

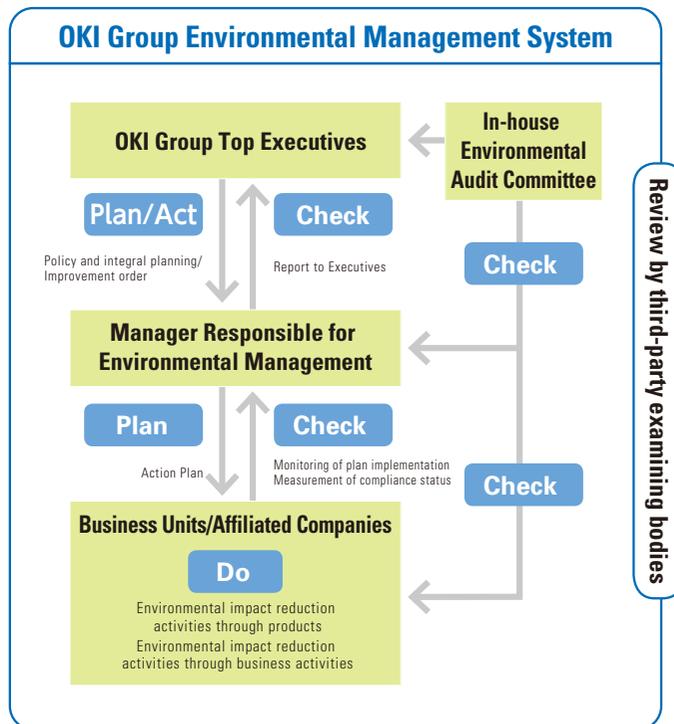
# CONSIDERATION FOR THE ENVIRONMENT

On the basis of the “OKI Group Environmental Policy” developed by taking environmental issues into consideration, the OKI Group plans and implements specific activities by setting up goals. Moreover, we operate environmental management systems for the entire Group as the foundation of our environmental management.

### OKI Group Environmental Policy

The OKI Group realizes a better global environment by providing products and services that contribute to the development of the information society for the next generation, and passes this down within the group.

- 1. Work to prevent pollution and protect the environment by implementing the OKI Group environmental management.**
  - Take action to provide environment-friendly products and services in all business processes through product planning, manufacturing, and maintenance operations.
  - In business activities, strive to save energy and resources and take action to reduce and recycle waste.
  - Work on biodiversity conservation and sustainable use.
- 2. Comply with applicable environmental legal requirements and regulations, and with customer requirements and other requirements to which the OKI Group subscribes.**
- 3. Adequately implement PDmCA (Plan-Do-multiple Check-Act) in the environmental management system, and take action to advance environmental performance and to continue improvement of its operation system.**
- 4. Disclose environmental information, and make wide contributions to the society by supporting environmental activities.**



## OKI Group Main Environment Activity Results (Fiscal Year 2017)

Category	Activity Content	Targets → Outcome
<b>Realization of a low-carbon society</b>		
Products	Development of energy-saving products	20% or more of developed products → 67% (energy saving of 21% or more over conventional products)
Business activities	Energy-savings at workplaces (plants and offices)	Improvement of 15.4% or more → 19.1% improvement (consumption vs. FY2012*1)
<b>Prevention of pollution</b>		
Products	Development of products complying with regulations on chemical substances in products	50 or more products → 56 products
	Ensuring legal compliance by supporting the new standard survey form (chemical substance management system/management procedure manual)	Respond to addition of RoHS prohibited substances → Response function added to IT system Confirm status of compliance with laws and regulations → No legal violations
Business activities	Reduction of chemical substance emissions from plants (atmosphere/water/soil)	Improvement of 27% or more → 38% improvement (chemical substance emission rate vs. FY2012*2)
	Compliance with chemical substance related regulations (atmosphere/water/soil)	Zero legal violations → achieved
<b>Resource circulation</b>		
Products	Recycling of used products	4,000t or more → 2,470t
	Development of easily recyclable products	30 or more products → 40 products
Business activities	Reduction and appropriate disposal of waste/recycling rate	Recycling rate 82% or more → 86%
	Streamlining of resource input	Improvement of 66% or more → 64% improvement (resource input rate vs. FY2012*3)
<b>Common</b>		
Biodiversity conservation	Realization of low-carbon societies/prevention of pollution/resource circulation	Promotion of the above initiatives

In order to accurately reflect the results of the activities, management indicators were reviewed from FY 2017 as shown in \*1 - 3 below.

\*1 Total of “improvement in energy usage rate × usage rate for entire group” for each workplace

\*2 “Emissions/input” of chemical substances

\*3 “Disposal amount/input” of primary resource

## ▶ Implementing Life-cycle Environmental Management

The OKI Group applies environmental management from a life-cycle perspective across its entire supply chain in Japan and overseas in an effort to reduce environmental impacts and deliver benefits to business operations at each stage of procurement, production, transportation, product use, and disposal.

### • Examples of Initiatives at Procurement and Transportation Stages

OKI Electric Industry (Shenzhen), our manufacturing base in China, successfully halved the amount of cardboard used daily by replacing the cardboard packaging used when transporting procured parts with returnable plastic containers. The packaging of more than 8,000 types of components used for ATM manufacturing was assessed and 3,856 types, or roughly half of the total amount, were selected. For each different component, visits were made to 20 suppliers or more and a process of conducting trials and holding discussions was initiated on both sides. Based on the decision on the details of the returnable containers, such as packaging specifications and rules on returning them, the impact on the environment was reduced while maintaining product quality.

## ▶ Horizontal Environmental Management Based on Site Characteristics

We implement environmental measures according to workplace characteristics and apply what we learned from cases where initiatives proved effective to develop models that can be applied to similar sites with the aim of optimizing the Group as a whole.

For example, processing plants are characterized by continuous operation of production facilities and air conditioning equipment. For these we are working to achieve a fixed reduction in energy consumption. Assembly plants have the characteristic of energy consumption fluctuating according to production volume. Here we are promoting efficiency through measures such as cellular production, one-piece flow production, or changes in layout to accommodate high-mix low-volume manufacturing. In our large offices, we are promoting the upgrade of air-conditioning equipment and lighting fixtures, and in smaller offices we are making improvements centered on operational aspects.

### • Examples of Initiatives at Assembly Plants

At Nagano OKI, where electronic components are mounted on printed circuit boards, even though the amount of glue used to temporarily attach components has decreased mainly because of their increased miniaturization, the high amount of energy used to operate glue curing ovens was still an issue. Nagano OKI therefore took measures to monitor the operation of curing ovens with a sensor, which alerts managers and operators when the oven has not been running for a certain length of time. The oven can then be switched to idle mode. This means that the fixed amount of energy used to operate glue curing ovens is no longer being wasted when production volume fluctuates. The plant was able to reduce energy consumption by 90% on curing ovens alone.



Operators are alerted to equipment operation status by different colored light bulbs

## ▶ Contributing to Climate Change Adaptions

Owing to the impact of unusual weather in recent years, the likelihood of disasters occurring on a scale much greater than previously thought is growing and cases of flood damage in urban areas due to rising water levels in small- and medium-sized rivers where there are few water gauges are also becoming more common.

Based on our highly accurate “ultrasonic water-level gauge” that has a proven record in river monitoring, OKI and Shizuoka OKI developed a small, light-weight, and all-in-one “zero-energy ultrasonic water-level gauge” that requires no installation of network cables or power supply thanks to its integrated wireless connectivity and solar-power generation. The device’s 920MHz band wireless multi-hop component is characterized by a strong signal, suffers few disconnections, and comes equipped with power-saving functionality based on advanced control technology.



“Zero-energy ultrasonic water-level gauge”

## Environmental Impact Reduction Activities and Benefits for Business in the Context of Life-cycle

	Procurement	Production	Transportation	Product Use	Disposal
<b>Reduction of environmental impact</b>	<ul style="list-style-type: none"> <li>Optimization of procurement volumes → Energy-saving/prevention of chemical pollution</li> <li>Procurement of components that do not contain hazardous substances → Prevention of pollution/legal compliance</li> </ul>	<ul style="list-style-type: none"> <li>Improvement of production efficiency → Energy-saving/resource conservation</li> <li>Reduction of chemical substance emissions → Prevention of pollution/legal compliance</li> </ul>	<ul style="list-style-type: none"> <li>Improvement of transportation efficiency → Prevention of global warming/resource depletion</li> <li>Reduction of packing materials → Resource cycling/reduction of waste</li> </ul>	<ul style="list-style-type: none"> <li>Power-saving/reduced size and weight of products → Prevention of global warming/resource depletion</li> <li>Reduction of chemical substances content in products → prevention of pollution</li> </ul>	<ul style="list-style-type: none"> <li>Recycling of used products → Improvement of recycling rate/reduction of final disposal volume/prevention of pollution via substances contained</li> </ul>
<b>Benefits for business</b>	<ul style="list-style-type: none"> <li>Reduction of procurement costs and inventory</li> <li>Prevention of loss of sales opportunities and business continuity by legal compliance</li> </ul>	<ul style="list-style-type: none"> <li>Reduction of production costs</li> <li>Shortened the production lead-time</li> <li>Business continuity through legal compliance</li> </ul>	<ul style="list-style-type: none"> <li>Reduction of transportation costs</li> <li>Enhance response to customer delivery dates</li> <li>Improve efficiency of delivery/installation work</li> </ul>	<ul style="list-style-type: none"> <li>Improvement of customer satisfaction by streamlining of customer energy consumption/supporting customer compliance with the Act on Rationalizing Energy Use/reducing the size and weight of products</li> </ul>	<ul style="list-style-type: none"> <li>Elimination of third-party products through collection of end-of-use products/improvement of corporate value by improved regulatory compliance</li> </ul>

Details of the OKI Group’s environmental activities are provided in the “OKI Group Environmental Report” and on our website.



Website “Environmental Conservation”

<http://www.oki.com/en/eco/>