



Eco-Friendly, Next-Generation Products

Throughout the product life cycle, from raw materials production and manufacturing to customer use and final disposal, we work to reduce the impact of products on the environment.

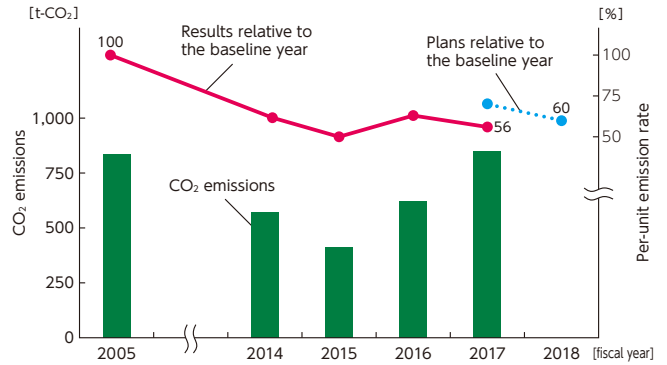
Reducing Environmental Impact in the Transportation of Products

Reducing environmental impact in logistics activities

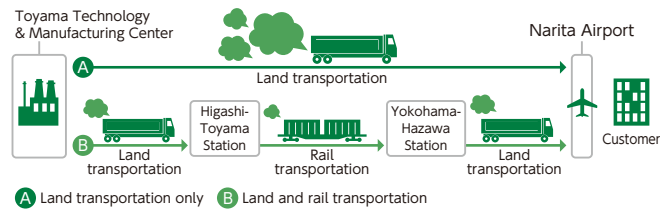
The Toyama Technology & Manufacturing Center was commended by the Director-General of the Maritime Bureau, an agency of the Japanese Ministry of Land, Infrastructure, Transport and Tourism, as an excellent company certified under the fiscal 2017 Eco-Ship Mark program implemented by the Ministry. Since then the Center has been promoting modal shift to marine transportation and improving the transportation method to further reduce its environmental impact. The Center reduced CO₂ emissions from land transportation in the Kanto region to about one-sixth by shifting to rail transportation using containers. It also proactively fostered the following measures to reduce its greenhouse gas emissions. It will continue to implement various measures to mitigate global warming and establish a low-emissions logistics system.

- Monitor CO₂ emission reductions
- Expand bulk transport
- Ship products from the nearest port to customers outside Japan
- Modal shift to transportation by ferry and by rail
- Reduce transportation weight by shifting from wooden packaging to cardboard packaging
- Use returnable boxes for delivery of products to customers in Japan

CO₂ emissions and emissions per unit of sales by fiscal year (Toyama Technology & Manufacturing Center)



Shift from land to rail transportation (example)



Provision of Eco-Friendly Products

Introduction of eco-design (environmentally conscious design)

In fiscal 2016, our Group introduced Environmentally Conscious Design, which is in compliance with International Standard IEC 62430,* with the aim of reducing environmental impacts not only by working to reduce our Group's environmental footprint, but also by providing eco-friendly products to customers.

To promote environmentally conscious design, we have introduced two types of assessments in the product development process: environmentally conscious design assessment and life cycle assessment.

In the environmentally conscious design assessment, environmental considerations incorporated in the design process to reduce the environmental load of a new product are evaluated. In the life cycle assessment, the potential environmental impact of a new product is assessed throughout its life cycle, based on a comparison of the specifications of the new product with those of existing products.

We pursue environmentally conscious design by utilizing the results of assessment results.



* IEC62430: International standard on environmentally conscious design for electrical and electronic products and systems, specified by the International Electrotechnical Commission (IEC)

Introduction of assessments

To reduce environmental impacts of our products throughout their life cycles, we introduced two types of assessments into the product design process, as shown on the right.

1. Environmentally conscious design assessment

By using a special tool (assessment sheet), we assess the results of an approach to reduce environmental impacts against the development target set for product/service performance.

Elements of environmentally conscious design assessment



2. Life Cycle Assessment (LCA)

We compare functions between the developed product and conventional products and make quantitative assessments of items that are related to the life cycles of products and have impacts on the environment by using a special LCA sheet.

Elements of life cycle assessment

