5         13.0

In fiscal 2016, global shipping increased by 12.3% from the previous fiscal year to reach 39,930 million ton-km due to increase of global production volume. Nissan has been continuously working to reduce shipping by upsizing trucks, improving truck loading rates, improving fuel economy of car-transporting ships and shifting to rail and sea shipping. However, the impact was not large enough to cancel out the impact of the global production increase.





CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

#### CO<sub>2</sub> Emissions in Logistics

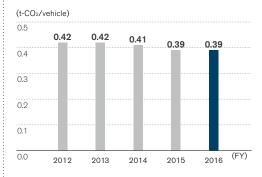
	Unit	2012	2013	2014	2015	(FY) 2016
Total	t-CO <sub>2</sub>	1,490,050	1,678,903	1,608,582	1,598,891	1,925,281
Inbound	t-CO <sub>2</sub>	821,030	908,804	822,867	797,034	809,088
Outbound *	t-CO <sub>2</sub>	669,020	770,098	785,715	801,857	1,116,193
Sea	%	23.9	20.2	18.5	18.3	17.8
Road	%	55.3	61.7	60.5	65.7	62.1
Rail	%	4.3	5.2	5.1	5.4	5.6
Air	%	16.4	12.9	15.9	10.6	14.5

"Inbound" includes parts procurement from suppliers and transportation of knockdown parts, and "Outbound" includes transportation of complete vehicles and service parts. In fiscal 2016,  $CO_2$  emissions from logistics were 1,925,281 tons, an increase of 20.4% from the previous fiscal year. Emissions from air freight increased 65.0%, impacting the overall emission level.

►► GRI G4 Indicators

►► G4-EN19/G4-EN30

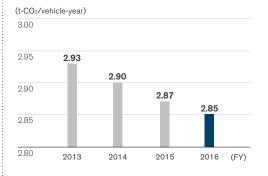
#### CO<sub>2</sub> Emissions per Vehicle Transported



In fiscal 2016, despite an expansion in global production, the CO<sub>2</sub> emissions per vehicle transported were 0.39 ton, the same level as the previous fiscal year.



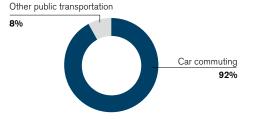
#### **Employee Commuting CO<sub>2</sub> Emissions**



companywide CO₂ reduction plan for car commuting employees in Japan. For fiscal 2016, CO₂ emissions from car commuting in Japan were approximately 40 kton, so or 2.85 ton-CO₂/vehicle annually. This plan encourages car commuters to shift from internal combustion engine vehicles to the zero-emission electric vehicle Nissan LEAF to reduce CO₂. The objective is to reduce emissions by 1% in ton-CO₂/vehicle annually.

In fiscal 2013, Nissan introduced a





- Calculated by using below parameters together with vehicle homologation data:
- Average car commuting range (Japan): 9,000 km/ vehicle-year
- National Greenhouse Gas Inventory Report of Japan (2009), Ministry of the Environment, Japan: 0.33 kg-CO2e
- CO<sub>2</sub> emission factor in fiscal 2014, Tokyo Electric Power Company: 0.000496 t-CO<sub>2</sub>/kWh
- Employees of Nissan offices and manufacturing plants in Japan, fiscal 2016.

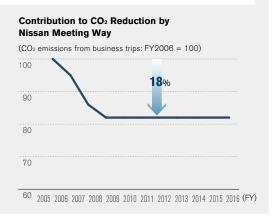
CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

#### CO<sub>2</sub> Emissions from Business Trips

In 2005 the company started the Nissan Meeting Way program to improve the efficiency of meetings. This program has five major rules: keep things paperless, require as little movement of people as possible, take only 1 hour per unit of discussion, confirm meeting objectives and record clear minutes. As a result of this program, meeting efficiency was improved;  $\text{CO}_2$  emissions from business travel were also reduced through the use of video and telephone conference systems.

#### Achieved 18% Reduction of CO<sub>2</sub> Emissions from Business Travel

Currently,  $CO_2$  emissions from business travel are approximately 226 kton. Nissan has achieved an 18% reduction in business-travel-related  $CO_2$  emissions compared to fiscal 2005 through the use of video and telephone conference systems since 2009.



#### **CORPORATE INDICATORS—SUPPLY CHAIN**

#### Supplier Emissions

	(FY)
Unit	2015
kt-CO2	9,382
GWh	22,893
GWh	516
1,000 m³	65,869
1,000 m³	52,970
	kt-CO <sub>2</sub> GWh GWh 1,000 m <sup>3</sup>

A supply-chain environmental survey was conducted on global tier-1 suppliers. Calculations were based on actual submitted data from suppliers and combined with other estimated data. This survey is one of Nissan's efforts to reduce CO<sub>2</sub> emissions throughout the entire value chain. In fiscal 2016, the carbon footprint of contract suppliers was 9,382kt-CO<sub>2</sub>. With tier-1 suppliers' own individual targets, overall CO<sub>2</sub> emissions and water input are expected to improve. Nissan is regularly engaging with global suppliers to continuously reduce environmental impacts. The company is involved in energy-saving collaborative Thanks Activities with suppliers to reduce energy/CO<sub>2</sub>. From fiscal 2017, Nissan has joined the CDP supply chain program as a lead member for the first time as a Japanese company.



CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

Scope 3 Emissions by Category		(FY)
Category	Unit	2016
1. Purchased goods & services	kt-CO <sub>2</sub>	17,914
2. Capital goods	kt-CO <sub>2</sub>	1,180
3. Fuel- and energy-related activities	kt-CO <sub>2</sub>	411
4. Upstream transportation & distribution	kt-CO <sub>2</sub>	809
5. Waste generated in operations	kt-CO <sub>2</sub>	197
6. Business travel	kt-CO <sub>2</sub>	226
7. Employee commuting	kt-CO <sub>2</sub>	304
8. Upstream leased assets	kt-CO <sub>2</sub>	0
9. Downstream transportation & distribution	kt-CO <sub>2</sub>	871
10. Processing of sold products	kt-CO <sub>2</sub>	0
11. Use of sold products	kt-CO <sub>2</sub>	127,666 🗷
12. End-of-life treatment of sold products	kt-CO <sub>2</sub>	423
13. Downstream leased assets	kt-CO <sub>2</sub>	461
14. Franchises	kt-CO <sub>2</sub>	0
15. Investments	kt-CO <sub>2</sub>	0
Total	kt-CO <sub>2</sub>	150,462

#### ▶ page\_140

The values marked with an asterisk are subject to assurance by KPMG AZSA Sustainability Co., Ltd. For details, please see p. 1 40. Nissan conducted a study based on the Corporate Value Chain (Scope 3) Accounting and Reporting Standard from the GHG Protocol. The results showed that about 90% of Scope 3 emissions were from the use of sold products. Nissan has introduced fuel-efficient vehicles globally and disclosed the resulting progress in corporate average fuel efficiency. As about 10% of Scope 3 emissions were from purchased goods and services, Nissan believes actions are necessary along the entire value chain. Since 2011, the company has shared its environmental policy and promoted collaboration with suppliers.

#### CORPORATE INDICATORS—ENVIRONMENTAL ACCOUNTING

#### **Environmental Conservation Cost**

					(FY)	
	Unit	2	014	2	2015	
		Investment	Cost	Investment	Cost	
Total	mil ¥	4,268	180,000	3,491	172,428	
Business area	mil ¥	28	1,532	71	1,519	
Upstream/downstream	mil ¥	_	566	0	513	
Management	mil ¥	0	2,321	0	2,297	
R&D	mil ¥	4,240	175,000	3,420	167,800	
Social activities	mil ¥	0	353	0	296	
Damage repairs	mil ¥		228	0	3	
					(FY)	
	Unit		2014		2015	
Total	mil ¥		6,366		5,599	
Cost reduction	mil ¥		1,341		2,289	
Profit	mil ¥		5,025		3,310	

All environmental costs are based on the guidelines provided by Japan's Ministry of the Environment, and are calculated for activities in Japan only.





CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

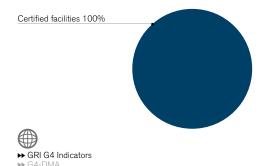
#### **CORPORATE INDICATORS—FACILITY**

#### **Carbon Credit**

					(F1)
	Unit	2013	2014	2015	2016
Allowance	t-CO <sub>2</sub>	48,124	46,194	45,824	43,424

Nissan Motor Iberica, S.A. in Barcelona and Cantabria, Spain, entered EU-ETS, and the verified allowance earned for fiscal 2016 was 43,424 tons.

#### ISO 14001 Certification



Nissan is progressing with the introduction of environmental management systems to all its operating sites worldwide. In January 2011 the company obtained integrated ISO 14001 certification for its Global Headquarters and all main facilities in Japan for research and development, production and distribution, as well as for product development processes. Nissan has also obtained ISO 14001 certification at all major production plants outside Japan.

#### **Green Building Policy**

With ISO 14001 management processes for evaluating environmental impact, Nissan makes it a key task to optimize its buildings in the construction or refurbishing stages to make all its structures greener. Evaluation metrics in this area include buildings with a smaller environmental footprint, such as lower CO<sub>2</sub> emissions; construction methods producing less waste and emissions; and reduced use of hazardous materials and other quality control tasks. Furthermore, in Japan Nissan uses the Ministry of Land, Infrastructure, Transport and Tourism's Comprehensive Assessment System for Built Environment Efficiency (CASBEE) as one performance index.

Among Nissan's current business facilities, the Global Headquarters in the city of Yokohama has earned CASBEE's highest "S" ranking, making it the second Nissan structure to do so following the Nissan Advanced Technology Center (NATC) in Atsugi, Kanagawa Prefecture. The Global Headquarters gained a Built Environment Efficiency Rating of 5.6, the highest CASBEE rating for a new structure, making it one of Japan's greenest office buildings. The building's use of natural energy sources to reduce its energy usage and its CO<sub>2</sub> emissions were evaluated highly, as were its methods of water recycling and its significant reduction in waste produced.

Since April 2000, Nissan has been deploying unique environmental facility certification system based on ISO 14001 for dealerships called the Nissan Green Shop. The company's environmental policy requires all dealerships in Japan to meet a certain standard and continue to be audited by Nissan each year. The dedicated evaluation sheet has a total of 84 KPIs and is regularly revised to reflect requirements of national legislation, local communities and the Nissan Green Program.

# → GRI G4 Indicators

#### Fines from Environmental Laws

There were no fines from violations of environmental laws in the reporting year. However, there was one environmental accident for which we received guidance from the government as below.

Wastewater exceeding the COD regulation value was released to the river unintentionally at the Yokohama Plant (Kanagawa Prefecture, Japan) on March 20, 2017. We immediately stopped the wastewater and introduced activated carbon powder to keep the quality of wastewater at regulation levels. In parallel, we have been identifying causes and considering permanent measures through cooperation with the municipal government. In addition, we improved the monitoring system to notice abnormal values before wastewater is released. Monitoring at other plants has also been enhanced to prevent recurrence.

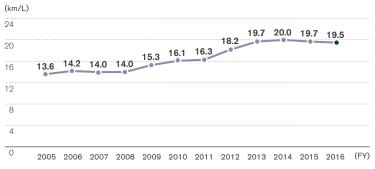


CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

#### **PRODUCT INDICATORS**

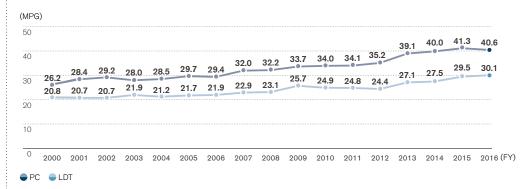
#### PRODUCT INDICATORS—FUEL ECONOMY, CO2

#### Corporate Average Fuel Efficiency (CAFE, JC08 Mode) in Japan



► GRI G4 Indicators ► G4-EN7/G4-EN27 In fiscal 2016, mainly due to strong sales of the Note e-POWER, the average fuel economy improved to 19.5km/L in JC08 mode. Regarding the fiscal 2016 results for Japan, provisional values determined by Nissan are used.

#### Corporate Average Fuel Efficiency (CAFE) in the United States



In fiscal 2016, sales of Infiniti large-segment vehicles increased, resulting in CAFE of 40.6 MPG for passenger cars. CAFE for light-duty trucks improved by 5.1% from fiscal 2015 to 30.1 MPG.



CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

# **CO<sub>2</sub> Emission Index from Nissan Vehicles** in Europe

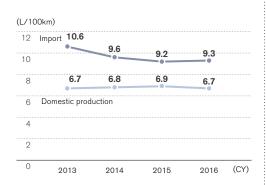
In 2016, the sales mix of diesel/petrol vehicles increased, worsening  $CO_2$  emissions by around 4% compared to 2015 for Nissan's passenger car models sold in Europe. Regarding the fiscal 2016 results for Europe, provisional values determined by Nissan are used.





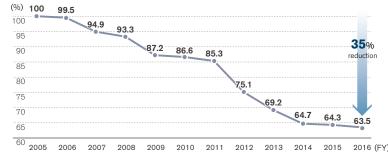
#### Corporate Average Fuel Consumption in China

Fuel efficiency for domestically produced vehicles improved by 3% from the previous calendar year, while the level for import vehicles worsened by 1.1% due to petrol volume increase.



#### Global Corporate Average Fuel Efficiency (CAFE)

Nissan's CAFE result in fiscal 2016 represented a 36.5% improvement from the fiscal 2005 level (as measured by fuel efficiency standards in the Japanese, U.S., European and Chinese markets). The sales of hybrid cars in Japan, the Note in Europe and the Altima and Versa in the U.S. market improved the overall CAFE result.







CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

#### **Top Fuel Economy Models**

			(FY)
Region	Model	Unit	2016
Global	Note e-POWER 1.2L	km/L (JC08)	37.2
Best selling model	X-Trail (Rogue)	km/L (JC08)	16.0~20.6
Japan (excl. light vehicles)	Note e-POWER 1.2L	km/L (JC08)	37.2
Japan (incl. light vehicles)	Note e-POWER 1.2L	km/L (JC08)	37.2
Europe	Micra 1.5L dCi + Stop/Start System	g-CO2/km	85
U.S.	Versa 1.6L 2WD CVT	MPG	35
China	Sylphy 1.6L 2WD CVT + Stop/Start System	L/100km	5.2



100% electric vehicles are excluded. From fiscal 2013, fuel economy in Japan is shown in JC08 mode.

#### Applying EVs Toward a Zero-Emission Society

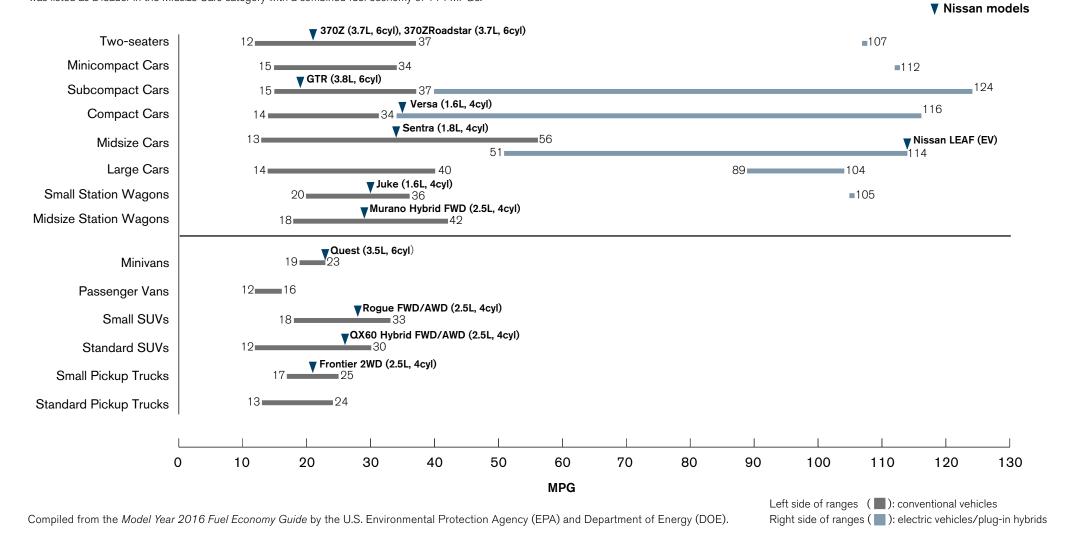
During fiscal 2016, Nissan started lending the e-NV200 for free for up to three years to 500 municipal governments and companies that proposed vehicle utilization plans to help improve urban development and solve administrative or corporate issues. Through this activity, Nissan is aiming to realize a zero-emission society.

The e-NV200, a multipurpose, zero-emission commercial vehicle, delivers a cruising range of 185-190 kilometers in Japan's JC08 mode and is equipped with "Power Plug" outlets that can draw a maximum of 1,500W from the onboard battery. Nissan expects the proposed activities to take full advantage of the e-NV200's clean, quiet operation and electric power availability. Assuming average cruising operation in Japan, the activities overall will mitigate approximately 1,450 tons of  $CO_2$  annually.

CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

#### **Fuel Economy Leaders**

The *Fuel Economy Guide* published by the U.S. Environmental Protection Agency (EPA) and Department of Energy (DOE) helps buyers to choose the most fuel-efficient vehicle. Based on the *Model Year 2016 Fuel Economy Guide*, the all-electric Nissan LEAF was listed as a leader in the Midsize Cars category with a combined fuel economy of 114 MPGe.



CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

#### **PRODUCT INDICATORS - TECHNOLOGIES**

#### Ratio of Powertrain Type (Shipment Base)

	Unit	Gasoline- powered vehicles	Diesel- powered vehicles	Natural-gas drive vehicles	Hybrid drive vehicles	Electric drive vehicles
Japan	%	55.1	2.7		3.3	2.1
North America	%	98.5	0.7	0.0		
Europe	%	47.7	49.2	0.0		
Other	%	90.7	8.4			



The Note e-POWER represents 1.1% of global sales.

Sales of the all-electric Nissan LEAF—the world's best-selling zero-emission car—surpassed 250,000 units in fiscal 2016. The ratio of EVs is steadily improving as the new Note e-POWER and a commercial EV, the e-NV200, were launched.

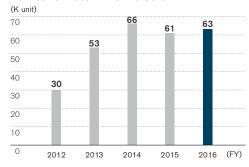
#### **Green Product Innovation**

Nissan believes it is important not only to develop and introduce zero-emission vehicles such as electric vehicles and fuel-cell vehicles, but also to improve the fuel economy of engine-powered vehicles. Nissan's PURE DRIVE title is given to vehicles that not only meet existing fuel economy requirements in each market but clear more stringent internal standards which we periodically review in line with societal demands. PURE DRIVE implements innovative environmental technologies that maximize energy efficiency to lower fuel consumption and reduce CO<sub>2</sub> emissions. Cars featuring these technologies are being marketed worldwide.

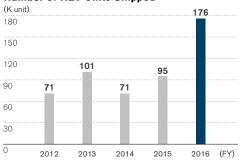
#### Core Technologies for Green Products

Nissan strives to develop technologies that maximize the overall energy efficiency of internal combustion engines and improve transmission performance, as well as zero-emission technologies. Nissan's core technologies in this area are lithium-ion batteries, Intelligent Dual Clutch Control Hybrid and the Xtronic transmission (Continuously Variable Transmission, or CVT) system.

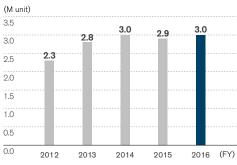
#### Number of 100% EV Units Sold



#### **Number of HEV Units Shipped**



#### Number of ICE with CVT Units Sold



CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

#### ΕV

The Nissan LEAF is now sold in 47 countries, with sales increasing every year. In 2016, total sales worldwide reached 250,000 vehicles. The second-generation LEAF newly launched in 2016 provides a longer driving range with a battery capacity improved from 24 kWh to 30 kWh.

Nissan also launched the company's first commercial EV, the e-NV200, in the European and Japanese markets in 2014.

#### e-POWER

Nissan's e-POWER powertrain combines a gasoline engine with an electric motor, enabling the low noise level of a motor-powered vehicle while offering excellent fuel efficiency. This powertrain was equipped in the new Note in Japan, which took the top spot in the Japan sales ranking for the compact segment • in the second half of fiscal 2016.

#### HEV

Nissan launched the X-Trail Hybrid in fiscal 2015 with expansion of its electric vehicle (EV) mode and optimized system mode operation to offer 25% improved fuel economy compared to equivalent conventional vehicles, achieving top-level fuel economy in its class.

In fiscal 2013, Nissan launched two rear-wheel-drive vehicles, the Skyline and the Infiniti Q50, equipped with an original hybrid system. Nissan is also expanding use of its hybrid system for front-wheel-drive vehicles. The extremely compact system is combined with the Xtronic transmission in the fiscal 2013 Pathfinder and Infiniti QX60.

#### The Xtronic Transmission

Nissan has achieved the goal of shipping 20 million Xtronic-equipped vehicles, with their fuel efficiency benefits, by fiscal 2016 from their first launch in 1992, thereby helping to reduce global CO<sub>2</sub> emissions. Nissan sold 3.03 million Xtronic vehicles in fiscal 2016, bringing the cumulative total to 25 million.

#### PRODUCT INDICATORS—OTHER EMISSIONS

#### Compliance with Emission Regulations (Passenger Cars Only)

		(1.1)
	Unit	2015
Japan 75% lower than 2005 standard (SU-LEV)	%	99
Europe Euro 6b	%	100 💌
U.S. U-LEV/SULEV/ZEV	%	98
China National 5	%	100

While Nissan has zero-emission vehicles, the ultimate clean car, in its portfolio, the company endeavors to make the entire fleet as clean as possible by reducing exhaust emissions. Nissan has introduced vehicles that comply today with each region's or country's more stringent future emission regulations. Due to differences in regulations, there is no direct way to compare by region or country, but this shows the percentage of Nissan's fleet in each location produced to the strictest standards of that region or country.

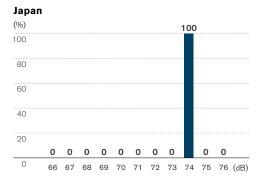
▶ both PC & LCV

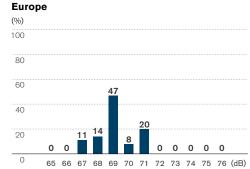


The compact segment includes small and ordinary passenger vehicles with engine displacement under 1,600 cc.

CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

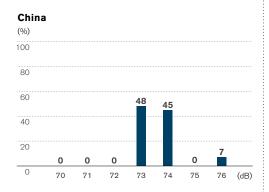
#### **Share of Noise Emissions**





Noise emissions are shown by the noise produced by the acceleration of vehicle in accordance with each national regulation. Only complete, built-up imported models are shown for China data.

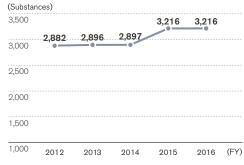




#### Regulated Chemical Substances

In 2007, Nissan created a unified global approach to reducing environment-impacting substances. Since then the company has enhanced management of these substances and advanced plans to reduce or to replace their use. Through communication with NGOs, Nissan restricts usage of substances that have potential to be hazardous, that are thought to have a high risk of falling into this category or that have been identified as potential threats even if they are not covered by laws and regulations in each country where it does business. As defined in the Nissan Engineering Standard (NES) titled "Restricted Use of Substances," these substances are banned or subject to controls in line with this approach. Nissan is working to apply this standard from the early development phase onward to the modules, raw materials and service parts that go into all Nissan vehicles. In fiscal 2016, the company revised its standard for assessment of hazards and risks in the Renault-Nissan Alliance, actively applying restrictions to substances that are increasingly the subject of consideration around the world going beyond regulation. As a result, the number of substances covered by the NES rose to 3,216.

#### **Defined Chemical Substances**





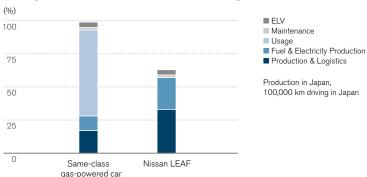
CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

#### PRODUCT INDICATORS—LIFECYCLE ASSESSMENTS (LCAs)

#### Lifecycle Assessment to Reduce Environmental Impact

Nissan uses the lifecycle assessment (LCA) method to evaluate and comprehensively assess environmental impact in all stages of the vehicle lifecycle, from resource extraction to production, transport, customer use and vehicle disposal. Climate change related to emissions is our primary concern, yet LCAs can also offer insights for management of environmental impacts beyond climate change. The company carries out LCAs for new technologies as they are introduced for better understanding and evaluation of their environmental impacts.

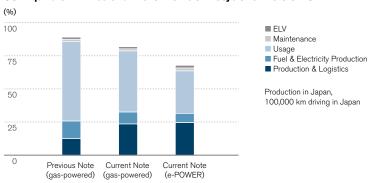
CO₂ Equivalent Emissions **>** over Vehicle Lifecycle for Nissan LEAF



Company calculations show that the Nissan LEAF reduces CO<sub>2</sub> emissions by up to 40% over its lifecycle compared to gasoline-powered vehicles of the same class. This assessment was certified by a third-party LCA assessment organization, the Japan Environmental Management Association for Industry.

Nissan introduced its new e-POWER system in fiscal 2016, marking another significant milestone in the electrification strategy with lifecycle emission improvements. Calculations show that e-POWER reduces CO<sub>2</sub> emissions by more than 32% over the vehicle's lifecycle compared to the previous-generation Note and by 18% compared to same the samegeneration Note.

CO₂ Equivalent Emissions 
over Vehicle Lifecycle for Note e-POWER



CO2, CH4, N2O, etc.

Unlike a full EV, an electrified e-POWER vehicle only requires small battery as the system is supported by a gasoline engine as its power source for charging. This means that emissions at the manufacturing stage can be kept at a lower level, similar to that for gasoline-powered vehicles. Nissan is also making efforts to reduce CO<sub>2</sub> emissions in manufacturing by improving the yield ratio of materials, using more efficient manufacturing processes and increasing the use of recycled materials. In the fuel-production and energy-use stages, the weight reduction and optimal energy management of e-POWER vehicles leads to lower CO<sub>2</sub> emissions.

Nissan also continues to pursue technology development on electric powertrains, power savings on ancillary devices and the use of renewable energy to reduce CO<sub>2</sub> emissions over the entire electrified vehicles' lifecycle. In the end-of-life stage, used batteries can be utilized for energy storage and further contribute to CO<sub>2</sub> emission reduction in society.

CO₂, CH₄, N₂O, etc.

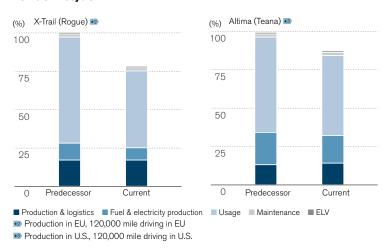
CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

#### Global Top Selling Model's Life Cycle Improvements

Nissan has been working to enhance the application of the LCA method and to extend quantitative understanding of the environmental impact of its products, especially the most impactful top-selling models worldwide.

The global best-selling model in fiscal 2016, X-Trail (Rogue), shows a 23% emission improvement over the entire lifecycle compared to the predecessor model, while that of another top selling model, Altima (Teana), shows around 13% improvement. Both models show major emission reduction improvements at the fuel production and use stages.

# CO<sub>2</sub> Equivalent Emissions Improvement in the New Model over Vehicle Lifecycle



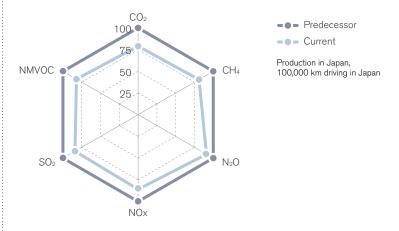
Nissan also studies on products' environmental impact over a wider range of segments, including small- to large-size gasoline-powered vehicles and zero-emission vehicles. In fiscal 2016, the LCA application rate as a percentage of total sales volume in the EU was more than 90%.

#### Lifecycle Improvements beyond Climate Change

With growing societal concerns over air quality, ocean acidification and eutrophication, Nissan has expanded the LCA study scope to chemical types beyond greenhouse gases.

Company calculations show that the current gasoline-powered Note has holistic environmental improvements over the lifecycle with approximately 9%-18% emission reduction for all targeted chemical types, as compared to the predecessor model. It creates well-balanced and holistic environmental benefits for society over the lifecycle.

#### **Emissions Improvement in the New Note over Vehicle Lifecycle**



Chemicals	Environmental Impacts
CO <sub>2</sub> – Carbon dioxide	Global warming potential
CH <sub>4</sub> - Methane	Global warming potential, Photochemical ozone creation potential
N <sub>2</sub> O – Nitrous oxides	Global warming potential
NOx – Nitrogen oxides	Acidification potential, Photochemical ozone creation potential, Eutrophication Potential
SO <sub>2</sub> – Sulphur dioxide	Acidification potential, Photochemical ozone creation potential
NMVOC – Non-methane volatile organic compound	Photochemical ozone creation potential

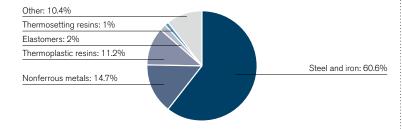
CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, etc.

CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

#### PRODUCT INDICATORS—MATERIALS, RECYCLING

#### **Material Ratio**

Nissan is increasing the use of renewable resources and recycled materials in addition to the traditional approach of using resources more efficiently to reduce reliance on them. The company's efforts with respect to recycled materials are based on the thought that once a natural resource is extracted, it should continue to be used, while maintaining quality, to minimize environmental impact. Nissan has set a target of increasing the recycled material usage ratio per new vehicle for which production begins in fiscal 2016 by 25% in Japan, the United States and Europe. The data shown here represents the status in fiscal 2016.





#### Recycling

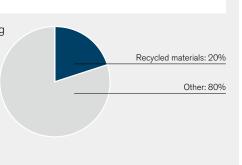
Nissan has defined a long-term goal of maintaining global usage of these natural resources at 2010 levels through 2050.

Toward this end, Nissan is presently researching ways to increase the recovery rate further in order to reclaim and reuse valuable materials from end-of-life vehicles (ELVs). As of fiscal 2016, company calculations showed that Nissan had achieved a recovery rate of 99.7% in Japan.

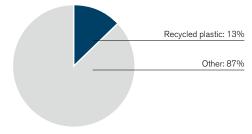
From the early development stage, Nissan considers the use of highly recyclable materials and makes structural improvements for ease of recycling. Since the Note, launched in 2005, all new models have achieved a 95% or greater recyclability rate based on the national regulations on ELVs in regions such as Europe, Japan and Korea.

#### Recycled Material Ratio

For production, Nissan has focused efforts on using recycled materials containing steel, aluminum and plastics. As a result, recycled materials account for approximately 20% by weight in the average vehicle. For example, the recycled ratio of cast aluminum in vehicle components such as engine cylinders is over 90% in total. This calculation was based on Nissan production in fiscal 2010.



#### **Recycled Plastic Usage in Vehicle**



Ratio of recycled plastic to total plastic was based on the best performance model in Europe. Recycled plastic use in fiscal 2016 was 13%.

### Automotive Shredder Residue to Landfill Ratio (%)

10

	0.00	0.00	0.00	0.00	0.00	
0	2012	2013	2014	2015	2016	(FY)

Based on the Automobile Recycling Law in Japan, Nissan calculated the ratio of landfill to residue after removing ferrous and nonferrous metals from ELVs. Nissan achieved a zero landfill ratio in fiscal 2016 by enhancing recycling capability through the acquisition of additional facilities that comply with the law.



CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

#### PRODUCT INDICATORS—ELV PROGRAMS

#### **ELV Programs**

Nissan has joined forces with other automotive companies to promote the recycling of ELVs through dismantling and shredding. In fiscal 2016, the program in Japan achieved a final recovery ratio for ELVs of 99.7% (actual value), at the same time reducing the amount of automotive shredder residue (ASR) related landfill and incineration disposal to zero based on the calculation method provided by the Japanese government.

This program consists of three phases: First, any Nissan ELVs entering the dismantling process are recycled, including flat steel, cast aluminum, bumpers, interior plastic parts, wire harnesses and precious rare earth metals. Second, specific items such as lithium-ion batteries are collected individually and directed to a dedicated recycling process. Third, residues from the dismantling process are shredded and collected at a dedicated facility.

Since 2004, Nissan and seven other Japanese auto manufacturers have promoted this facility to recycle ASR. Aligned with the Automobile Recycling Law in Japan, this serves as an integral part of a system to recycle ASR effectively, smoothly and efficiently. Nissan is a team leader of this alliance.

Another activity is Nissan's take-back system for ELVs in Europe. This network of Authorized Treatment Facilities was developed for individual countries in collaboration with contracted dismantlers, contracted service providers and governments to be aligned with the European ELV directive.

#### **RESULTS OF NISSAN GREEN PROGRAM 2016**

#### Targets set for four key initiatives under NGP2016 were fully achieved.

Key Focus Area	NGP2016 Target	NGP2016 Results	
Zero-emission vehicle penetration	Achieve number-one global market share	Achieved number-one cumulative sales and market share	
Fuel-efficient vehicle expansion	Improve CAFE by 35% from FY2005	Improved by 36.5% (achieved in FY2014)	
Corporate carbon footprint minimization	Reduce CO <sub>2</sub> emissions of global corporate activities by 20% (t-CO <sub>2</sub> /vehicle, vs. FY2005)	Reduced by 22.3% (achieved in FY2014)	
Natural resource use minimization	Increase recycled material usage ratio per new vehicle by 25%	Achieved rate of over 25%	

#### Activities for Zero-emission Vehicle Penetration

In addition to promotional efforts to expand penetration of the 100% electric Nissan LEAF, Nissan has developed technologies, such as LEAF to Home and V2G (Vehicle to Grid), in order to realize a zero-emission society.

#### **Activities for Expanding Fuel-efficient Vehicles**

In addition to technological advances including variable compression ratio engine and CVT improvement and vehicle weight reduction, Nissan has introduced a broader lineup of hybrid vehicles, as well as promoting the penetration of the e-POWER powertrain that is equipped in the new Note.

#### **Activities for Minimizing Corporate Carbon Footprint**

Nissan has introduced higher-efficiency equipment and manufacturing processes, energy-saving measures, and the use of renewable energy such as that generated from biomass gas and wind power.

#### **Activities for Minimizing Natural Resource Use**

In collaboration with business partners, Nissan has collected steel and aluminum scrap generated during manufacturing and end-of-life aluminum wheel rims for reuse in new vehicles. In addition, Nissan developed a new electric motor that requires just 40% as much dysprosium as a conventional motor, and is currently implementing it in the Nissan LEAF.

CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

#### THIRD-PARTY ASSURANCE

#### **Third-Party Assurance**



#### Independent Assurance Report

To Mr. Fumiaki Matsumoto, Director, Nissan Motor Co., Ltd.

We were engaged by Nissam Motor Co., Ltd. (the "Company") to undertake a limited assurance engagement of the environmental permanence indicators listed in the table below for the period from April 1, 2016 to March 31, 2017 (the "Indicators") included in its Sustainability Report 2017 (the "Report") for the fiscal year ended March 31, 2017.

- · Energy consumption in manufacturing processes
- CO<sub>2</sub> emissions from manufacturing processes
- CO2 emissions from the commuting of employees in Japan, U.S. and Europe and the use of sold products
- Water input from the Company's production sites in Japan
- Waste generated from the Company's production sites in Japan

#### The Company's Responsibility

The Company is responsible for the preparation of the Indicators in accordance with its own reporting criteria (the "Company's reporting criteria"), as described in the Report.

#### Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Indicators based on the procedures we have performed. We conducted our engagement in accordance with 'International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements on Reviews of Historical Financial Information', '18AE 3410, Assurance Engagements on Greenhouse Gas Statements', issued by the International Auditing and Assurance Standards Board, and the 'Practical Guidelines for the Assurance of Sustainability Information' of the Japanese Association of Assurance Organizations for Sustainability Information in Elimited assurance engagement consisted of making inquiries, primarily of persons responsible for the preparation of information presented in the Report, and applying analytical and other procedures, and the procedures performed vary in nature from, and are less in extent than for, a reasonable assurance engagement. The level of assurance provided is thus not as high as that provided by a reasonable assurance engagement. Our assurance procedures included:

- Interviewing with the Company's responsible personnel to obtain an understanding of its policy for the preparation of the Report and reviewing the Company's reporting criteria.
- Inquiring about the design of the systems and methods used to collect and process the Indicators.
- Performing analytical reviews of the Indicators.
- Examining, on a test basis, evidence supporting the generation, aggregation and reporting of the Indicators in conformity with the Company's reporting criteria, and also recalculating the Indicators.
- Visiting to the Company's Oppama plant selected on the basis of a risk analysis.
- Evaluating the overall statement in which the Indicators are expressed.

#### Conclusion

Based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that the Indicators in the Report are not prepared, in all material respects, in accordance with the Company's reporting criteria as described in the Report.

#### Our Independence and Quality Control

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. In accordance with International Standard on Quality Control 1, we maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

KPMG AZSA Sustamobility co., Ltd.

KPMG AZSA Sustainability Co., Ltd. Tokyo, Japan June 21, 2017

## [Remarks] Basis of calculation for CO<sub>2</sub> emissions, waste generated and water input subject to third-party assurance

- CO<sub>2</sub> emissions from production sites: Calculated based on Nissan internal standards. The energy use data of each site is based on invoices from suppliers, which are multiplied by a CO<sub>2</sub> emissions coefficient publicly available for each production site.
- CO₂ emissions resulting from employees' commutes: Calculated based on the GHG Protocol Scope 3 Standard. Specifically, the annual CO₂ emissions resulting from each employee's commute are calculated using a standard unit of measurement announced by Japan's Ministry of Economy, Trade and Industry, Ministry of the Environment, and Ministry of Land, Infrastructure, Transport and Tourism. This figure is calculated on the basis that employees working at Global Headquarters commute by bus and other employees use cars that are vehicles designated by Nissan, based on the data they submit when applying for transportation allowances. This is multiplied by the number of employees at each facility or office.
- CO<sub>2</sub> emissions from the use of sold products: Calculated using the average regional CO<sub>2</sub> emissions per vehicle multiplied by estimated average lifecycle mileage and multiplied by fiscal 2016 sales volumes. The average CO<sub>2</sub> emissions for the use phase (including direct emissions only) per unit are calculated for each of our main regions (Japan, U.S., EU and China) and extrapolated from average emissions of these markets for other markets. The Sustainable Mobility Project (SMP) model issued by the International Energy Agency was used to determine estimated average lifecycle mileages.
- Scope 3 emissions figures are estimates subject to varying inherent uncertainties.
- Waste generated from production sites of Nissan Motor Co., Ltd. in Japan: Calculated based on Nissan internal standards. The discharged waste is based on data from truck scales at the sites or data reported by disposal contractors. All discharged waste within the sites concerned is targeted. However, nonsteady and irregular generated waste, waste generated in canteens, waste from permanently stationed companies at the sites, waste generated by external vendors and waste from construction are excluded. In addition, materials recycled in-house, used in reproduction (reused by Nissan) or recycled (as salable, valuable materials) are not categorized as generated waste.
- Water input from production sites of Nissan Motor Co., Ltd. in Japan: Calculated based on Nissan internal standards. Water input is the water withdrawal amount according to billing meters or company meters installed on site. The water withdrawal amount includes drinking water (tap water), industrial-use water, underground water (spring/well water) and rainwater or the like.

CONTENTS	INTRODUCTION	CEO MESSAGE	NISSAN'S CSR STRATEGIES	NISSAN'S CSR MANAGEMENT	RENAULT-NISSAN ALLIANCE	CSR DATA	THIRD-PARTY ASSURANCE
ENVIRONMENT	SAFETY	PHILANTHROPY	QUALITY	VALUE CHAIN	EMPLOYEES	ECONOMIC CONTRIBUTION	CORPORATE GOVERNANCE & INTERNAL CONTROL

### **GRI** index (Environment)

Section	Index	Reference
G4-EN1	Materials used by weight or volume	117, 138
G4-EN2	Percentage of materials used that are recycled input materials	138
G4-EN3	Energy consumption within the organization	117, 118
G4-EN4	Energy consumption outside of the organization	125, 126, 127
G4-EN5	Energy intensity	118
G4-EN6	Reduction of energy consumption	118
G4-EN7	Reductions in energy requirements of products and services	129, 130, 131
G4-EN8	Total water withdrawal by source	117, 120, 121
G4-EN9	Water sources significantly affected by withdrawal of water	-
G4-EN10	Percentage and total volume of water recycled and reused	-
G4-EN11	Location and size of protected areas	-
G4-EN12	Description of significant impacts in protected areas	-
G4-EN13	Habitats protected or restored	-
G4-EN14	Total number of IUCN Red List species in areas affected by operations	_
G4-EN15	Direct greenhouse gas (GHG) emissions (Scope 1)	117, 119, 120
G4-EN16	Energy indirect greenhouse gas (GHG) emissions (Scope 2)	117, 119, 120
G4-EN17	Other relevant indirect greenhouse gas emissions	119, 125, 126, 127
G4-EN18	Greenhouse gas (GHG) emissions intensity	119, 120, 125
G4-EN19	Reduction of greenhouse gas (GHG) emissions	119, 125, 126
G4-EN20	Emissions of ozone-depleting substances (ODS)	-
G4-EN21	NOx, SOx and other significant air emissions	117, 122, 123
G4-EN22	Total water discharge by quality and destination	117, 120, 121
G4-EN23	Total weight of waste by type and disposal method	117, 123, 124
G4-EN24	Total number and volume of significant spills	128
G4-EN25	Weight of transported, imported, exported, or treated hazardous waste	
G4-EN26	Areas affected by the reporting organization's discharges of water and runoff	-
G4-EN27	Extent of impact mitigation of environmental impacts of products and services	129, 130, 131, 133, 134, 135, 136, 137, 139
G4-EN28	Percentage of products sold and their packaging materials that are reclaimed by category	138
G4-EN29	Significant fines and noncompliance with environmental laws and regulations	128
G4-EN30	Environmental impacts of transporting products, goods, materials, and members of the workforce	119, 124, 125, 126
G4-EN31	Total environmental protection expenditures and investments by type	127
G4-EN32	Percentage of new suppliers that were screened using environmental criteria	23, 73
G4-EN33	Significant actual and potential negative environmental impacts in the supply chain and actions taken	23
G4-EN34	Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms	_