

## Environmental Data

### Challenge 1: New Vehicle Zero CO<sub>2</sub> Emissions Challenge

#### A Sales of Electrified Vehicles (Global)

[Third-Party Assurance](#)

	Year	2015	2016	2017
Vehicle sales (thousand units)				
Hybrid and plug-in hybrid vehicles		1,203.9	1,400.6	<b>1,517.9</b>
Fuel cell vehicles		0.5	2.0	<b>2.7</b>
Total		1,204.4	1,402.6	<b>1,520.6</b>

### Challenge 3: Plant Zero CO<sub>2</sub> Emissions Challenge

#### B Calorific Energy Use Ratio at TMC (Japan)

[Third-Party Assurance](#)

	FY	2016	2017	2018
Ratio (%)				
Electricity		45.8	44.8	<b>45.3</b>
City gas		49.3	51.3	<b>50.1</b>
Heavy oil A		4.1	2.9	<b>2.9</b>
Kerosene		0.4	0.5	<b>0.4</b>
Hot water		0.3	0.3	<b>0.3</b>
Cold water		0.1	0.1	<b>0.1</b>
Renewable energy		0.0	0.1	<b>0.9</b>

• Conversion factors: [↗ Environmental Data p. 133-Y](#)

#### C Global Total CO<sub>2</sub> Emissions (Actual Emissions)

[Third-Party Assurance](#)

	FY	2016	2017	2018
Volume from Energy Consumption at Stationary Emission Sources				
Total CO <sub>2</sub> emissions (million tons)				
Japan (TMC)		1.52	1.51	<b>1.49</b>
Japan (consolidated EMS and its subsidiaries)		4.03	4.23	<b>4.29</b>
North America		0.93	1.00	<b>0.99</b>
China		0.63	0.64	<b>0.66</b>
Europe		0.25	0.28	<b>0.28</b>
Asia (excluding Japan), Australia, Middle East, South Africa, Latin America		0.73	0.82	<b>0.77</b>
Total		8.09	8.48	<b>8.48</b>
CO <sub>2</sub> emissions per unit produced (tons/unit)		0.795	0.805	<b>0.806</b>

• Scope of coverage: TMC and consolidated subsidiaries and other companies in Japan and overseas, a total of 121 companies

[↗ Environmental Data p. 132-R](#)

• GHG Protocol was used to calculate emissions

• Conversion factors: [↗ Environmental Data p. 133-X](#)

• Revised due to an error in past data

#### D Global Energy Consumption (at Stationary Emission Sources)

Third-Party Assurance

	FY	2016	2017	2018
Consumption volume by region (PJ <sup>1</sup> )				
Japan (TMC)	15.5	15.8		<b>15.6</b>
Japan (consolidated EMS and its subsidiaries)	46.3	45.9		<b>46.7</b>
North America	13.5	13.5		<b>13.6</b>
China	5.7	5.7		<b>5.9</b>
Europe	3.7	3.7		<b>3.8</b>
Asia (excluding Japan), Australia, Middle East, South Africa, Latin America	8.0	8.0		<b>7.6</b>
<b>Total</b>	<b>92.7</b>	<b>92.6</b>		<b>93.2</b>
Energy consumption per unit produced (GJ <sup>2</sup> /unit)	9.12	8.79		<b>8.85</b>

<sup>1</sup> PJ (Peta joule):

Peta represents 10<sup>15</sup> and a joule is a unit of energy

<sup>2</sup> GJ (Giga joule):

Giga represents 10<sup>9</sup> and a joule is a unit of energy

- Scope of coverage: TMC and consolidated subsidiaries and other companies in Japan and overseas, a total of 121 companies

[↗ Environmental Data p. 132-R](#)

- Conversion factors: [↗ Environmental Data p. 133-Y](#)

- Revised due to an error in past data

	FY	2016	2017	2018
Consumption volume by energy type (PJ)				
Electricity	38.7	38.5		<b>38.5</b>
City gas	29.7	29.9		<b>30.1</b>
Natural gas	15.0	15.0		<b>15.0</b>
LPG	2.3	2.3		<b>2.3</b>
LNG	0.9	0.9		<b>1.1</b>
Coke	1.0	1.0		<b>1.0</b>
Coal	0.5	0.5		<b>0.6</b>
Heavy oil A	1.2	1.0		<b>0.9</b>
Diesel oil	0.4	0.4		<b>0.4</b>
Kerosene	0.2	0.2		<b>0.2</b>
Steam	1.1	1.1		<b>1.2</b>
Hot water	0.7	0.7		<b>0.7</b>
Others	0.7	0.7		<b>0.6</b>
Renewable energy	0.3	0.4		<b>0.6</b>
<b>Total consumption</b>	<b>92.7</b>	<b>92.6</b>		<b>93.2</b>

- Revised due to an error in past data

#### Challenge 4: Challenge of Minimizing and Optimizing Water Usage

##### E Global Water Withdrawal Volume by Source

	FY	2017	2018
Water withdrawal volume (million m <sup>3</sup> )			
Municipal water		47.9	<b>47.9</b>
Groundwater		12.0	<b>12.6</b>
Rainwater		0.2	<b>0.2</b>
Water discharge from other organizations		0.8	<b>0.0</b>

- Scope of coverage: TMC and consolidated subsidiaries and other companies in Japan and overseas, a total of 113 companies
- Prior results were revised in conjunction with changes to the scope of coverage

##### F Global Water Discharge by Destination

	FY	2017	2018
Water discharge volume (million m <sup>3</sup> )			
River/lake		32.3	<b>32.9</b>
Groundwater		0.7	<b>0.4</b>
Brackish surface water/seawater		3.1	<b>2.8</b>
Sewage		9.2	<b>8.9</b>
Other organizations		0.6	<b>1.8</b>

- Scope of coverage: TMC and consolidated subsidiaries and other companies in Japan and overseas, a total of 101 companies
- Prior results were revised in conjunction with changes to the scope of coverage

##### G Global Recycled Water Discharge

	FY	2017	2018
Volume of recycled water discharge (million m <sup>3</sup> )		2.2	<b>1.9</b>

- Scope of coverage: TMC and consolidated subsidiaries and other companies in Japan and overseas, a total of 113 companies
- Prior results were revised in conjunction with changes to the scope of coverage

## Challenge 5: Challenge of Establishing a Recycling-based Society and Systems

### H Trends in Vehicle Recovery Rate and ASR<sup>1</sup>

#### Recovery Rate at TMC (Japan)

	FY	2014	2015	2016	2017	2018
Vehicle recovery rate <sup>2</sup> (converted into a per-vehicle value) (%)		99	99	99	99	<b>99</b>
ASR recovery rate <sup>3</sup> (%)		96	97	97	98	<b>98</b>

<sup>1</sup> Automobile Shredder Residue: Residue after vehicles are shredded

<sup>2</sup> Vehicle recovery rate: Calculated by combining the percentage recycled and recovered through the dismantling and shredding processes, approximately 83% (quoted from the April 2003 joint council report), with the remaining ASR rate of 17% × ASR recovery rate of 98%

<sup>3</sup> ASR recovery rate: Recovery volume/amount collected

### I Trends in Damaged and Removed Bumpers Collected and Recovered at TMC (Japan)

	FY	2014	2015	2016	2017	2018
Amount collected (thousand pieces)		912	855	809	770	<b>775</b>
Collection rate (%)		72.5	72.9	69.4	67.4	<b>68.3</b>

### J Volume of Raw Materials Used and Ratio of Recycled Materials Used (Global)

	FY	2017	2018
Volume of raw materials used (million tons)		13.9	<b>13.75</b>
Ratio of recycled materials used (%)		24	<b>24</b>

### K Damaged and Removed Parts Collected and Recovered at TMC (FY2018, Japan)

Bumpers	775,000 units (collection rate of 68.3%)
Lead wheel balance weights <sup>4</sup>	28.4 tons
Amount of oil delivered using tanker trucks (bulk supply system <sup>5</sup> )	64.8% of the volume sold by parts distributors

<sup>4</sup> Lead wheel balance weights: Weights used to ensure rotation balance when joining a wheel and tire  
<sup>5</sup> Bulk supply system: Filling oil directly to large-capacity tanks located on site

### L Supply of Used and Remanufactured Parts at TMC (FY2018, Japan)

Parts name	Number of parts supplied	
	Used and remanufactured parts	New parts (reference)
Remanufactured parts		
Automatic transmissions	1,368	68
Power steering gear	3,932	1,784
Torque converters	1,196	4,328
Used parts	32,679	—

### M Breakdown of Total TMC Waste Volume

Third-Party Assurance

	FY	2014	2015	2016	2017	2018
Breakdown of total waste volume (thousand tons)						
Waste at cost		34.9	34.8	34.1	32.8	<b>31.7</b>
Incinerated waste		1.1	1.1	1.1	1.0	<b>1.0</b>
Landfill waste		0.0	0.0	0.0	0.0	<b>0.0</b>
Total		36.0	35.9	35.2	33.8	<b>32.7</b>

### N Breakdown of Global Total Waste Volume

	FY	2014	2015	2016	2017	2018
Breakdown of total waste volume (thousand tons)						
Waste at cost		417	400	386	394	<b>417</b>
Incinerated waste		60	58	56	59	<b>63</b>
Landfill waste		17	17	19	21	<b>19</b>
Total		494	475	461	474	<b>499</b>

## Challenge 6: Challenge of Establishing a Future Society in Harmony with Nature

### O Results of Toyota Environmental Activities Grant Program (Global)

	FY	2014	2015	2016	2017	2018	Cumulative total
Country/region covered (programs)							
Asia-Pacific		8	7	5	7	<b>5</b>	<b>110</b>
North America, Latin America		0	0	1	0	<b>0</b>	<b>20</b>
Africa		2	1	3	1	<b>3</b>	<b>32</b>
Europe		0	2	1	2	<b>2</b>	<b>14</b>
Japan		14	11	16	18	<b>18</b>	<b>184</b>
Total		24	21	26	28	<b>28</b>	<b>360</b>

\* FY2018 grant topics: Biodiversity, climate change

## Environmental Management

### P Environment-related Non-compliance Incidents and Complaints at TMC (Japan)

	FY	2014	2015	2016	2017	2018
Non-compliance incident (Cases)		1 <sup>1</sup>	0	0	1 <sup>2</sup>	1
Complaint (Cases)		0	0	0	0	0

1 See P15 of the Environmental Report 2014

2 See P46 of the Environmental Report 2017

- Number of non-compliance incidents and complaints are determined based on internal standards

### Q Trichloroethylene Levels at TMC (FY2018, Japan)

Third-Party Assurance

Plant	Levels of groundwater before remediation mg/L (Environmental standard value: 0.01)
Honsha	Less than 0.002-0.88
Motomachi	Less than 0.002-0.11
Kamigo	Less than 0.002-0.05
Takaoka	Less than 0.002-0.20
Miyoshi	Less than 0.002-0.08
Tsutsumi	Less than 0.002-0.31

- In 1997, Toyota completed implementation of measures to prevent outflow of groundwater at the six production plants listed above  
Toyota is continuing groundwater remediation using pump and aeration treatment without exceeding the standard values  
Trichloroethylene levels are reported to the authorities concerned  
Levels are also explained to citizens at local council meetings
- Measurements are taken at all Toyota Motor Corporation (TMC) plants, and nothing is detected at plants other than those listed
- The levels are expressed as a range since each plant includes multiple measurement points

## Statements Relating to Environmental Data

### R Scope of Data Coverage (TMC (One Company) and Consolidated EMS in Japan (77 Companies Including Subsidiaries) and Overseas (43 Companies), a Total of 121 Companies)

TMC: One company

Japan: Main production companies

#### Group 1

Daihatsu Motor Co., Ltd.  
Toyota Motor Kyushu, Inc.  
Toyota Motor East Japan, Inc.  
Toyota Motor Hokkaido, Inc.  
Toyota Auto Body Co., Ltd.  
Hino Motors, Ltd.

#### Group 2

Aisan Industry Co., Ltd.  
Aisin AW Co., Ltd.  
Aisin AI Co., Ltd.  
Aisin Seiki Co., Ltd.  
Aisin Takaoka Co., Ltd.  
Aichi Steel Corporation  
JTEKT Corporation  
Denso Corporation  
Tokai Rika Co., Ltd.  
Toyoda Gosei Co., Ltd.  
Toyota Industries Corporation  
Toyota Boshoku Corporation

#### Group 3

Cataler Corporation  
Kyoho Machine Works, Ltd.  
Central Motor Wheel Co., Ltd.  
Toyota Home Co., Ltd.  
Primearth EV Energy Co., Ltd.  
Yutaka Seimitsu Kogyo, Ltd.

#### Group 4

Admatechs Co., Ltd.  
Shintec Hozumi Co., Ltd.  
Toyota Energy Solutions, Inc.  
Japan Chemical Industries Co., Ltd.

#### Group 5

FTS Co., Ltd.  
Kyowa Leather Cloth Co., Ltd.  
Koito Manufacturing Co., Ltd.  
Taiho Kogyo Co., Ltd.  
Chuoh Pack Industry Co., Ltd.  
Chuo Spring Co., Ltd.  
Tsuda Industries Co., Ltd.  
Toyoda Iron Works Co., Ltd.  
Trinity Industrial Corporation  
Fine Sinter Co., Ltd.

Overseas: Main production and production/sales companies

#### North America

TMMK (U.S.)  
TMMI (U.S.)  
TMMWV (U.S.)  
TMMAL (U.S.)  
TMMTX (U.S.)  
TMMMS (U.S.)  
BODINE (U.S.)  
TABC (U.S.)  
TMMC (Canada)  
CAPTIN (Canada)  
TMMBC (Mexico)

#### China

TFTM  
TFTD  
TTFC  
TFAP  
FTFE  
FTCE  
SFTM  
GTMC  
GTE  
TMCAP

#### Europe

TMR (Russia)  
TMMP (Poland)  
TMMF (France)  
TMUK (U.K.)  
TMMT (Turkey)  
TPCA (Czech Republic)

#### Asia (excluding Japan), Australia, Middle East, South Africa, Latin America

TSAM (South Africa)  
TKM (India)  
TKAP (India)  
IMC (Pakistan)  
TMMIN (Indonesia)  
TMT (Thailand)  
STM (Thailand)  
ASSB (Malaysia)  
TMP (The Philippines)  
TAP (The Philippines)  
TMV (Vietnam)  
Kuozui (Taiwan)  
TMCA (Australia)  
TASA (Argentina)  
TDB (Brazil)  
TDV (Venezuela)

### S Conversion Factors Used to Calculate "Global Average CO<sub>2</sub> Emissions from New Vehicles Reduction Rate Versus 2010 (Japan, U.S., Europe, China)"

Gasoline	2.32 kg-CO <sub>2</sub> /L
Diesel oil	2.58 kg-CO <sub>2</sub> /L
LPG	3.00 kg-CO <sub>2</sub> /kg, 0.507 kg/L (liquid density)*

\* Japan Environmental Management Association for Industry, "Carbon Footprint Communication Program, Basic Database" (version 1.01)

- "Greenhouse Gas Emissions Accounting and Reporting Manual" (version 4.3), Japanese Act on Promotion of Global Warming Countermeasures

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### T Conversion Factors Used to Calculate Respective Emission Volume of 15 Categories in Scope 3 and Ratio of Total Emissions

Category	Conversion factors						
Category 1: Purchased goods and services	· Ministry of the Environment of Japan, "Emissions Units Database for Accounting for Organizations' Greenhouse Gas Emissions, etc. Throughout the Supply Chain" (version 2.4)						
Category 2: Capital goods	· Japan Environmental Management Association for Industry, "Carbon Footprint Communication Program, Basic Database" (version 1.01)						
Category 3: Fuel- and energy-related activities (not included in Scope 1 and Scope 2)	· Greenhouse Gas Emissions Accounting and Reporting Manual" (version 4.3), Japanese Act on Promotion of Global Warming Countermeasures						
Category 5: Waste generated in business operations	· Ministry of the Environment of Japan, "Emissions Units Database for Accounting for Organizations' Greenhouse Gas Emissions, etc. Throughout the Supply Chain" (version 2.4)						
Category 6: Business travel	· Ministry of the Environment of Japan, "Emissions Units Database for Accounting for Organizations' Greenhouse Gas Emissions, etc. Throughout the Supply Chain" (version 2.4)						
Category 7: Employee commuting	· Japan Environmental Management Association for Industry, "Carbon Footprint Communication Program, Basic Database" (version 1.01)						
	<table border="1"> <tr> <td>Gasoline</td> <td>2.66 kg-CO<sub>2</sub>/L</td> </tr> <tr> <td>Diesel oil</td> <td>2.74 kg-CO<sub>2</sub>/L</td> </tr> </table>	Gasoline	2.66 kg-CO <sub>2</sub> /L	Diesel oil	2.74 kg-CO <sub>2</sub> /L		
Gasoline	2.66 kg-CO <sub>2</sub> /L						
Diesel oil	2.74 kg-CO <sub>2</sub> /L						
Category 9: Downstream transportation and distribution	· Greenhouse Gas Emissions Accounting and Reporting Manual" (version 4.3), Japanese Act on Promotion of Global Warming Countermeasures						
Category 11: Use of sold products	· Japan Environmental Management Association for Industry, "Carbon Footprint Communication Program, Basic Database" (version 1.01)						
	<table border="1"> <tr> <td>Gasoline</td> <td>2.66 kg-CO<sub>2</sub>/L</td> </tr> <tr> <td>Diesel oil</td> <td>2.74 kg-CO<sub>2</sub>/L</td> </tr> <tr> <td>LPG</td> <td>1.81 kg-CO<sub>2</sub>/L, 0.507 kg/L (liquid density)</td> </tr> </table>	Gasoline	2.66 kg-CO <sub>2</sub> /L	Diesel oil	2.74 kg-CO <sub>2</sub> /L	LPG	1.81 kg-CO <sub>2</sub> /L, 0.507 kg/L (liquid density)
Gasoline	2.66 kg-CO <sub>2</sub> /L						
Diesel oil	2.74 kg-CO <sub>2</sub> /L						
LPG	1.81 kg-CO <sub>2</sub> /L, 0.507 kg/L (liquid density)						
	· Greenhouse Gas Emissions Accounting and Reporting Manual" (version 4.3), Japanese Act on Promotion of Global Warming Countermeasures						
	<table border="1"> <tr> <td>Gasoline</td> <td>2.32 kg-CO<sub>2</sub>/L</td> </tr> <tr> <td>Diesel oil</td> <td>2.58 kg-CO<sub>2</sub>/L</td> </tr> <tr> <td>LPG</td> <td>3.00 kg-CO<sub>2</sub>/kg</td> </tr> </table>	Gasoline	2.32 kg-CO <sub>2</sub> /L	Diesel oil	2.58 kg-CO <sub>2</sub> /L	LPG	3.00 kg-CO <sub>2</sub> /kg
Gasoline	2.32 kg-CO <sub>2</sub> /L						
Diesel oil	2.58 kg-CO <sub>2</sub> /L						
LPG	3.00 kg-CO <sub>2</sub> /kg						

### U Conversion Factors Used to Calculate "Trends in CO<sub>2</sub> Emissions per Ton-kilometer (Transportation Volume) from TMC Logistics Operations (Japan)"

Railway	22.0 g-CO <sub>2</sub> /tkm
Vessel	39.0 g-CO <sub>2</sub> /tkm
Gasoline	2.32 kg-CO <sub>2</sub> /L
Diesel oil	2.62 kg-CO <sub>2</sub> /L
Heavy oil C	2.98 kg-CO <sub>2</sub> /L

• Used "Guidelines on Disclosure of CO<sub>2</sub> Emissions from Transportation & Distribution" (version 3.0) issued by Ministry of Economy, Trade and Industry of Japan and Ministry of Land, Infrastructure, Transport and Tourism of Japan, and other guidelines

### V Conversion Factors Used to Calculate "Trends in Total CO<sub>2</sub> Emissions (from Energy Consumption at Stationary Emission Sources) and CO<sub>2</sub> Emissions per Unit Produced at TMC"

Electricity	0.3707 kg-CO <sub>2</sub> /kWh	Coke	3.2426 kg-CO <sub>2</sub> /kg
Heavy oil A	2.6958 kg-CO <sub>2</sub> /L	Coal	2.3557 kg-CO <sub>2</sub> /kg
Heavy oil C	2.9375 kg-CO <sub>2</sub> /L	Hot water	0.0570 kg-CO <sub>2</sub> /MJ*
Kerosene	2.5316 kg-CO <sub>2</sub> /L	Cold water	0.0570 kg-CO <sub>2</sub> /MJ
LPG	3.0040 kg-CO <sub>2</sub> /kg	Steam	0.0570 kg-CO <sub>2</sub> /MJ
City gas	2.1570 kg-CO <sub>2</sub> /Nm <sup>3</sup>		

\* MJ (mega joule): Mega represents 10<sup>6</sup> and a joule is a unit of energy  
 • CO<sub>2</sub> emissions were calculated using the Nippon Keidanren's 1990 conversion factors

### W Conversion Factors Used to Calculate "Trends in Global Total CO<sub>2</sub> Emissions (from Energy Consumption at Stationary Emission Sources) and CO<sub>2</sub> Emissions per Unit Produced"

- GHG Protocol was used to calculate emissions
- Emissions from electric power were calculated using the 2001 conversion factor from the "CO<sub>2</sub> Emissions from Fuel Combustion" from IEA, Paris, France (2007 edition)
- For items other than electric power: 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Prepared by the National Greenhouse Gas Inventories Programme, Eggleston H.S., Buendia L., Miwa K., Ngara T. and Tanabe K. (eds). Published: IGES, Japan.
- For city gas, steam, hot water, cold water, and coke-oven gas, the conversion factors used were those quoted in the Japanese Act on Promotion of Global Warming Countermeasures (March 2017)

### X Conversion Factors Used to Calculate Global Total CO<sub>2</sub> Emissions (from Energy Consumption at Stationary Emission Sources)

- GHG Protocol was used to calculate emissions
- Emissions from electric power were calculated using the 2015 conversion factor from the "CO<sub>2</sub> Emissions from Fuel Combustion" from IEA, Paris, France (2017 edition)
- For items other than electric power: 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Prepared by the National Greenhouse Gas Inventories Programme, Eggleston H.S., Buendia L., Miwa K., Ngara T. and Tanabe K. (eds). Published: IGES, Japan
- For city gas, steam, hot water, cold water, and coke-oven gas, the conversion factors used were those quoted in the Japanese Act on Promotion of Global Warming Countermeasures (March 2017)

### Y Conversion Factors Used to Calculate Global Energy Consumption (at Stationary Emission Sources)

- Electricity conversion factor is 3.6 (GJ/MWh)
- Other energy conversion factors were based on the Japanese Act on Promotion of Global Warming Countermeasures (March 2017)

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## Environmental Accounting

### Environmental Costs Scope of coverage: Toyota Motor Corporation

#### FY2017 and FY2018 Results Based on Format of Ministry of the Environment of Japan

Category	(billion yen)	Toyota				Five vehicle body manufacturers <sup>1</sup>			
		2017		2018		2017		2018	
		Investments	Costs	Investments	Costs	Investments	Costs	Investments	Costs
		0.3	1.4	0.4	1.4	0.3	2.3	0.5	2.1
Costs within business area	(1) Pollution prevention costs	75.4	0.8	63.0	0.7	1.8	0.6	0.2	0.8
	(2) Global environmental conservation costs	0.1	2.0	0.1	2.1	0.1	1.6	0.0	1.7
	(3) Resource recycling costs	0.0	0.5	0.0	0.5	0.0	0.1	0.0	0.1
Upstream/downstream costs	Recycling-related costs, industry organization shared costs	0.0	15.5	0.0	13.4	0.0	2.2	0.0	2.2
Management activities costs	Costs for environmental advertisements, environmental reports publishing, full-time environment-related employees, etc.	0.0	395.2	0.0	370.2	0.5	42.0	1.7	43.0
R&D costs	R&D costs to lower environmental concern	0.0	0.6	0.0	0.5	0.0	0.0	0.0	0.0
Social activities costs	Grants, etc. to environmental conservation organizations	0.2	9.1	0.1	3.8	0.0	0.0	0.0	0.0
Environmental damage response costs	Soil and groundwater remediation costs, etc.	76.0	425.1	63.6	392.6	2.7	48.8	2.4	49.9
Total		501.1		456.2		51.5		52.3	

<sup>1</sup> Five vehicle body manufacturers: Toyota Motor East Japan, Inc., Daihatsu Motor Co., Ltd., Toyota Auto Body Co., Ltd., Hino Motors, Ltd., Toyota Motor Kyushu, Inc. (total based on each company's respective calculation standards)

- Errors in FY2017 data were corrected

### Economic Effect

#### Substantial Effect

	FY	2017	2018	Five vehicle body manufacturers <sup>1</sup>	
				2017	2018
Reduction in energy costs through energy conservation		0.6	0.6	1.6	1.4
Reduction in waste processing and treatment costs		0.1	0.1	0.0	0.0
Sales of recycled products		2.4	4.8	5.0	7.0
Total		3.1	5.5	6.6	8.4

- Errors in FY2017 data were corrected

#### Customer Benefits: Amount of Reduction in Oil Consumption by

##### Switching to Hybrid Vehicles

	FY	2017	2018	Cumulative from December 1997 (first-generation Prius launch)
Japan		226.8	269.8	1,679.7
Worldwide		619.5	723.2	4,960.7

#### Customer Benefit Calculation Method (Japan Only)

- Calculation method: (Difference in average annual fuel efficiency<sup>2</sup> × number of vehicles owned<sup>3</sup> × average annual mileage<sup>4</sup>) × average gasoline price in each year<sup>5</sup>

<sup>2</sup> Difference in fuel efficiency between hybrid electric vehicles on the road in the fiscal year and corresponding gasoline vehicle models

<sup>3</sup> Number of vehicles owned by customers as estimated by Toyota from the number of hybrid electric vehicles sold each year adjusted for average vehicle age

<sup>4</sup> Calculated by Toyota estimate

<sup>5</sup> Nationwide average gasoline price in each year in Japan calculated by the Oil Information Center, the Institute of Energy Economics Japan

### Environmental Efficiency (Sales/Environmental Footprint)

#### CO<sub>2</sub> Index for Vehicle Production (for 10 Plants Only)

	FY	2014	2015	2016	2017	2018
Index		311	319	342	337	<b>357</b>
Sales	(billion yen)	11,040	11,210	11,590	11,480	<b>12,200</b>

- Sales/CO<sub>2</sub> emissions is used as an index, with FY1990 as 100

#### Waste Index for Vehicle Production

	FY	2014	2015	2016	2017	2018
Index		628	654	612	600	<b>638</b>
Sales	(billion yen)	11,040	11,210	11,590	11,480	<b>12,200</b>

- Sales/waste volume is used as an index, with FY1990 as 100