The FDK Group is always aware of environmental issues and strives to reduce the environmental burden in its procurement, production and distribution in addition to contributing to the reduction of the environmental burden and environmental risks throughout society through the supply of batteries and electronic devices.



# **Protecting the Global Environment**

## **Basic Concept**

FDK Group positions environmental conservation as one of the most important items of management to further environmental management reflected in its unique businesses under the slogan, "FDK Group Cares about Nature and Safeguards our Planet" to pass down a beautiful Earth to the next generation.

## **FDK Group Environmental Policy**

As a member of the FUJITSU Group, the FDK Group recognizes the need for action toward the realization of an independently sustainable and recycle-oriented society with initiatives toward environmental conservation that follow the business activities of the company, which include not only legal compliance in each country and region, greenhouse gas reduction, waste reduction, and thorough management of chemical substances but also the reduction of our environmental impact through the products that FDK provides.

FDK has established the "FDK Group Environmental Policy" to promote even more comprehensive environmental management overall and has revised this policy as shown below to incorporate the mission of the FDK Group.

#### FDK Group Environmental Policy

## FDK Group Environmental Policy

The FDK Group will promote environmental management under its slogan based on the environmental philosophy below.

#### **Philosophy**

The FDK Group has set a mission to "contribute globally to society with technology that efficiently uses electric energy" as a Smart Energy Manager and will contribute to the realization of a sustainable society by developing and supplying batteries and electronic devices products which benefit the environment while bringing satisfaction to customers.

Moreover, the FDK Group will promote environmental initiatives as "One FDK" with the help of each and every employee through fair corporate activities which comply with environmental laws and regulations to pass down a beautiful global environment rich with nature to the next generation.

#### **FDK Group Slogan**

FDK Group Cares about Nature and Safeguards our Planet.

This policy applies to locations as well as FDK affiliate companies both inside and outside of Japan while surpassing the application scope of the international ISO14001 standard.

#### FDK Group Environmental Management Framework

#### FDK Group Environmental Management Framework



## FDK Group 8th Environmental Action Plan (FY2016 to FY2018)

The FDK Group has formulated a three year plan that conforms to the Fujitsu Group Environmental Action Plan and it has been promoting environmental initiatives. Through these policies and targets, FDK Group contributes to reducing the environmental impact of customers and society while striving to reduce the environment impact of the FDK Group by strategically and

continuously expanding these activities to all FDK business regions. The results of efforts in FY2017 are shown in the table below. FDK will respond to themes it was unable to achieve by analyzing the factors which prevented success to build new frameworks.

Items	Action Plan	FY2017		
	(2016 - 2018)	Targets	Achievements	
Design for environment	Develop at least one battery product or electronic device annually that contributes to better energy efficiency (energy savings).	Develop at least one battery or electronic device annually at each site	Kosai: Developed DC-DC module and transformer Sanyo: Developed multilayer power indicators Takasaki: Developed Ni-MH battery for a low self-discharge model Tottori: Improved the capacity of Cylindrical-type Lithium batteries	
	Develop at least one battery product or electronic device annually that contributes to better resource efficiency (resource savings).	Develop at least one battery or electronic device annually at each site	Kosai: Reduced the weight of power storage systems Sanyo: Reduced the weight of ferrite products Takasaki: Developed an Ni-MH battery that uses recycled materials Tottori: Reduced the material loss of Lithium batteries	
Reduction of greenhouse gases	Reduce the amount of energy consumption and $\mathrm{CO}_2$ emissions 14% compared to FY2013 by the end of FY2018. (48,181 t or less)	Reduce emissions 15% compared to FY2013 through the entire FDK Group in Japan (less than 47,776 t)	Achieved 45,945 t Measures included renewing aged equipment and transitioning to LED lighting	
Energy efficiency	Improve the energy consumption per unit an average of 1% per year.	Improve an average of 1% per year	Achieved target at three of five locations	
Reduction of chemical substances	Improve the PRTR* chemical emissions per unit 3% compared to FY2015 by the end of FY2018.	Improve 2% compared to FY2015 at each location	Achieved target at four of five locations	
Reduction of waste	Reduce the amount of waste per unit 3% compared to FY2015 by the end of FY2018.	Improve 2% compared to Fy2015 at each location	Achieved target at all five locations Promoted a reduction in waste loss via comprehensive sorting and manufacturing processes	
Local environment/ social contributions	Conduct at least two initiatives a year toward local environmental efforts and social contribution activities.	Conduct at least two initiatives a year at each site	Please see page 21 and page 22.	

PRTR (Pollutant Release and Transfer Register): The publicly accessible database has companies measure emissions to the environment of chemical substances that could be harmful to the health of people or the ecosystem (air/water/soil) from their business sites as well as emissions transferred off-site as waste to report those emissions to their country. Their country then releases the quantity of emissions and transfer off-site based on the reported data and measurements.

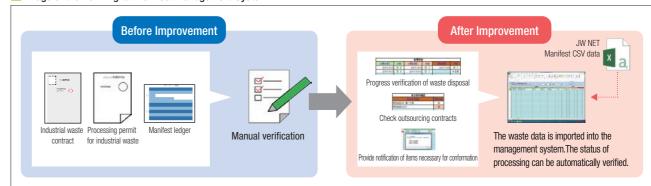
### Developing a Digital Manifest Management System for Industrial Waste Processing

Business proprietors emitting industrial waste are required by law to collect the amount of industrial waste in a manifest (industrial waste management ledger) that includes a record of processing by concluding a contract with an outsourcer in advance and issuing this manifest to that outsourcer to manage the transfer of industrial waste and prevent illegal dumping when outsourcing the transport and processing of industrial waste. Presently, the

Ministry of the Environment can accelerate and rationalize informational exchange by adopting a digital manifest to promote wider standardization, but a person in charge still has to check each and every entry in a

FDK has developed an in-house system to automatically confirm the ledger using data from the digital manifest to facilitate more efficient operations.

## Image of the New Digital Manifest Management System

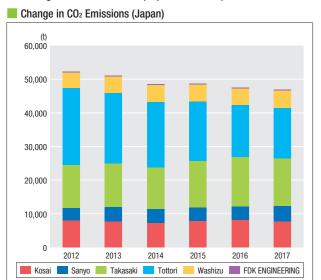


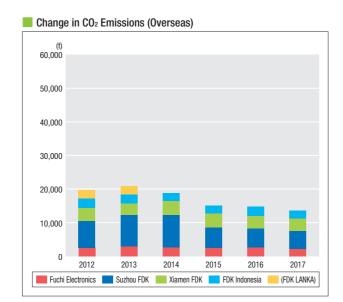
27 FDK GROUP CSR REPORT 2018
FDK GROUP CSR REPORT 2018



# **Environmental Performance**

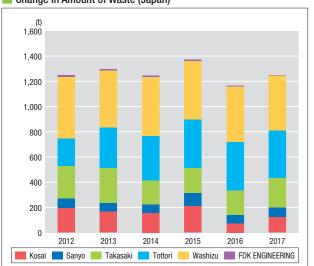
## ► Change in CO₂ Emissions (Japan/Overseas) FY2012 to FY2017

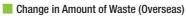


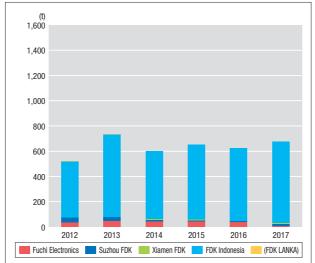


# ► Change in Amount of Waste (Japan/Overseas) FY2012 to FY2017

# Change in Amount of Waste (Japan)







# FY2017 Performance Data by Business Site (Results for the Previous Fiscal Year)

Items	(Unit)	Kosai Plant	Sanyo Plant	Takasaki Plant	Tottori Plant	Washizu Plant	FDK ENGINEERING
CO <sub>2</sub> emissions	(t-CO <sub>2</sub> )	7,772 (8,201)	4,619 (4,008)	14,171 (14,671)	15,004 (15,552)	5,105 (4,877)	239 (231)
Water usage	(m³)	84,024 (138,845)	29,413 (28,460)	24,179 (24,640)	98,717 (115,395)	46,691 (51,508)	739 (530)
PRTR chemical emissions	(kg)	3 (8)	0 (2)	182 (92)	178 (189)	( <del>-</del> )	( <del>-</del> )
SOx emissions	(kg)	_	_ ( <del>-</del> )	_ ( <del>-</del> )	— (0)	_ (-)	_ (-)
NOx emissions	(kg)	167 (186)	_ ( <u>-</u> )	_ (-)	4,688 (6,093)	_ (-)	_ (-)
Soot	(kg)	(100) - (-)	_ (—)	_ (—)	_ (—)	_ (-)	_ (-)
Waste water	(m³)	84,024 (138,845)	29,685 (28,460)	23,629 (24,167)	51,816 (54,035)	46,691 (51,508)	739 (530)
Waste	(tons)	122 (72)	79 (65)	231 (195)	380 (388)	433 (437)	5 (8)
Local/social contributions	(Activities)	9 (6)	3 (4)	3 (3)	9 (2)	14 (13)	2 (2)

Items	(Unit)	FDK ECOTEC	Suzhou FDK	Xiamen FDK	Fuchi Electronics	FDK Indonesia
CO <sub>2</sub> emissions	(t-CO <sub>2</sub> )	25 (24)	5,297 (5,732)	3,720 (3,560)	2,227 (2,708)	2,412 (2,698)
Water usage	(m³)	( <del>-</del> )	9,590 (9,170)	20,633 (19,554)	7,892 (10,814)	11,366 (27,187)
PRTR chemical emissions	(kg)	(-)	(-)	(-)	(-)	_ ( <del>-</del> )
SOx emissions	(kg)	( <del>-</del> )	( <del>-</del> )	( <del>-</del> )	( <del>-</del> )	_ ( <del>-</del> )
NOx emissions	(kg)	( <del>-</del> )	_ ( <del>-</del> )	_ ( <u>-</u> )	( <del>-</del> )	_ ( <del>-</del> )
Soot	(kg)	_ ( <del>-</del> )	_ ( <del>-</del> )	_ ( <u>-</u> )	_ ( <del>-</del> )	_ ( <del>-</del> )
Waste water	(m³)	_ ( <del>-</del> )	9,590 (9,170)	20,633 (19,554)	7,892 (10,814)	11,366 (27,187)
Waste	(tons)	_ ( <del>-</del> )	14 (9)	10 (3)	7 (36)	645 (575)
Local/social contributions	(Activities)	2 (2)	_ ( <del>-</del> )	1 (2)	— (2)	_ ( <del>-</del> )

<sup>• &</sup>quot;—" indicates an item not measured in that fiscal year because it is outside the scope for that plant or it is not relevant, or the obligation of measurement is every other year.

FDK GROUP CSR REPORT 2018 30

<sup>-</sup> The  $\text{CO}_2$  conversion coefficient for utility power is recalculated as  $0.57\text{t-CO}_2\text{/MWh}$ 

<sup>•</sup> FDK LANKA has been excluded from collection after FY2014 due to a transfer of business.