

Environmental Management

Policy

KDDI Group

KDDI's Approach (Environment)

KDDI's attitude toward environmental conservation is defined in the KDDI Environmental Charter, which regulates the Basic Principle (Approach to Global Environmental Problems), which is its highest concept, and the Code of Conduct for setting the direction of its concrete initiatives.

KDDI Environmental Charter

Manifesto

KDDI Group recognizes the importance of fulfilling its duty as a responsible global corporate citizen to conserve and protect the Earth's irreplaceable environment so that it can be inherited by future generations. We are committed to pursuing our business in eco-conscious ways, through programs of activities that span the entire company.

Scope of Reports of Environmental Information

[Link](#) Page_102 Range of Environmental ISO Certification (KDDI Group ISO14001 Certification Acquisition)

[Link](#) Page_106 Environmental Accounting Scope of Calculation (Scope of Environmental Accounting)

[Link](#) Page_108 Environmental Impact Scope of Calculation (Environmental Impact of FY2016 Business Activitiesment Turnover Rate)

Action Guideline

1. We will strive to evaluate the quantitative impact of our activities as a company on the global environment, implement effective environmental protection programs and continuously improve these programs. Specifically, we will:
 - (1) Develop and operate environmental management systems necessary to make continuous improvements in such environmental fields as energy conservation, resource conservation and waste reduction.
 - (2) Comply with environmental laws, ordinances and other regulations and requirements. In particular, we will promote measures to reduce our electricity consumption from the perspective of preventing global warming.
 - (3) Promote communication through the appropriate disclosure of information.
2. We will strive to develop and offer services that reduce environmental impact through the use of next-generation information technologies.
3. We will contribute to the development of a recycling-oriented society by promoting measures to mitigate and reduce the environmental impact of activities that necessarily entail mass consumption, such as the supply of mobile handsets.
4. We will promote corporate purchasing policies that favor eco-friendly products and equipment.
5. As a responsible corporate citizen, we will contribute to society and local communities through activities that promote an affluent society that is in harmony with the environment.

Message from Executive Officer

In recent years, natural disasters caused by climate change are occurring frequently, bringing with them immense damage. The Paris Agreement and Sustainable Development Goals (SDGs) were adopted based on these conditions, both setting long-term worldwide objectives in the environmental field, and changing the direction of the world toward becoming a "Zero CO₂ Emissions Society." In 2017, KDDI has also established KDDI GREEN PLAN 2017-2030, a long-term plan to extend over 14 years. The utilization of ICT reduces the CO₂ in society and contributes to the suppression of climate change, but ICT itself harbors the contradiction of increasing environmental impact. In our plan, KDDI has set objectives to solve these problems and reduce our own CO₂ emissions by increasing the energy efficiency of our telecommunications facilities and devices and utilizing renewable energy. We are further strengthening our initiatives from the position of fulfilling our responsibility to achieve this plan.



Akira Dobashi
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Environmental Sustainability
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[Link](#) Page_09 CSR Promotion Framework

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Risks and Opportunities from Climate Change

According to the Intergovernmental Panel on Climate Change (IPCC), when it comes to global warming, there is no room for doubt. They consider it extremely likely that influences from human activities such as economic growth and an increasing population form the main cause for global warming.

KDDI considers the risks from climate change to be important management challenges, and we believe there are opportunities to make adjustments to reduce climate change by lessening existing influences through “moderation” in order to suppress greenhouse gas emissions.

■ Risks and Opportunities from Regulations

Each country and region has regulations and measures that influence the business activities of corporations, such as energy-saving standards, carbon taxes, and emissions negotiations. KDDI considers such regulations and measures as potential risks to business continuity and growth. We also consider it an opportunity for business growth, and in order to comply with these regulations, we are building environmentally-friendly bases, as well as providing services that save energy and reduce society's environmental impact through the use of ICT.

■ Risks and Opportunities from Physical Influences

Global warming has caused typhoons to grow in size and increase in precipitation, bringing damage to various locations. These kinds of natural disasters also influence the telecommunications facilities of KDDI, and we perceive them as risks to business continuity. The demand for measures against such natural disasters is increasing globally. KDDI is working to expand our business by spreading anti-

disaster measures that use ICT services such as monitoring systems and disaster-prevention systems to prepare for disasters.

■ Other Risks and Opportunities

A lack of response to climate change can lead to business continuity risks such as a decline in market competitiveness and reliance from stakeholders. KDDI has set long-term objectives to suppress climate change, and we believe that providing services that contribute to the reduction of environmental impact leads to business expansion and can also contribute to SDG Goal 7 (Affordable and clean energy).

Policy

KDDI

Fourth Environmental Conservation Plan KDDI GREEN PLAN 2017-2030

KDDI has established the KDDI GREEN PLAN 2017-2030, a new environmental conservation plan. This is a long-term plan extending to FY2030, based on the long-term Paris Agreement objectives adopted at COP21 in 2015 and the government's Plan for Global Warming Countermeasures, with the objective of reducing KDDI's CO₂ emissions by 7% in comparison to FY2013. With the aim of achieving these objectives, we are making efforts to reduce CO₂ emissions by utilizing renewable energy and other various methods.

With this plan, in addition to making performance reports in each fiscal year, we will consider revisions and reviews when necessary, which will then be reflected in the plan.

Overview of KDDI Green Plan 2017-2030

(1) Climate Action

- 7% reduction in CO₂ in FY2030 compared to FY2013 for KDDI (in Japan, non-consolidated)
- Upgrading to highly energy-efficient data centers in Japan and abroad
- Contributions to reductions in society's CO₂ emissions by providing KDDI's information and communication technology (ICT) services

(2) Creating a Recycling-Oriented Society

- Maintain zero emissions* from retired telecommunication facilities
- Maintain material recycling rate of 99.8% for used mobile phones

(3) Conservation of Biodiversity

- Active promotion of initiatives using ICTs to conserve ecosystems

* Zero emissions are defined as a final disposal rate of 1% or less.



Climate Action

- 7% reduction in CO₂ emissions in FY2030 compared to FY2013 for KDDI (in Japan, non-consolidated) ⁽¹⁾⁽²⁾⁽³⁾
- Upgrading to highly energy-efficient data centers in Japan and abroad
- Contributions to reductions in society's CO₂ emissions by providing KDDI's information and communication technology (ICT) services

Note: KDDI's target emission reduction of 7% compared to FY2013 matches the 7% industry target in Japan's national Climate Action Plan. In order to achieve this target, KDDI will make use of various approaches to reduce emissions, including the use of renewable energy.

Creating a Recycling-Oriented Society

- Maintain zero emissions from retired telecommunication facilities ⁽⁴⁾⁽⁵⁾
- Maintain material recycling rate of 99.8% for used mobile phones

Note: Zero emissions are defined as a final disposal rate of 1% or less.

Conservation of Biodiversity

- Active promotion of initiatives using ICTs to conserve ecosystems

Environmental Management

System

KDDI Group

Environmental Management Regime

Environmental Management System

In order to clearly state our position on promoting CSR and the environment with management, the CSR Committee was established in the CSR & Environment Management Department to discuss important issues on the environment lead by the General Manager of the Corporate Sector with the CSR & Environment Management Department as the secretariat. Through the Environmental Subcommittee headed by the executive officer in charge of CSR as chairman and the CSR & Environment Management Department as the secretariat and attended by the managers of each division and group company that have acquired ISO14001 certification, the deliberation results will be reflected in each division and associated company, as well as in the objectives of each organization.

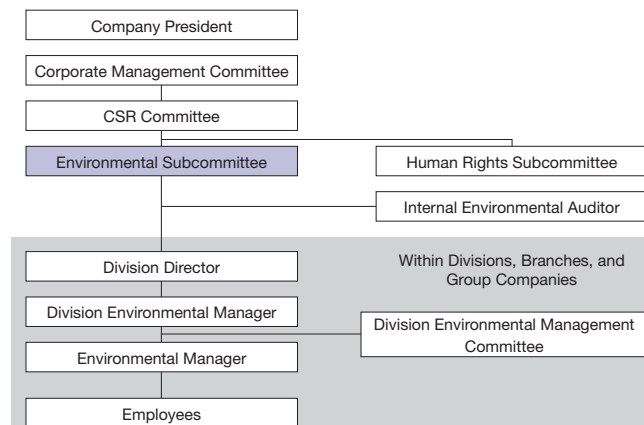
In the KDDI Group, the CSR & Environment Management Department takes a role of promotion, cooperating with related divisions to promote a group-wide system of management.

Environmental Management System Construction

KDDI Group has formed the Environmental Subcommittee, which

serves as the center for the Environmental Management System (EMS). This subcommittee is comprised of a system that centrally manages the status of EMS operations carried out by each division, branch, group company, and related organizations, and cooperates with each group company to promote efficient environmental conservation activities throughout the group.

KDDI Group's Environmental Management Regime



[Link](#) Page_09 CSR Promotion Framework

System

KDDI Group

Internal Environmental Audits

The KDDI Group holds internal audits as an ISO14001 requirement, and appoints auditors from each branch in order to ensure objectivity and independence, with a focus on the CSR & Environment Management Department.

In FY2016, 57 divisions and 64 offices in KDDI and group companies were audited. Referring to internal environmental audit results in FY2015, emphasis was placed on (1) compliance, (2) response to regulations revised in 2015, (3) EMS operation management, and (4) objective management, and self-checks using a check sheet were held in conjunction with face-to-face audits executed by auditors. There were 0 indicated matters, 161 matters requiring revision, with approximately 60% in operations management. Due to the decline in matters requiring revision or suggestion in comparison to the previous fiscal year, we believe that EMS is becoming firmly established.

System

KDDI Group

Compliance with Environmental Regulations

Compliance with Various Environmental Management Regulations

In order to prevent or reduce damage to the environment from our business activities, KDDI strictly complies with environmental regulations, as well as with regulations of various local governments and agreements made with regional authorities. There were no environmental regulation violations in FY2016.

KDDI Group ISO14001 Certification Acquisition (certifying authority: Japan Quality Assurance Organization (JQA))

As of the end of March 2017: KDDI CORPORATION, Okinawa Cellular Telephone Company, KDDI Evolva Inc., KDDI Evolva Okinawa Corporation, KDDI Research, Inc., KDDI Technology Corporation, KDDI Engineering Corporation, mediba inc., Japan Telecommunication Engineering Service Co., Ltd., KDDI Group Foundation, KDDI Health Insurance Union, KDDI Pension Fund, KDDI Web Communications Inc., KDDI Challenged Corporation, KDDI Foundation, TELEHOUSE International Corporation of Europe Ltd., Chubu Telecommunications Co.,Inc., WebMoney Corporation, KDDI MATOMETE OFFICE CORPORATION, KDDI MATOMETE OFFICE HIGASHINIHO CORPORATION, KDDI MATOMETE OFFICE CHUBU CORPORATION, KDDI MATOMETE OFFICE KANSAI CORPORATION, KDDI MATOMETE OFFICE NISHINIHO CORPORATION, Kokusai Cable Ship Co.,Ltd.

Total: acquired by 24 companies and groups

Environmental Management

<Related Regulations>

- Act on the Rational Use of Energy
- Act on the Promotion of Sorted Collection and Recycling of Containers and Packaging
- Waste Management and Public Cleansing Act
- Act on Rationalized Use and Proper Management of Fluorocarbons
- Law Concerning Special Measures for Promotion of Proper Treatment of PCB Wastes (PCB Special Measures Law)

■ Appropriate Processing of PCB-containing Apparatus

KDDI promotes the disposal of components that previously included high-concentration PCB. In FY2016, disposal could not be performed because the disposal processors were not fully prepared to receive the large disposal items. We will continue the disposal of remaining high-concentration PCB devices as soon as disposal processors that can accept them are in place. We are also scheduling the disposal of low-concentration PCB devices.

Activity

KDDI

Acquiring the Eco ICT Mark

KDDI acquired the Eco ICT Mark established by the ICT Ecology Guidelines Council* as part of our endeavor toward environmental consideration and the reduction of our environmental impact.

* Council founded for the purpose of establishing energy-saving indices to be referenced when procuring ICT devices and data centers

Activity and Results

KDDI Group

Education and Infusion for Employees

KDDI believes that increase in environmental awareness and promotion of environmental understanding are needed in order to vitalize environmental activities, and we provide environmental education for all employees.

Initiatives	Target	Details/Performance
Beginning of period information session	KDDI Group Environmental ISO Representatives	Theme: KDDI's EMS, environmental regulations, details of new regulation revisions 17 companies, 56 participants
Training of inside auditors		Study session to train 4 auditors
E-learning	All Employees of KDDI Group	Theme: Biodiversity 12,430 participants (90.9% of the target)

Policy





KDDI

Promoting Green Procurement

KDDI formulated the KDDI Green Procurement Guidelines to promote purchasing of more environment-friendly products, and procure business equipment (communications devices, air conditioning systems, and power supply facilities) with high energy-saving performance. The Guidelines promote procurement activities for the devices defined in the new ICT Ecology Guidelines specified by the ICT Ecology Guideline Council.

Furthermore, through the CSR procurement survey for business

partners we have run since FY2015, we have confirmed our business partners' status of response toward environmental management.

-  [State of Compliance with Green Purchasing Law \(Japanese\)](#)
-  [List of Compatible Models \(Japanese\)](#)
-  [Product Line-Up](#)
-  [Supply Chain Management](#)

System

KDDI

Cooperation of Business Partners

KDDI is continuing cooperation with our business partners to make our base stations lighter and more energy efficient. We have worked with our base station equipment suppliers to develop equipment that is lighter and consumes less power (approximately 45% lighter and approximately 22% less power consumption than before), and have continued to introduce this equipment since FY2015.







KDDI will continue to promote approaches to business partners and work with suppliers to reduce its environmental impact.

Environmental Management





Performance

KDDI

Self-evaluation Check List for CO₂ Emission Reduction Efforts by Telecommunication Operators

		Evaluation item	If implemented, description of actions taken
Formulation of voluntary environmental action plan, etc.	1	Has the organization formulated a voluntary environmental action plan that describes actions for reducing CO ₂ emissions? Has the plan been implemented?	KDDI has formulated a Medium-term Environmental Conservation Plan based on the KDDI Environmental Charter, and the plan is being implemented.  Link Page_100 KDDI Environmental Charter
	2	Does the voluntary environmental action plan include specific actions for which quantitative goals for CO ₂ emission reduction are stated?	The Third Medium-term Environmental Conservation Plan (KDDI GREEN PLAN 2012-2016) sets the following targets. <ul style="list-style-type: none"> • 30% constraint in energy use estimated for FY2016 compared with not taking any energy-saving measures • 15% reduction in energy use per subscriber estimated for FY2016 compared with FY2011 • Expansion of Tribrid Base Stations to 100 by March 31, 2012 (Target achieved). • Achieve zero emissions for retired telecommunications facilities (*Zero emissions is defined as having a final disposal rate of 1% or less) • Recycling rate of used mobile phone material over 99.8% • Recycling rate of general waste material for KDDI buildings and headquarters over 90%  Link Page_34 Third Medium-term Environmental Conservation Plan – KDDI GREEN PLAN 2012-2016
	3	Does the organization put efforts into informing and enlightening employees about environmental conservation actions to improve their environmental awareness, as well as publishing the organization's voluntary environmental action plan internally and externally?	<ul style="list-style-type: none"> • The Medium-term Environmental Conservation Plan is published inside and outside the company by means of the Integrated Report (Detailed ESG Version) and the corporate website. • KDDI also provides e-learning program and internal seminars for employees whenever necessary. • Integrated Report (Detailed ESG Version)  Link Page_103 Education and Infusion for Employees
	4	Are the implementation statuses of and the targeted achievements for actions given in the voluntary environmental action plan disclosed to the public?	The attainment statuses of trend targets toward the achievement of the Medium-term Environmental Conservation Plan are published in the Integrated Report (Detailed ESG Version) and the corporate website.  Link Page_32 Material Issue 4: Initiatives to Conserve the Global Environment
Eco-efforts in procurement	5	Has the organization formulated, with a view to energy-saving, procurement standards for ICT devices and data centers? Does procurement conform to the established standards?	KDDI conducts its procurement activities in accordance with the KDDI Green Procurement Guidelines.  Link Page_103 Promoting Green Procurement
	6	Does the organization procure office supplies and other goods as well as logistics service in an energy-saving manner (Green purchasing, etc.)?	KDDI promotes green purchasing under the KDDI CSR Procurement Policy.  Link Page_76 Supply Chain Management

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		Evaluation item	If implemented, description of actions taken
Promotional system for eco-efforts	7	Is there an assigned group or personnel in charge of CO ₂ emission reduction actions?	The CSR & Environment Management Department is established as the internal organization responsible for CO ₂ emission reduction efforts.
	8	Does the organization have a system for appropriately monitoring and checking the status of implementation and the achievement level of targets given in the voluntary environmental action plan as well as for conducting internal audits?	KDDI monitors the status of implementation and the achievement level and conducts inspections and improvements through internal audits, both of which are realized through the ISO Environmental Management System.
Other eco-efforts	9	Does the organization undertake eco-friendly actions beside energy- saving efforts?	<p>The promotion of 3R (Reduce, Reuse, Recycle) is also a core KDDI challenge, and the following goals are pursued:</p> <ul style="list-style-type: none"> • Promotion of recycling communications equipment; Improvements in recovering resources; • Promotion of recycling used mobile phones; Improvements in recovering resources • Reduction in paper resource use via "Green by ICT" (Bill on WEB, KDDI paperless fax service, slimmed-down au mobile phone manual, compact individual packaging, etc.); • Reduction in office waste and improvements in recovering resources. <p>KDDI is also engaged in improving the supply chain through Scope 3 and LCA efforts, and support for Biodiversity.</p> <p> Link Page_111 Environmental Performance (Low-Carbon society)</p> <p> Link Page_112 Environmental Performance (Recycling-Oriented society)</p> <p> Link Page_114 Environmental Performance (Biodiversity)</p>
	10	Does the organization perform activities for environmental conservation in collaboration with the community?	<p>KDDI implements forest conservation activities in which employees and customers work together across the country.</p> <p> Link Page_115 Environmental Conservation Activities by Employees</p>

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Environmental Accounting

KDDI has implemented environmental accounting since 2010 as a powerful system to quantitatively evaluate environmental activity costs and effects. We analyze calculated costs and effects and utilize them toward more efficient environmental management.

[Scope of Environmental Accounting]

- Period: April 1, 2016 to March 31, 2017
- Scope of calculation: 30 KDDI Group companies*
- Calculation standard: Ministry of Environment "Environmental Accounting Guidelines 2005" and "KDDI Environmental Accounting Guidelines"

Environmental Protection Costs		Transaction Examples	FY2015 (Millions of Yen)		FY2016 (Millions of Yen)		Change from Previous Year (Millions of Yen)	
			Investment	Cost	Investment	Cost	Investment	Cost
Business area costs	Pollution prevention costs	Pollution prevention costs stipulated by law, costs for proper disposal of PCB, etc.	0	43	0	0	0	△43
	Global environmental protection costs	Power-saving wireless equipment for mobile base stations (Investment amount is calculated proportionally based on the power-saving effect.)	9,512	23,202	2,509	23,764	△7,002	562
	Resource recycling costs	Reduction of paper resources, processing and disposal of waste products	0	560	0	823	0	263
Upstream/downstream costs		Collection, recycling, and reuse of merchandise and products	0	1,281	0	1,396	0	115
Administrative costs		Operation and updating of environmental ISO standards, disclosure of environmental information	0	134	0	122	0	△12
R&D costs		R&D of technology, equipment, handsets, products, services, and other items conducive to reducing the environmental burden	0	340	0	108	0	△232
Social activity costs		Donations and support for forest conservation activities and to environmental protection groups	0	56	0	50	0	△6
Environmental damage restoration costs		Measures for prevention of asbestos spraying, restoration of polluted soil	0	0	0	0	0	0
Total			9,512	25,616	2,509	26,263	△7,002	647

* KDDI Web Communications Inc., mediba Inc., KDDI Research, Inc., KDDI Engineering Corporation, KDDI Evolva Okinawa Corporation, KDDI Challenged Corporation, KDDI Technology Corporation, WebMoney Corporation, KDDI MATOMETE OFFICE CORPORATION, KDDI MATOMETE OFFICE HIGASHINIHON CORPORATION, KDDI MATOMETE OFFICE CHUBU CORPORATION, KDDI MATOMETE OFFICE KANSAI CORPORATION, KDDI MATOMETE OFFICE NISHINIHON CORPORATION, Okinawa Cellular Telephone Company, KDDI Evolva Inc., Japan Telecommunication Engineering Service Co., Ltd., Chubu Telecommunications Co., Inc., Kokusai Cable Ship Co., Ltd., TELEHOUSE International Corp. of Europe Ltd. (UK), TELEHOUSE International Corp. of Europe Ltd. (France), TELEHOUSE International Corp. of America. (US), TELEHOUSE Deutschland GmbH (Frankfurt), HKCOLO.NET LTD. (Hong Kong), TELEHOUSE Beijing Co., Ltd (Beijing), TELEHOUSE BEIJING BDA Co., Ltd (Beijing), TELEHOUSE Shanghai Co., Ltd (Shanghai), KDDI Korea Corporation (Seoul), KDDI Singapore Pte Ltd. (Singapore), TELEHOUSE International Corp. of Vietnam (Hanoi)

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1. Environmental Protection Benefits (Physical)		Indicator Category (Unit)	FY2015	FY2016	Change from Previous Year
(1) Benefits derived from business area	1) Benefits related to resources invested in business activities	Power consumption (MWh)	2,438,952	2,440,582	1,629
		Paper usage (t)	12,047	9,800	△2,247
		Paper reduced by Bill on WEB (t)	3,834	3,892	58
	2) Benefits related to environmental burden and waste products discharged from business activities	Greenhouse gas emissions (t-CO ₂) *	1,392,753	1,277,094	△115,659
Industrial waste emissions related to telecommunications facilities and buildings (t)		5,298	5,820	521	
(2) Benefits derived from upstream/downstream costs	Benefits related to goods and services produced by business activities	Number of used mobile phones and other devices collected (10,000 units)	348	359	11

2. Economic Benefits of Environmental Protection Measures (Yen)	Substantive Benefits (Major Effects)	FY2015 (Millions of yen)	FY2016 (Millions of yen)	Change from Previous Year
Revenues	Revenues from sales through disposal of telecommunications facilities and buildings	333	150	△182
Costs reductions	Reduction in energy costs by adopting the use of low-pollution vehicles	12	15	3
	Reduction in costs of new purchases by reusing disposed of telecommunications facilities	3,879	4,083	203
Total		4,224	4,248	24

* Emission coefficient used per telecommunications operator