JR EAST GROUP SUSTAINABILITY REPORT

JR East Group Sustainability Report 2011

Aiming for a Sustainable Society

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日本。

JR-EAST GROUP

CONTENTS

More detailed information is available on our website:
http://www.jreast.co.jp/e/aboutus/

Editorial Policy

We are publishing the JR East Group Sustainability Report 2011 with the aim of introducing our various initiatives in an accurate and easy-to-understand form.
In the "Special Topics" we have taken up the Great East Japan Earthquake and tsunami, covering the extent of damage suffered by JR East and our approach to restoration and reconstruction.
The information that we wish to communicate to our stakeholders consists of three aspects: Environment, Safety, and Society.
Since this report presents information on matters that have made progress in particular, please refer to our website for information on overall activities of our Group companies.

References	Environmental Reporting Guidelines 2007 [Japan Ministry of the Environment] Environmental Accounting Guidelines 2005 [Japan Ministry of the Environment]
Reporting period	This report basically covers our activities in fiscal 2011 (from April 1, 2010 to March 31, 2011), although some events presented here happened earlier or in the period between the end of March 2011 and the publication of this report in October 2011.
Boundary of reporting	This report covers activities of East Japan Railway Company and its 74 Group companies. Except for those described individually, actual performance data cover JR East alone.

Note: External Assurance on environmental performance and environmental accounting data
KPMG AZSA Sustainability Co., Ltd. has been engaged to provide external assurance on a set of selected environmental performance and environmental accounting indicators so that the reliability of the data is ensured. The particular indicators that are assured are marked with ☆ for clarity.

Group Philosophy

JR East Group aims to function as a dynamic corporate group providing quality leading-edge services, with railway businesses at its core.
To that end, each person working for the group will reflect the viewpoints of customers by providing safe, reliable transportation and high-quality, convenient products and services. At the same time, group employees will continue raising the levels of services and technologies to earn the further trust and confidence of customers.
We will grow continuously and advance in harmony with customers by generating earnings while meeting social responsibilities as a *Trusted Life-Style Service Creating Group.*

Basic Principles

Putting the customer first

We will put our hearts into providing good service and living up to customers' expectations.

Ensuring safety and quality

We will take thorough measures to provide transportation services that are safe and reliable and products and services that are of high quality.

Developing the Group

We will make concerted efforts to grow the group by emphasizing autonomy, collaboration, and new initiatives.

Top Message

Our role as a railway operator and starting anew

Restoration and "Creative Reconstruction" from the Great East Japan Earthquake

First of all, please allow us to offer our deepest sympathies for all of the victims of the Great East Japan Earthquake of March 11, 2011, and to offer a solemn prayer for those who lost their lives.

The Great East Japan Earthquake brought unprecedented damage to countless places within our service area, and caused severe damage to our railway facilities. Due to this damage, both Shinkansen and conventional lines in the devastated areas had no choice but to suspend operations for an extended period of time. In addition, parts of the Group's shopping centers, hotels, and other facilities were also forced to suspend their operations due to the damage to their buildings and others.
Following the earthquake, as a result of the enormous support we received from everyone concerned, and the concerted restoration efforts of the JR East Group as a whole, we were able to resume train operations one after another, with the exception of the railway sections running along the Pacific Ocean, which received particularly catastrophic damage due to the tsunami. These achievements could not have been accomplished without the efforts of all of the people who so unselfishly devoted themselves in the early days and nights of restoration despite the intermittent aftershocks. I would like to take this opportunity to thank each and every one you who lent your support during the time we required to resume our services.

By April 29th, 2011, we were fortunate to have been able to resume operations for all railway sections of the Tohoku Shinkansen lines. On that day, I boarded the first train to resume service between Sendai and Morioka and participated in an event for the reconstruction of the area around Hirosaki. I was so pleased to see so many happy faces in Aomori, Hirosaki, Morioka, and Sendai, with people walking together and smiling with their families and friends. We have also received many voices of support from our customers for our efforts to resume service of all Tohoku Shinkansen lines. In observing the anxiety and inconvenience the damage to our railway facilities created for our customers first hand, we were able to better understand the significant impact that "Connecting Rails" have on our customers' spirit, and reaffirm our company's ultimate mission to realize the uninterrupted service of our railways, something indispensable for the local people and for society in general.

The JR East Group is committed to its continued restoration efforts for the damage resulting from the Great East Japan Earthquake, and will approach this undertaking together as a group and as a principal issue. For the restoration of the railway sections alongside the Pacific Ocean, we plan to proceed cooperatively, restoring the area as a whole and in the planning of the area's urban development. Moreover, in order to fulfill our social responsibilities as a corporate group with business foundations in the eastern Japan area, we intend to continue our hard work to restore the areas impacted by the disaster through such efforts as the creation of tourism through the excavation of local resources, distribution of more information, and the hosting of farm fresh markets at our major terminal stations for the sales of products from quake-hit areas.

"Inaugural year for service quality reforms"—Our customers' voices as our guide

JR East Group has been working to date on improvements to customer services and on the provision of safe and comfortable operations, upholding the "rigorous pursuit of customer satisfaction" as one of the basic management policies outlined in our "JR East 2020 Vision - *i do mu* -."

Additionally, to further improve customer satisfaction, JR East Group has decided to allocate this year as the "inaugural year for service quality reforms" in an effort to continue its work to better enhance the service quality of our group as a whole by making our services accessible to as many customers as possible, despite being immersed in a severe business environment. Based on our "Service Quality Reform Medium-Term Vision" 5-year plan beginning from this year, we aim to improve the railway environment in which our customers can safely and comfortably use our services. Through improvements to our transport quality, we seek to prevent transport interruptions, resume operations with limited delay in the case of an interruption, and enhance our systems for the distribution of information.

Our ceaseless pursuit of Extreme Safety Levels

Based on the accumulated experience from past disasters, JR East Group aims to further enhance its safety in operations under its 5-year safety plan "2013 Safety Vision." More specifically, we plan to promote our disaster countermeasures, including the seismic reinforcement of elevated bridges and other structures, and an increase in the number of seismometers. Moreover, through our investigations of the handling of operations after the Great East Japan Earthquake, we plan to devise an inventory of areas in need of improvement, and cite the lessons learned from this disaster in our future countermeasures. Furthermore, for major accidents such as the level crossing accident on the Iiyama Line, we are committed to continuing our comprehensive investigations into the origins of such accidents and the prevention of their recurrence, and continue our never-ending challenge to achieve Extreme Safety Levels in our railway operations.

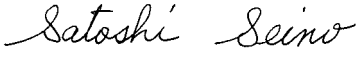
Our continued endeavors toward the global environment: the utilization of new technologies

Following the accidents at the Fukushima Daiichi Nuclear Power Plant, the Government of Japan is currently reevaluating its policies on energy.

Consequently, the roles of railways with their low CO_2 emissions and high energy efficiency are continually growing. We also anticipate that the importance of our accumulated efforts to reduce the environmental burden of the JR East Group will similarly be further increased. Regrettably, based on the current trends in national energy policy, we have had no choice but to reexamine the total CO_2 emission targets upheld in our "JR East 2020 Vision - *i do mu* -." Nevertheless, we will remain steadfast in our efforts to address global environmental issues, and in our desire to promote technological developments from a wider viewpoint, including those regarding the utilization of new energies such as wind and solar power, and the introduction of railway systems employing rechargeable batteries.

We consider this disaster and the subsequent accidents at the Fukushima Daiichi Nuclear Power Plant to hold high potential in the changing structure of Japan's economy. With this year marking the 25th year since the JNR privatization reform, JR East Group is once again aiming for a "Creative Reconstruction," promoting management reforms with a firm resolution to start once again from scratch, though it is expected that the severe management environment will be with us for quite some time.

Satoshi Seino
President and CEO
East Japan Railway Company



Special Topics: Damage following the Great East Japan Earthquake and efforts toward restoration and reconstruction

○ The Great East Japan Earthquake

The magnitude 9.0 Tohoku-Pacific Ocean Earthquake occurred on March 11th, 2011, at 14:46, with the epicenter off the Sanriku coast. The earthquake produced strong tremors over a wide area, with a giant tsunami sweeping away much of the Pacific Ocean coastal area of the Tohoku and Kanto regions. The quake was followed by a series of strong aftershocks, causing tremendous damage to various regions in eastern Japan. For all of the victims of the earthquake and tsunami, and for those who lost their lives, we would like to extend our deepest sympathies and offer a solemn prayer to them all.

In this series of Special Topics, we will outline the damage to our facilities resulting from the Great East Japan Earthquake and our endeavors toward restoration and reconstruction.

1. Damage and restoration of railway related facilities following the disaster

The Great East Japan Earthquake resulted in profound damage to our railway facilities, including the ground facilities for both the Shinkansen and conventional lines. Despite the intermittent aftershocks following the earthquake, we were able to begin restoration work on our facilities greatly due to the enormous support we received from JR Group companies and other concerned parties. For the Tohoku Shinkansen lines, we were able to resume operations for all railway sections by April 29th, 2011, and return to regular time tables from September 23rd. For our conventional lines, with the exception of the railway sections running along the Pacific Ocean, which received particularly catastrophic damage due to the tsunami, train operations have gradually been able to resume one by one.

The following chart outlines the damage incurred by our railway facilities due to the Great East Japan Earthquake followed by details regarding restoration.

■ Major damage to Tohoku Shinkansen ground facilities (as of May 10, 2011)

Major damage	March 11 earthquake (main shock)	Aftershocks (after April 7)	No. of damaged locations
Fractured, tilted, and cracked power poles	Approx. 540 locations	Approx. 270 locations	Approx. 810 locations
Broken overhead contact lines	Approx. 470 locations	Approx. 200 locations	Approx. 670 locations
Damage to elevated bridge columns	Approx. 100 locations	Approx. 20 locations	Approx. 120 locations
Track irregularities and damage	Approx. 20 locations	Approx. 20 locations	Approx. 40 locations
Electrical substation facility failures	Approx. 10 locations	Approx. 10 locations	Approx. 20 locations
Collapse, tilting, and peeling of soundproof walls	Approx. 10 locations	2 locations	Approx. 10 locations
Breakage and collapse of ceiling materials	5 stations	2 stations	7 stations
Sheared bridge girders	2 locations	7 locations	9 locations
Damage to bridge girder supports	Approx. 30 locations	Approx. 10 locations	Approx. 40 locations
Track damage in tunnels	2 locations	–	2 locations
Total	Approx. 1,200 locations	Approx. 550 locations	Approx. 1,750 locations

※ There was no collapse of elevated bridges, bridges, station buildings, or tunnels.

■ Major damage to conventional line ground facilities (as of May 10, 2011)

Major damage for the 36 railway divisions

Major damage	March 11 earthquake (main shock)	Aftershocks (after April 7)	Total
Track irregularities	Approx. 2,200 locations	Approx. 620 locations	Approx. 2,820 locations
Fractured, tilted, and cracked power poles	Approx. 1,150 locations	Approx. 90 locations	Approx. 1,240 locations
Outflow of crushed ballast stones	Approx. 220 locations	1 location	Approx. 220 locations
Deformation of platforms	Approx. 220 locations	Approx. 50 locations	Approx. 270 locations
Deformation of civil engineering facilities (earth filling, earth cutting, etc.)	Approx. 170 locations	Approx. 10 locations	Approx. 180 locations
Signal and telecommunication facility failures	Approx. 130 sections	Approx. 10 sections	Approx. 140 sections
Damage to bridges and elevated bridges	Approx. 120 locations	Approx. 30 locations	Approx. 150 locations
Damage to station buildings	Approx. 80 stations	Approx. 20 stations	Approx. 100 stations
Damage to tunnels	Approx. 30 locations	2 locations	Approx. 30 locations
Electric substation facility failures	Approx. 30 locations	Approx. 10 locations	Approx. 40 locations
Fallen rocks	Approx. 20 locations	Approx. 10 locations	Approx. 30 locations
Damage to station facilities such as overhead walkways for transfer passengers	Approx. 20 locations	4 locations	Approx. 20 locations
Broken overhead contact lines	Approx. 10 locations	Approx. 10 locations	Approx. 20 locations
Total	Approx. 4,400 locations	Approx. 850 locations	Approx. 5,250 locations

※ Major damage to ground facilities in 7 railway divisions resulting from the tsunami (as of May 1, 2011)

■ Major damage to ground facilities in 7 railway divisions resulting from the tsunami (as of October 1, 2011)

Line name	Railway division	Length	Station building			Track	Total
			No. of stations inspected	No. of stations washed away	No. of other damaged stations	No. of damaged locations	No. of damaged locations
Hachinohe Line	Hashikami–Kuji	Approx. 37 km	12 stations	0 station	2 stations	Approx. 20 locations	Approx. 20 locations
Yamada Line	Miyako–Kamaishi	Approx. 55 km	13 stations	4 stations	4 stations	Approx. 70 locations	Approx. 80 locations
Ofunato Line	Kesennuma–Sakari	Approx. 44 km	12 stations	6 stations	1 station	Approx. 60 locations	Approx. 70 locations
Kesennuma Line	Maeyachi※–Kesennuma※	Approx. 73 km	21 stations	9 stations	3 stations	Approx. 240 locations	Approx. 250 locations
Ishinomaki Line	Maeyachi–Onagawa	Approx. 32 km	11 stations	1 station	3 stations	Approx. 70 locations	Approx. 70 locations
Senseki Line	Higashi-Shiogama–Ishinomaki※	Approx. 34 km	16 stations	0 station	8 stations	Approx. 380 locations	Approx. 390 locations
Joban Line	Iwaki–Watari※※	Approx. 50 km	18 stations	3 stations	4 stations	Approx. 840 locations	Approx. 850 locations
Total		Approx. 325 km	103 stations※※※	23 stations	25 stations	Approx. 1,680 locations	Approx. 1,730 locations

※ The figures do not include station premises.
※※ Inspections for the Evacuation-Prepared Area for the case of an Emergency areas within a 20 km radius of the Fukushima Daiichi Nuclear Power Plant (between Kido and Odaka: for the station buildings at 8 stations (excluding Tomioka Station), and approx. 40 km of tracks) have been postponed.
※※※ In addition to the 103 stations inspected, there are 8 stations for which inspections have been postponed (Kido, Tatsuta, Yonomori, Ono, Futaba, Namie, Momouchi, Odaka, Iwaki-Ota, and Haranomachi).

■ Track irregularity (Sendai Station premises)

Before restoration

After restoration

■ Collapse of ceiling materials (Sendai Station)

Before restoration

After restoration

2. Utilizing our experience from past earthquakes

In learning from the earthquakes to date, JR East has initiated various earthquake countermeasures including the seismic reinforcement of elevated bridges, and improvements to its Earthquake Early Detection System and Earthquake Early Warning System.
In order to utilize the lessons learned from the 1995 Great Hanshin-Awaji Earthquake, JR East instituted a series of seismic reinforcement measures for rigid-frame elevated viaduct support columns and bridge columns which were previously susceptible to shear failures. By the end of March 2008, we had reinforced all these facilities of Shinkansen. Also on our conventional lines, by the end of March 2009, we had completed the same reinforcement for all columns except the places that were related with other construction work in the Southern Kanto and Sendai areas.
As a result, we were able to prevent the collapse of elevated bridge columns at the time of the Great East Japan Earthquake. Currently, we are working to reinforce elevated bridge columns which are susceptible to failure due to bending from intense earthquake motion, aiming to further improve our safety levels against earthquakes.
JR East has introduced a system for the Shinkansen, in which seismometers for the detection of primary tremors (P-waves) are installed along its railway lines and on the coastlines. This system allows us to stop trains as soon as primary tremors are detected.
At the time of the Great East Japan Earthquake, 2 Shinkansen trains were operating in the Sendai area at the speed of approx. 270 km/h. The coastal seismometers were activated to shut down the power supply 12–15 seconds before the earthquake motion exceeded thresholds for operational discontinuation and actuate emergency braking. For conventional lines, our Earthquake Early Warning System was introduced for the Tokyo metropolitan area in December 2007 and in all other areas in April 2009. The system utilizes information obtained from Shinkansen seismometers and Earthquake Early Warnings transmitted by the Japan Meteorological Agency to stop trains in any section of track in the case of a major earthquake.
Additionally, through the lessons we learned from the 2004 Niigata Chuetsu Earthquake in which one of our Joetsu Shinkansen trains was derailed in operation, and from the perspective of preventing secondary accidents following a derailment, JR East has instituted numerous measures aimed at improving our Shinkansen railcars and tracks. At the time of the Great East Japan Earthquake, one of our trains in test operation derailed. As such, we are conducting further investigations into the mechanism of derailment in order to improve such safety measures.

3. Issues remaining after the disaster and our countermeasures to them

Immediately after the occurrence of the Great East Japan Earthquake, we established “Headquarters for Earthquake Disaster Control”, headed by President and have strived to protect the customers’ safety as the matter of first priority.
Protecting the lives of passengers and employees at the time of a disaster, and taking prompt action toward restoration are considered of top priority in JR East’s business continuity plan (BCP). At the time of the Great East Japan Earthquake, although our actions were consistent with this principle, we have identified some areas in need of improvement.
In order to better direct passengers to evacuation in the occurrence of a tsunami or damage to our facilities, JR East established an investigative committee following the Great East Japan Earthquake to study and to verify our measures with both hardware and software, and to consider any necessary improvements. Under the Committee, each of the special interest groups of experts has been assigned to investigate the following: understanding the mechanisms of Shinkansen derailment; the verification of train stop systems for Shinkansen and conventional lines; the verification of passenger evacuation guidance at the time of a tsunami; and, measures to counter damage to Shinkansen power poles.
At the time of the Great East Japan Earthquake, even in the Tokyo metropolitan area, many seismometers recorded nearly double the threshold designated for operational cessation, and in most of our railway divisions, many of the inspections were required to be done on foot. Consequently, after taking the range of circumstances into consideration, and the fact that some locations would require restoration work that was judged to take until the following morning, we decided to halt train operations on March 11 and close our ticket gates.
However, as a result of these actions and the condition of station facilities at a number of our stations, we were forced to close the shutters of several passages, which resulted in shutting customers out of those stations. We sincerely understand the grave inconvenience that these decisions caused to so many of our customers. As such, we are currently reviewing the judgments and the handling of each one of our actions on the day of the disaster, and will continue our investigations into measures that support the early resumption of operations, the provision of temporary shelters inside stations, where customers having difficulty in returning to their homes can stay, and stockpiles among others.

Although the epicenter of the Great East Japan Earthquake was located within our service area, the effects of the earthquake spread well beyond those immediate surroundings, extending to encompass a wide range of regions including the Tokyo metropolitan area. For this reason, the scope of the information that we needed to collect was quite vast, and ranged from issues of customer safety and the levels of damage surrounding the epicenter to the transport of passengers in the Tokyo metropolitan area. Although it is our current policy to establish a countermeasure headquarters at both our Head Office and at the Branch Office in the disaster-impacted area at the time of a disaster, we plan to further review our options to more promptly and functionally implement our countermeasures, our procedures for establishing a countermeasure headquarters, and our methods of collecting information.

4. Towards restoration and reconstruction

On April 29, the 50th day after the March 11 disaster, with the resumption of operations between Sendai and Ichinoseki, all sections of the Tohoku Shinkansen lines had resumed operations. In contrast, in the Pacific coastal areas which were severely damaged by the tsunami, as both urban and residential areas have been thoroughly devastated, we also confirm serious damage to our railway facilities that requires a large-scale work for restoration. Currently, several municipalities are in the process of formulating their own reconstruction plans. For some of these areas, we are taking part in the relevant discussion. JR East will work together with national and local governments in its efforts to move forward with the restoration of our railway divisions along the coastal areas damaged by the tsunami, while remaining committed to participate cooperatively in restoring the area as a whole and in the planning of urban development.
Moreover, in order to contribute to increased tourism and the reconstruction of all of the regions in our service area, JR East is providing railway transport support through the Aomori Destination Campaign, the sales of products like the JR East Pass, and the hosting of farm fresh markets at its major terminal stations for the products of quake-hit areas. We are committed to our endeavors to support areas affected by disaster and harmful rumor with the JR East Group's concerted efforts, including "Market for Products from Disaster-affected Areas", in which agricultural products from the affected areas are on sale in stations in the Tokyo metropolitan area.

○ Countermeasures for electricity supply issues

Due to the severe shortage in electricity resulting from the earthquake, while sincerely appreciating the understanding of our customers, we are continuing to work on energy saving at our stations and on board.
This summer, in compliance with the Power Use Limitation Order, which was issued for the first time in 37 years, the Government of Japan ordered limitations on the use of electricity. At JR East, we did our utmost to comply with the government's targets for reduction and conserve electricity through such measures as reducing the number of weekday train operations during daytime hours, and by switching off or reducing the lighting at stations and on board.
Since severe electricity shortages are expected to remain for some time, JR East has adopted the principle to continue our energy saving effort through limiting the use of all unnecessary lighting at stations and on board.

* In the above Special Topics, the Great East Japan Earthquake refers to both the Tohoku-Pacific Ocean Earthquake and the disasters stemming from the nuclear power plants.

Basic Concept on Environmental Protection and Targets

■Basic philosophy and basic policies for promoting ecological activities (established May 1992)

The JR East Group formalized its basic philosophy and basic policies in 1992 and established activity guidelines in 1996, and our specific environmental protection measures are based on these.

【Basic philosophy】

- The entire JR East Group, working together, will diligently strive to balance environmental protection with our business activities.

【Basic policies】

- To contribute to customers' lives and local communities by providing a comfortable environment
- To develop and provide the technology needed to protect the global environment
- To maintain an awareness of environmental protection and raise the environmental awareness of our employees

■Activity guidelines for the promotion of ecological activities (established March 1996 and partially revised in February 1998)

1. We work to prevent the waste of precious energy resources and to reduce CO_2 emissions—a known source of global warming—by enhancing our energy efficiency and introducing cleaner forms of energy.
2. We ensure the proper management and processing of environmental pollutants and ozone-depleting substances, in compliance with laws and regulations. Moreover, we do our best to reduce generation of such substances and adopt environmentally responsible substitutes when they are available.
3. We ensure the appropriate processing of various types of waste generated at our offices, establishments, stations, trains, etc. We strive to recycle waste and reduce the generation thereof, and to use more recycled and resource-saving products to minimize our burden placed upon the environment.
4. We respect the natural environment, which nurtures diversified life, and endeavor to reduce noise and vibrations caused by train operations, thus achieving harmony with the environment along railway lines.
5. We work to make railways a more attractive and environmentally friendly form of transportation.

JR East Group's environmental impact

Waste disposal
- Waste includes salable waste.
- Recycling includes thermal recycling* where general and industrial wastes are incinerated with heat recovery.

*Thermal recycling: A recycling method in which the heat arising from the incineration of waste is used to create steam and warm water, which in turn are used to generate electricity and hot-water

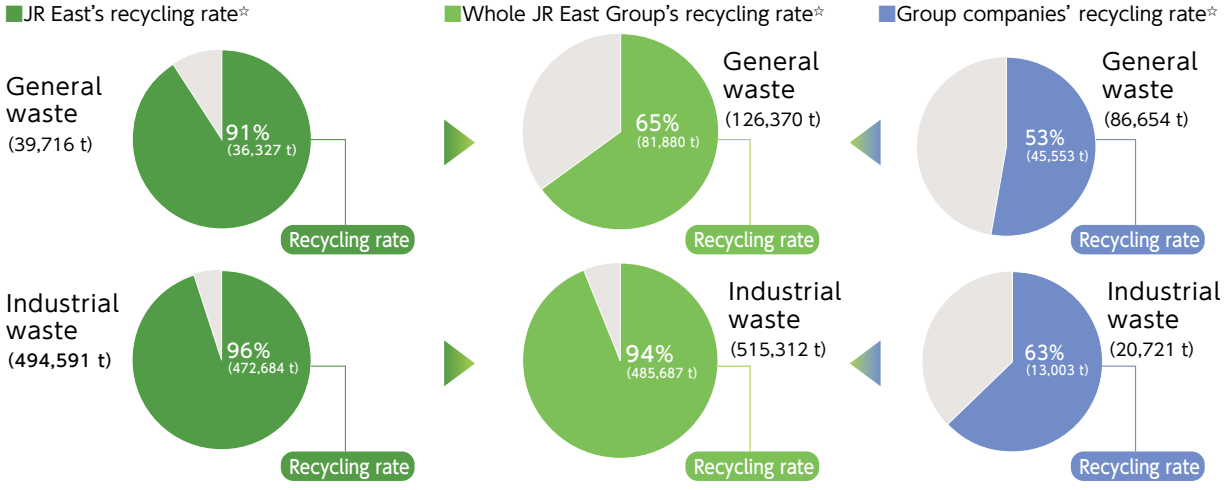
INPUT

	JR East's business operations	JR East Group companies' business operations
Energy use☆	●Electricity 5.15 billion kWh*1 ●City gas 11.53 million m³*2 ●Other fuels 77 thousand kl (crude oil equivalent)*2	●Electricity 0.88 billion kWh ●City gas 35.70 million m³ ●Other fuels 31 thousand kl (crude oil equivalent)
Water use☆	11.76 million m³	9.45 million m³
Office paper use☆	1,760 t (of which 95% is recycled paper)	1,020 t (of which 81% is recycled paper)
	Operating revenue 1,830.2 billion yen	Operating revenue 707.1 billion yen

OUTPUT

	JR East's business operations	JR East Group companies' business operations
CO_2 emissions☆	2.15 million t-CO_2	0.52 million t-CO_2
General waste discharged☆	●Offices 2,614 t ●Stations and trains 34,729 t ●General Rolling Stock Centers etc. 994 t ●Tickets 396 t ●Other field office*3 966 t ●Power plants 17 t Total 39,716 t	86,654 t
Industrial waste discharged☆	●Construction projects*4 462,793 t ●General Rolling Stock Centers etc. 30,498 t ●Medical waste 157 t ●Other field office 519 t ●Power plants 624 t Total 494,591 t	20,721 t

* Beginning in the fiscal year ending March 2011, the amount of energy used by group companies, including that used by tenants and by the vehicle outside our business premise (excluding the energy used by specified carriers), is excluded from the total energy used by JR East, in line with the Act on Rational Use of Energy (Energy Conservation Law). Along with the change in category of energy usage (see Page 14), the electricity supplied from JR East to its Group companies, which was previously calculated as JR East's energy use, is now included in the energy used by Group companies, while the energy used by Group companies for the work consigned by JR East is now included in JR East's energy use. These changes have resulted in a reduction in the amount of energy used and the CO_2 emissions.
* There are data that are missing due to the earthquake, but their effect on the total amount is negligible.



*1 Electricity: Both electricity generated in JR East's power plants and used internally and electricity purchased from electric companies are included.
*2 City gas and other fuels: Fuel used for generating electricity in JR East's thermal power plants is not included.
*3 Other field office: Technical center and conductor's depots, etc., engaged in the maintenance of equipment.
*4 Construction projects: Waste generated by our construction projects, but for which contractors legally become the waste-discharging entity, are included in industrial waste.

Targets and outcomes

■ Accomplishment of environmental targets for the fiscal year ended March 2011

Category of environmental conservation activities	Main activities	Targets to be met by fiscal 2011	Results for fiscal 2011	Results
Measures to prevent global warming	Total CO_2 emissions from railway business activities	50% reduction by fiscal 2031 (relative to fiscal 1991 level) 2.76 million t-CO_2 ⇒1.38 million t-CO_2 (reduction by 1.38 million t-CO_2)	2.15 million t-CO_2☆	
		32% reduction by fiscal 2018 (relative to fiscal 1991 level) 2.76 million t-CO_2 ⇒1.88 million t-CO_2 (reduction of 0.88 million t-CO2)		
	Energy-efficient railcar utilization rate	86%	88%☆	Achieved
	Electricity used for train operation	2% reduction (relative to fiscal 2007 level) 4.17 billion kWh ⇒ 4.09 billion kWh (reduction of 0.08 billion kWh)	4.01 billion kWh☆	Achieved
	Train electricity used per unit transport volume	2% reduction (relative to fiscal 2007 level) 1.85 kWh/car-km ⇒1.81 kWh/car-km (reduction of 0.04 kWh/car-km)	1.81 kWh/car-km☆	Achieved
	Energy saving at stations and offices	4.5% reduction (relative to fiscal 2007 level) 15.3 billion MJ ⇒14.6 billion MJ (reduction of 0.7 billion MJ)	15.8 billion MJ☆*3	
Measures for resource circulation	Recycling rate for waste generated at stations and on trains	70%	92%☆	Achieved
	Recycling rate for waste generated at General Rolling Stock Centers, etc.	95%	97%☆	Achieved
	Recycling rate for waste generated in construction projects	92%	96%☆	Achieved
	Recycled office paper utilization rate*1	100%	90%☆	
Environmental activities along railway lines	Reduction of noise to 75 dB or less along the Tohoku and Joetsu Shinkansen Lines (in designated noise control area)*2	100% (Fiscal 2010 targets have been achieved)	100%☆	Achieved
Environmental communication	Participation in specific environmental protection activities every year	Participation in tree planting, etc.	28 thousand trees planted at 15 locations☆	—
Environmental management	Setting of numeric targets by all group companies	All group companies set their own numerical targets	Established	—

Targets for the JR East Group

*1 Recycled office paper utilization rate: Papers sold as recycled paper by manufacturers are calculated as recycled paper.

*2 Measures to reduce noise along the Tohoku and Joetsu Shinkansen Lines: We have completed measures to reduce noise to 75 dB or less, guided by the national government. For other areas we have independently carried out improvement projects and completed them during fiscal 2010.

*3 Measures to save energy at stations and offices: Calculation is based on the energy categories used when the fiscal 2011 target was formulated.

■Actual performance against FY 2011 targets

Two targets, "Energy saving at stations and offices" and "Recycled office paper utilization rate", were not accomplished.

● Energy saving at stations and offices

In respect of energy saving at stations, offices, etc., JR East has set a new environmental target for FY 2011 in June 2008, and has been striving for renewing conventional equipment to new energy-saving ones and encouraging employees to save energy. However, because of the construction of increased number of units on increased floor area of facilities, including barrier free facilities, and an increase in in-station stores, we could not achieve the target.

We are currently considering the setting of the targets separately for offices and transport departments in line with the Act on Rational Use of Energy (Energy Conservation Law).

● Recycled office paper utilization rate

JR East launched its effort to achieve its own target to raise the utilization rate of recycled office paper in 1996. Since the revision of the target in January 2005, it has been the target for the whole group. We have been striving for the target to accomplish 100% utilization of recycled paper as environment friendly paper. However, perception has changed and it is now commonly recognized that using FSC certified paper* is also environmentally friendly, and we have increased the use of FSC certified paper. Partly because of this reason, the Group could not achieve the target of 100% utilization of recycled paper.

In view of the fact that we are required to purchase environment-conscious goods and supplies, we try to set new targets, which may encourage the use of not only recycled office paper but also environment-friendly goods to the greatest extent possible.

* FSC certified paper: The paper made of virgin pulp, which is made only from the wood produced in compliance with local laws and regulations of the area of production (FSC certified paper, etc.)

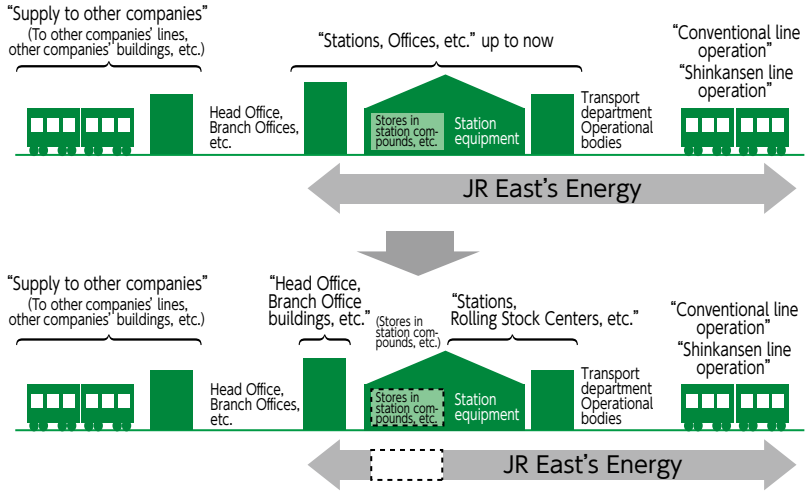
● Setting of the next term target

We are now undertaking the formulation of the target from fiscal 2012 based on the close inspection of the past commitment and the current social conditions, and will announce the target as soon as it is finalized through press release and other media.

Measures to Prevent Global Warming

■Change in category of energy usage

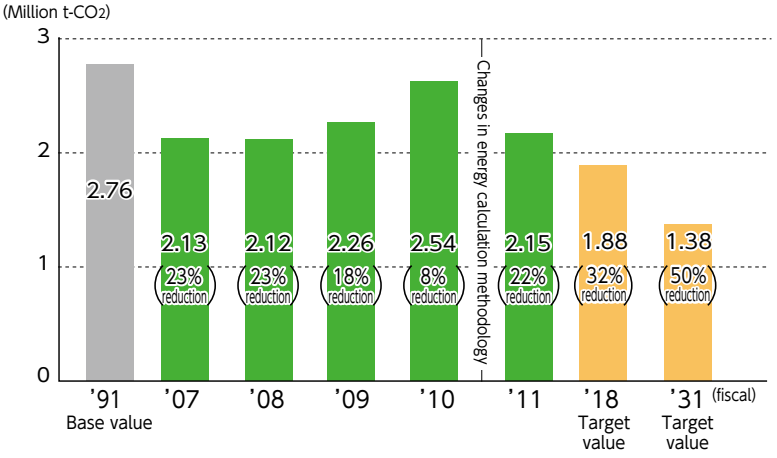
Up to now JR East has broken down energy consumption by 4 categories: i.e., "Conventional line operation," "Shinkansen line operation," "Stations, Offices, etc." and "Supply to other companies." From this fiscal year, however, in line with the Energy Conservation Law, we have decided to calculate and control energy consumption of JR East by dividing "Stations, Offices, etc." into transportation category "Stations, Rolling Stock Centers, etc." and non-transportation category, "Head Office, Branch Office, etc." As a result, each department will control its own energy consumption, which will help further reduction of energy usage. For the boundary of the amount of energy used by JR East, please refer to the "Boundary" below.



■Trends in CO_2 emissions☆

Our CO_2 emissions in the fiscal year ending March 2011 totaled 2.15 million tons, a decrease of 0.39 million tons over the previous fiscal year. This was due to the restart of our own hydroelectric power plant, which resulted in the reduction of the operating rate of our own thermal power plant, and eventually in the reduction of CO_2 emissions from it.

■ Trends in total JR East CO_2 emissions



*Total CO_2 emissions in FY 2011, when calculated with the same calculation methodology (category and boundary) with that in past years, are 2.26 million t-CO_2.

*Boundary:

Energy consumption and CO_2 emissions have been calculated for JR East alone, in principle. Beginning with FY 2011, however, the energy consumption by, and its associated CO_2 emissions from, companies to whom JR East outsources its station operations and other services are calculated as JR East's own energy consumption and CO_2 emissions. Meanwhile, the energy consumption by, and its associated CO_2 emissions from, stores in station compounds operated by group companies are excluded from those of JR East. These changes have been made to calculate the energy consumption and CO_2 emissions associated with JR East's business as a whole more accurately in line with the idea of setting organizational boundaries for transportation and factories in the Act on Rational Use of Energy (Energy Conservation Law). No revision was made to the past data of energy consumptions and CO_2 emissions.

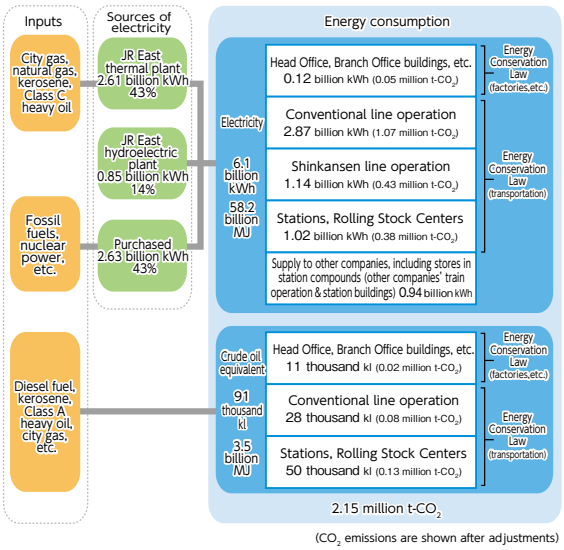
*Calculation Method:

Energy consumption is calculated based on the Energy Conservation Law. As a unit calorific value for the electricity generated at our own hydraulic power plant, 9.76 MJ/kWh is used. The total amount of CO_2 emissions is calculated based on the Act on Promotion of Global Warming Countermeasures (Global Warming Measures Law). However, the emissions attributable to the consumption of electric power purchased outside the company, including that is used for railway transport, are calculated on the basis of post-adjustment emissions coefficient. When the actual emissions coefficient is used, the CO_2 emissions for fiscal year ending March 2011 is 2.41 million t-CO_2 (a decrease of 0.41 million t-CO_2).

■Energy conservation and CO_2 reduction☆

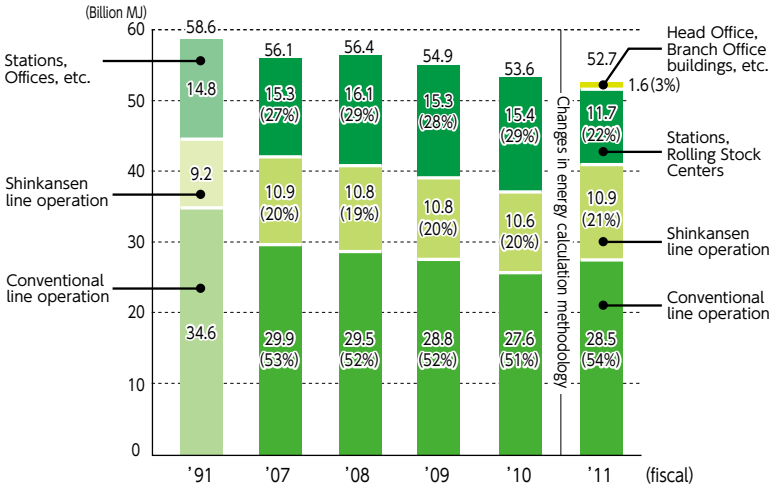
The electricity consumed by JR East for train operations as well as for lighting and air conditioning at stations and in offices is supplied by JR East's own power plants and by electric power companies. Besides electricity, we also use light fuel and kerosene for diesel train operation and air conditioning at stations and in offices. We will strive to save energy for train operation, which accounts for about 70% of our total energy consumption, and reduce CO_2 emissions in various ways.

■ JR East Energy flow map



(CO_2 emissions are shown after adjustments)

■ Composition of energy consumption by JR East



* Total energy consumption calculated with the same methodology (category and boundary) with that used in past years is 54.9 billion MJ.

■Reducing energy consumed for train operations☆

As of the end of March 2011, JR East had 10,993 energy-efficient railcars in operation. This accounts for 88% of our railcar fleet. We are putting into service more new-generation energy efficient railcars, with features such as regenerative brakes, which can convert kinetic energy during deceleration into electric energy, and variable voltage variable frequency (VVVF) inverters, which control motors without wasting electricity.

E233 series: State-of-the-art cars introduced on the Chuo Line in December 2006

E5 series: new high-speed Shinkansen railcars in which the highest level of customer service and the cutting-edge technology are coalesced

E231 series: VVVF inverter cars for commuter and suburban transportation

■Diesel-powered, electric-motor-driven hybrid railcars and new resort trains

The Kiha E200 type cars, which entered service on the Koumi Line in July 2007, are the world's first diesel-powered, electric motor-driven hybrid railcars. Compared with the current trains, fuel consumption rate has been reduced by about 10% and the noise level of the trains idling at stations and accelerating on departure has been lowered by 20–30 dB. Also, in October to December 2010 we began operating HB-E300 Series, a new type of resort train equipped with a hybrid system similar to Kiha E200 type on Nagano, Aomori and Akita areas.

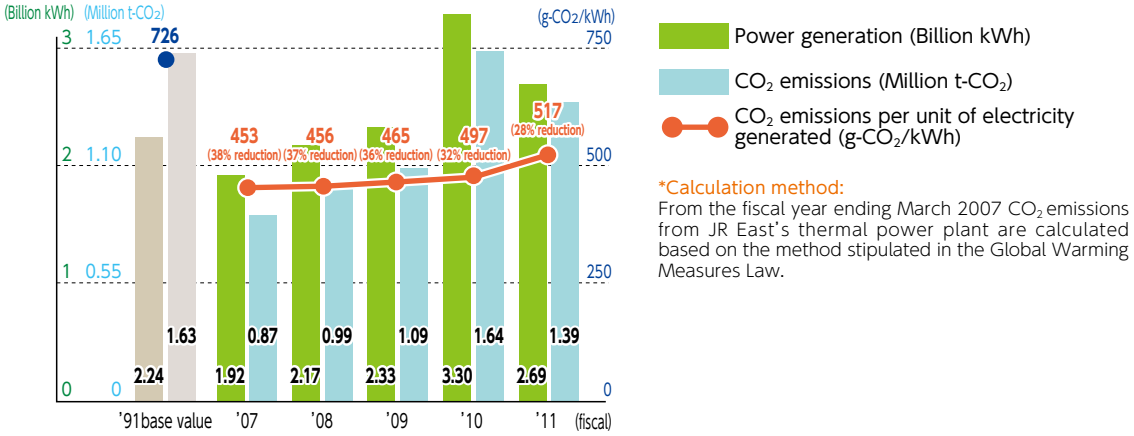
HB-E300 series: A hybrid resort train

■JR's own power plants☆

JR East operates a thermal power plant in Kawasaki City, Kanagawa Prefecture, with a total output of 655 thousand kW. At the plant, we replaced three of its four generating units with combined-cycle power generation units* with improved generating efficiency. In June 2006 we replaced kerosene with natural gas as fuel for the No. 3 generation unit. In an effort to further reduce CO_2 emissions, we will replace the last steam powered generation unit using heavy oil with a combined-cycle generation system using natural gas in FY 2014. Output and CO_2 emissions from our thermal power plants in Fiscal 2011 were lower than those in previous year, due to the restart of our own hydroelectric power plant, which reduced the operating rate of our own thermal power plant.

* A combined-cycle power generation unit is a power generation unit that combines gas turbines propelled by combustion of gas with steam turbines driven by steam from the exhaust heat.

■ Power generation and CO_2 emissions at JR East's thermal power plant



*Calculation method:
From the fiscal year ending March 2007 CO_2 emissions from JR East's thermal power plant are calculated based on the method stipulated in the Global Warming Measures Law.

■Utilization of natural energy

We also promote use of natural energies, including solar and wind power. Solar panels are installed at Tokyo Station, Takasaki Station, General Education Center, and R&D Center. Takasaki Station doubled its solar panels in March 2004.

In addition, solar panels were installed at Tokyo Station above the platforms serving Tokaido Line (Tracks No. 9 and 10) and began operation on February 25, 2011. Also, in preparation for employing wind-power generation, we will proceed with research to determine the effect of connecting electricity generated by wind power, which fluctuates according to wind velocity, to a substation.

Solar panel installed atop platform roofs at Takasaki station

Solar panels installed atop Tokaido Line platforms (Tracks No. 9 and 10) at Tokyo station

■Greening rooftops

We have been promoting the planting of greenery on JR East-owned station and office building rooftops with the aim of reducing the heat island effect and decreasing the need for air-conditioning. As of the end of March 2011, we had "greened" a combined rooftop area of approximately 19,109 m^2 in 57 projects.

Rooftop greenery at LUMINE Kitasenju

■Rooftop greening by JR Group companies

We have been promoting rooftop greening to make station buildings in the metropolitan area a place of relaxation for the residents of the community as well as for office workers. The "Soradofarm," which is a vegetable farm rented to subscribers and built alongside the gardens, serves to create a local community, and provide education in farming and environment through people's experience in cultivating vegetables. It is popular among many customers and there are now in Ebisu, Ogikubo and Takasaki.

Kawasaki Be

Soradofarm Ebisu

■Saving energy in office buildings

In response to revisions to laws and regulations, saving energy in office buildings has become increasingly important. We work hard on reducing energy consumption both in hardware, including the introduction of highly efficient equipment and facilities, and in software, including temperature management of air conditioning and diligently turning off lights.

■Getting recognition as top-level establishment

Sapia Tower, JR Shinagawa East Building, JR Tokyu Meguro Building and Tokyo Building were cited as Superior Global Warming Countermeasures Establishment (commonly referred to as top-level establishment or quasi-top-level establishment) under the Tokyo Metropolitan Environmental Preservation Ordinance on May 26, 2011, in recognition of highly-efficient facilities and active management efforts at energy conservation with laudable CO_2 reduction.

Sapia Tower recognized as a top-level establishment

JR Shinagawa East Building recognized as a quasi-top-level establishement

■Saving energy used by information systems

In response to revisions to laws and regulations, saving energy in office buildings has become increasingly important. Since the fiscal year 2009, JR East has been working on this problem by endeavoring to turn off power for certain information system equipment during non-use hours, resulting in savings of about 54,000 kWh of power consumption in fiscal year 2010. We also reduced the number of servers by combining equipment and worked to introduce energy-saving products. In the future we plan to expand the coverage of equipment subject to these efforts with a view to further reduction of power consumption. After the Great East Japan Earthquake, we have strengthened our measures to set our business-use PC terminals at power saving mode as part of our electricity saving efforts.

Environmental Measures : A case report

■LED lighting installed on Yamanote Line

Beginning in December 2010 LED lighting was installed on cars on Yamanote line on an experimental basis. The parts installed on the ceiling of a railcar must be nonflammable as a preventive measure against fire break outs so together with JR group companies, we developed LED lighting equipment that meet the standards and installed the same. This lighting apparatus was installed on Yamanote line E231 series 1 trainset 11 cars, replacing all 262 fluorescent lamps in the passenger cars. We believe that the replacement will result in saving energy of lighting fixtures and we will continue to verify their durability and maintenability.

■Intermodal Transportation = Reduction of CO_2 emissions by the entire transportation system

Promoting Park-and-Ride

We are adding parking spaces in front of stations in order to promote park-and-ride schemes so that our customers with tickets for the Shinkansen or limited express trains can drive their cars from home to nearby stations and use the train network from there. By the end of March 2011, 91 JR East stations had parking spaces for ten thousand cars*. Not only can people get to their destinations safely and surely, without getting bogged down in traffic congestion, but they can travel with less impact on the environment.

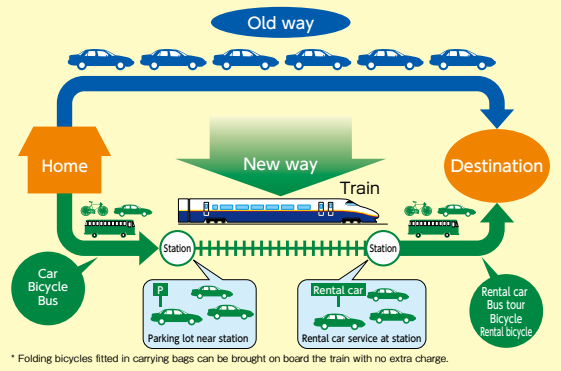
At 10 stations between Tomobe and Iwaki on the Joban Line, parking charges are free for express train customers going farther than a specified distance.

Promoting rail and car rental

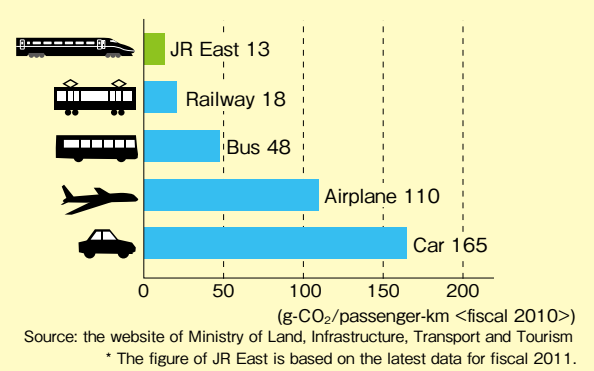
To suggest to our customers travel plans that use a combination of railways and automobiles, JR East has been offering a car rental service called "Train-ta-kun" since 1995, with discounted rental charges. We are facilitating intermodal transportation* by introducing new classes of automobiles, such as light cars, offering attractive rates, and installing car navigation systems and ETC as standard equipment on rental cars.

* Parking spaces for ten thousand cars at 91 stations: Parking spaces include those developed by JR East, and those managed by JR East Group companies or in cooperation with local municipalities.
* Intermodal transportation: Intermodal transportation refers to a transportation system which allows a person to get from an origin point to a final destination by connecting between different modes of transportation.

■ Intermodal transportation



■ CO_2 emissions by mode of transportation



Measures to create a sound material cycle

■Reducing waste and recycling

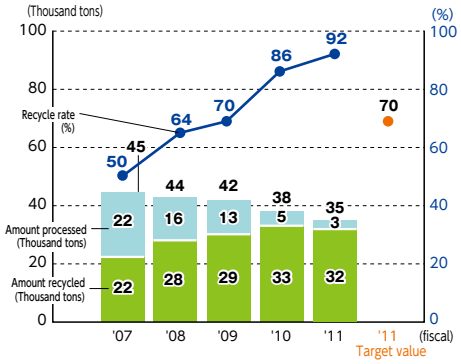
JR East generates many kinds of waste through its railway operations, including daily trash removed from trains and stations and industrial waste from our General Rolling Stock Centers. In addition, restaurants and retail stores in our life-style businesses produce garbage and general waste. In order 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 in March 2011 the ratio of trash from stations and trains that were recycled was 92% (Beginning in the fiscal year ending March 2008 thermal recycling was considered. And, also, definitions were partly changed in the fiscal year ending March 2010) Since the trash from stations and trains contain some recyclable garbage, we first placed segregation trash cans at stations to catch recyclable waste. Then we established recycling centers in Ueno, Omiya and Shinkiba to make more rigorous segregation. In October 2010, to further improve recycling ratio, we consolidated the recycling centers in Ueno and Shinkiba and built the JR East Tokyo Materials Recycling Center (Operated by East Japan Eco Access Co., Ltd.) within the compounds of Tokyo Freight Terminal Station and started operation. This center has a capacity to treat 17,700 tons per year. To make the center environment-friendly, we provided greenery around the building.

JR East Tokyo Materials Recycling Center

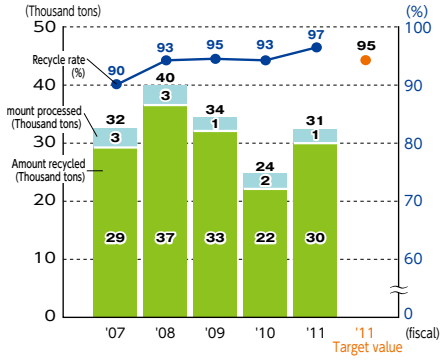
■ Waste from stations and trains



■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.

■ Waste from General Rolling Stock Centers

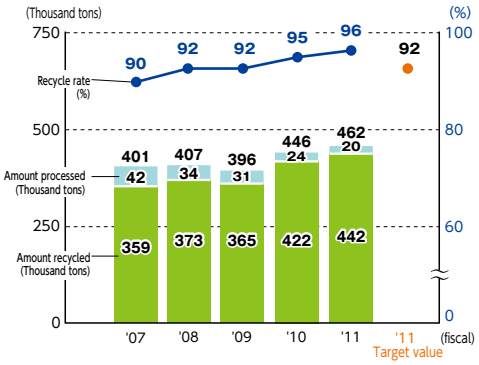


At Nagano General Rolling Stock Center, retired wheels are recycled into brake disk parts.

■Reducing construction waste☆

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 2011, JR East generated 462 thousand tons of waste through construction and maintenance projects at our stations and other structures, including 47 thousand tons of waste through work entrusted to JR East.*

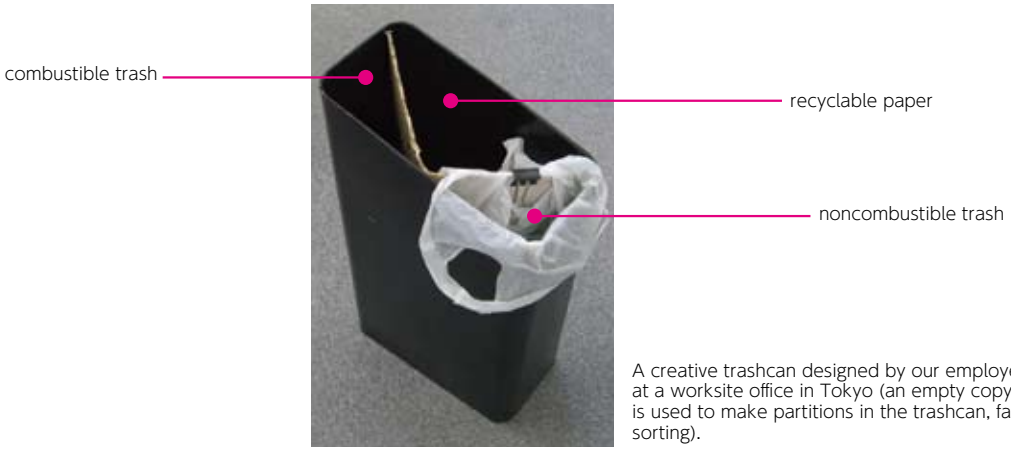
■ Waste from construction projects



* 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 2011, we recycled 2,306 out of a total of 2,614 tons of waste (88%).



A creative trashcan designed by our employees is seen at a worksite office in Tokyo (an empty copy-paper box is used to make partitions in the trashcan, facilitating sorting).

■Efficient use of water resources☆

As a consumer of 11.76 million m^3 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 43 thousand m^3 of water was reused in the fiscal year ending March 2011.

* 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 2011, all of the 396 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." 50% 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.

To further promote the green procurement, we plan to set a target of "100% green procurement" for JR East Group as a whole. We will continue our efforts at building recycling-oriented society through our green procurement.

■Recycling trash within the company

JR East promotes recycling within the company of trash generated at stations.

The magazines and newspapers and the like 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, etc. are recycled into office paper used in 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 a weed barrier sheet composed mainly of waste PET bottles, and after testing has succeeded in producing and commercializing the product.

Biological diversity

■Hometown Forestation Program

In 2004, in order to protect biological diversity and contribute to a sustainable society, while cherishing our sense of gratitude to nature, we began the Hometown Forestation Programs to plant trees native to each region and revitalize the forests. We undertook these programs with the cooperation of Fukushima Prefecture from 2004 to 2009 and with the cooperation of Niigata Prefecture and the town of Tsunanmachi in 2010. In addition, in other areas served by JR East, we are conducting tree planting native to the areas and we shall continue to do the same in the future.

Shinanogawa River Hometown Forestation Program in June, 2010

■Forest development along railway lines☆

Beginning in 1992 we have been engaged in tree planting activities along the JR wayside. By fiscal 2011 a total of 44 thousand people participated in planting about 300 thousand trees. Today, we have gone beyond the wayside and do tree planting in cooperation with the communities.

■Development of railway trees

Along the JR East railway lines, we have railway trees planted to shield the tracks from blowing snow and wind. The first railway forest was created in 1893 for disaster prevention. As living disaster prevention facilities, railway forests are playing their roles.

JR East now owns approximately 5.8 million railway trees on a total of about 4,000 hectares along our lines at approximately 1,200 locations. The trees absorb 16 thousand tons of CO_2, equivalent to 0.6% of the CO_2 that JR East emits. In this way, they also contribute to preserving the environment.

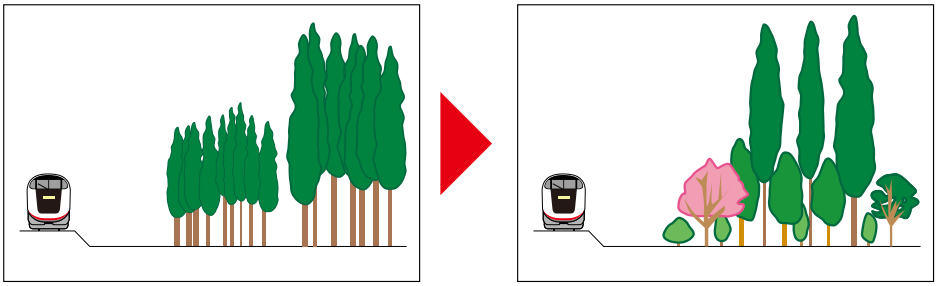
In 2008, after fundamentally reviewing the role of railway trees from the viewpoints both of disaster prevention and environmental preservation, we launched a new project to plant trees to replace those that will require replacement over the coming 20 years.

Jinguji No. 2 railway forest on the Ou Main Line
(forest to protect against blizzards)

Tenoko No. 6 railway forest on the Yonesaka Line
(forest to protect against snow slides)

■Railway trees—From single to multi-variety trees

Conventional railway trees were of a single variety, primarily cedar trees, because another function, in addition to protecting against natural disasters, was to generate profits through the production of timber. This has recently been less successful, however, in the face of declining demand for domestic timber. In future tree replacement, we will plant several varieties suitable for the local climate and develop them to be more sustainable and ecologically resilient.



Conventional railway trees
(single variety such as cedar trees)

New railway trees
(mixture of different varieties of trees)

■Planting new railway trees

Ceremonies for the planting of new railway trees were held in the Kakizaki No. 1 railway forest between Kakizaki and Yoneyama on the Shin-etsu Main Line on September 27, 2008, in the Oitama No. 2 forest on the Ou Main Line between Oitama and Takahata on July 26, 2009, and in the Jinguji No. 2 railway forest on the Ou Main Line between Jinguji and Kariwano on May 22nd, 2010. With kind advice and guidance from ecologist and Professor Emeritus Akira Miyawaki of Yokohama National University, several varieties of native trees (potential natural vegetation) were selected and planted. Many local residents and participants from organized tours participated in the ceremonies, and discovered how the trees they planted would grow to become useful as living railway disaster prevention facilities.

Basic thoughts on noise reduction

■Improvement of the environment along railways: Basic thoughts on noise reduction

In the operation of trains, noise is created by the train cars moving through the air, by the wheels travelling on the rails, by the motors, and by other sources. In order to reduce noise, we are working in various ways to improve both the trains and our ground equipment.
JR East also endeavors to reduce noise during maintenance work on track and structures to further improve the environment along the lines.

■Measures for the Shinkansen lines

In accordance with the Japanese government's Environmental Quality Standards for Shinkansen Superexpress Railway Noise, JR East has taken many steps to reduce this noise, such as the installation of soundproof walls and sound-absorbent materials, rail grinding*1 and the modification of our railcars to operate more quietly. We have already completed the implementation of measures to reduce noise levels to 75 dB or lower in densely populated residential areas along our railway lines, and we plan to take further steps by expanding the scope of areas where noise levels need to be reduced to 75 dB or lower. Also, with the introduction of E5 Series railcars, which were developed based on the results of running tests using the Shinkansen "FASTECH" test train, JR East is working to improve the environment even as we increase train speed, including further reduction of noise and micro-pressure waves in tunnels*2.

*1 Rail grinding: A measure to smooth out uneven places in rails caused by wheels traveling over them. This reduces noise by controlling car vibration.
*2 Micro-pressure waves in tunnels: An explosive sound caused by compressed air being forced out of a tunnel when a Shinkansen train enters it at a high speed. The sound is produced at the end of the tunnel.

The E5 Series employs low-noise pantographs.

■Measures for conventional lines

We have implemented voluntary measures for conventional lines to minimize noise, installing long rails*1 and performing rail-grinding and wheel-truing*2. We also comply with the Japanese government's Policy on Noise Measures for Construction of New Conventional Railways or Large-Scale Remodeling when we engage in this kind of construction or modification of our conventional lines.

*1 Installing long rails: Rail joints are welded such that the length of a single rail becomes more than 200 meters. With fewer rail joints, these rails reduce noise produced at joints when trains pass.
*2 Wheel truing: A measure to grind the unevenness of wheels caused by wear, to restore their circular shape.

■Measures for maintenance work

As the maintenance work is usually done during night, we give advance notice about the schedule and details of the work to residents in surrounding areas. We also make utmost efforts to minimize noise by using modified equipment producing lower noise. Furthermore, by using track that is designed to resist deformation, JR East is reducing the volume of required maintenance work.

Improvement of the Environment along Railway Lines

■Restricting use of herbicides

Safe train operations require regular removal of weeds along railway lines. While we generally remove them manually, we also use a certain amount of herbicide. We keep the usage of herbicides to a minimum in both volume and range of use. When selecting herbicides for use, we select those from the safest of the three levels of toxicity to humans and animals, and from Category A, the safest of the five levels of toxicity to fish. We continue to observe the rules in place in order to keep our impact on the surrounding environment to a minimum, as with our initiative to postpone the spraying of herbicides when conditions on the scheduled day are not satisfactory for spraying. In FY 2011, 221 tons of herbicides were used.

■Harmony with the landscape

Constructing a large-scale railway facility or remodeling one can affect the immediate area and surrounding environment, and their design is increasingly important. From the stage of planning and designing, we consider harmony with the landscape along with function and economy, endeavoring to build facilities friendly to the regional environment. In the fiscal year ended March 2009, the Tenmagawa Bridge (between Kamikitamachi and Ottomo on the Tohoku Main Line) received the Civil Engineering Design Prize of the Japan Society of Civil Engineers—a recognition of our efforts by a distinguished outside party.

Chemical substance management

■Compliance with laws and setting goals for reduction of chemical substances

When using chemical substances, the effects on human health and ecological systems must be fully considered. The JR East Group not only rigidly adheres to established standard values, but sets its own ambitious targets as well. As much as possible, we restrict the use of such substances and adopt environmentally responsible substitutes.

■Reducing and replacing ozone depleting substances☆

We endeavor to reduce the use of substances specified as controlled substances under the Ozone Layer Protection Law and adopt environmentally friendly substitutes.

- Large heat exchangers (Large refrigerators)—Having steadily replaced air conditioning units using specified chlorofluorocarbons (CFCs) with systems that do not use them, we completed the removal of such units from buildings by the end of March 2008.
- Rolling stock—Except for some diesel railcars, all of our cars use CFC substitutes. As of March 2011, we were using 0.5 tons of CFCs and only 87 tons of CFC substitutes. We routinely check for gas leaks, and collect the refrigerants when scrapping retired railcars in accordance with applicable laws and regulations.
- Fire-extinguishing agent—Although 63 tons of halon gas was still in use as a fire-extinguishing agent as of March 2011, we have it under proper control and are replacing it with non-halon agents (such as powder agents and CO_2) when building new facilities or renovating existing ones.

■Chemical substance management☆

As JR East uses chemical substances primarily for painting and repairing our railcars, we take rigorous steps for their use and management in order to prevent their leakage. We are a company that handles a considerable amount of specified chemical substances, and 16 JR East facilities submitted the data regarding the release and transfer of these substances to relevant authorities in the fiscal year ended March 2011, pursuant to the PRTR System.*

We are also promoting the introduction of stainless steel railcars that do not require painting. At the end of March 2011, as many as 81% of the 10,703 cars operated on our conventional lines were stainless steel railcars. Beside their use for railcars, we used 321 tons of organic solvents for painting railway facilities and stabilizing track beds in the fiscal year ended March 2011.

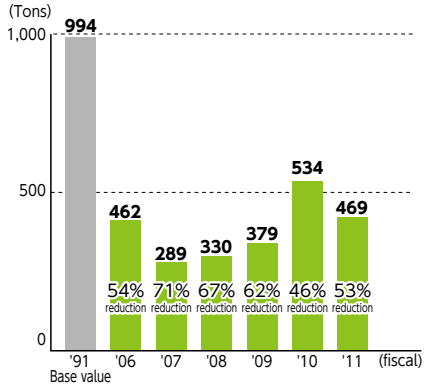
* PRTR system: A system where companies notify their releases and transfers of chemical substances obliged by the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof. It encourages the monitoring and control of toxic chemical substances emitted into the environment and measures to prevent negative impact on the environment.

■Reducing emissions from JR East's thermal power plants☆

We use natural gas, kerosene and heavy fuel oil (especially, low-sulfur fuel oil) at JR East's thermal power plants. When these fuels burn, however, nitrogen oxides (NOx), sulfur oxides (SOx), and particulate matter (PM) are emitted.

We are endeavoring to reduce the production of emissions the total emissions into the air by equipping our thermal power plants with NOx removal equipment, low NOx burners, dust collectors, etc.

■ NOx emissions from JR East's thermal power plants



* In FY 2009, there was an increase in the volume of NOx emissions due to the high operating rate of our thermal power plant. However, in FY 2010, the operating rate of the thermal power plant decreased after resuming operations of our hydroelectric power plants, resulting in a reduction in the volume of NOx emissions.

■Management of PCBs☆

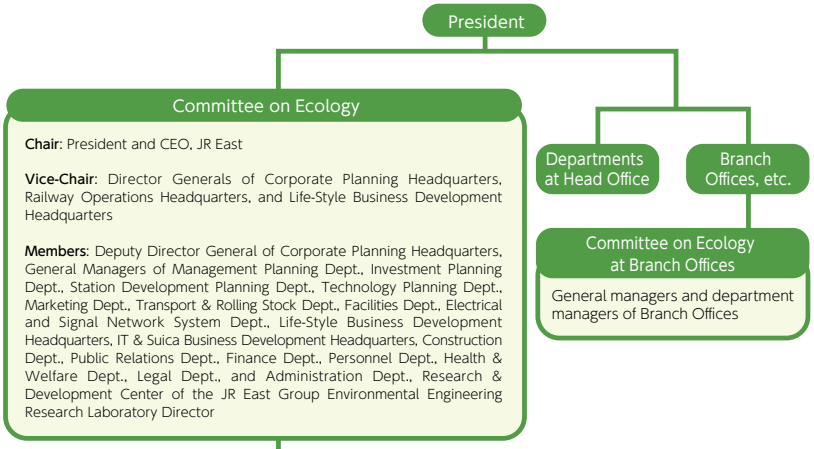
Equipment containing PCB's is securely stored at 146 locations and reports on it are filed as required by laws and regulations. We render this equipment harmless to the extent that can be done by PCB waste treatment facilities.

In the fiscal year ended March 2011, we treated 273 units of equipment such as transformers and capacitors.

Environmental Management System

Established in 1992 as a top management organization to promote environmental activities and chaired by the president and CEO of JR East, the Committee on Ecology Promotion surveys the environmental impact of business activities, sets environment-related targets, implements environmental conservation activities and monitors progress toward target achievement, which is also examined by top management. Furthermore, to strengthen our organization to proactively address global environmental issues in the long term, JR East established the Environmental Management Office in its Management Planning Dept. in July, 2010. The Environmental Management Office will manage the various environmental laws, the education of each of our employees to improve environmental awareness, and the formulation of environmental strategies as a whole for the JR East Group.

■ **Organizational structure to promote environmental management (as of July 1, 2011)**



Department name	Main activities	Working group name
Environmental management	Promotion of environment conservation activities at each work place, promotion of environment management as a whole group, management of environmental targets and publication of environmental activities, etc.	* JR East Eco Activities WG * JR East Group environment management promotion WG
Measures to prevent global warming	Reduction of CO_2 emissions through reduced electricity use and new energy technologies, reduction of CO_2 emission volume throughout the entire transport system, etc.	* Eco station WG * Eco railcar WG * Railway usage promotion WG * Illuminance optimization WG
Measures for resource circulation	Recycling of wastes from stations and trains, reduction and recycling of industrial waste, eco-friendly procurement, etc.	* Station & train waste WG
Chemical substance management	Management of ozone depleting substances, chemical substances, PCB, etc.	* PCB waste WG
Environmental activities along railway lines	Measures against noise, utilization of spring water in tunnels, conservation and utilization of railway trees, proper use of herbicide, etc.	* Railway trees conservation & utilization WG * Proper herbicide usage WG

■Creating an environment-conscious climate

JR East believes that it is important to promote environmental activities with clear goals established for the entire JR East Group, and that every employee becomes actively involved. In order to build a climate in which all employees do so voluntarily, we are expanding the scale of our environmental activities by promoting "JR East Eco Activities" at each work place, developing leaders through environmental education, and sharing recognition of exceptional environmental efforts through the presentation of awards.

■In-house environmental education

For effective environmental management, it is essential that all employees have appropriate knowledge on environmental issues. We provide environmental education lectures to our employees in training in order to develop environmental activities in JR East and group companies. Through these lectures, we aim to expand the scale of our environmental activities. In the fiscal year ending March 2007, to enhance environmental activities at each group company, we began an "Environmental management training" program for people in charge of environmental matters in those companies.

■ Environmental education & training system

Education of environmental-activity promoters at organizations of JR East and group companies

Environment management practical training

- Persons trained: those responsible for environment at local organizations, etc.
- Objective: improvement of ability in environment-related matters as trainers to field offices, etc.
- Number of participants: 30

Training for personnel responsible for environmental measures

- Persons trained: those responsible for environment at each Branch Office
- Objective: acquisition of basic knowledge such as environment-related laws
- Number of participants: 15

Implementation of training and lectures in Branch Offices

■Internal environmental audits

At our General Rolling Stock Centers, in-house auditors are trained through external training programs, and conduct routine audits at the centers in order to evaluate environmental activities.
During the company's internal audits, in the fiscal year ending in March 2011, we have reviewed chemical substances designated under PRTR system and identified verification of MSDS control status as one of the important audit items with a view to insuring certainty of our compliance.

■ ISO14001-certified facilities

Certified facilities	Year and month of certification
〈JR East〉	
Niitsu Rolling Stock Manufacturing Factory	Feb-99
Kawasaki Thermal Power Plant	Mar-01
Tokyo General Rolling Stock Center	Mar-01
Omiya General Rolling Stock Center	Feb-02
Shinkansen General Rolling Stock Center	Nov-02
Koriyama General Rolling Stock Center	Dec-03
Nagano General Rolling Stock Center	Feb-05
Akita General Rolling Stock Center	Jul-05

Certified facilities	Year and month of certification
〈Group companies〉	
East Japan Eco Access Co., Ltd.	Nov-99
LUMINE Co., Ltd.	Dec-00
East Japan Transport Technology Co., Ltd. (Omiya Branch)	Feb-02
Nippon Restaurant Enterprise Co., Ltd. (manufacturing section)	Sep-02
Nagano Railway Servicing Co., Ltd.	Jan-07
JR East Mechatronics Co., Ltd.	Mar-08
East Japan Marketing & Communications, Inc.	Aug-08

Thorough management of chemical substances

JR East is working to establish a system to prevent environmental accidents by more rigidly managing chemical substances. We prepared emergency response manuals for on-site locations such as our thermal power plants and General Rolling Stock Centers that handle chemical and hazardous substances. We are also preparing ourselves to properly respond to any contingencies by holding workshops and training sessions on how to handle such substances, and ensuring that related information reaches all related personnel.

Compliance with environmental laws and regulations

There were no major violations of environment-related laws and regulations resulting in penalties in the fiscal year ending March 2011.

Environmental Communication

■Partnership with society through media

We have published an environmental report each year since 1996 (in 2002, the name of the report was changed to JR East Group Sustainability Report) to provide stakeholders with accurate and easy-to-understand information about JR East activities for the environment and society. Additionally, we also provide information via the Internet, on-board posters and other media.

■Eco-tourism

Eco-tourism develops deeper understanding and affection for Japan's natural environment and culture. This fiscal year, to convey the appeal of the Shirakami mountains area, a World Heritage Site, we held a lecture in the Tokyo metropolitan area which attracted more than 500 people. Similarly, at our lecture held in Shirakami, 60 people joined the program. Furthermore, we continue to promote Hiking from Stations in each region, and in the fiscal year ending March 2011, we held 626 hiking trips from stations with approximately 220,000 people in total participating in the events. Among them we organized 6 Eco-hiking courses which included visits to facilities where energy resources were efficiently utilized and to seashores to pick up trash there. A total of about 3,500 people participated.

Blue Pond, with its distinctly blue water, in a beech forest

Planting trees at Futatsumori

Visiting a natural beech forest

The efforts of each organization

■Actions by Nagano Branch Office

(1) Actions by Committee on Ecology

In order to reinforce specific actions on environment closely related to the community in accordance with the basic philosophy and basic policy on ecology promotion activities of JR East, Nagano Branch Office established the Nagano Branch Committee on Ecology to grasp the current status of ecology activities and identify issues concerning such activities within Nagano Branch Office.

(2) Reduction of industrial waste from repair and removal of various equipment

In the past mixed metal scraps generated by repair and removal of various equipment were disposed of as industrial waste because of difficulty of recycling them. To reduce industrial waste and to promote 3R's, we reviewed the company manual "Standards for Segregating Locally Sellable Items" and sold mixed metal scraps* that had sales value and realized reduction of industrial waste.

* Mixed metal scraps: scraps that had mixed materials such as iron, copper and plastics.
Examples: various relays, railway signals, crossing gates, various electronics devices

(3) Cooperation with, and participation in, "Prefecture-wide Across the Board No Car Commute Week"

In order to contribute to prevention of global warming through greater use of public transportation, we have cooperated with, and participated in, the "Prefecture-wide Across the Board No Car Commute Week" sponsored by Nagano Prefecture.

During the campaign week, we put up posters at the station fronts to give publicity to the campaign, extended the validity period of "No Car Day Discount Tickets" to facilitate use of railways and employees working at Nagano Branch Office building engaged in proactive efforts at curtailing CO_2 emissions.

Comments by employee in charge

Yosuke Yano
Planning Office,
General Affairs Dept.,
Nagano Branch

At Nagano Branch Office we are aware of the importance of environmental, ecological activities and all of us are engaged in "efforts to contribute to environmental society." We are actively publicizing environmental activities to inculcate our employees with the eco-awareness and animating eco-activities in each department. We will continue our efforts to improve environment together with the community, beginning with the "Forestation from the Wayside" which was begun in 1992 and cooperation with, and participation in, the "Prefecture-wide Across the Board No Car Commute Week."

■Actions at Niitsu Rolling Stock Plant

(1) Environmental Promotion System Utilizing ISO 14001

Niitsu Rolling Stock Plant acquired Environmental Management System "ISO 14001" in February 1999 and since then has been engaged in environmental programs with a goal of "contributing to global environmental preservation activities through our production activities in concert with our Group companies". Specifically, ① we are working to reduce CO_2 by identifying burden on environment in our business activities and making visible causes of such burden; ② we are working to make visible laws and regulations related to environment focused on "Regulatory Compliance Schedule," and constructed a carefully thought-out compliance management system; and ③ through our environmental preservation activities, making continuous improvement of our environmental management system as 3 pillars, all of us employees are engaged in environmentally-conscious production activities in our daily operations at 4 subcommittees of energy conservation, resources saving promotion, waste reduction and compliance/eco-promotion/education.

(2) Actions for energy conservation and global warming prevention

For FY 2011 as principal activities of energy conservation and global warming prevention, we worked to reduce power consumption through such activities as ① implementation of energy conservation campaign; ② insuring no overtime days; ③ CO_2 reduction by change of fuels in once-through boilers; and ④ installation of sensors to respond to people's presence in the workers' room to reduce power usage.

With respect to fuel change in once-through boilers, we replaced heavy fuel oil that had been used with city gas, resulting in a more than 10% reduction in CO_2 emissions per year. With respect to sensors in workers' room, we have finely rearranged electrical wiring in the hallways and rooms so that lights turn on automatically only where the sensors detect the presence of people. Also, the conventional mercury lamps were replaced by energy-saving type fluorescent lamps. These actions resulted in considerable reduction in electricity usage.

In addition to the existing initiatives above, Niitsu Rolling Stock Plant this fiscal year put an effort to reduce peak power consumption through ① reduction of lamps that are turned on in the buildings; ② use of hand lamps (LED); and ③ adjustment of operating time of automatic machinery. All employees are taking the initiatives in conserving energy by conducting various energy-saving measures on trials and adding necessary improvements for reducing electricity consumption.

Comments by employee in charge

Nobuyuki Umezu
Asst Manager,
General Affairs Section,
Niitsu Rolling Stock Plant

In February 1999 Niitsu Rolling Stock Plant became the first organization in JR East to receive "ISO 14001" and is working to reduce power consumption, save resources and cut back on waste. We are making efforts at compliance, focusing on regulatory compliance schedule. Making full use of "ISO 14001" each employee is engaged in production activity, being conscious of the need to improve environment, such as by reducing power consumption.

CO_2 reduction by changing fuels for once-through boilers

Reports on Ecological Activities at JR East Group Companies

■Nippon Hotel Co., Ltd.

Compatibility of Recycling food waste and revitalizing locality

Nippon Hotel Co., Ltd. considers global environment protection as one of the important issue to take up as a corporation. We have established basic philosophy, basic policy and action guidelines for the protection of earth environment and are making efforts ① to reduce energy and CO_2 (reducing electricity and gas consumption); ② to recycle (turning food waste into fertilizers and livestock feed); and ③ to show specific targets for the improvement of environmental consciousness of employees. We are also strengthening the environmental management organization by establishing the Environmental Management Office and project subcommittees to promote environmental preservation activities.

The nature of hotel operation is such that a lot of food waste is generated from restaurants in each hotel. In order to reduce food waste we have found ways to procure vegetables that have been already cut. We have promoted recycling of generated food waste by signing a comprehensive agreement on turning leftover food into fertilizers and helping local revitalization with the City of Aizuwakamatsu of Fukushima Prefecture. We are also using vegetables grown with the use of such fertilizers, thereby contributing to the revitalization of local community as well.

In the future Nippon Hotel will continue to study earth environmental issues from a broad perspective and carry on a variety of environmental preservation activities.

Comments by employee in charge

Shin-ichi Arai
Manager,
Environmental
Management Office,
Nippon Hotel Co., Ltd.

Our company is endeavoring to practice and improve environmental preservation consciousness by advocating 3R campaign as our basic policy: i.e., Reduce, Reuse and Recycle. In particular, we have a recycling system to turn waste from food served in our hotels into fertilizers in partnership with local communities.

In the future, from the viewpoint of environmental protection, we want to foster a corporate culture where all employees together make use of such know-how and grapple with improvement of the environment.




State of recycling at Hotel Metropolitan Marunouchi

■East Japan Eco Access Co., Ltd.

Operation of JR East Tokyo Materials Recycling Center

East Japan Eco Access Co., Ltd. has been engaged in certain portion of station operation, mostly cleaning of stations and buildings, and collection, transportation and recycling of waste. We have endeavored to practice environmentally-conscious corporate management in such a way as to place the highest priority on attaining customer satisfaction, advocating "quality" and "environment" as a keyword. In particular, we have cited the protection of global environment and coexistence with local communities as our corporate philosophy and recognized our role to be "to continue to work to improve environment, tirelessly and without giving up," and have carried out environmental preservation activities in such a manner. We shall continue our efforts with an eye to building a recycling-oriented society and to becoming a true global environmental corporation.

The JR East Tokyo Materials Recycling Center which was newly organized in October 2010 is operated by East Japan Eco Access Co., Ltd. and consists of three facilities, each handling different types of trash. In addition to segregating and recycling cans, bottles, PET bottles, old papers, etc. in one integrated operation, the center handles waste plastics from homes in Shinagawa Ward, in which the center is located. Upon receiving intermediate treatment here, the waste will become usable materials, such as PET bottles transformed into uniforms for JR East employees and many other kinds of reused products. This facility is also hard at work, creating biotopes, greening rooftops, greening walls and other activities to lessen the burden of the facility on the environment.

Comments by employee in charge

Yasuhito Saiki
General Manager,
Tokyo Materials Recycling Center Operation
East Japan Eco Access Co., Ltd.

JR East Tokyo Materials Recycling Center separates about 10,000 tons of waste per year from trains, stations and homes in Shinagawa Ward. The issue is how to reduce the amount generated as general waste and industrial waste. We are working hard to separate and recycle as much as possible. Our mind is focused on "making effective use of finite resources" and all of us will continue our dedication to reducing burden on the environment to the extent possible.

Bldg. A – Manual segregation of mixed trash line

Bldg. A – Manual segregation of cans and bottles line

Bldg. B – Manual segregation of newspapers and magazines line

Bldg. C – Waste plastics from homes hauled in

Rooftop greening

Biotope

Wall greening

Environmental accounting and management indicators

■Using Environmental Management Indicators in business activities☆

In the fiscal year ended March 2011, our environmental conservation costs amounted to approximately 47.5 billion yen in investments and 22.4 billion yen in expenses. Of these investments, costs for global environmental conservation, which accounted for a large portion, were at the same level as the previous year because we continued acquiring new railcars.

By introducing these new cars, we estimate we will reduce CO_2 emissions by 0.23 million tons during their service lives.

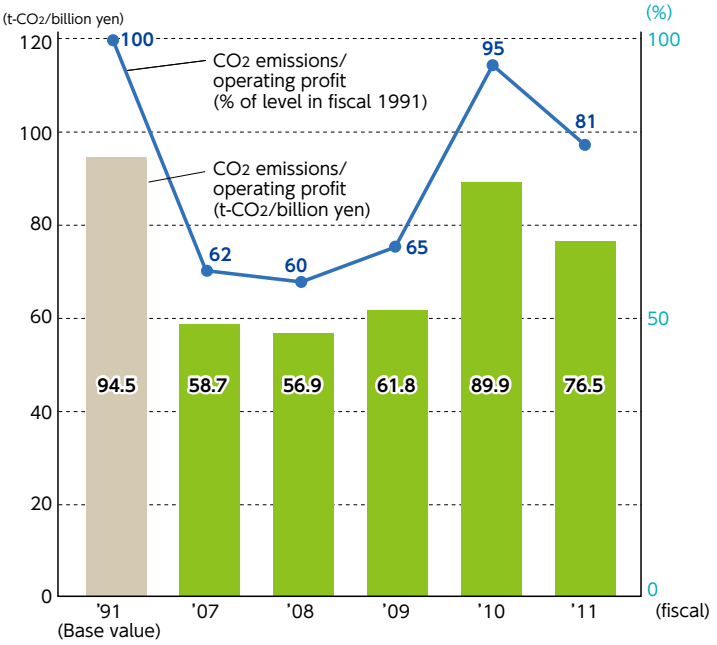
JR East has its own Environmental Management Indicator to assess the relation between our business activities and environmental impacts. These are calculated by dividing CO_2 emissions, which are a major factor in our environmental impacts, by operating profits, which represent our economic value added.

The smaller the value of the indicator is, the smaller impacts we exert on the environment to create a same economic value added. For the fiscal year ended March 2011 the value of the indicator was 76.5 t-CO_2/billion yen, compared with 94.5 t-CO_2/billion yen for the fiscal year ending March 1991.

Environmental Management Indicator

$$= \frac{\text{Environmental Impacts}}{\text{Economic Value Added (EVA)}} = \frac{\text{CO}_2\text{ emissions (t-CO}_2\text{)}}{\text{Operating profit (billion yen)}}$$

■ JR East's Environmental Management Indicator



■ Environmental accounting for fiscal year ended March 2011☆

Category	Environmental conservation costs (billion yen)		Environmental conservation benefits in relation to environmental targets			Economic benefit of environmental conservation activities (billion yen)
	Investments	Expenses		Fiscal 2009	Fiscal 2010	
Environmental conservation (pollution prevention) activities along railway lines	9.53	15.27	Implementation of noise reduction measures along Shinkansen and conventional lines (soundproof walls, continuous welded rail, and other measures) NOx emissions from JR East's thermal power plants	100% 534 tons	100% 469 tons	–
Global environmental conservation activities	36.73	–	CO_2 emissions through business activities CO_2 emissions per unit of electricity generated at JR East's thermal power plants Energy-efficient train utilization rate Train energy consumption per unit of transportation volume	2.54 million t-CO_2 — 88% —	2.15 million t-CO_2 — 88% —	24.6
Resource circulation activities	1.26	4.94	Recycling rate for waste generated at stations and trains Recycling rate for waste generated at General Rolling Stock Centers, etc. Recycling rate for waste generated through construction projects Recycling rate for general waste Recycled paper utilization rate	86% 93% 95% — 92%	92% 97% 96% — 90%	2.07
Environmental management	–	0.37	Taking part in specific environmental protection activities every year (Forest development along railway lines Shinanogawa River Hometown Forestation Program)	49 thousand trees planted at 19 locations	28 thousand trees planted at 15 locations	–
Environmental research & development	–	1.75				–
Social activities	–	0.06				–
Total	47.52	22.39				26.67

Notes
Capital investment for the period: 354.4 billion yen
Total R&D costs for the period: 16.4 billion yen*
Targets for the JR East Group

* Total R&D costs :
Total R&D costs include 0.57 billion yen of costs for basic research and development commissioned to the Railway Technical Research Institute under a research agreement.

The above table's relations with the table for Targets and Results are as follows:
"Environmental conservation activities along railway lines" = "Environmental activities along railway lines" and "Chemical substance management"
"Global environmental conservation activities" = "Measures to prevent global warming" and "Chemical substance management"
"Resource circulation activities" = "Measures for resource circulation"
"Environmental management" = "Environmental management" and "Environmental communication"
"Environmental research & development" = "Research & development"
"Social activities" = "Environmental communication"

〈Notes on calculation of environmental conservation costs and benefits〉
Environmental conservation costs
○Data are for East Japan Railway Company only (i.e., non-consolidated data).
○Environmental conservation costs are mainly based on data available in the current management system.
○The total costs are treated here as environmental costs where the costs have multiple objectives and result in large environmental benefits.
(e.g., global environmental conservation costs include the total amount invested in energy-efficient trains)
○Expenses do not include depreciation charges.
○In the costs for resource circulation activities, expenses for treating waste generated at stations and trains are calculated by multiplying the allocations by the expenses for cleaning stations and train cars, based on a model for cleaning stations and trains.
○In the costs for resource circulation activities, the expenses for treating waste generated through construction projects are calculated by multiplying waste volume for fiscal 2008 by standard unit prices for the type of waste in that region.
Environmental conservation benefit
○Environmental conservation benefits are calculated based on figures set as our environmental targets.
Economic benefit of environmental conservation activities
○Economic benefit of global environmental conservation activities is calculated by multiplying annual savings (estimates are used in some cases) in electricity and repair costs resulting from the introduction of energy-efficient trains by the expected useful life, to determine useful-life economic benefit.
○Income from the sales of waste generated at General Rolling Stock Centers and through construction projects is included in economic benefit of resource circulation activities.

Railway Technical Development on Environment

Following research and development are being pursued to construct a railway system with high priority on environment.

◎ Organizing energy management

With a view to reducing energy needed to operate trains we are engaged in development of storage battery-driven electric car system and in studying actual consumption of operating energy. We are also engaged in efforts to reduce energy at stations, offices and General Rolling Stock Center.

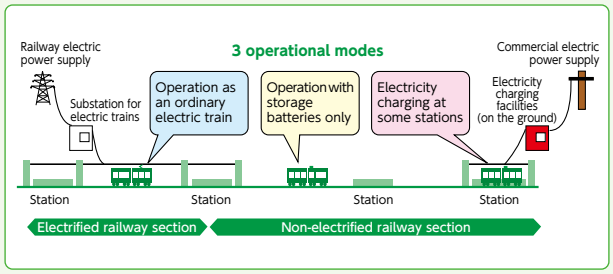
◎ Application of energy saving technology to railway operation

We are engaged in research to apply to railways such highly energy-efficient technologies as photovoltaic power generation, other renewable energy and heat pumps. We are also engaged in research of multiple-use technology.

As specific examples, we are working on the following research and development themes.

■Development of a storage battery train system: NE Train (new energy train) Smart Denchi-kun

We are studying application of new motive energy to railways through a trial NE Train (New Energy Train). At present, to reduce burden on environment in non-electrified sections, we are making efforts at development of a "storage battery-driven electric car system," which is a hybrid of overhead lines and storage batteries.



Constitution of Storage Battery-driven Electric Car System

In this system trains receive electric power from overhead lines in electrified sections and run while storing it in the storage batteries and in non-electrified sections, the trains run with power stored in the batteries. This system results in reduction of CO_2 as well as of noise compared with the conventional diesel cars. At present we are conducting running tests and rapid charging tests with a trial car, NE Train Smart Denchi-kun, in which this system is installed.

NE Train Smart Denchi-kun

■Study on effective use of regenerated energy

Energy efficiency can be enhanced by making effective use of regenerated energy which is produced when a train applies brakes.
In order to accurately measure the regenerated energy, we have placed electric energy meters on the train as well as on the substation to conduct simultaneous measurement. In this way we plan to grasp the flow of energy, analyze it to clearly identify the issues involved and work toward improvement.

■Making energy flow visible at Tokyo Station

We are proceeding with the development of a system to make energy flow visible, using Tokyo Station as a model.
The conventional equipment system has been mostly focused on monitoring for the sake of security. By taking in information on energy conservation and making it visible, we are building a more efficient energy management system.

Energy flow visualization system at Tokyo Station

Pursuing “ultimate safety levels”

■Our concept of safety

Since the establishment of the company, safety has been the top management priority at JR East, and we have worked relentlessly to heighten our levels of safety. Our earnest efforts to learn from unfortunate accidents in the past have enabled JR East to further the prevention of accidents in the future with our continued developments both in software and in hardware.

■Safety initiatives in our medium term management plan

In the JR East 2020 Vision - *i do mu* -, we have set two goals to represent our unflagging commitment to “ultimate safety levels”: we will continue implementing our priority improvement plan for safety equipment, reinforce safety weak points, and reduce risks; we will expand and improve education and training on safety and prevent accidents by correctly understanding and analyzing previous accidents and incidents.

■Launch of our 5th 5-year Safety Plan, 2013 Safety Vision

Since our establishment, JR East has continued to create and implement medium term safety plans. With the installation and further development of our safety equipment, along with companywide advancements in safety awareness and skill, we have succeeded in reducing the frequency of railway accidents drastically from levels at the time of the company’s establishment.
In the fiscal year ended March 2010, JR East formulated a new 5-year safety plan, 2013 Safety Vision. With this plan, we are undertaking a variety of measures. New to the 2013 Safety Vision are two approaches: safety related human resource development and system improvements; and, the prevention of accidents before they occur through risk assesment. In addition, as with our previous Safety Plan, we will continue to target zero accidents involving passenger injuries or fatalities, and zero accidents involving employee fatalities (including employees of Group companies and Partner companies).
JR East will continue to remain steadfast in its efforts to achieve “ultimate safety levels” through the concerted efforts of all of its employees.

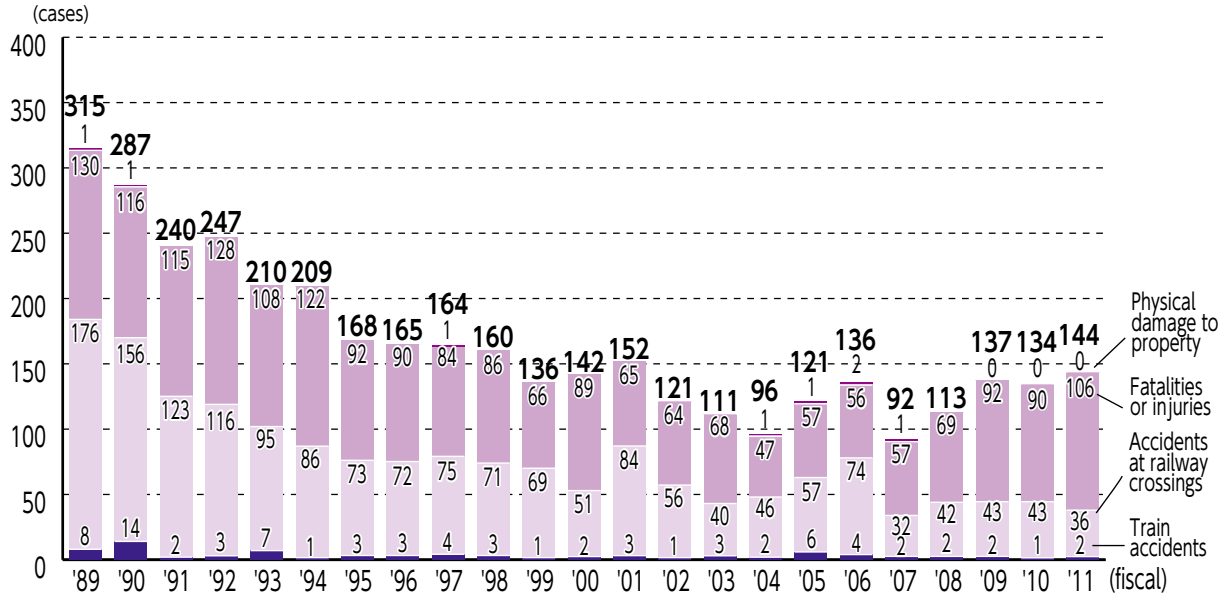
2013 Safety Vision Brochure

■ Overall view of the 2013 Safety Vision

■Trends in railway accidents

In the fiscal year ending March 2011, JR East recorded 2 railway accidents, 36 accidents at level crossings and 106 accidents involving passenger injuries or fatalities. Most of these accidents were collisions with automobiles or people at level crossings, customers on platforms coming into contact with trains, and customers falling onto the tracks from platforms.

■ Trends in railway accidents



■ Physical damage to property: accidents causing more than 5 million yen damage to property by train operation
■ Fatalities or injuries: people killed or injured by train operation
■ Accidents at railway crossings: people or automobiles being hit by trains
■ Train accidents: train collisions, derailments, and train fires

Creation of a culture of safety

■Our 5 cultures of safety

To heighten levels of railway safety, it is necessary to establish and support unwavering cultures of safety. The cultures of safety we seek is based upon accident information from the past and we learn and act upon it in mutual trust.

① **A culture of proper reporting**
Preventing the occurrence and recurrence of accidents through prompt and proper reporting of all accidents and incidents.

② **A culture of noticing**
The prevention of accidents through an awareness of the causes of accidents and the sharing of information that would prevent these causes from leading to actual accidents.

③ **A culture of direct meeting and discussion**
Allowing for the open and honest exchange of opinions and discussions enables us to identify the causes of accidents and to take appropriate countermeasures against recurrence.

④ **A culture of learning**
Continuously learning about accidents and learning from accidents and incidents, which occur in all places of work, not just in one's own workplace.

⑤ **A culture of action**
Safety can only be secured by taking safe actions. Think and act for yourself. This is at the core of our safety.

■"Sangen Principle; Three Actualities Principle" as a standard for action

Accidents and incidents always occur at the Genba.* This means that the sources of accident prevention can also be found at the Genba. In order to suitably understand and rectify each accident or incident, JR East approaches safety issues with the "Three Actualities Principle" as its standard for action: actual locations, actual objects, and actual people.

* Genba: "Genba" means a field or workplace, where employees actually do their physical work in construction, production, maintenance, operation, etc., as distinguished from management or office work, in industrial sectors, such as construction and manufacturing.

■Developing safety-related human resources

With rapid shifts between generations, the nurturing of employees who can assume major roles in ensuring safety is becoming a pressing need. JR East has assigned "Key Safety Leaders" for its field organizations and other such institutions, and "Safety Professionals" for branch offices and other such establishments to increase levels of safety.

A general meeting for "Key Safety Leaders"

An accreditation ceremony for "Safety Professionals"

■Chroniclers of Safety (Narrators of oral history)

In FY 2010, we organized a group of ex-employees of JR who possessed an abundance of knowledge and applied skills in railway safety to act as our "Chroniclers of Safety (narrators of oral history)." Currently, Chronicler of Safety Seminars are being conducted by a group of eight of these Chroniclers, hoping to pass down their accumulated experiences and skills to future generations.

The Chronicler of Safety Seminar: Commemorating the 1st anniversary of the organization

■The Challenge Safety Campaign

In 1988, we started the Challenge Safety Campaign with the aim of encouraging our employees to actively take on the challenge of further improving safety levels, rather than just passively maintaining safety. The Challenge Safety Campaign aims to increase our employee awareness and sense of safety. We intend to guide all employees to more safety-oriented behavior by having them think about and discuss safety, act upon it, and feel a sense of achievement through doing so.

■Railway Safety Symposium

Since 1990, we have held the Railway Safety Symposium for the purpose of improving each employee's awareness of safety. In the fiscal year ending March 2011, JR East held its 19th symposium, titled "Let's rethink why accidents and incidences keep occurring: Our efforts to fully share safety consciousness with all personnel have already begun."

The 19th Railway Safety Symposium

■Safety education and training

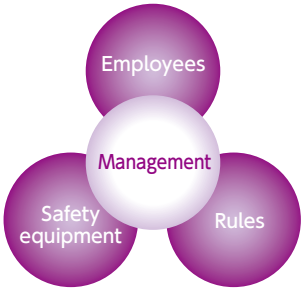
To improve the skills of train crews, accident prevention simulator training is conducted regularly in the General Training Centers in each of our branches. At the JR East General Education Center in Shirakawa City, Fukushima Prefecture, we train both drivers and conductors, and provide human resource development in the form of knowledge and technical proficiency.
The Accident History Exhibition Hall was established in the Center to emphasize the importance of learning from past accidents.


Driving cab simulator


Accident History Exhibition Hall

■Safety management: Eliminating the causes of accidents

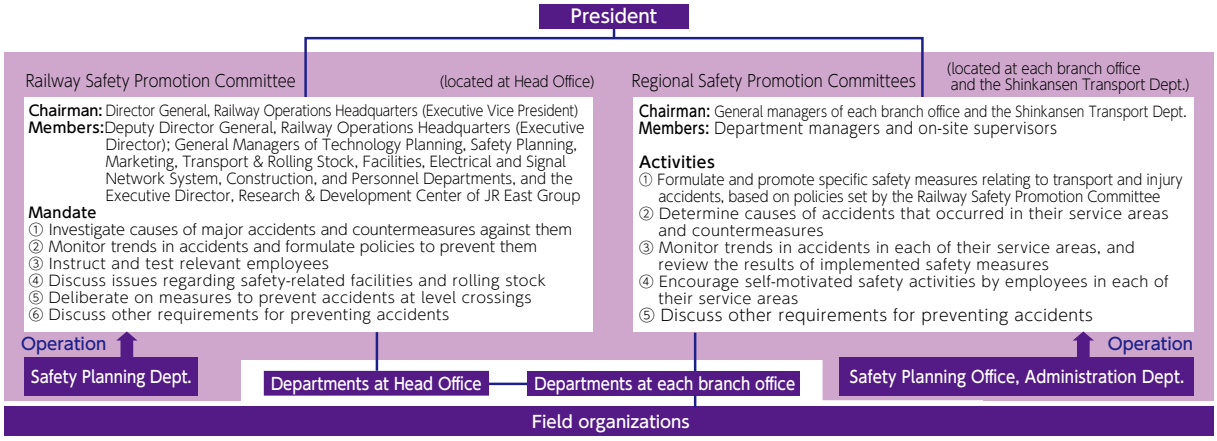
We believe that safety is ensured through management systems that synergistically link the three major factors, Employees, Rules, and Safety Equipment. JR East, together with our front-line employees, Head Office, and Group companies as a whole, is working to improve operational safety through the Railway Safety Promotion Committee, Head Office Safety Campaign, and JES-Net. The Railway Safety Promotion Committee is responsible for thorough cause investigation and taking prompt countermeasures at the occurrence of an accident. In our Head Office Safety Campaign, front-line employees and executive officers from the Head Office participate in direct discussion about safety matters. JES-Net functions to enhance our safety promotion network among Group and other related companies.



■Railway Safety Promotion Committee

JR East has established the Railway Safety Promotion Committee at its Head Office, chaired by the Director General from Railway Operations Headquarters. The committee reviews the organization's basic policies to respond to and prevent accidents, and promotes safety measures within the railway business. There are also Regional Safety Promotion Committees at each branch office and the Shinkansen Transport Dept., chaired by the general managers of the branch offices and the department. These committees implement specific measures in cooperation with the Railway Safety Promotion Committee, and investigate the causes of accidents, implement concrete preventive measures, and promote activities to enhance safety in their service areas.

■ Safety promotion network (as of April 1, 2011)



■Head Office Safety Campaign

JR East runs a Head Office Safety Campaign once a year. The campaign gives executive officers from the Head Office and front-line employees a chance to hold direct discussions. In the fiscal year ending March 2011, executive officers from the Head Office together with front-line employees and employees of Group and partner companies participated in heated discussions on the theme, "Pursuing ultimate safety levels across the JR East Group, aiming to completely eliminate incidents which repeatedly occur: How to comprehensively convey safety consciousness to all personnel, and how to identify the causes of railway accidents and act upon these recognitions." The campaign included inspection of nighttime maintenance work and the confirmation of our efforts and remaining issues following the start of the 2013 Safety Vision, sharing of the understanding of the current situation between front-line employees and executive officers from the Head Office.

■Collaboration with group companies

The JR East Safety Network (JES-Net) was established in the fiscal year ending March 2005 as a safety promotion network among JR East Group and partner companies who are engaged in work directly influencing train operations.
As of April 1st, 2011, the number of companies in this network had expanded to 35. JR East is committed to improving the levels of safety throughout the JR East Group.

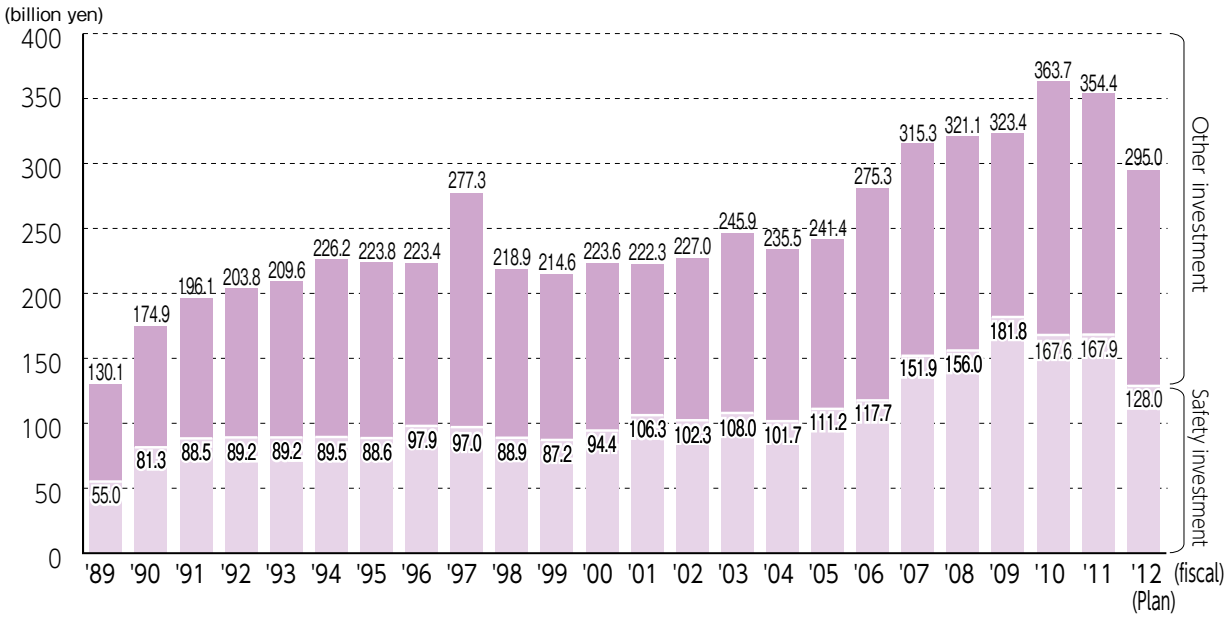
Improvement of safety equipment

■Investment in safety equipment for "ultimate safety levels"

To achieve a more assured level of safety in railway operations, weak points in the current systems must be identified and reviewed from a safety standpoint. Furthermore, safety equipment must undergo intensive and effective assessments in order to prevent the occurrence of accidents in the future. To date, our countermeasures have been primarily focused on preventing any reoccurrence of accidents that have happened in the past. However, additional risks also exist, such as the very realistic threat of a major earthquake in the Tokyo metropolitan area, which would result in major damage to our railways. As such, in addition to measures we have taken so far, JR East will implement concrete countermeasures through the analysis and evaluation of all potential risks before they actually evolve into accidents.

Regarding our improvements to safety equipment, and based on our four previous 5-year Safety Plans leading up to FY 2009, JR East has invested more than 2.2 trillion yen for the 20 years since the company's establishment. In our 2013 Safety Vision, JR East's 5th 5-year Safety Plan which began in FY 2010, JR East plans to invest approximately 750 billion yen on safety measures for the 5-year period between April 2011 and March 2014, with a cumulative safety investment amounted to approximately 2.5 trillion yen by the end of FY 2011.

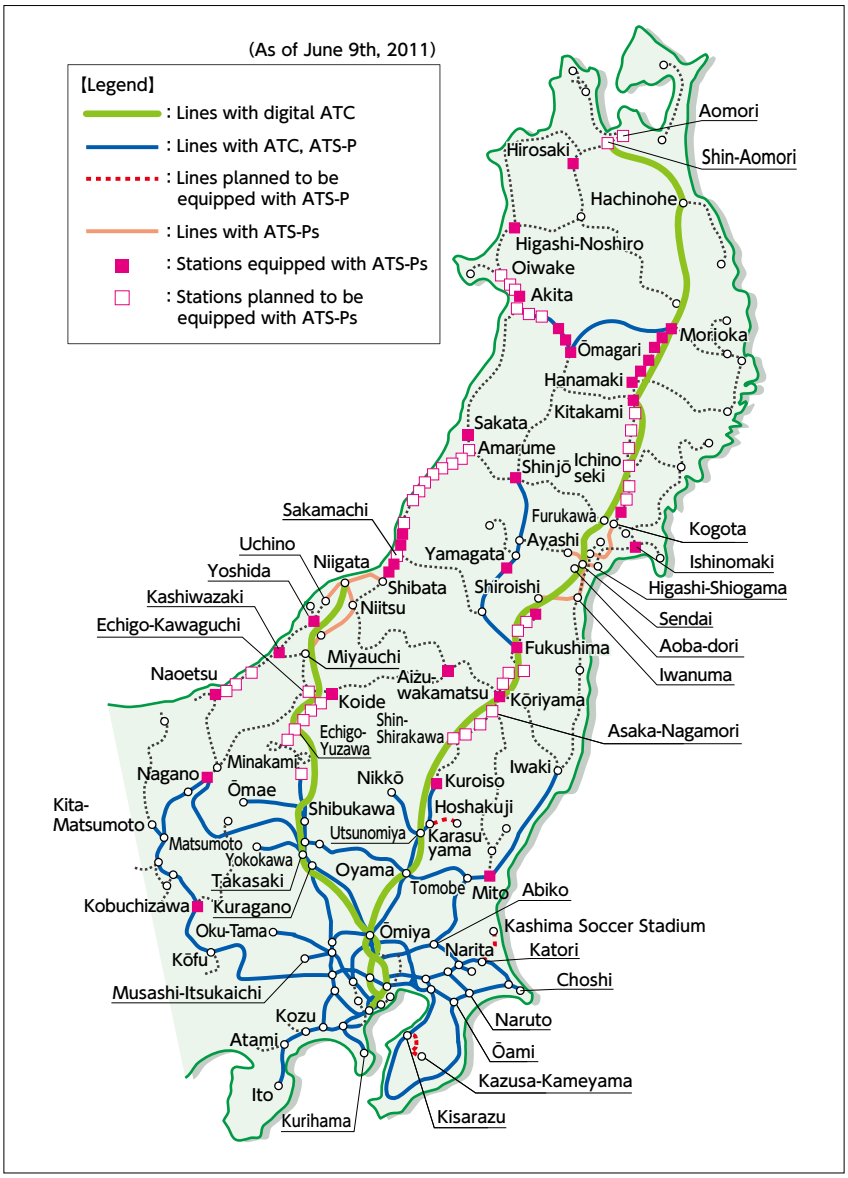
■ Trends in safety investment



■Installing safety equipment

To prevent collisions between trains, JR East has installed ATS (automatic train stop) and ATC (automatic train control) systems on all of its railway lines. To heighten the current safety level of train operations even further, we are installing ATS-P and ATS-Ps systems, which employ continuous speed monitoring functions. The number of installations is steadily increasing; mostly in the Tokyo metropolitan area. By the end of March 2011, the ATS-P system had been installed on 2,336.1 km of railway line. The ATS-Ps system is currently installed on 227.7 km of line in the Sendai and Niigata regions and at 34 stations.
In addition, in response to revisions to the Ministry Ordinance for technological standards for railways in July 2006, we are working on measures to prevent excessive train speeds at turnouts, at terminals, and on descending grades. Planned improvements at all curves that had been targeted for action were completed by the end of March 2010.

■ Railway lines and stations with ATC, ATS-P and ATS-Ps systems



■ Measures to prevent excessive train speeds

	Target locations	Installations as of the end of March 2011	Planned completion
Curves	1,468 locations	1,468 locations	Fiscal ending March 2010 (completed)
Turnouts	816 stations	699 stations	Fiscal ending March 2016
Line terminals	63 stations	61 stations	Fiscal ending March 2016
Descending grades	1,528 locations	861 locations	Fiscal ending March 2016

* Including locations improved prior to July 2006

■Systemization of maintenance work

Safety during maintenance work has been improved with the use of TC-type wireless alarm systems. The systems warn employees working on railway tracks when a train is approaching. JR East has also introduced a safety system that enables workers performing maintenance to turn signals red from a handheld device, ensuring that trains are stopped whenever necessary. The system is already in use on all major lines in the Tokyo metropolitan area and is being introduced to other railway divisions.

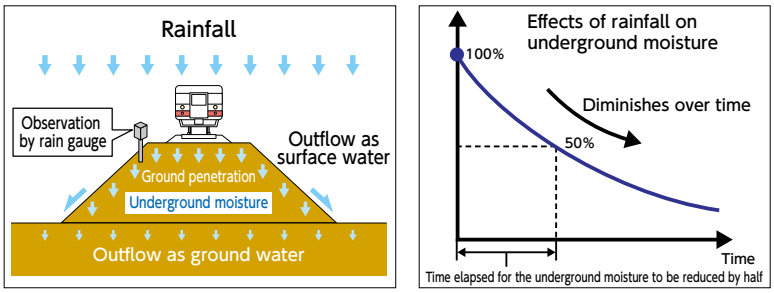
Track closure procedure by a handheld device for maintenance work

■Practical application of the Advanced Train Administration and Communications System (ATACS): train control system with radio transmission

ATACS is a train control system utilizing radio transmissions. By using radio communications for the transmission of information between ground and on-board facilities, the system enables the trains to be mainly controlled by on-board equipment, permitting reductions in traditionally required facilities such as signals, connecting cables, and track circuits, which are currently used for the detection of trains.
Eliminating these facilities is expected to reduce the number of facility failures and the number of subsequent transport disruptions. JR East plans to introduce this ATACS to the Senseki Line for practical operation the end of March 2012.

■Introduction of effective rainfall as a new indicator

When there is heavy rainfall, we ensure train safety through operational restrictions such as limits to train speed and, when necessary, by suspension of operations. For operational restrictions on conventional lines, we have been using hourly rainfall*1 and continuous precipitation*2 as our indices. Since June 2008, we have been using “effective rainfall” as a new indicator that is effective in prevention of landslide disasters due to rainfall. Effective rainfall is the amount of underground water remaining after changes over time in ground penetration and outflow. Using this indicator, we can more precisely predict the occurrence of landslide disasters, improving the safety and reliability of our train operations.



Use of effective rainfall as an index

*1: Hourly rainfall: the total rainfall over a one-hour period
*2: Continuous precipitation: the total continuous rainfall over a 12-hour period

■Completion of reinforcement work for disaster prevention against heavy rainfall in the Tokyo metropolitan area

JR East has completed its planned reinforcement work to railway lines to protect against heavy rainfall. The measures are intended to reduce operational restrictions due to heavy rain and minimize any effect on train operations. JR East began reinforcement work for disaster prevention against rainfall in April 2004 on 12 routes, mainly in the Tokyo metropolitan area and with high levels of traffic, and this work was completed in June 2008.

Concrete lattice frame protection work

■Lessons learned from the past earthquakes

Learning from earthquakes in the past, JR East has employed the following three anti-earthquake measures:

① The immediate stoppage of trains in operations (emergency train stop measures)
② The prevention of structural damage (seismic reinforcement measures)
③ The minimization of secondary accidents following derailment (preventative measures against trains deviating from tracks)

①Early Earthquake Alert System

JR East has installed seismographs along coastal and Shinkansen railway lines for the detection of primary tremors (P-waves). Our present system allows us to stop trains as soon as primary tremors are detected. For conventional lines, our Early Earthquake Alert System was introduced for the Tokyo metropolitan area in December 2007 and in all other areas in April 2009. The system enables trains in any section of track to be stopped in the case of a major earthquake, utilizing information obtained from our Shinkansen seismographs and from any advance announcements given by the Japan Meteorological Agency.

②Seismic reinforcement of elevated bridges

In response to the 1995 Great Hanshin-Awaji Earthquake, JR East has been taking a number of seismic reinforcement measures on rigid-frame elevated bridge columns which were susceptible to shear failures. By the end of March 2008, we had reinforced all of our elevated Shinkansen viaduct support columns and Shinkansen bridge columns. On our conventional lines, by the end of March 2009 we had reinforced all other columns except in places that required additional construction work in the Southern Kanto and Sendai areas. Currently, we are reinforcing elevated bridge columns susceptible to failure due to bending by strong earthquake motion, aiming to further improve our safety levels against earthquakes.

③Prevention of secondary accidents after derailment

During the Niigata Chuetsu Earthquake in 2004, one of our Joetsu Shinkansen trains was derailed while running. Fortunately, this derailment did not lead to any injury to either our passengers or our train crews. Learning from the events surrounding this earthquake, JR East has taken numerous measures aimed to improve our Shinkansen trains and tracks. For our railcars, we have installed an L-shaped car guide on the bogies to restrict lateral movement of the car body. For ground facilities, we are improving the shape of joint bars to lessen the impact of wheels on rail joints in the case of a derailment and implementing countermeasures to prevent the overturning of railcars and the lateral movement of rails in the case that metallic rail fasteners are damaged in derailment. Furthermore, early detection of earthquake occurrence by seismographs and of interruptions of electric transmission have enabled us to more promptly detect earthquakes and start emergency braking about one second earlier.
Nevertheless, at the time of the Great East Japan Earthquake in March 2011, one of our trains in test operation derailed after its regular inspection. As such, further investigations are needed in order to improve our safety measures.

■Measures to prevent railway crossing accidents

When the company was established in 1987, there were 247 accidents during the year at level crossings. In the fiscal year ending March 2011, the number had been drastically reduced to 36. Approximately 60% of all level-crossing accidents involve automobiles. We have installed devices such as obstacle detectors, which are capable of detecting an obstacle such as an automobile stalled on a crossing and stopping trains, and we have put crossing warning devices in a higher position for better visibility. More large red and white crossing gates have been installed; the barrier arms are thicker than usual and have red and white reflective plates that cover the whole bar. These are expected to provide better visibility day and night. Studies are currently being carried out on the effectiveness of these bars. In addition, we are presently promoting a wide range of public relations activities for the prevention of level crossing accidents, appealing to drivers for their cooperation and understanding.

Furthermore, we are trying to increase the number of overhead crossings to eliminate level crossings with roads, and are doing this with the cooperation of local governments, neighboring residents, and the police. In addition, for countermeasures against secondary accidents caused by derailments at level crossings, we are installing derailment prevention guards at level crossings.

■Station platform safety

In the fiscal year ending March 2011, there were 76 accidents in which customers fell from platforms onto tracks or came into contact with trains. JR East is installing protection-related devices, including emergency train-stopping systems, on our platforms to ensure the safety of its customers. In addition, since customer awareness and cooperation are also vital to safety on our platforms, we are implementing our “Zero Platform Accident Campaign” through posters, as a measure to heighten the safety awareness of our customers.

Furthermore, as an additional accident prevention measure for customers on platforms, JR East is introducing automatic platform gates on the Yamanote Line. In FY 2011, JR East introduced automatic platform gates at Ebisu and Meguro Stations. From this fiscal year, FY 2012, we will install gates at all remaining stations, applying the knowledge we accumulated through the analyses of technical issues and the impact on train operations observed at the first two stations. In FY 2013, we plan to introduce these automatic platform gates to Osaki and Ikebukuro Stations, and, in FY 2014, to Otsuka, Sugamo, Komagome, Shin-Okubo, Mejiro, Takadanobaba, and Tamachi Stations. With the exception of the 4 stations of Shimbashi, Shibuya, Shinjuku and Tokyo, which require large-scale improvement work, we plan to complete installations in all stations on the line by March 2019.

Automatic platform gates on the Yamanote Line

Measures taken since the accident on the Uetsu Line

On December 25, 2005, the limited express train Inaho No.14 derailed between Sagoshi and Kita-Amarume Stations near the No. 2 Mogami-gawa Bridge. We would like to report on the measures we have taken since this accident.

■Increased number of anemometers (wind meters)

To date, JR East has increased the number of anemometers at the accident site between Sagoshi and Kita-Amarume Stations. In addition, for sections with operational restrictions due to strong winds, we established multiple anemometers as our new standard and increased the number of anemometers in locations where windbreak fences were installed.
Additionally, by reconfirming the requirements for wind restrictions on sections of railway lines, using information from front-line employees, topography, and wind conditions of the areas, and adding new operation restriction sections, we are working to improve our safety observation network to counter the effects of these strong winds. Furthermore, by the end of March 2010, we had completed our planned increase and installation of anemometers on the lines.

	As of Dec. 25th, 2005: A	As of Mar. 31st, 2011: B	Increase (B-A)
Conventional lines	228 units	699 units	+471 units
Shinkansen Lines	89 units	158 units	+69 units
Total	317 units	857 units	+540 units

■Installation of windbreak fences

In order to reduce wind force on trains, we have installed windbreak fences at the following locations:

<As of Mar. 31, 2011>

	Line Name	Section	Location of Installation	Time Complete
1	Tokaido Line	Adjoining Nebukawa Station	Both sides of the line	Jul. 1991
2	Joban Line	Between Yonomori and Ono	West side only	Feb. 1996
3	Kawagoe Line	Between Sashiogi and Minami-Furuya	North side only	Apr. 1998 Jun. 2009 Extension
4	Uetsu Main Line	Between Sagoshi and Kita-Amarume	West side only	Nov. 2006
5	Tohoku Main Line	Between Fujita and Kaida	West side only	Nov. 2006
6	Tohoku Main Line	Between Kurihashi and Koga	Both sides of the line	North side: Mar. 2007 South side: Jun. 2007
7	Joban Line	Between Fujishiro and Sanuki	Both sides of the line	Mar. 2007
8	Keiyo Line	Between Kasai Rinkai Koen and Maihama	South side only	Mar. 2007
9	Keiyo Line	Between Ichikawa Shiohama and Futamata Shinmachi	South side only	Mar. 2007
10	Keiyo Line	Between Kaihin Makuhari and Kemigawa-hama	South side only	Mar. 2007
11	Musashino Line	Between Misato and Minami-Nagareyama	Both sides of the line	South side: Mar. 2007 North side: Jun. 2009
12	Keiyo Line	Between Shiomi and Shin-Kiba	South side only	Jun. 2007
13	Keiyo Line	Between Shin-Kiba and Kasai Rinkai Koen	South side only	Aug. 2007
14	Keiyo Line	Between Futamata Shinmachi and Minami-Funabashi	South side only	Aug. 2007
15	Musashino Line	Between Minami-Koshigaya and Yoshikawa	Both sides on bridge sections North side	Both sides on bridge sections: Mar. 2009 North side: Feb. 2010
16	Musashino Line	Between Kita-Asaka and Nishi-Urawa	Both sides	South side: Dec. 2009 North side: Aug. 2010

■Expanded introduction of a gale warning system

We have been adding to our gale warning system to raise the level of safety by restricting operations not only when the actual wind speed measured by anemometers exceeds restriction thresholds, but also when the projected maximum wind speed exceeds these limits.
Installation of our gale warning systems to all locations with operation restrictions against gales for conventional lines was completed by September 2010.

	As of Dec. 25th, 2005: A	As of Mar. 31st, 2011: B	Increase (B-A)
Number of locations with gale warning systems	6 locations	296 locations	+290 locations

■Utilizing meteorological information to test methods for operational restrictions

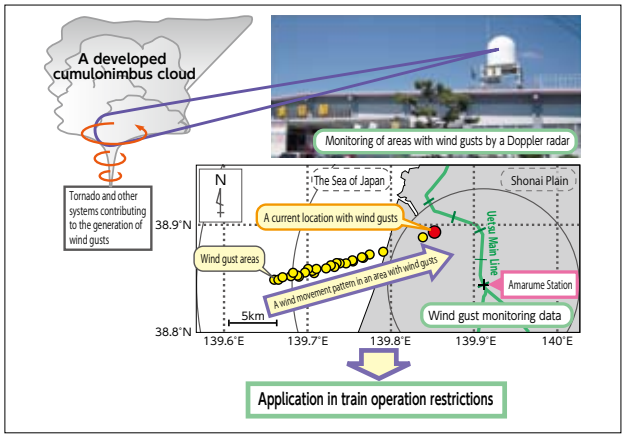
Local gusts are meteorological phenomena, and are difficult to observe with conventional observation equipment such as anemometers. Through meteorological information obtained from the Japan Meteorological Agency radar, and by detecting the passing of cold weather fronts and the accompanying development of cumulonimbus clouds, we have been investigating how to forecast the occurrence of local gusts and to apply that information to our operational restrictions. From fiscal 2008, the system was tested during the winter on the Uetsu Main Line between Niitsu and Sakata and on the Hakushin Line between Niigata and Shibata. On February 17th, 2009, we added the system to sections of the Uetsu Main Line, Shin-etsu Main Line, Echigo Line, Yahiko Line, and Riku-u West Line for additional testing.
During this four year period of testing, though we initiated train operational restrictions a total of six times, we did not observe any actual occurrence of local gusts.

■Research of a Doppler radar observation method

We are currently investigating the possible utilization of a Doppler radar observation method to help identify local gusts, as information to be used for operational restrictions. Doppler radars can determine wind conditions by detecting the movements of raindrops and rain clouds and are used at some airports for detecting local gusts.
Since 2007, we have conducted local gust observations using a Doppler radar. With the system constructed in 2010 as a basis for a local gust detection system, we started real-time local gust detection experiments at Amarume Station on the Uetsu Main Line. While conducting ongoing validations and improvements through experimental monitoring of the local gust detection system, we will advance our research on the application potentiality of the system for train operation restrictions.

Doppler radar installed on the roof of Amarume Station on the Uetsu Line

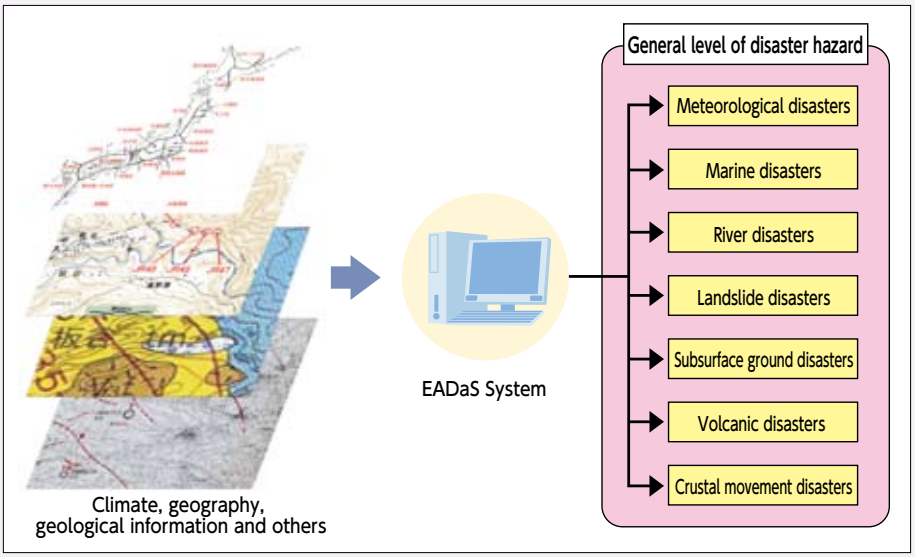
Doppler radar main body



Technological developments supporting railway safety

■Disaster risk evaluation system (EADaS) to prepare for natural disasters

We are currently developing a disaster risk evaluation system (EADaS: Environment, Agent, Disaster, and Structure), which will quantitatively evaluate the vulnerability to natural disasters of random locations across Japan by assessing relationships between natural environment features such as topography, geology, and climate and natural disasters due to topography, based on our experiences and experiments. We are now working on the systemization of the EADaS method, aiming for a system which will enable our staff on the front line of our field organizations to easily evaluate the vulnerability of locations to natural disasters.



EADaS system (image)

■Earthquake safety measures

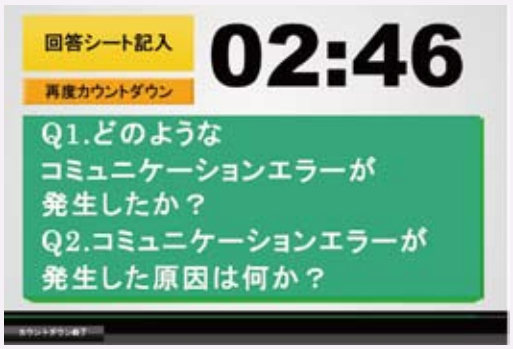
In order to prevent secondary accidents in the case of Shinkansen derailment due to an earthquake, JR East has developed and introduced railcar guide systems (L-shaped car guide and rail rollover prevention devices) and glued insulated joints.
Currently, we are proceeding with research and development on measures on rail expansion joint sections.

Rail rollover prevention devices

■Training materials for workers handling maintenance vehicles

JR East has developed training materials for drivers and persons in charge of maintenance vehicles, and is utilizing the tools for training these people. Trainees can learn about frequently occurring human errors while conducting maintenance on trains through personal computers. The objective of the training is to assist trainees in learning the necessary skills for the prevention of human error. The tools encourage "thinking and speaking by themselves" trainee initiative and promote active learning through encouraging trainees to discover new things through mutual learning with other trainees and shared experience. By doing so, the tools aim for the training contents to be rooted and prevent operational accidents with maintenance vehicles.

A sample case study



The presentation of issues and promotion of active learning

Relationship with Customers

Service quality reform

■Service quality

Since its establishment, JR East has continuously striven to improve its service to the level that all customers can enjoy travel free of care. Customer requirements, however, continue to become ever more sophisticated, so we need to respond with even better services.

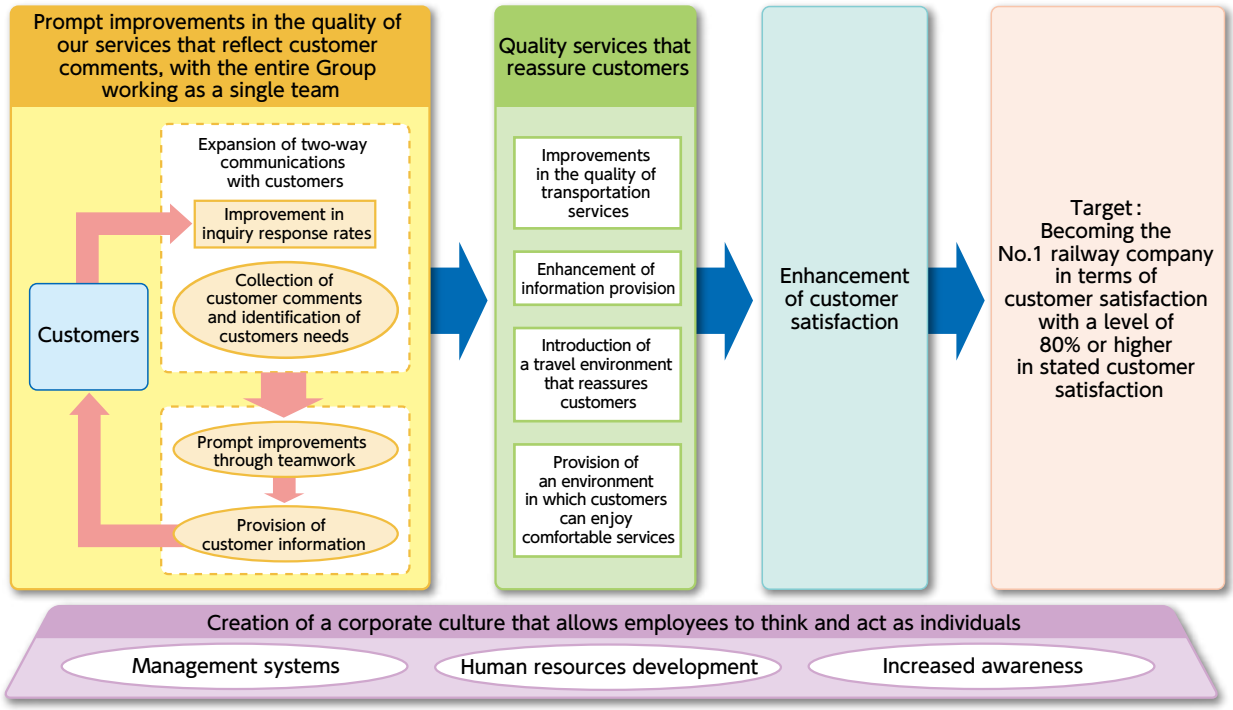
With this in mind and with the objective of achieving a continuous improvement in our service quality, in July 2010 we clarified our basic customer service quality policy and established the Customer Service Quality Reformation Department at Head Office as well as Customer Service Quality Reformation Offices at various branches. We have also designated the year 2011 the first year of service quality reform and commenced a five-year plan — Service Quality Reform Medium-Term Vision.

Service Quality Reform Medium-Term Vision is supported by the following three pillars:

- **Quality services that reassure customers**
- **Prompt improvements in the quality of our services that reflect customer comments, with the entire Group working as a single team**
- **Creation of a corporate culture that allows employees to think and act as individuals**

We will continue to make progress with service quality reforms through specific measures based on the Vision with the ultimate goal of achieving the status of railway industry No. 1 in terms of customer satisfaction.

■Overall Goals of the Service Quality Reform Medium-Term Vision



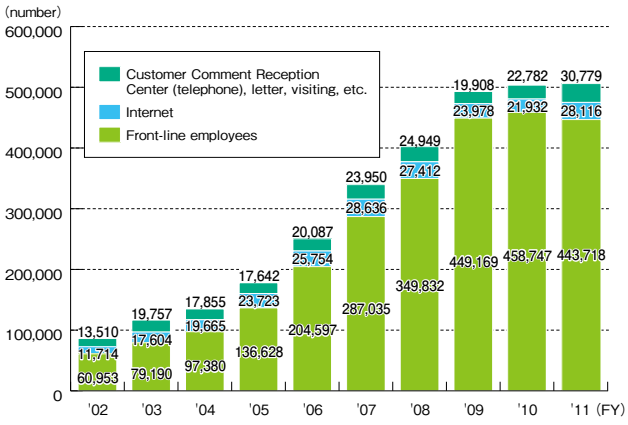
Customer Comments at the Core of Policy

■Customer comments

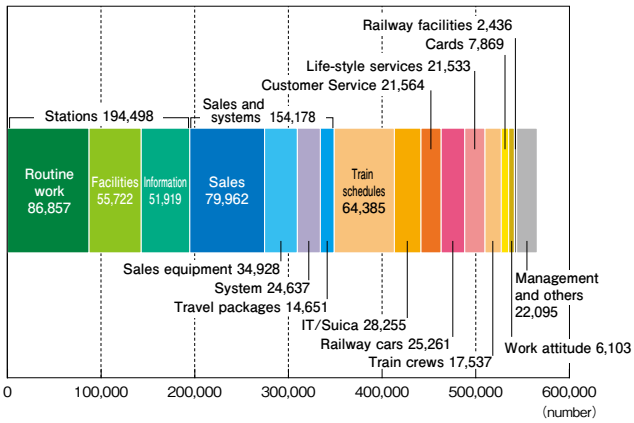
The core of improved quality of service in JR East has been our constant attention to customer comments, and in the future we will continue to monitor customer desires and introduce speedy service quality reforms in line with their expectations. To constantly improve our services it is vital for us to listen carefully to customer comments—both positive and negative—and then promptly respond to their requests through service improvements.

JR East has various methods of collecting large numbers of customer comments on a daily basis, including those passed directly to front-line employees, those posted on the Internet, and those given over the telephone. All of these comments are quickly shared and analyzed on a companywide basis, and form the core of our improvements. We believe that each and every individual customer comment contributes to the core of improved customer satisfaction.

■Trends in the number of customer comments by channel (FY 2002~)



■Customer opinions (Total 565,714)



*The chart shows the number of comments on each subject. Some customers commented on more than one subject.

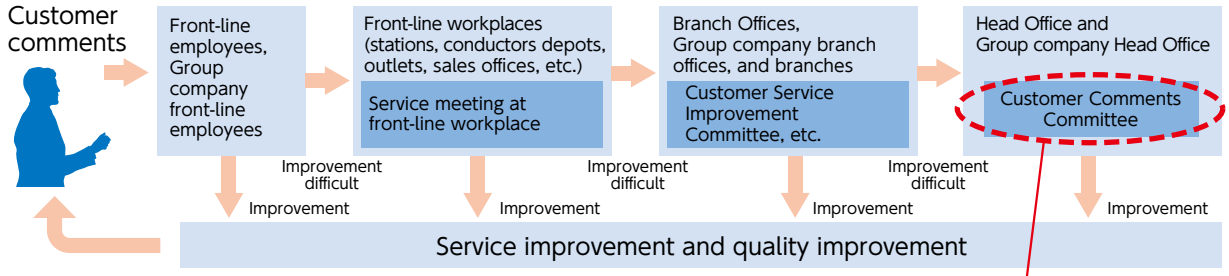
■Customer Satisfaction Surveys

We conduct customer satisfaction surveys via our JR East Customer Questionnaires to enable us to gain an understanding of how customers evaluate our services that we cannot get simply through customer feedback and to quantitatively check levels of customer satisfaction. The survey results are used to decide which issues JR East should most urgently address as well as to confirm the efficacy of previous measures.

■Prompt service quality improvements with customer comments at the core

Customer comments may be discussed at various levels. Initially a decision about whether an improvement is necessary or not is made at the level that received the original customer comment. If no decision can be made at that level, then the customer comment is passed on to higher discussion levels all of which are striving to introduce as many customer-suggested improvements as possible in a concrete form. At the very top level, we have also established the Customer Comments Committee, chaired by the president, which considers the possible implementation of improvement measures based on collected customer comments. Through this system, we are constantly striving for the attainment of improved customer services.

■Systematic improvements based on customer comments



What is the Customer Comments Committee?

Chaired by the president, the committee discusses the necessity of improvements requested by customers and specific solution measures that will ultimately lead to speedy improvements.

■Specific Improvements Made by the Customer Comments Committee

Customer comments

I purchased a commuter pass from a multi-function vending machine and paid with a credit card, but no receipt was issued. Having to go to the ticket office for the issuance of a receipt is inconvenient.

From mid March 2011, the issuance of receipts for credit card settlements less than ¥30,000 has been enabled.

I wear a maternity identification badge but have never been offered a priority seat.
I want to have the maternity identification badges displayed above priority seats.

From January 2011 the maternity identification badge logo was introduced for priority seats on commuter trains operating in the Tokyo metropolitan area.

We will continue, acting as a single team, to make company-wide efforts to introduce improvements based on customer comments.

Quality services that reassure customers

■Creation of a safe environment

The provision of safe and stable transport is the basis of service quality. To achieve such safe and stable transport, JR East works constantly to increase the levels of stability while at the same time proceeding with the creation of an environment in which passengers can travel free of worry.

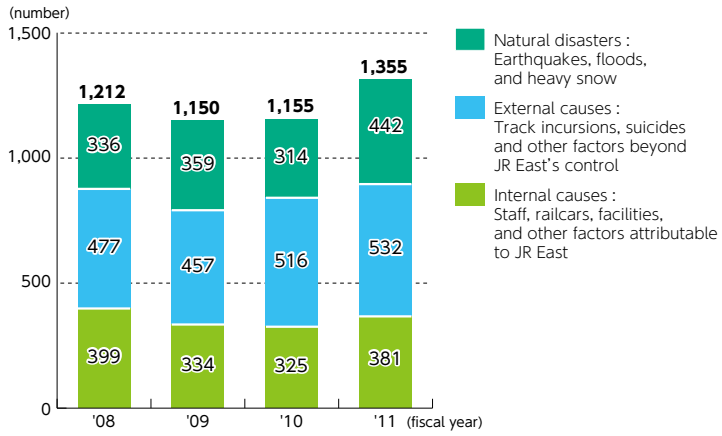
■Improvement in the quality of transport

To improve the quality of transport, JR East constantly works on the prevention of transport disruption as well as the implementation of measures to enhance our post-disruption response abilities and improved passenger information provision.

■Transport disruptions

Transport disruptions refer to the suspension of operations or to delays of 30 minutes or more due to railcar and/or facility problems or natural disasters. In the fiscal year ending March 2011, both internal and external causes increased and there were 1,355 cases (a year-on-year increase of 200).

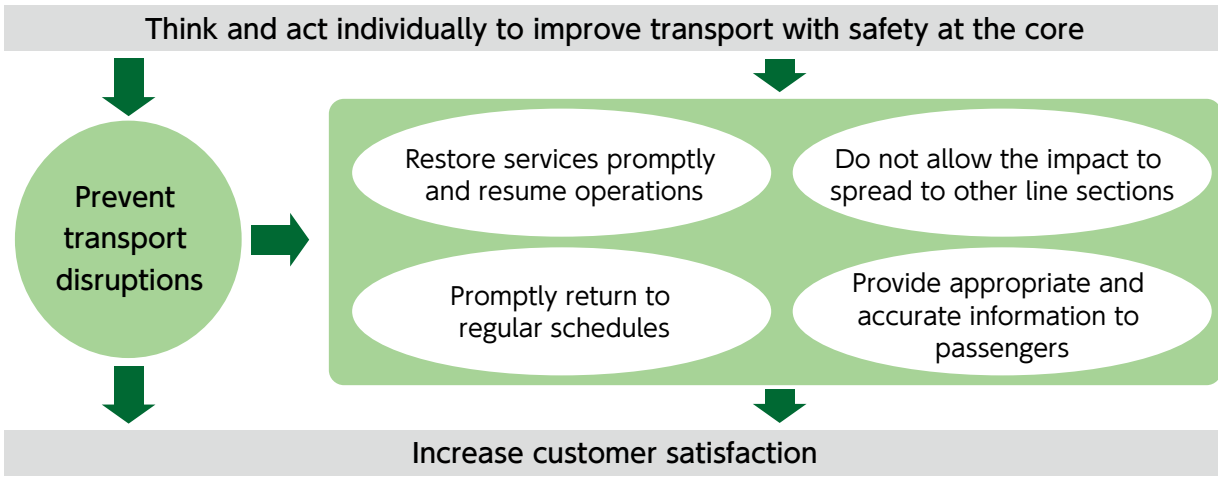
■Trends in transport disruptions



■Prevention of the occurrence of transport disruptions and rapid resumption of operations

To increase transport continuity of services, we are implementing hardware measures designed to prevent transport disruptions on an on-going basis, including the introduction of double fail-safe system railcars*, the construction of next-generation turnouts, measures to reduce lightning strike damage to electric facilities, and installation of windbreak fences. In regard to transport disruptions we are working to establish targets, such as minimum times required for restart of operations so as to achieve earlier restoration and operational resumption.

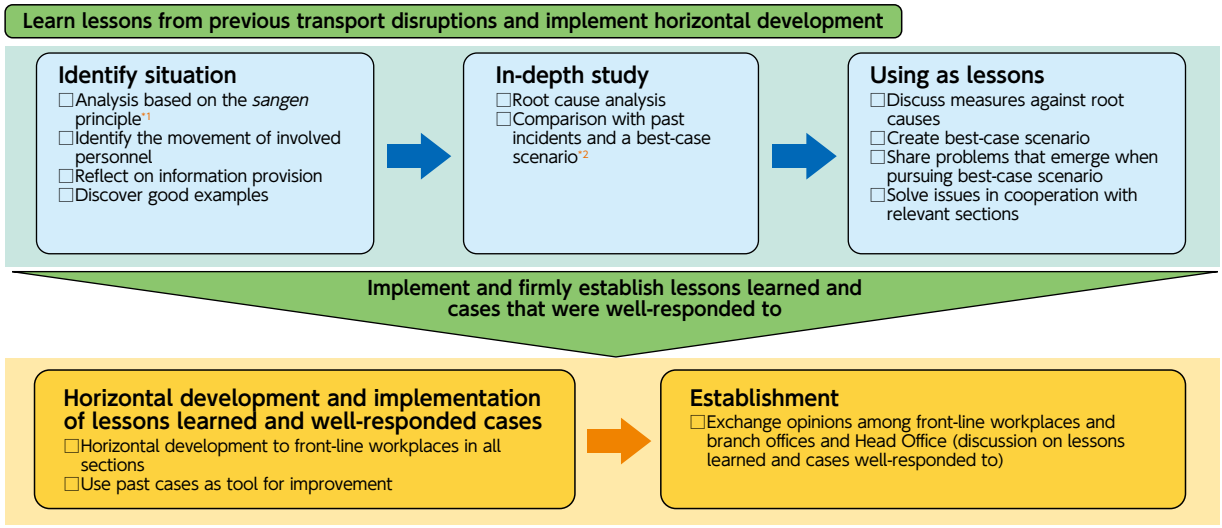
* Double fail-safe system railcars: Railcars demonstrating increased reliability through ensuring that items of major equipment have double fail-safe systems.



■Learn lessons from transport disruptions and implement horizontal development

While reflecting on past examples of transport disruption, we examine measures to prevent recurrences. JR East is working on early-improved transport stability through the accumulation of lessons from the past that can be utilized to increase our ability to respond to transport disruptions.

■Learn lessons from previous transport disruptions and systematically implement horizontal development



*1 *Sangen* principle: Understand the three actualities—actual locations, actual objects, and actual people—to accurately recognize the actual situation and take the necessary measures
*2 Best-case scenario: Ideal response in cases of transport disruptions

■Information Enhancement

In order to enable us to provide prompt and accurate passenger information during transport disruptions, we have installed transport disruption information displays in 107 stations (as of March 31, 2011). We are also striving to provide information via a variety of tools including train monitors, the Internet, and mobile phones.

Information display during transport disruptions


Information on the website

■Problem prevention measures taken by the facilities section

We are working to lessen the impact of transport disruptions with priorities on a reduction in the actual number of incidents, rapid restoration of services when incidents do occur, and the provision of accurate customer information. In the facilities section in particular, in order to reduce the severity of problems and failures the following measures are being taken: facilities strengthened or doubled to make them less likely to cause problems, establishment of a restoration base, and an increased backup supply. These initiatives have resulted in a downward trend of transport disruptions in the Tokyo metropolitan area.
In our efforts to provide accurate customer information, we are working to enhance and improve our information displays.
We will continue to strive for a reduction in transport disruptions by analyzing past occurrences and the implementation of facility strengthening measures in terms of both software and hardware.

■Transport Services Improvements

We are continuously striving to enhance the convenience of both Shinkansen and conventional lines and to reduce rush-hour congestion through such measures as increasing the number of cars and introducing wider-bodied cars. In December 2010, the Tohoku Shinkansen extension between Hachinohe and Shin-Aomori was completed greatly reducing travel time between Tokyo and Aomori. In the Tokyo metropolitan area, convenience in the Tokyo Mega Loop* was enhanced by establishing a new Musashino Line direct service extension to Omiya Station and easing congestion on the Yokohama Line by increasing the number of night time operations.

Furthermore, the new E5 Series Hayabusa high-speed Shinkansen railcars were introduced in March 2011 with a 300 km/h service, the fastest commercial operations in Japan, thereby enhancing our overall service.

During the fiscal year ended March 2011 the average level of in-train congestion during morning commuting hours declined by 59 percentage points to 179% compared to the fiscal year ended March 1988. We will continue our efforts to secure reliable transport through a reduction of transport disruptions and other means to meet perceived needs of customers.

* Tokyo Mega Loop: Musashino, Keiyo, Nambu and Yokohama loop lines in the Tokyo metropolitan area that connect with other railway company lines.

■Service Managers

JR East is increasing the number of service managers who make rounds of stations and are in position to assist elderly customers and those not used to traveling. These service managers provide relevant and timely information and guidance and other fine-tuned services in times of emergency as well as during regular operations. As of April 1, 2011, service managers are located at 47 stations.

■Barrier-free Stations

JR East has been working with local governments and other entities to install elevators at stations in accordance with the Barrier-Free Transportation Law. As of the end of March 2011, we had completed installations in 469 stations.

Chuo Line (Rapid) platform in Shinjuku Station

Jujo Station upbound train platform

■Barrier-free Railcars

To improve accessibility for persons with vision impairments, in the fiscal year ended March 2006 we installed Braille maps and stickers indicating the passenger's current location and the locations of various facilities on all Shinkansen trains. On conventional lines we also are placing Braille stickers identifying car numbers and door locations.

In December 2006, the new universal design E233 series railcars started being introduced sequentially to the Chuo Rapid, Keihin Tohoku, and Keiyo Lines. Spacious toilets capable of accommodating advanced electric wheelchairs with handles, were introduced on New Narita Express E259 series trains and on the new Shinkansen E5 series Hayabusa in October 2009 and March 2011, respectively.

■Increased Escalator Safety

To prevent injuries to customers when they use escalators, we are carrying out safety enhancements including measures that will prevent sandals from getting caught, prevent falls during emergency stops, and prevent steps from descending when escalators stop.

In a specific move JR East, in a united campaign with other railway companies and Japan Elevator Association, has been stressing the necessity of improved safety by directly addressing customers with, for example, a poster campaign showing the importance of holding on to the handrails, and promoting escalator safety in general.

■Baby Stroller Safety Measures

In order to guarantee the safety of passengers with baby strollers, we have been working to improve the detection ability of railcars doors if and when baby stroller frames get caught. We are also carrying out a joint campaign with other railway companies, baby stroller manufacturers, local governments, and nonprofit organizations (NPOs), under the slogan "Let's Protect Babies," that urges passengers with baby strollers to be extra careful, as well as asking other passengers to pay attention to potential accidents.

"Let's Protect Babies" campaign

■Placement of Automated External Defibrillators (AEDs)

AEDs are medical electroshock devices for the treatment of ventricular fibrillation caused by cardiac arrest. The devices have been widely used in the United States and Europe since around 2000. JR East has been working on placing AEDs near ticket gates at stations with many customers, and as of the end of May 2011, 310 stations have been equipped with one or more AEDs (446 AEDs in total). The placement of AEDs on Shinkansen and new Narita Express trains was instigated in February and October 2009, respectively, and as of March 31, 2011, 162 AEDs had been installed.

■Total Smoking Ban in Tokyo Metropolitan Area Stations and Trains

For several years in line with customer requests and an increasing general public aversion to smoking, JR East has worked to eliminate passive smoke. In April and October 2009, as well as removing all smoking areas from platforms at major Tokyo metropolitan area stations, we went one step further and initiated a limited smoke-free station interior policy, which was widened in June 1, 2011, again in line with customer requests. All smoking was banned on JR East's Shinkansen and limited express trains from March 2007 and on some trains providing through services with other companies from June 2009.

Total smoking ban covering most of the Tokyo metropolitan area

■Improvements in Station Toilets

In order to dispel the image of station toilets as dark, dirty, and malodorous and to enable customers to be able to use them comfortably, since its establishment JR East has constantly upgraded its toilet facilities. Measures taken include a change to western-style toilets, improved ventilation and the use of larger floor tiles.
Furthermore, to reduce the amount of water used, we are introducing water flow controllers that automatically distinguish the use and provide the optimum amount of water as well as washbasins equipped with automatic faucets.
During this fiscal year ending March 2012, we will renovate the toilets in approximately 10 more stations and thereby increase customer comfort and satisfaction.

Tokyo Station (Keiyo Line B-1F)

■Setting and Usage of the WiMAX Base Station

Since February 2009, UQ Communications Inc. has been offering an Internet connection service using UQ WiMax. In conjunction with this service, we have been setting up WiMAX base stations that enable Internet connection in station concourses where connection had previously been difficult or impossible. As of May 31, 2011, easy connections are now available at 142 stations.
Furthermore, taking full advantage of the system's broadband capabilities, WiMAX is now being used to provide transport disruption information to some station displays.

■More Comfortable On-board Air Conditioning

JR East is working on improvements to railcar air conditioning (cooling and heating) to make railway travel more comfortable. On new railcars (E231, E233, and E5 series) fully-automatic air-conditioners are installed. On other cars, continuous efforts are being made to provide the most comfortable environments possible by having conductors carry out frequent temperature checks, thermostat changes and other detailed responses, as well as by taking other actions appropriate for the different conditions on individual railway lines.

■Women-only Cars

In order to enhance the safety of female passengers we have introduced women-only cars on the Saikyo Line during late night operations (July 2001), and during morning rush hours (April 2005). Currently women-only cars are also operating during morning rush hours on the Chuo Rapid Line (September 2005), the Joban Local Line (May 2006), the Sobu Local Line (November 2006), and the Keihin Tohoku and Negishi Lines (April 2010).

■Measures for Female Molestation

In addition to the adding of women-only cars during certain hours, and with the aim of enabling female passengers to travel stress free, we have been installing SOS buttons on major Tokyo metropolitan area lines that women can use to alert train crews if they experience molestation. Furthermore, in cooperation with police and other railway operators we are actively conducting a campaign to eliminate train molestation and have significantly increased security surveillance on trains and in stations. As a further step in the discouragement of female molestation, we have installed on-board security cameras in the leading cars on all Saikyo Line trains.

■New Narita Express Service Improvements and Security Measures

The new Narita Express (N'EX) E259 type railcars are equipped with large LCD panels showing destinations, operational conditions, news, flight data, and other information in four languages (Japanese, English, Chinese, and Korean) and by introducing a WiMAX system, the latest information can be provided regardless of whether the train is in motion or halted. A high-speed Internet connection service is also available via a wireless LAN.

To even further strengthen security, we have completed the installation of on-board security cameras in the leading cars of all Saikyo Line trains, in which the highest number of female molestations previously occurred. Security cameras have also been installed on the new Narita Express E259 series and new Shinkansen Hayabusa E5 series.

■Suicide Prevention Measures

JR East has constantly supported NPOs in their efforts to prevent suicides and has, for example, installed blue lights (believed to discourage suicide attempts) at the edges of platforms. In March 2011, in conjunction with the government's "Suicide Prevention Enhancement Month" we carried out a campaign named "JR East ♥ Life Assisting Month" to aim at reducing the number of suicides by strengthening our efforts to provide life support. These measures included the provision of information regarding consultation services through posters, etc., the operation of Support Life Trains, and the introduction of telephone counseling in collaboration with the Federation of Inochi no Denwa Inc.

Creation of a Think and Act by Yourself Culture

■Human resources development to enhance service quality

With the goal of achieving even more service improvements, we hold regular service quality training sessions and symposiums, and are working to create a workplace environment in which employees think and act by themselves.

Service quality symposium

Service quality training sessions

■Hospitality

We have also encouraged our employees to qualify for Service Assistance certification, with the aim of instilling in them a spirit of hospitality. As of the end of March 2011, approximately 6,400 employees had received level two certification.

JR East's Life-style Business

■JR East's Life-style Business

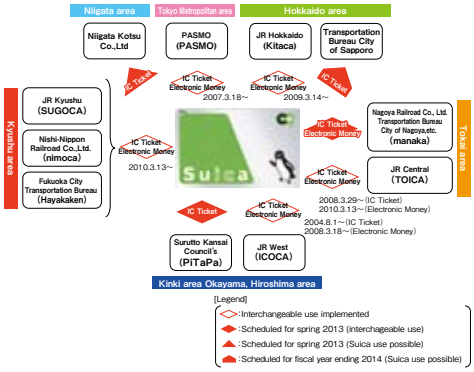
JR East operates a broad range of life-style businesses and provides services to support the everyday lives of our customers as well as in their various lifestyles and life stages. These services include retail stores within station buildings, hotels, office buildings and fitness clubs that benefit from their locations near stations, advertising in stations and on trains, childcare support in areas adjoining railway lines, and housing.

Suica improves customer convenience

■IC Farecard—Expansion of Interchangeable Usage

The popularity of our Suica IC card has increased because of its convenience, which has led to an increase in the number of cardholders to more than 36.3 million as of the end of June 2011. Suica usage has recently been expanded in several ways. In addition to its use on our Tokyo metropolitan, Sendai, and Niigata area lines, Suica is interchangeable with the PASMO IC card, so it now can be used on almost all train and bus services throughout the Tokyo metropolitan area. Interchangeable use has also been expanded to include JR West's ICOCA, JR Central's TOICA, and JR Hokkaido's Kitaca, and in March 2010 interchangeable use with JR Kyushu's SUGOCA, Nishi-Nippon Railroad's nimoca, and Fukuoka City Transportation Bureau's Hayakaken began. And there are even more plans for the future. Interchangeable use with Tranpass IC Council's manaca and Surutto Kansai Council's PiTaPa are planned from spring 2013.

■Expansion of Interchangeable Usage



■Service Area

■Electronic Money

In addition to being convenient for the payment of fares, Suica is becoming increasingly useful as e-money. The card is now accepted at many stores in or near railway stations, and can also be used at Family Mart, Lawson, Circle K Sunkus, Seven-Eleven, Aeon, and Takashimaya stores and other non-station outlets as well as for Coca-Cola vending machines and Yamato Transport. As shown in the above figure, Expansion of Interchangeable Usage, Suica is now interchangeable with many IC cards and, as of the end of June 2011, Suica could be used at 152,000 outlets nationwide, with maximum daily transactions reaching a total of 2.82 million.

Suica electronic money

■Responding to Diverse Needs

Suica functions are expanding in line with the diverse needs of today's customers. In addition to ordinary services, these functions include Mobile Suica (service also available from July 23, 2011 with Android™ installed smartphones supporting Osaifu-Keitai) which allows passengers to purchase JR East Shinkansen reserved tickets and board trains without needing to get paper tickets, Suica Internet service where money deposits (Suica charges) and Internet shopping settlements can be made, and View Suica Card, a Suica and credit card combination operated in cooperation with airlines and financial institutions. JR East will continue to develop Suica as an easy-to-use and convenient IC card.

Mobile Suica

View Suica Card

Suica Internet service

Appeal to Overseas Visitors

■Proposal of products that appeal to overseas visitors

In addition to the Japan Rail Pass, which allows unlimited travel on all JR lines, we now offer the JR East Pass which allows unlimited usage within the JR East service area. In autumn 2010, to coincide with the Shinshu Destination Campaign, we introduced the reasonably priced (¥10,000 for adults) JR East Pass Special flexible 3-day ticket (any three days can be chosen for travel from a total of 10), which, together with a strengthening of traveler recognition of the Shinshu area brought about through our website and foreign media usage, has led to an increase in visitors.

Other bargains for overseas travelers include the Suica & N'EX package which provides access to central Tokyo and travel therein, and since February 2011 the Suica & Monorail package which contains a Suica with an original design and a Tokyo Monorail discount train ticket.

■JR East Travel Service Center opens to service Haneda international flights

To coincide with the opening of Haneda Airport's new International Terminal, on October 21, 2010 a new JR East Travel Service Center was opened in the Tokyo Monorail Haneda Airport International Terminal Station. At the center the Suica & Monorail package can be purchased and redemption exchange orders for Japan Rail Passes and JR East Passes can be processed.

Technology Development Toward New Railway Services

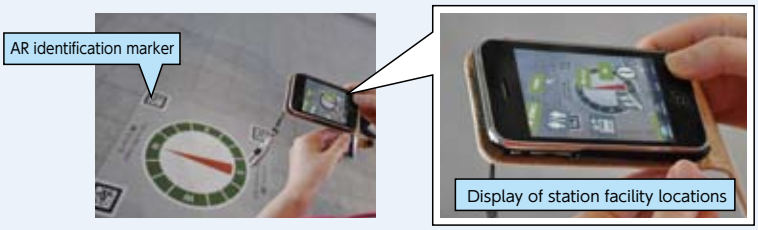
■R&D using Smart Station Lab Building

Smart Station Lab Building, a new experimental facility with the same area and equipment as a regular station, was completed in June 2010 at the Saitama City-based JR East Group Research and Development Center. In this facility it is now possible for us to conduct tests on customer flow behavior (lines of movement from free passageways through ticket gates, concourses, stairways, and train platforms) that have previously been impossible in operating stations or within the narrow confines of laboratories. We are, therefore, now in a position to make overall assessments of passenger behavior.
Currently we are also carrying out basic assessment tests with the goal of developing an information system using smartphones and the introduction of light transmissive organic thin-film solar cells to the railway business.

Smart Station Lab Building

(1) Smartphone information system

We are currently carrying out research into station information systems utilizing smartphones and Augmented Reality (AR) technology. With such a system if passengers look at AR identification markers on station floors and elsewhere through a smartphone, information regarding locations of ticket gates, toilets, and other facilities will be displayed on their smartphone screens. Using AR technology in this way will enable information provision via smartphones, even inside stations where GPS and electronic compasses often fail to function adequately. In November 2011, a group combining four companies—JR East, Softbank TelecomCorp., DNP Digitalcom Co., Ltd., and Bookmark—won the 2010 Good Design Frontier Design Award.



(2) Basic assessment tests toward the introduction of light transmissive organic thin-film solar cell to the railway business

We are currently conducting basic assessment tests on the potential for the introduction of light transmissive organic thin-film solar cells to the railway business. Compared to traditional silicon (inorganic) solar cells, organic solar cells have the following advantages: heat emissions during manufacturing are low, resources are abundant, expensive manufacturing equipment is unnecessary. The cells are light, thin, bendable (glass is not used as a base), and highly transmissive which make it possible to introduce them without large-scale station structural reinforcements, etc. There is also the advantage that they can be used in station windows and on platform ceilings without decreasing the flow of light. At present the energy transformation efficiency we have achieved is low and cannot compare with silicon cells, but there is potential for a considerable boost in power generation capabilities within several years. Given this, we will continue to plan for the future and consider their application in stations.


Light transmissive organic thin-film solar cell

■R&D regarding more comfortable seats

On commuter trains we have introduced such improvements as widening seats and clarifying individual seat spaces so that as many passengers as possible can sit comfortably. We found, however, that there are many instances where passengers are made uncomfortable by others sitting with their legs wide open, leaning on their neighbors, and/or stretching out their legs. We also found out that some seated passengers are worried that they themselves might be causing discomfort in others.

As a result, we designed and produced prototype seats that are comfortable to sit on and not invasive to nearby passengers with the aim of balancing comfort and compromise. With an eye to commercialization, from June 2011 we have been conducting trials on one car on the Yamanote Line in order to verify the comfort, durability, cost, etc., of the seats.


The result of our pursuance of improved passenger comfort

Relationship with Society

With communities

JR East is continuing its commitment to regional communities through its Station Renaissance program which revitalizes stations that serve as the cores of their communities, and thereby contribute to the increased attraction of entire areas. One such initiative was the transformation of Tachikawa Station into a more user-friendly environment by increasing its barrier-free facilities, creating the ecute Tachikawa commercial space, and opening Hotel Mets Tachikawa.
On the Yaesu side of Tokyo Station, GranTokyo North Tower and South Tower and GranRoof are continuing to rise and develop; North Tower (phase II) will be completed at the end of August 2012 and GranRoof in autumn 2013. On the Marunouchi side of the station, work is now under way to totally restore the station building to its original form. An in-station commercial zone, GranSta, is also being developed. In combination, the developments will be called Tokyo Station City, under the concept of developing Tokyo Station into a complete city. Our goal is to create a station that will serve as a transmission base for new cultures, while also forming a spectacular gateway to the metropolis of Tokyo.
We are also cooperating with local governments in the creation of new stations in line with their urban planning, and continuing with the improvement of existing station buildings in order to create free passages, based on requests from local authorities. In the fiscal year ended March 2011, in coordination with development projects in surrounding areas, Sawara Station on the Narita Line was renewed and now hosts a community center within the station. This means that since our establishment in 1987 we have introduced local government facilities into a total (as of March 31, 2011) of 81 stations. Station building renewal projects were also continued with the construction of free passages in Hitachi and Suzumenomiya stations on the Joban and Tohoku Main lines respectively.


Sawara Station


Hitachi Station

■Railway Overpasses

JR East continues to cooperate with local government-planned and -implemented schemes for railway overpasses. These projects aim to both unify towns that are split by railway tracks and eliminate traffic congestion, thereby simultaneously improving the safety levels of both road and rail transportation. Along the Chuo Line, for example, in a bid to unify towns and to eliminate congestion by decreasing the number of level crossings, we introduced a program of overpass construction between Mitaka and Tachikawa stations in cooperation with the Tokyo Metropolitan government, the entity responsible for the roads in this area. There used to be 18 level crossings along this approximately 13.1 km section, but by November 2010, railway tracks had been elevated and all level crossings removed.

Overhead Crossing

Rediscover Local Areas Project

■Development of the Rediscover Local Areas Project

Under the "Create Together" strategy in which a clear division of roles is stipulated between JR East and regional communities, we are promoting the Rediscover Local Areas Project. The aim of this scheme is to create new markets that also take into account overseas visitors to Japan and thereby bring about increased flows of both visitors and goods among the Tokyo metropolitan area and other regions.

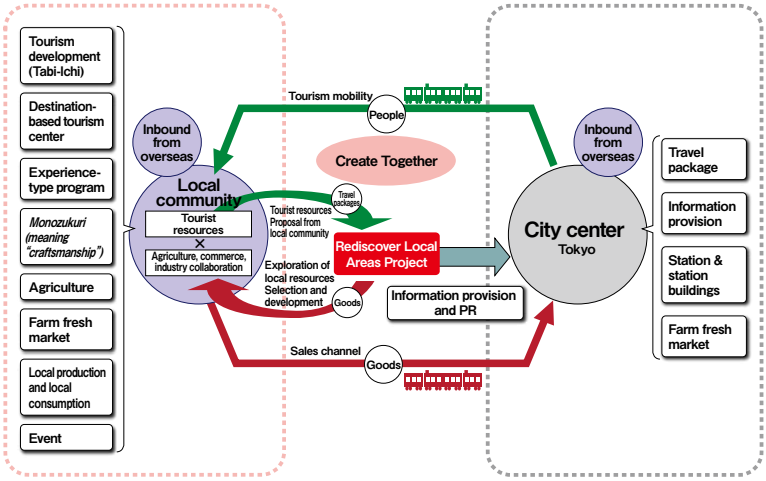
The JR East Group has the following attributes: railway networks that link Japan's various regions, stations that serve as centers of local communities, business know-how, sales channels and advertising power that all radiate out from the Tokyo metropolitan area, along with human resources that continuously make social contributions as members of local communities. The Rediscover Local Areas Project utilizes JR's unique abilities to fully exploit the traditional cultures, festivals, techniques, local produce, and other tangible and intangible tourist resources, expand sales channels, and promote the interactive exchange of information among the Tokyo metropolitan area and regional communities.

During the fiscal year ended March 2010, JR East carried out development and renewal of its long-stay hotels and stations in the Iwate, Tateyama, and Echigo-Yuzawa areas utilizing features unique to each area. We have thus pursued regional revitalization through our policy of cooperation with local residents. In the fiscal year ended March 2011, furthermore, following the commencement of Tohoku Shinkansen operations to Aomori, in collaboration with urban planning organizations in the city of Aomori, we opened A-Factory, a complex that consists of a craft center and market in the heart of the Aomori waterfront district. In the craft center apples grown in Aomori Prefecture, Japan's largest producer, will be processed into cider while in the market, agricultural and other local products will be sold. We are also proposing to increase the tourist appeal of Aomori in a tie-up with the Tabi-Ichi travel package through which local residents both propose and guide tours of as yet little-known tourism resources.

To stimulate increased interest throughout the Tokyo metropolitan area, furthermore, in collaboration with our destination and other marketing campaigns, we are hosting a number of farm fresh markets at locations such as Ueno Station and other central sites. All of these efforts are aimed to increase tourism through wider publicity of the attractions of Japan's various regions. With these farm fresh markets, we at JR East are working to provide information in cooperation with local communities by holding tourism publicity and other events and by utilizing our transport media including digital signage.

We will continue to promote regional revitalization through cooperation with local governments, organizations, producers, and through the power of local communities including schools and companies.

■Rediscover Local Areas Project




A-FACTORY


Tabi-Ichi

Childcare Support

■Childcare Support Facilities—Support for working parents

As part of our urban development initiatives in cooperation with local communities, JR East is supporting the opening of childcare facilities such as nursery schools in locations within five minutes of stations, thereby enabling parents to balance childcare responsibilities and employment. The total number of childcare support facilities opened since 1996 reached 54 in April 2011 and further expansion is being targeted. Nursery schools adjacent to stations have the advantage of enabling parents to drop off and pick up their children on their way to or from work. We have also noted an increase in the number of children being dropped off and picked up by their fathers, which demonstrates that our efforts in this field are leading to an increased level of male participation in childcare. We will continue to accommodate a variety of childcare-related needs and broaden the framework of our childcare initiatives to include not only nursery schools but also kids' station and station after school centers which take advantage of their location near stations, as well as nursery services such as our parent-child community cafés which can be used by all people involved in child-rearing regardless of whether they are working or not. Thus JR East will actively contribute to local neighborhoods and enhance the values of the communities located adjacent to our railway lines.


Shinkansen train and nursery school near station


Children playing in station rooftop garden

■Refresta: Support for Mother-Baby Trips

Refresta provides integrated facilities consisting of baby resting areas, make-up lounges, and cafés. In the baby resting areas we provide changing tables, breast-feeding booths, and child toilets, with the aim of enhancing the opportunities and comfort of mothers who go out with their babies or small children.

Refresta

Culture

■East Japan Railway Culture Foundation

In order to continuously utilize its management resources for social contributions, in 1992 JR East established the East Japan Railway Culture Foundation, an organization that has successfully promoted local culture, studied and researched railways, and taken part in international cultural exchanges through our railway business. The Foundation's activities include operating both the Railway Museum and the Old Shimbashi Station building, sponsoring local cultural activities, and accepting trainees from railway operators in Asian countries. The Foundation provides information on its website (http://www.ejrcf.or.jp/english/index.html). It became a public interest incorporated foundation in April 2010.

■Railway Museum

In 2007, the Railway Museum was opened in Saitama City, and it is based on three major concepts. It was designed to be a museum that systematically conducts surveys and research using railway-related heritage and reference materials, a history museum that depicts the history of railways focusing on exhibits of locomotives and cars, and an educational museum where children can learn about railway principles, systems and technologies through hands-on experience. Since its opening, the Railway Museum has proved to be a great success, attracting 820,000 visitors in the fiscal year ended March 2011. The Museum opened the Teppaku Plaza in April 2011 and it continues to enhance its exhibitions and facilities.

The Railway Museum opened on October 14, 2007. (Railway Day) (Omiya-ku, Saitama-shi)

With the Next Generation

■Children's Railway Association

The Children's Railway Association is managed by the Traffic Manners Association, with the aim of raising children's awareness of proper manners on public transportation. In our service area, there are approximately 500 active members in 12 branches. JR East has established related facilities in each of our branch offices and actively supports the association so as to contribute to an improvement of manners on public transportation by the next generation, and provides opportunities for such activities as clean-up work in railway stations and field trips to railway facilities and branch offices.

■Development of environmental education by delivering lectures on request

In the fiscal year ending March 2010, to contribute to the development of a sustainable society, JR East initiated environmental education programs for the children to lead the next generation so that they are able to understand environmental issues and their relationships with the society. The program aims to educate children on "Information and the Environment," a program which we will continue to develop further.

Delivering an environmental education program at an elementary school in Tokyo

■Railway Museum Environment Seminar

In July 2011, the Railway Museum hosted a seminar for elementary school students on environmentally friendly railways. During the daylong course, the participants were given the opportunity to gain a broad understanding of global environmental concerns through a study of JR East's environmental measures and learned the importance of recycling through experiencing the separation of garbage generated both at stations and on trains.

Seminar on environmentally friendly railways at the Railway Museum

International

■International Cooperation

In line with the requests from such agencies as the Ministry of Land, Infrastructure, Transport and Tourism, JR East has for several years been actively involved in international cooperation through the dispatch of railway experts to Asian countries in order to explain our technologies and to provide the expertise we have nurtured over the years. We also, in line with requests from the Japan International Cooperation Agency (JICA), now regularly offer residential courses for trainees from developing countries during which we provide tuition in professional fields.

JR East also welcomes inspection tours of overseas visitors involved in the running of railways, and in the fiscal year ended March 2011, for example, we hosted 746 visitors from 60 countries. During these tours, we organized on-site visits that covered a wide variety of subjects including an introduction to the methods necessary for the privatization of a national railway company, explanations and descriptions of such cutting-edge technologies as Shinkansen trains and the Suica IC card, steps to be taken for the conservation of the global environment, and JR East's lifestyle services businesses.

Inspection of Shinkansen railcar maintenance (Shinkansen General Rolling Stock Center)

Inspection of hybrid railcar Koumi (Koumi Line Sales Office)

■Global Contribution Through International Institutions

JR East is a member of the International Union of Railways (UIC), the International Association of Public Transport (UITP), the Association of American Railroads (AAR), the American Public Transportation Association (APTA), and other international railway organizations. In addition to collecting and providing information through international conferences and publications organized by these institutions, we strive to constantly work toward the resolution of railway-related issues around the world.

We have recently been endeavoring to contribute to the global promotion and development of railway businesses by hosting conferences of these international organizations and conducting study tours introducing Japanese railway technologies. Since April 2009, Yoshio Ishida, JR East's vice chairman, has chaired the UIC, and as a group, we will continue to contribute to both Japanese and global railway development through the activities of international railway organizations.

Vice Chairman Yoshio Ishida making an address at the UIC general assembly (Beijing, 2010)

International Symposium on Level Crossings (Tokyo, 2010)

Relationship with Employees

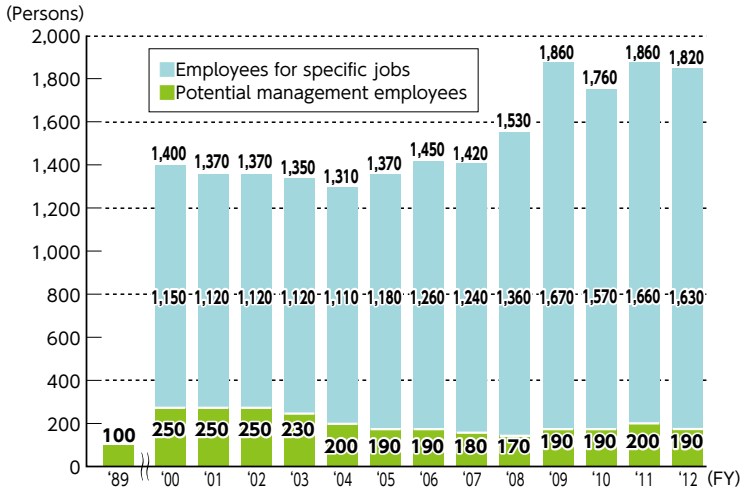
Demonstrating the power of human resources

In order to provide services that will satisfy customers, it is vitally important for us to create an environment where JR East's personnel can fully exercise their abilities. Our success in enabling our people to be able to personally decide what they need to achieve and then act on their decisions will determine the future of our entire organization.
We also have to face the fact that society is in a continual state of change, and this includes both the awareness of working people and their working environments. As a result of this, we believe that JR East, as a part of the nation's infrastructure and as an organization that aims for extreme levels of safety, must constantly respond to the motivation of all our employees as they work to meet their responsibilities, and thereby bring about improved safety and increased customer satisfaction.
JR East continues to work to provide an environment in which all employees can enjoy their jobs while Constantly striving to attain even higher goals. To that end, we are determined to face the challenge of creating a company where people grow through their work from the perspectives of how to respond to the motivation of each employee to meet challenges, how to ensure a suitable work-life balance, and how to make full use of the diversity of our human resources. In JR East Vision 2020, JR East advocated the following goals: the fostering of motivated young employees, the upgrading of the skills of management-level employees, the encouraging of veteran employees to pass on their technical knowledge and their skills to the next generation of employees who will shoulder the burdens of the 21st century, the utilization and fostering of diverse human resources, and the instigation of a strategic reform of our human resources system.

■Recruitment

JR East's main supports are the capabilities of each and every employee. In regard to human resources, it is JR East's basic philosophy to employ people based chiefly on their personalities and abilities and then to steadily nurture them until they reach the full flowering of their abilities. Because of the large number of employees reaching retirement age by the end of this fiscal year (March 2012), and the constant necessity of human resources development and the transference of knowledge and technologies to the next generation, we have recruited 1,820 new employees.

■Number of new employees by fiscal year



■Employing Persons with Disabilities

As of June 2011, 2.21% of our workforce consisted of employees with disabilities. These members of staff work alongside other employees in a broad range of positions. We further increased our ability to employ people with disabilities in April 2008, when we established JR East Green Partners Co., Ltd. which was charged with the task of promoting their employment and helping us meet our social responsibility to improve the work environment for such employees. The company was certified as a special subsidiary in May 2009.

■JR East Technical Academy

In order to motivate our young employees and encourage them develop into professionals capable of playing leading roles in all fields of railway technology, in March 2009 we established the JR East Technical Academy. The third year class that started in May 2011 consists of 29 employees from 10 technological fields who will spend the year on leave from their regular positions in order to concentrate on technological studies at the Head Office. The program has been designed to enable participants to thoroughly learn the theory and structure of their individual professional fields as well as to provide them with a comprehensive overview of railway technologies and systems in general. Through research at universities and from practical training sessions at manufacturers, furthermore, we hope to enable all participants to acquire a broad range of knowledge.

■Skills Development

The development of human resources and the steady but continuous introduction of new technologies and skills are vital to the sustainable growth of the JR East Group. Based on a perspective of nurturing quality through work, we are striving to enhance the organizational power of the Group and to develop human resources capable of shouldering the burdens of the future. With this in mind we constantly conduct training programs at our General Education Center and in branch offices, and many kinds of seminars at our Head Office. And as part of our support for all employees to set their own challenges in regard to self-education and to thereby heighten their abilities, we offer both internal and external correspondence courses. The internal courses are aimed at the acquisition of knowledge and skills directly connected to our employees' duties while the external courses target the acquisition of knowledge indispensable for businesspeople in terms of management know-how, qualifications acquirement, languages, and office automation.

■My Project

In order to encourage our employees to face the challenges of taking the next steps in their careers, in January 2011 we upgraded our small groups and proposal activities and initiated the My Project program. This program is comprised of three aspects: self-starting, freedom of method and importance of process, with the fruit being the employee's personal growth. The project is based on the belief that the tackling of improvements in itself is an opportunity for the fostering of human resources, and, thereby, aims to nurture employees capable of thinking and acting independently.

■Skills Training Centers—Develop engineers for future railways

Integral to our efforts to ensure that veteran employees pass on their technologies and skills to the next generation of technical staff, who will carry the burdens of future railways, is our establishment of skills training centers designed to support the continuity of railway-specific knowledge in individual workplaces. In our rolling stock maintenance center, for example, railway car mockups, such as power collection equipment, door opening-closing devices, braking equipment, etc., have been set up, while at our facilities maintenance center railway facilities including tracks, turnouts, platforms, overhead line equipment, signal devices, etc., have been installed, so training sessions can take place in virtually real environments.
By the fiscal year ending 2014, we plan to establish a total of no less than 104 skills training centers including those that make use of existing facilities. The development of this project commenced in the fiscal year ended March 2011.

Promotion of Workplace Gender Equality Plan

■Promotion of Work-Life Program

JR East has been actively promoting the betterment of the working environment for women and striving for the achievement of a work-childcare balance. With the goal of further promoting workplace gender equality, in 2009 we instigated the Work-Life Program as part of our effort to become a company in which all employees can fully demonstrate their abilities in a work atmosphere they regard as rewarding.

■Objective of the promotion

The objective of this program is to enable JR East to become a company in which diverse human resources can fully demonstrate their abilities and fulfill their work responsibilities while benefiting from satisfying and rewarding careers.

■Basic concept

■Three pillars of the program

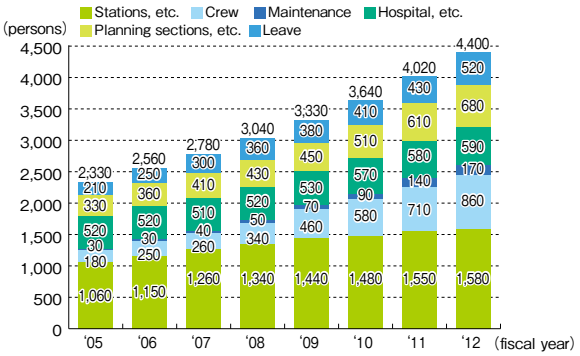
In particular, we have been working on the provision of support for the achievement of balanced work-childcare and work-nursing care levels, as well as instigating forums aimed at the achievement of workplace gender equality, and the operation of the gender equality portal site on our intranet.

Measures taken to support the achievement of balanced work and childcare/nursing

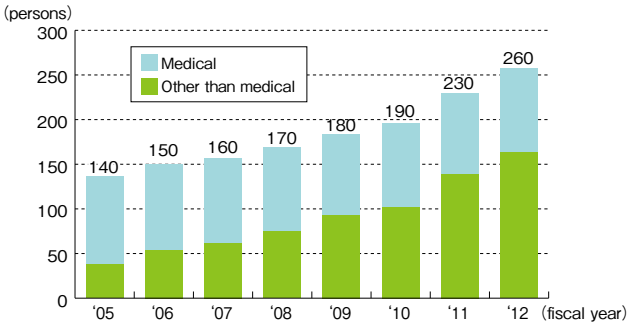
- Extended the availability of childcare leave for one year until the child reaches three years of age (April 2010)
- Introduced a system of reduced daily working hours and increased holiday entitlement (April 2010)
- Established workplace nursery schools (two in Tokyo and one in Sendai) and a hospital nursery school (JR Tokyo General Hospital)

Established workplace nursery schools

■Expansion of workplace opportunities for female employees



■ Changes in the number of female manager



■Nikkei Child-Raising Support Award

In recognition of our efforts to support the achievement of a balance of work and childcare, JR East was awarded the 5th Nikkei Child-Raising Support Award 2010, sponsored by the Nihon Keizai Shimbun. This was the first time that a transport-related business won the award.

Receiving the Nikkei Child-Raising Support Award

■General Business Operator Action Plan

JR East has formulated a 2nd phase action plan in line with the Law for Measures to Support the Development of the Next Generation (formulated in October 2008, revision notification submitted in March 2010).

■Action Plan

Duration : October 25, 2008–March 31, 2012 (revision notification submitted in March 2010)

【Basic Policy】

JR East's goal is to become a company in which diverse human resources can fully demonstrate their abilities and achieve their work responsibilities while benefiting from satisfying and rewarding careers.

Target 1 : Introduce a new program that remains one step ahead of regular positive action measures within the scheduled period, and implement measures and information provision aimed at the achievement of workplace gender equality.

Target 2 : Further enhance the system that supports improved work-childcare and work-nursing care environments within the scheduled period.

Target 3 : Establish and operate workplace nursery schools within the scheduled period.

Target 4 : Actively expand and enhance nursery schools near stations and other childcare support facilities with the goal of increasing the social participation of women and engendering a diversification of lifestyles.

In November 2008 we were certified by the Minister of Health, Labour and Welfare as a company supporting the raising of the next-generation of children.

Next-generation certified logo (colloquially named: Kurumin)

Improved Work Environment

■Mental Health Care

In order to maintain and improve the mental health of our employees, we believe it is vitally important for all our employees to recognize stress in their everyday lives and deal with it promptly. As a result, we are taking various support measures, such as the distribution to all employees of a pamphlet about self-care with the aim of increasing their awareness of this issue. We have also set up a counseling service in conjunction with a JR East medical facility and, through this, respond individually to our employees' needs. In order to promote front-line care in the workplace, beginning in the fiscal year ended March 2008, we also organized training programs for on-site supervisors.

■Elder Employee System

During the fiscal year ended March 2009, JR East introduced the Elderly Employee System that encourages employees who have reached retirement age to continue working for Group companies that can benefit from their individual capabilities and skills. Through this plan we hope to enable retired employees to stabilize their lives until they reach their fully pensionable ages, as well as to encourage them to continue to contribute to our Group-wide accumulation of know-how.

■Human Rights Enlightenment

In order to educate our employees in the necessity of enhanced human rights, we have established human rights enlightenment promotion committees at Head Office and in regional offices.
Specifically, these committees conduct training for those personnel in charge of human rights enlightenment in regional offices and Group companies. To propagate human rights awareness, lectures are also conducted on human rights enlightenment in training sessions attended by new recruits, new train crews, work-implementation managers, and new managers. Even further, human rights education for both our staff and their families has been instigated through articles that spotlight human rights problems that could occur in our environment in our newsletter *JR Higashi*.
We have also joined the Industrial Federation for Human Rights, Tokyo, and are conducting human rights enlightenment activities as well as information exchanges.

Human rights enlightenment training

Employment of People with Disabilities

■JR East Green Partners Co., Ltd.

JR East Green Partners, a special JR East subsidiary, was launched in April 2009 and charged with the task of overall management of uniforms used in JR East. Afterwards, the new subsidiary has taken up such additional business as printing and maintenance and management of tree planting in continued efforts to expand work opportunities for people with disabilities. In addition to organizing the employment of people with disabilities, JR East Green Partners now cooperates with support organizations and special support schools and provides work training opportunities for disabled persons wishing to secure corporate positions. By carrying out a broad range of activities, the company supports the entire Group in the fulfillment of its social responsibilities.

JR East Green Partners Co., Ltd. headquarters

Typical work scene

CSR Management

■Basic concept of CSR

The JR East Group is based on railway businesses that are involved in a broad range of our customers' lives and that are vital to society and local communities. With such a public responsibility, we are committed to meeting our social responsibilities by carrying out our business activities in such a manner as to ensure railway safety and reliable transportation services.
In terms of our social mission, our Group Philosophy states: "We will grow continuously and advance in harmony with our customers by generating earnings while meeting our social responsibilities as a Trusted Life-style Service Creating Group." We are determined to remain a corporate group capable of meeting social expectations and maintaining stakeholders' trust by pursuing our business activities in line with that philosophy.

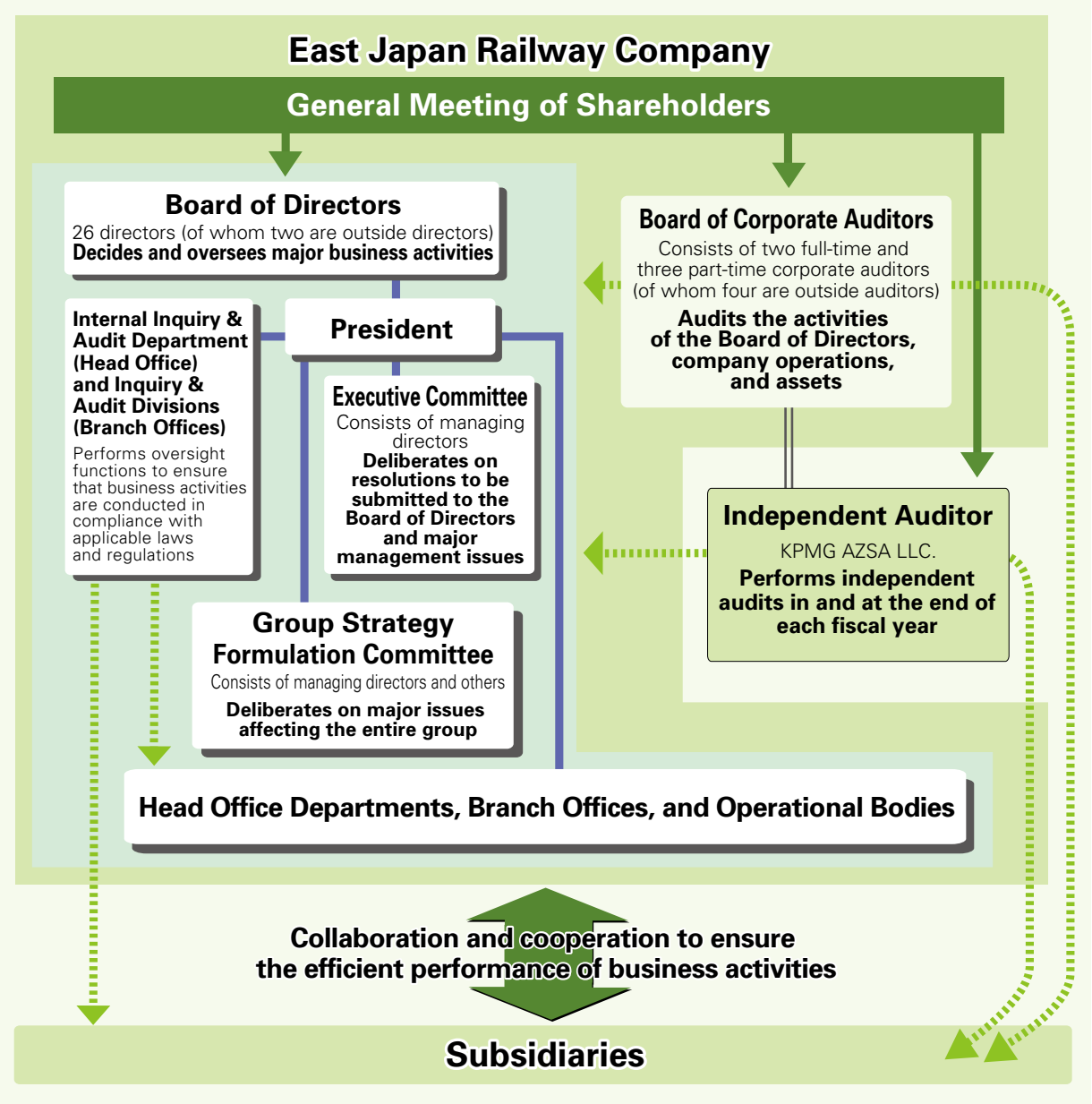
■JR East's Basic Corporate Governance Philosophy

To continue to be a company trusted by its shareholders and all other groups of stakeholders, JR East has made the strengthening of its corporate governance a top-priority management task. Specifically, with a view to augmenting the soundness and transparency of management, JR East is creating appropriate systems for management decision making, operational execution and overseeing, Group management, information disclosure, and other important matters while also implementing the various measures.

■Execution of duties, Supervision and Audit System

Our 26-member Board of Directors, including two external directors, normally meets monthly to decide key operational matters relating to statutory requirements and other matters, and supervise overall operations. Under the Board of Directors is the Executive Committee, which includes all directors with executive functions. Usually meeting every week, this committee deliberates on matters to be decided by the Board of Directors and other important management issues. In addition, meetings of the Group Strategy Formulation Committee, which consists of managing directors and others, are held as and when required to deliberate on major issues affecting the Group as a whole, including management strategy for each business field.
JR East has established an internal auditing system involving approximately 100 full-time employees in the Inquiry & Audit Department at the Head Office and inquiry & audit divisions in branch offices, and these units work to ensure that corporate operations are executed appropriately and efficiently. The Inquiry & Audit Department also undertakes the auditing of Group companies. Our Board of Corporate Auditors usually meets every month and the audit of corporate auditors is supported by approximately 10 specialized staff. They oversee executive actions carried out by directors, with a focus on full-time directors, in accordance with the rules established by the Board of Corporate Auditors by investigating their attendance at the Board of Directors, the Executive Committee and other important in-house meetings and their financial situations and other items.
Regarding financial audits, the financial statements of JR East are audited under contract by an independent auditor (accounting auditor), KPMG AZSA LLC., in and at the end of each fiscal year.

■ Corporate Governance system (as of August 1, 2011)



Compliance

■Basic Concept of Compliance

In 2005, JR East adopted the Policy on Legal and Regulatory Compliance and Corporate Ethics as the Group's corporate activity guidelines. Concomitantly, we established Compliance Hotlines, both inside and outside the Company for internal reporting, and have promoted efforts on compliance.
Moreover, in 2009 and in 2010, all employees of JR Group were given education to increase their awareness about compliance.
JR East Group has been making a concerted effort for further promoting compliance management, including the thorough inspection of legal matters in all aspects of its business since 2009 and the ensuring of proper business conduct with the use of "Basic Matter Confirmation Support Sheet" designed for regular checking of important matters by individual departments since 2011.

■Formulation and Revision of the Compliance Action Plan

In order to enhance the effectiveness of the policy originally formulated in 2005, we developed and distributed the first version of our Compliance Action Plan document that summarized what we consider to be desirable levels of conduct for all Group employees. After the series of Shinanogawa power plant incidents, however, a revised edition was published in 2009 which incorporated such aspects as the necessity of constant awareness of potential problems, adherence to laws and regulations as basis for actions, and confirmation of the contents of reports.

■Full Inspection of Legal Matters and a Continuous Review of Overall Work

We conducted full inspections of our compliance in regard to all our operations including Group companies. Starting with this series of full inspections, JR East Group is promoting continuous reviews of all its operations based on laws and regulations, internal rules, and social norms. Since 2011, based on the above mentioned thorough inspection of legal matters, JR East has created a "Basic Matters Confirmation Sheet", which lists the matters requiring regular checking, to ensure business is continuously conducted on a propper manner.

■Strengthening Compliance Education

JR East conducts regular compliance education sessions and intends to further reinforce the system. In order to specifically raise employee awareness in terms of compliance, in 2009 we made available to all Group employees an education program based on our revised Compliance Action Plan. We intend to continue to offer education in line with the actual conditions in individual workplaces.
From 2010, we delivered a compliance questionnaire to all JR East employees in an effort to raise their awareness of compliance issues.

■Compliance Training

■ Compliance Training

Title	Number of sessions	Participants	Contents and objectives	Number of participants
Management School (Compliance Course)	1	Administrative managers of Group companies	Compliance	32
Legal Skills Training	1	Legal affairs managers of branch offices	Enhancement of practical legal knowledge, legal reasoning, and decision-making/ problem-solving skills	16
Basic Legal Training	1	Legal affairs personnel of Group companies	Acquisition of basic legal knowledge	48
Regular Legal Seminar	4	Employees of JR East and Group companies	Explanation of new and revised laws, and awareness-raising about compliance	820

■Shinanogawa Power Station Incident

On March 10, 2009 JR East received an administrative sanction from the Director of the Hokuriku Regional Development Bureau of the Ministry of Land, Infrastructure, Transport and Tourism. The sanction was issued in accordance with the River Act and included the revocation of a permit to draw water from the Shinano River because the company's water intake had exceeded the maximum allowed quantity at our hydroelectric plant, Shinanogawa Power Station (the collective name for the Senju, Ojiya and Ojiya Daini power plants in Ojiya and Tokamachi cities, Niigata prefecture). Subsequent to receipt of this sanction, we have taken corrective actions in accordance with the directions in the sanction and have endeavored to implement measures to prevent recurrence and to cultivate close cooperation with the local communities.
On April 2, 2010, with the consent of the parties involved, we filed an application for water intake permit with the Director of the Hokuriku Regional Development Bureau of the Ministry of Land, Infrastructure, Transport and Tourism. On June 9, 2010 we received the permit and the Shinanogawa Power Station resumed drawing water from the Shinano River and restarted power generation.
Reflecting on this misconduct, we are redoubling our efforts at compliance management to prevent recurrence and we are sincerely committed to foster harmony with environment and enhance coexistence with the communities.

■Personal Data Protection

In 2005, we published our Regulations for the Management of Personal Information, and appointed Chief Privacy Officers who bear the responsibility of strictly protecting personal data. We are also working to ensure that each and every employee is aware of the necessity of the strict handling and management of personal data through pamphlets covering the subject exclusively and articles in our internal magazines. In order to even further enhance our levels of information security we regularly conduct internal workplace audits.

■Risk Management

The Crisis Management Headquarters was established in 2002 to centrally collect and manage information, and to make prompt initial responses in the event of major crises affecting the business operations of JR East Group. In 2004, we added the Crisis Management Office, a full-time section that has taken responsibility for Headquarters' secretarial work. We have, furthermore, recently established a system that enables us to respond to various emergencies including terrorist threats and pandemics such as influenza, and are constantly striving to prepare effective responses to all potential risks faced by JR East Group.

■Information Disclosure

JR East has a wide range of relationships with many stakeholders, including the 16.59 million customers using our railway services each day, as well as our shareholders and investors, business partners, employees and their families, and local communities.
We actively disseminate information about Group initiatives through public and investor relations activities to these stakeholders. We also strive to disclose key corporate information on our website in a swift and appropriate manner.
Furthermore, JR East is working to create wide-ranging opportunities to listen to and learn from the views and requests of our stakeholders.

Independent Assurance Report

Independent Assurance Report

To the President and CEO of East Japan Railway Company

Purpose and Scope

We were engaged by East Japan Railway Company (the "Company") to provide limited assurance on its JR East Group Sustainability Report 2011 WEB version (the "Report") for the fiscal year ended March 31, 2011. The purpose of our assurance engagement was to express our conclusion, based on our assurance procedures, on whether:

- the environmental performance indicators and environmental accounting indicators marked with ☆ (the "Indicators") for the period from April 1, 2010 to March 31, 2011 included in the Report are prepared, in all material respects, in accordance with the Company's reporting criteria; and
- all the material environmental information defined by the Japanese Association of Assurance Organizations for Sustainability Information ("J-SUS") is included in the Report.

The content of the Report is the responsibility of the Company's management. Our responsibility is to carry out a limited assurance engagement and to express our conclusion based on the work performed.

Criteria

The Company applies its own reporting criteria as described in the Report. These are derived, among others, from the Environmental Reporting Guidelines 2007 and Environmental Accounting Guidelines 2005 of Japan's Ministry of the Environment. We used these criteria to evaluate the Indicators. For the completeness of material environmental information, we used the 'Criteria for Granting a Environmental Report Assurance and Registration Symbol' of J-SUS.

Procedures Performed

We conducted our engagement in accordance with 'International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information' issued by the International Auditing and Assurance Standards Board, and the 'Practical Guidelines of Sustainability Information Assurance' of J-SUS.

The limited assurance engagement on the Report consisted of making inquiries, primarily of persons responsible for the preparation of information presented in the Report, and applying analytical and other procedures. The level of assurance provided is thus not as high as that provided by a reasonable assurance engagement. Our assurance procedures included:

- Interviews with the Company's responsible personnel to obtain an understanding of its policy for the preparation of the Report.
- Reviews of the Company's reporting criteria.
- Inquiries about the design of the systems and methods used to collect and process the Indicators.
- Analytical reviews of the Indicators.
- Examining, on a test basis, evidence supporting the generation, aggregation and reporting of the Indicators in conformity with the Company's reporting criteria, and also a recalculation of the Indicators.
- Visit to the Company's domestic factory selected on the basis of a risk analysis.
- Assessment of whether or not all the material Environmental information defined by J-SUS is included in the Report.
- Evaluating the overall statement in which the Indicators are expressed.

Conclusion

Based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that:

- the Indicators in the Report are not prepared, in all material respects, in accordance with the Company's reporting criteria as described in the Report; and
- all the material Environmental information defined by J-SUS is not included in the Report.

We have no conflict of interest relationships with the Company that are specified in the Code of Ethics of J-SUS.

KPMG AZSA Sustainability Co., Ltd.

KPMG AZSA Sustainability Co., Ltd.
Tokyo, Japan
November 15, 2011

JR East has redefined its boundary for energy consumption by sorting out the energy used in transportation, that used in non-transportation activities, and that supplied to other companies. This has also helped clarify the boundary of its group companies, and we believe that the calculated figures now present a truer picture of JR East's and its group companies' energy consumption and CO_2 emissions.

Group companies' quantitative environmental data are, however, only shown in the "JR East Group's environmental impact" section. Because the environmental impacts of the group companies are much smaller than those of JR East and it is not always easy to describe the impacts of the group companies that are engaged in diverse businesses, it may be understandable that focus has so far been placed on the impacts of JR East. Nonetheless, taking into account the fact that the JR East group's non-transportation businesses are growing year by year, we believe that JR East Group Sustainability Report, which annually reports on the group's activities and performance, should account for the group's policies, initiatives and performance in relation to its non-transportation businesses in more detail.

Naomi Sugo
KPMG
AZSA Sustainability Co., Ltd.

【Summary from the General Manager of the Management Planning Department】

Makoto Takahashi
Director and General Manager
Management Planning Department
Corporate Planning Headquarters

To begin, please allow us to offer once again our deepest sympathies for all of the victims of the Great East Japan Earthquake of March 11, 2011, and to offer a solemn prayer for those who lost their lives.

As a result of the Great East Japan Earthquake, JR East Group received extensive damage to a wide range of its service area. In this year's report, taking the Great East Japan Earthquake as our Special Topics, we detail the damages to our facilities resulting from the disaster, the issues to be resolved and their countermeasures, our energy saving efforts over the past summer, and our efforts toward restoration and reconstruction.

Domestically, in response to the Fukushima Daiichi Nuclear Power Plant accidents following the Great East Japan Earthquake of March 11, 2011, discussions have been surfacing on the overall future of Japan's energy policy. As a business operator, JR East is being urged to review its future plans for energy usage, including those regarding the utilization of renewable energies.

Globally, as the Kyoto Protocol's First Commitment Period is coming to a close in 2012, all concerned countries are currently discussing mid- and long-term countermeasures against global warming, including proposed frameworks for a so-called Post-Kyoto Protocol from 2013.

To date, JR East Group has implemented a wide range of environmental conservation activities in remaining true to our basic philosophy to "Balance Environmental Protection with Business Activities." We believe that railways are environmentally friendly means of transport, as they produce less greenhouse gas emissions than other transport modes in the transport business sector.

JR East Group is committed to continuing its range of environmental measures as a group while upholding the issue of global warming as one of our priority issues in business. As a business operator which uses a large volume of energy, it will also continue its efforts to date without succumbing to an overreliance on the recognized environmental advantages of railways.

History of JR East Group's environmental and social activities

Year	Month	Environmental and social activities
1987	Apr.	Japanese National Railways divided, and East Japan Railway Company established. First Railway Safety Promotion Committee meeting held.
	Jun.	Green Campaign began. Green Counter (now renamed customer help desks) opened for receiving customer feedback.
1988	Sep.	Company-wide "Challenge Safety Campaign" launched.
	Dec.	ATS-P, an improved safety train-control system, installed on the Keiyo Line.
1989	Apr.	Safety Research Laboratory and General Training Center established.
1990	Sep.	"First Railway Safety Symposium" held.
	Oct.	"Future 21," a management plan for the twenty-first century, announced. "Ladies' Cars," cars exclusively reserved for female passengers, introduced on sleeping-car limited express trains.
1992	Mar.	East Japan Railway Culture Foundation established.
	Apr.	Committee on Ecology established.
	May	Trees planted to commemorate the 5th anniversary of JR East's founding (later, an annual event called "Railway Lines Forestation Program" began).
	Aug.	Waste collection sorted into three categories began on a trial basis at Sugamo Station on the Yamanote Line.
1993	Mar.	All-day smoking ban extended to major stations in the Tokyo suburban areas.
1994	Feb.	Ueno Station Recycling Center started operation (with automatic system for separating used cans from bottles).Waste collection sorted into three categories started at 36 stations on the Yamanote and other lines.
	Mar.	"Basic Safety Plan" announced.
1995	Feb.	Recycling of used train tickets began in the Tokyo metropolitan area.
	Mar.	First measure to reduce Shinkansen noise completed.
	Apr.	Ecology education for all new recruits initiated. "Train-ta-kun," a discount car rental service for train passengers, launched.
1996	Mar.	JR East website set up. Quantitative environmental targets set for CO_2 emissions and others. First annual Environmental Report published.
	Dec.	Autonomous Decentralized Transport Operation Control System (ATOS) became operational.
1997	Mar.	Recycling facility at Minami-Akita Operations Center started operation. Separate smoking zones established at all stations.Smoking banned on all local trains.
	Oct.	Recycling facilities at Nagano Shinkansen Rolling Stock Center and Tokyo Station started operation.
1998	Mar.	Second set of measures to reduce Shinkansen noise completed.
	Nov.	Shinkiba Recycling Center started operation (for separating used newspapers from magazines). JR East ranked as 27th on the list of world's most respected enterprises by Financial Times.
1999	Feb.	Safety Plan 21 announced. Niitsu Rolling Stock Plant acquired ISO14001 certification.
	Mar.	Omiya Recycling Center started operation (with automatic system for separating used cans from bottles).
	Apr.	Service managers deployed at some stations.
	May	Started utilizing copier paper recycled from newspapers collected at stations.
	Sep.	Information service on train operations made available by cell-phone.
2000	Apr.	JR East General Education Center established. Uniforms made from recycled PET bottles introduced.
	Nov.	Environmental targets revised with the announcement of New Frontier 21,the Group's medium-term management plan.
2001	Mar.	Oi Workshop, Kawasaki Thermal Power Plant, and Niigata Mechanical Technology Center acquired ISO14001 certification.
	Jul.	"Women-Only" cars for female passengers introduced on the Saikyo Line on a trial basis.
	Dec.	JR East Research & Development Center established.
2002	Feb.	Test runs of the AC Train, a next-generation commuter train, began. Omiya Workshop acquired ISO14001 certification.
	Sep.	Sustainability Report including social and economic aspects published.
	Nov.	Sendai General Rolling Stock Workshop acquired ISO14001 certification.
2003	Mar.	Third set of measures to reduce Shinkansen noise completed. "Guide to Barrier-Free Station Facilities" pamphlet distributed.
	May	Test runs of the NE Train, world's first hybrid railcar, began.
	Sep.	First JR East Group Environmental Management Promotion Conference held.
	Dec.	Koriyama Workshop acquired ISO14001 certification.
2004	Mar.	"Safety Plan 2008" announced.
	Apr.	"F Program" launched, with the aim of creating a better working environment for female employees.
	May	Adatara Hometown Forestation Program held.
2005	Jan.	Environmental targets revised with the announcement of "New Frontier 2008",the Group's medium-term management plan.
	Feb.	Nagano General Rolling Stock Center acquired ISO14001 certification.
	Jul.	Akita General Rolling Stock Center acquired ISO14001 certification. Customer Service Department established.
	Dec.	Office-wide JR East Eco Activities started at JR Hachioji Branch Office.
2006	Feb.	Disaster Prevention Research Laboratory established.
2007	Mar.	Smoking banned in all cars of Shinkansen and limited express trains.
	Jul.	World's first diesel hybrid railcars in commercial service, the Kiha E200 type, commenced operation.
	Oct.	Railway Museum opened.
2008	Mar.	"JR East Vision 2020 - *i do mu* -" announced.
	Jun.	Environmental targets revised.
2009	Mar.	2013 Safety Vision Announced.
	Apr.	Environmental Engineering Research Laboratory Established. Total ban on smoking in specified locations in the Tokyo metropolitan area.
2010	Jun.	Water intake restarted in Shinanogawa Power Station based on the "Permission of the use of river water". Platform doors installed at Ebisu Station on the Yamanote Line.
	Jul.	Environmental Management Promotion HQS established in the Corporate Planning Headquarters.
2011	Mar.	Operation of Tohoku Shinkansen, Hayabusa, started.

Former names are used for some facilities

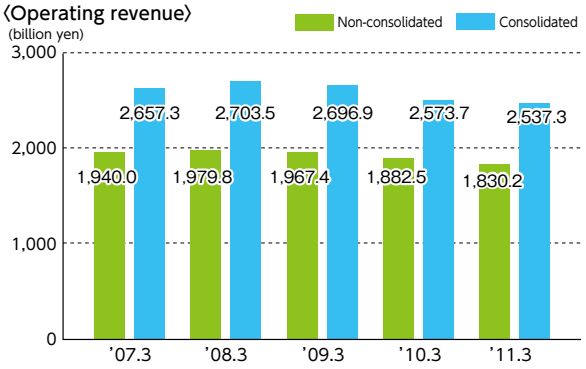
History of Awards

Year	Month	JR East Group: History of Awards
1995	Oct.	Poster category at the 5th Awards for Environmental Advertisements and the Director of Environmental Agency's Awards (Organized by Japan Eco-Life Center)
1997	Apr.	6th Global Environment Award (Organized by Nihon Kogyo Shimbun in special cooperation with WWF Japan)
	Jun.	1st Environmental Action Plan Award and the Director of Environmental Agency's Awards (Organized by the National Association of Environmental Conservation and sponsored by the Environmental Agency)
	Nov.	Poster category at the 7th Awards for Environmental Advertisements and the Director of Environmental Agency's Awards (Organized by Japan Eco-Life Center)
1998	Apr.	1st Green Reporting Award Third Prize (Co-organized by Toyo Keizai Inc. and Green Reporting Forum)
2001	May	4th Green Reporting Award Third Prize (Co-organized by Toyo Keizai Inc. and Green Reporting Forum)
2005	Jan.	Grand Prize for Environmental Report in Environmental Report Category at Environmental Communication Awards 2004 (Organized by the Global Environmental Forum and sponsored by the Ministry of the Environment)
2006	Dec.	2006 Environment Minister's Award for Global Warming Prevention Activity in two categories: countermeasure technology introduction and dissemination, and implementation of countermeasures (organized by the Ministry of the Environment)
2007	Apr.	16th Global Environment Award Education, Culture, Sports, Science and Technology Minister's Award (Organized by Fuji Sankei Group in special cooperation with WWF Japan)
	Dec.	Environment Minister's Award for Global Warming Prevention Activities in the category of technological development and commercialization (organized by the Ministry of the Environment) Eco Products Category Minister of Environment Prize in the 4th Eco Products Award (organized by the Eco-Products Awards Promotion Council; sponsored by the Ministry of Finance, Ministry of Health, Labour and Welfare, Ministry of Agriculture, Forestry and Fisheries, Ministry of Economy, Trade and Industry, Ministry of Land, Infrastructure, Transport and Tourism, Ministry of the Environment)
2010	Mar.	Environmental Management Award, Japan Creation Award 2009 (Japan Fashion Association)

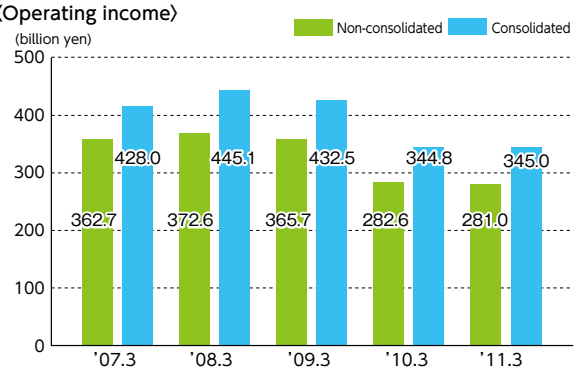
■Corporate profile

Corporate name	East Japan Railway Company
Address	2-2, Yoyogi 2-chome, Shibuya-ku, Tokyo, Japan
Established	April 1, 1987
Capital	200 billion yen
Number of employees	59,650 (as of April 1, 2011)
Passenger line network	Shinkansen lines: 1,134.7 km Conventional lines: 6,377.9 km
Number of stations	1,689
Total number of trains in operation per day	12,732 (timetable revised in March 2011)
Total number of passengers per day	16.59million
Business areas	Transportation, station space operation, shopping center and office building operation, and other services

〈Operating revenue〉



〈Operating income〉



■Businesses of the JR East Group (as of October 1, 2011)

■Transportation services

JR Bus Kanto Co., Ltd. / JR Bus Tohoku Co., Ltd. / Tokyo Monorail Co., Ltd.

■Shopping center operations

Tetsudo Kaikan Co., Ltd. / atre Co., Ltd. / LUMINE Co., Ltd. / Yokohama Station Building Co., Ltd. / Shonan Station Building Co.,Ltd. / JR Chuo Line Mall Co., Ltd. / JR East Department Store Co., Ltd. / JR Tokyo West Development Co., Ltd. / Utsunomiya Station Development Co., Ltd. / Takasaki Terminal Building Co., Ltd. / Mito Station Development Co., Ltd. / Kinshicho Station Building Co., Ltd. / Chiba Station Building Co., Ltd. / JR East Aomori Business-development Co., Ltd. / Station Building MIDORI Co., Ltd.

■Office operations

JR East Building Co., Ltd.

■Hotel operations

Nippon Hotel Co., Ltd. / Sendai Terminal Building Co., Ltd. / Morioka Terminal Building Co., Ltd. / Akita Station Building Co., Ltd. / Hotel Metropolitan Nagano Co., Ltd.

■Retail shop and restaurant businesses

JR East Retail Net Co., Ltd. / Nippon Restaurant Enterprise Co., Ltd. / JR East Food Business Co., Ltd. / JR East Station Retailing Co., Ltd. / JR East Water Business Co., Ltd. / Kinokuniya Co., Ltd

■Trading and logistics businesses

East Japan Railway Trading Co., Ltd. / JR East Logistics Co., Ltd.

■Travel agent and car rental services

JR East View Travel Service Co., Ltd. / JR East Rental & Lease Co., Ltd.

■Sports and leisure businesses

JR East Sports Co., Ltd. / GALA YUZAWA Co., Ltd.

■Real estate management

JR East Urban Development Corporation

■Information, financial, and personnel services

JR East Japan Information Systems Company / JR East Net Station Co., Ltd. / JR East Management Service Co., Ltd. / JR East Personnel Service Co., Ltd. / JR East Green Partners Co., Ltd.

■Credit card business

Viewcard Co., Ltd.

■Advertising and publishing

East Japan Marketing & Communications, Inc. / Tokyo Media Service Co., Ltd. / THE ORANGE PAGE, Inc.

■Cleaning and linen supply services

SHINKANSEN CLEANING SERVISE COMPANY / JR EAST TRANSPORTATION SERVISE / East Japan Eco Access Co., Ltd. / JR Takasaki Railway Services Co., Ltd. / JR Mito Railway Services Co., Ltd. / JR Chiba Railway Services Co., Ltd. / JR Technoservice Sendai Co., Ltd. / East Japan Amenitec Co., Ltd. / Akita Clean Servicing Co., Ltd. / Niigata Railway Servicing Co., Ltd. / Nagano Railway Servicing Co., Ltd. / Shinnihon Linen Co., Ltd.

■Construction consulting and maintenance services

JR East Consultants Company / JR East Design Corporation / JR East Facility Management Co., Ltd. / JR East Mechatronics Co., Ltd. / Union Construction Co., Ltd. / East Japan Transport Technology Co., Ltd. / Tohoku Rolling Stock Machinery Co., Ltd. / Niigata Rolling Stock Machinery Co., Ltd.

■District Heating and Cooling

Shinjuku South Energy Service Co., Ltd.

■Group companies of our branch offices

Tohoku Sogo Service Co., Ltd. / Jaster Co., Ltd. / JR Atlis Co., Ltd. / Tokky Co., Ltd.

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The J-SUS mark indicates that the reliability of the environmental information contained in the JR East Group Sustainability Report 2011 meets the standard for environmental report screening and logo use defined by the Japanese Association of Assurance www.j-sus.org Organizations for Sustainability.

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East Japan Railway Company
Committee on Ecology
2-2 Yoyogi 2-chome, Shibuya-ku, Tokyo
151-8578, Japan
Phone: +81-3-5334-1122
E-mail: eco@jreast.co.jp
http://www.jreast.co.jp/eco/