# Measures to create a sound material cycle

## Waste reduction and recycling

JR East generates many kinds of waste through its railway operations, including daily trash removed from trains and stations and industrial waste from our General Rolling Stock Centers. In addition, restaurants and retail stores in our life-style businesses produce garbage and general waste.

In order to reduce all these various forms of waste, JR East actively supports the approach known as "reduce, reuse, recycle." For recycling in particular, goals are set for each type of waste.

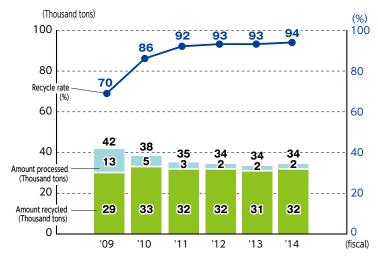
## Recycling waste collected from stations and trains<sup>☆</sup>

In the fiscal year ended March 2014, 94% of the trash collected from stations and trains was recycled. Since trash from stations and trains contains recyclable materials, we first placed separation bins in stations. We then established recycling centers in Ueno, Omiya and Shin-Kiba for more rigorous separation. In October 2010, to further improve recycling rates, we consolidated the recycling centers in Ueno and Shin-Kiba and built the JR East Tokyo Materials Recycling Center (operated by East Japan Eco Access Co., Ltd.).



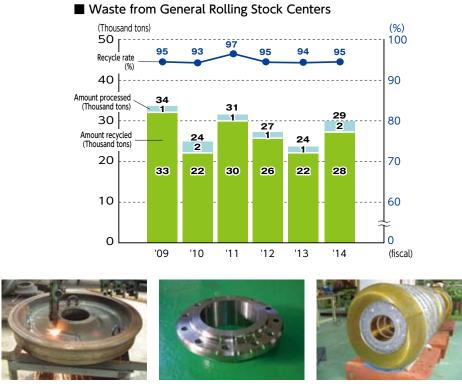
JR East Tokyo Materials Recycling Center

#### ■ Waste from stations and trains



# Recycling at General Rolling Stock Centers<sup>☆</sup>

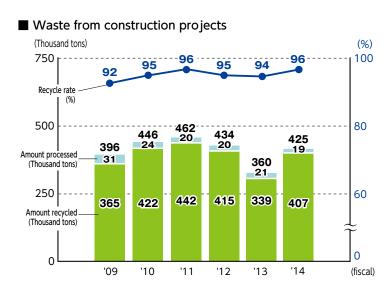
JR East Group is recycling waste generated during the manufacture and maintenance of rolling stock. At our regional General Rolling Stock Centers, waste is sorted into 20 to 30 categories to reduce waste generation and promote recycling. Starting in FY2006, we have been collecting data on the volume of retired railcars that are sold as scrap to be recycled so as to monitor the progress.



At Nagano General Rolling Stock Center, retired wheels are recycled into brake disk parts

# Reducing construction waste<sup>☆</sup>

JR East endeavors to reduce waste from construction by requiring subcontractors to use design and construction methods that allow them to properly dispose of construction byproducts and to minimize waste. In the fiscal year ending March 2014, JR East generated approximately 425 thousand tons of waste through construction and maintenance projects at our stations and other structures, including approximately 42 thousand tons of waste through work entrusted to JR East.\*



<sup>\*</sup> Work entrusted to JR East: Construction work contracted to JR East by local governments etc., to be done at non-JR East facilities, for such purposes as to ensure safe train operations.

## Reducing waste at offices<sup>☆</sup>

In departments at the Head Office and Branch Offices, we strive to reduce waste by promoting elimination of paper and by recycling, including the use of creative, employee-designed trash cans. In FY2014, we recycled 2,302 tons out of a total of 2,621 tons of waste (88%).



Separate trash bins for different types of trash (inside Chiba Branch Office)

## Efficient use of water resources<sup>☆</sup>

As a consumer of 11.48 million m<sup>3</sup> of water annually, JR East actively promotes the use of recycled waste water\*, using, for example, rainwater and water already used for washing hands to flush toilets. At the Head Office building, 25 thousand m<sup>3</sup> out of 36 thousand m<sup>3</sup> of water was reused in FY2014.

\* Recycled waste water: Defined as water of a quality level between clean water and sewage water. It is used for limited purposes as a recycled resource.

# Reducing and recycling tickets<sup>☆</sup>

Collected used tickets are sent to a paper mill. After the iron powder has been separated from the backs of the tickets, the paper is recycled to make toilet paper and corrugated cardboard. In FY2014, all of the 345 tons of collected tickets were recycled. Collected magnetic season tickets were recycled into solid fuel.

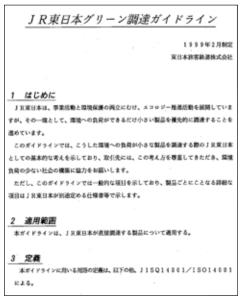


Used tickets collected at stations are recycled into toilet paper that is used at major stations in the Greater Tokyo metropolitan area.

#### Promoting green procurement

JR East is developing ecological promotion activities compatible with both business activities and environmental preservation, and in promoting as part of those efforts the procurement of products with lower environmental impact, formulated the "JR East Green Procurement Guidelines" in 1999 – outlined within these guidelines is our philosophy with regard to materials, conservation of resources, and packaging. Additionally, when considering selection of a new material supplier, we investigate that company's environmental and CSR activities, and this information is used to help evaluate potential suppliers.

Furthermore, toward promoting the procurement of environmentally friendly office supplies, the JR East Group has established the goal of "100% green procurement", and successfully achieved this objective in FY2014. Through activities toward green procurement, JR East promotes the formulation of a recycling-oriented society.



JR East Green Procurement Guidelines

#### Recycling trash within the company

JR East promotes in-company recycling of trash generated at stations.

Magazines, newspapers and similar paper items collected from our segregated trash boxes at stations and trains are being recycled into coated paper and stationery and used in our offices.





Newspapers and other papers collected in stations and elsewhere are recycled into office paper used by our company.

### Recycling waste PET bottles into civil engineering materials

JR East has constructed a recycling system that produces resin weed-barrier sheets (product name: Nakusa R-PET) by recycling the PET (polyethylene terephthalate) bottles discarded in stations and trains. The main ingredient for resin weed-barrier sheets used to be polyethylene, but JR East has developed and commercialized a weed-barrier sheet composed mainly of waste PET bottles after tests were successful.