# I

# Measures to create a sound material cycle

## Reducing waste 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

In the fiscal year ending March 2010, waste collected from our stations and trains amounted to 38 thousand tons. Since waste collected from our stations and trains includes recyclable materials, we endeavor to properly sort it and recycle it. JR East has installed separate refuse bins for different types of waste at stations, and has established its own recycling centers in the Tokyo metropolitan area to ensure thorough sorting of waste after it has been collected. Beginning with the fiscal year ended March 2008, thermal recycling was also taken into account and the definition of recycling was partly revised during the fiscal year ended March 2010.

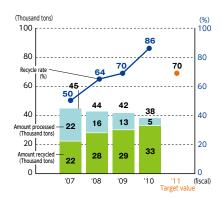
#### Recycling initiatives at General Rolling Stock Centers, etc.

JR East Group is recycling waste generated during the manufacture and maintenance of rolling stock. At the Niitsu Rolling Stock Manufacturing Factory, we promote waste reduction and recycling, taking into account the railcars' entire life cycle starting at the time of designing. At our regional General Rolling Stock Centers, waste is sorted into 20 to 30 categories to reduce waste generation and promote recycling. Starting in the fiscal year ending March 2006, we have included our retired railcars that were sold to outside parties and later scrapped as part of the quantities recycled by the JR East Group when calculating our recycle rates.

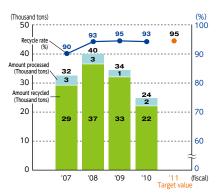


At Nagano General Rolling Stock Center, retired wheels are recycled into brake disk parts.

#### ■Waste from stations and trains

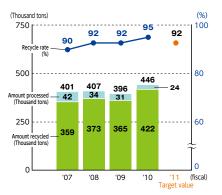


#### ■Waste from General Rolling Stock Centers



JR East endeavors to reduce waste from construction by requiring subcontractors to use design and construction methods allowing them to properly dispose of construction byproducts and to minimize waste. In the fiscal year ending March 2010, JR East generated 446 thousand tons of waste through construction and maintenance projects at our stations and other structures, including 76 thousand tons of waste through work entrusted to JR East.

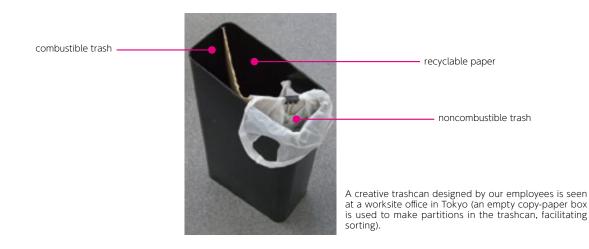
#### ■Waste from construction projects



\*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**

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 trashcans. In the fiscal year ending March 2010, we recycled 2,297 out of a total of 2,712 tons of waste (85%).



### Efficient use of water resources

As a consumer of 11.92 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, 23 thousand out of 41 thousand m<sup>3</sup> of water was reused in the fiscal year ending March 2010.

\*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, etc.

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 the fiscal year ended March 2010, all of the 417 tons of collected tickets, etc., was 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

As part of ecological activities balancing environmental protection and business, JR East promotes the procurement of products with lower environmental impact, and in 1999 formulated the "JR East Green Procurement Guidelines." 52% of office supplies are subject to green procurement. When we choose a supplier of materials, we investigate its environmental and CSR activities, and use what we find as a factor in our decision.

## Recycling trash within the company

JR East promotes recycling within the company of trash generated at stations. Paper from recycled tickets is used as toilet paper at major stations in the greater Tokyo metropolitan area, while magazines collected in magazine trashcans on trains and at stations are recycled into coated paper and used to produce the information magazine "Train Vert," which is distributed on the Shinkansen. Newspapers are also recycled and used internally as copy paper.



The information magazine "Train Vert" in the Shinkansen is made using paper recycled from magazines, etc., discarded in trashcans at stations or left on trains.

## 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 a weed barrier sheet composed mainly of waste PET bottles, and after testing has succeeded in producing and commercializing the product.