

Sustainable Environmental Management

Setting targets for 2050 to reduce environmental impact in energy saving and global warming prevention, resource conservation and recycling, and pollution prevention

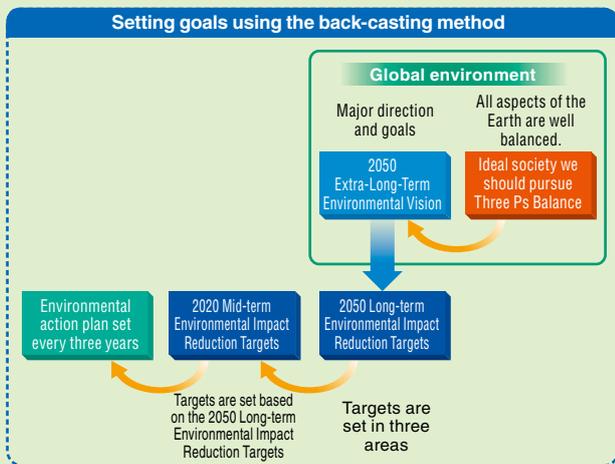
The Ricoh Group first developed a sustainable environmental management system that allows simultaneous achievement in environmental conservation and profit creation in the 1990s. Under this scheme, every single Group employee has been working on activities to reduce environmental impacts and develop technologies for environmental protection. To further enhance our corporate value, we will continue to strengthen the measures already taken and accelerate their implementation while generating a new business model that better suits a sustainable society.

As part of such a sustainable business model and with a goal of developing a more farsighted approach to environmental activities, the Ricoh Group presented its 2050 Extra-Long-Term Environmental Vision in 2005 that urges developed countries to

decrease their total environmental impact to 12.5% of the current level by 2050. In March 2009, the Group issued its Mid- to Long-term Environmental Impact Reduction Targets announcing specific steps to be taken to achieve the vision. With 2020 and 2050 being key years, the targets are set in three different areas—energy saving and global warming prevention, resource conservation and recycling, and pollution prevention—making them the first of their kind in the world.

The major focal points for each of the three areas are “reduction of CO₂ emission through lifecycles,” “promotion of resource conservation that counters the trend of resource depletion,” and “management and reduction of chemical substances to minimize environmental risks.” The numerical targets are incorporated into the Environmental Action Plan formulated every three years, and highly effective activities have been developed to achieve the targets in each area.

Setting Environmental Targets



Ricoh Group Mid- to Long-term Environmental Impact Reduction Targets

		2020	2050
Energy saving and global warming prevention	Reduction of CO ₂ emissions (including five gases calculated as CO ₂ equivalent) throughout lifecycles	Reduce 30.0% from fiscal 2001	Reduce 87.5% from fiscal 2001
Resource conservation and recycling	Reduction of use of new resources in products	Reduce 25.0% from fiscal 2008	Reduce 87.5% from fiscal 2008
Pollution prevention	Reduction of chemical substances to minimize environmental risks	Reduce 30.0% from fiscal 2001	Reduce 87.5% from fiscal 2001

* Targets specified above are set based on Ricoh's business areas and market share in fiscal 2001. (For more detailed information, see the press release at http://www.ricoh.co.jp/release/by_field/environment/2009/0422.html)

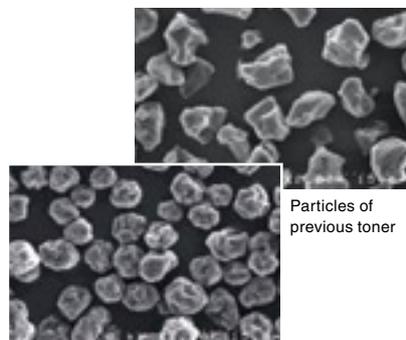
Approach through Products (Environmental Technology Development)

New color PxP toner

Lower fusing temperature for smaller environmental impact

Ricoh seeks opportunities for environmental impact reduction through the whole life cycle of their products. The new color PxP toner (a polymerized toner), made from newly developed polyester resin, is designed to fuse at a lower temperature than its predecessor by 20°C while achieving higher picture quality with fine and uniform particles. A breakthrough feature of this next-generation toner is a lower fusing temperature that realizes both energy efficiency and reductions in environmental impact concurrently. In the production process, the new model generates

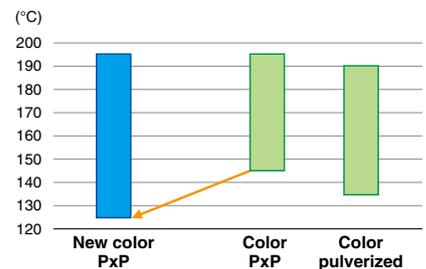
waste water and solvents easier to recycle compared with previous types, thus allowing resource savings as well.



Particles of new color PxP toner

Achieved higher picture quality with fine and uniform particles of new color PxP toner

Toner fusing temperature (compared to other Ricoh products)



Approach through Products (Resource Conservation and Recycling)

Innovative manufacturing leads to resource recirculation

The Ricoh Group pursues an approach to manufacturing that reduces the waste of resources and energy consumption throughout the lifecycle of our products. Since 1993, we have been generating our unique design methods with a policy that considers recycling conditions in the designing phase. Particularly, we focus on designs that accommodate reconditioned machines, are easily dismantled and sorted, allow us to reuse valuable parts, recycle high quality materials, allow for closed loop recycling, and result in strong products that can withstand the rigors of recovery and recycling. More recently, we have been concentrating our efforts on making our products smaller in size, lighter and more durable. imagio MP C2200, launched in October 2008, is more compact than conventional models. This new multifunctional color copier features a smaller body than black-and-white units^{*1} and is lighter in weight (by 20%) compared to preceding color units.

In order to reduce environmental impact and improve economic efficiency we recover and recondition used products at the end of their product life and send them back

to market with added value. Through an established network, products are recovered and thoroughly inspected, dismantled, cleaned and reassembled with new parts, resulting in a product with the same level of quality as a new product. Since the first series of reconditioned units of imagio MF6550RC was returned to the market in 2001, more models have been added to the lineup of reconditioned copiers.

*1 Compared to imagio MP 2550, when equipped with duplex copying unit, manual paper feeder (not in use) and inner finisher.

*2 Compared to imagio MP 2500, when not equipped with an ADF.



imagio MP C2200: multifunctional color copier with a smaller and lighter body

Measures in Business Operation

Ricoh's manufacturing process innovation

The Ricoh Group has been carrying out innovations in the manufacturing process in its efforts to reduce its environmental impact. Focusing on innovations in manufacturing processes saves energy and space on streamlined production lines and has a spillover effect on associated equipment, such as air conditioners and air compressors. In addition, the equipment costs and line start-up time will be greatly reduced. To date, trimmed production lines for organic photoconductors used in copiers have been put in operation, while the size of toner filling devices has been dramatically reduced. In addition, innovative processes have been realized, including changes in the toner crush lines and thermal sheet painting methods. These measures have also been applied to production lines in other countries whenever possible. The simultaneous achievement of reducing environmental impact and improving manufacturing efficiency has enforced the competitive edge of the Ricoh Group in the way only good environmental management can.

Measures for Customers

Helping customers reduce environmental impact by visualizing CO₂ emission levels

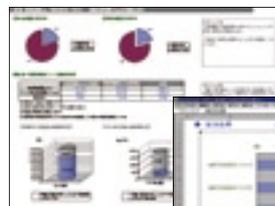
The Ricoh Group passes on the know-how of environmental impact reduction that we have been using in our office operations to our customers. In this service in Japan, we provide customers with a graphic representation of CO₂ emission they produce while using office equipment. To do this, we collect data on the electricity and paper consumption of the copiers and laser printers at customers' offices through remote monitoring software, called "@Remote." Based on the collected data, we estimate CO₂ equivalent from the amount of electricity and paper consumed, and inform the customer of the results.

The Ricoh Group promotes paperless offices and stricter compliance with sorting and recycling to create environmentally-friendly offices. We provide customers with the know-how that we have gained from

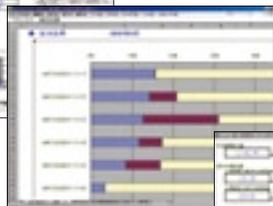
such practices by opening our offices to the public as "live offices." Starting in Japan, live offices now operate in more than 70 locations including those outside the country. One example is Ricoh Asia Pacific Pte. Ltd., which is a regional headquarter subsidiary in the Asia

region; it has been supporting an increasing number of customers in creating environmentally-friendly offices. The Ricoh Group's sustainable environment management activities are expanding within its community.

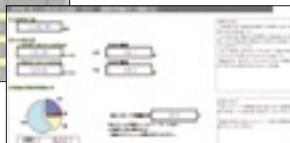
Report on office equipment usage (example)



Estimated CO₂ emissions reduced by use of double-sided/multi page printing



Number of printed pages by function



Amount of electricity consumed and its estimated CO₂ emissions equivalent

* Functions installed and function settings may vary depending on models.



Live office in Singapore

* For details, please read the Ricoh Group Sustainability Report (Environment) 2009.