

JR East Group

# Sustainability Report 2009



**JR**  
JR-EAST GROUP

## C O N T E N T S

Editorial Policy	2
Group Philosophy, Basic Principles	3
Top Interview	4

### [Special Topics]

1 Environmental Measures Put into Action	10
2 Establishment of Environmental Engineering Research Laboratory	12
3 Establishment of our 5th 5-year Safety Plan, 2013 Safety Vision	14
4 Continuing the Challenge — Improving customer satisfaction	16
5 Maximizing Group Value	18
6 Future of IT and Suica Businesses	20

### [Environment]

Basic Concept on Environmental Protection and Targets	22
JR East Group's environmental impact	23
Targets and outcomes	24
Measures to Prevent Global Warming	26
Measures to create a sound material cycle	32
Chemical substance management	35
Reducing Noise along Railway Lines	37
Improvement of Environment along Railway Lines	38
Measures for Biodiversity	39
Development of Environmental Technology	41
Environmental Management System	43
Environmental Communication	46
Reports on Ecological Activities at JR East	47
Reports on Ecological Activities at JR East Group Companies	49
Environmental accounting and management indicators	51

### [Safety]

Pursuing "extreme safety levels"	53
Creation of a culture of safety	56
Safety management	58
Improvement of safety equipment	59
Measures taken since the accident on the Uetsu Line	63
Safety Research and Development	65

### [Society]

Relationship with Customers	67
Relationship with Society	75
Relationship with Employees	78
Maintaining Customer Confidence and Trust	81
Independent assurance report	85
Following an interview with the President/Future prospects	86
History of JR East Group's environmental and social activities	87
Corporate profile/Businesses of the JR East Group	88
Editorial Postscript	89

## Editorial Policy

The JR East Group is publishing this Sustainability Report 2009 in order to provide information on our environmental and social initiatives in an accurate and easy-to-understand manner. This year's report is divided into two parts — the special topics section and the details section.

The special topics section, which is based on JR East Vision 2020 - *i do mu* - published on March 31, 2008, contains the statements of relevant directors regarding the direction they believe we should take. The details section contains our attitude and approach to the environment, safety, and society which we regard as particularly important to the achievement of the Group's corporate social responsibilities.

In this year's report, in order to make the Group's undertakings more easily understandable to a larger number of people, we have focused on areas in which we made special progress during the fiscal year that ended March 2009. Year-on-year information and other details are available on our website.

### References

Environmental Reporting Guidelines (Fiscal Year 2007 Version) [Japan Ministry of the Environment]  
Environmental Accounting Guidelines 2005 [Japan Ministry of the Environment]

### Reporting period

This report basically covers our activities in fiscal 2009 (from April 1, 2008 to March 31, 2009), although some events presented here happened earlier or in the period between the end of March 2009 and the publication of this report in September 2009.

### Boundary of reporting

This report covers activities of East Japan Railway Company and 82 Group companies\*

\*East Japan Railway Company and 82 Group companies  
There were 82 Group companies as of the end of March 2009.

## 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.

## "*I do mu*" – means to continue pursuing possibilities

It is now a year since JR East launched Vision 2020 - *i do mu* - which looks steadfastly 10 years ahead. In line with this vision, the Group now has the goal of contributing to the forming of a sustainable society by playing its role and taking its responsibilities. How is JR East today viewing the vision it set up and how is it proceeding along the path of its realization? Satoshi Seino, JR East president, spoke of the progress of the vision and explained his thoughts as a top executive to CSR expert Professor Mika Takaoka of Rikkyo University's College of Business.

President and CEO,  
East Japan Railway Company  
**Satoshi Seino**

Professor, Department of Business,  
Rikkyo University  
**Mika Takaoka**

### New value creation from a customer perspective

**Takaoka:** JR East announced its JR East Vision 2020 - *i do mu* - in March 2008. Could you please tell us the background of its drafting and publication?

**Seino:** Since JR East was formed after the division and privatization of the Japanese National Railways (JNR), we have published three management visions, the most recent of which was our four-year plan New Frontier 2008. Within these rather short-term four-year plans, of course, we tended to target those things we believed we could achieve within such a period. I have to add, however, that in the longer-term Vision 2020 we included the challenge of achieving a sustainable society, even though there are aspects that cannot be realized with our current technologies. This was because we still felt it was important to include such a goal. In fact, we formulated this management vision after considering the role we believe we should be playing in 10 years, including, to a certain extent, our dreams. As such, Vision 2020 contains certain aspects that are still concepts. For those concepts that become concrete, however, we will set schedules, establish frameworks for their promotion, and ultimately realize all our goals.

**Takaoka:** In considering corporate social responsibilities, including environmental issues, wasn't it better for you to draw up a business plan with a longer span such as Vision 2020?

**Seino:** Exactly. Because we want to define the role JR East will play as the operator of an urban railway network, supporting regional redevelopment and contributing to the development of all our business fields, we included all these aspects in Vision 2020.



## Seven gear changes needed to attain sustainable growth

**Takaoka:** In JR East Vision 2020 - *i do mu* -, I think you showed what JR East is aiming for in the expression "Moving Up a Gear in Seven Areas." In it you mentioned several areas that may surprise the general public, such as raising corporate value through an increased focus on investment, and examining the possibilities of overseas operations. I personally wondered what JR actually means when it cites developing overseas operations. Are these the aspects that are represented by the word "idomu" or challenge?



**Seino:** In the past, we had to place the highest priority on reducing the long-term debt we had inherited from JNR, and if there was money available, we used it to repay existing debt as much as possible. If we intend to develop a sustainable business for the future, however, I believe that a more active system of investment will also be necessary. As a result, I named the goal of "increasing focus on capital investment" as the first of the seven areas of activity for which we need to gear up. We will, therefore, make active capital investment in the areas we believe will ultimately lead to the growth of the company.

It is true that it is quite difficult to draw a practical image of what our overseas activities could actually be, but we do receive many inquiries and requests from countries around the world. In particular, we are often asked to dispatch engineers to participate in such areas as technical cooperation in railcar maintenance and transport operations know-how. To date we have responded by simply dispatching capable engineers, but from now on we expect to actively develop our overseas business operations in cooperation with other Japanese companies.

**Takaoka:** Included in the seven areas you mentioned are such environmentally friendly targets as "taking a positive and long-term approach to global environmental problems" and "reducing total CO<sub>2</sub> emissions from railway operations by 50% compared with fiscal 1991 levels by fiscal 2031."

**Seino:** Railways are environment-friendly. It is well documented that CO<sub>2</sub> emissions from railways are only 10% of those from automobiles for transporting a person over the same distance. From our perspective, however, this is simply a result. We have not, in fact, reviewed railcar performance from the aspect of CO<sub>2</sub> emissions, nor actively considered reviewing energy efficiency from the perspective of CO<sub>2</sub> emissions. The lower emissions levels are simply the result of keeping in pace with technological development and benefiting from the results.

**Takaoka:** I see, but I believe that JR East has actively advanced railcar weight reduction. Are you saying that the primary aim of such reductions was not the lowering of CO<sub>2</sub> emissions?

**Seino:** To put it simply, lighter railcars cause less track damage. The burden on rails is completely different with today's light, stainless steel trains when compared to the old, heavy, steam locomotives. Furthermore, reducing the energy consumption of the railcars themselves was also an important issue. So we decided that our goal should be to design more environmentally friendly railcars, and we are now continuing with their development and introduction. We are starting with a shift from diesel railcars that directly emit CO<sub>2</sub> to diesel hybrid railcars which have less negative environmental impact. Currently diesel hybrid railcars are operating on the Koumi Line. Moreover, we currently have fuel cell railcars and battery-charged trains at the R&D stage. The latter is the train that carries batteries onboard that can be rapidly recharged while the train stops at stations. If we succeed in this development, we will be able to operate electric trains on lines without overhead wires.

**Takaoka:** I think there is a big difference in terms of corporate social responsibility from simply saying that railways are environmentally friendly to being strong minded enough to set their own targets and time frameworks to further reduce their environmental impact.



In local regions I think the issue of local railway line survival will be a key issue to the potential economic contributions to local communities. You stated in JR East Vision 2020 - *i do mu* - that even if the number of passengers continues to decline on local lines, you will continue to consider it part of your business to maintain services by including, perhaps, the use of alternative transport systems.

**Seino:** Since our establishment we have not closed any local railway lines, but it is true that there are lines on which the transport volume continues to decrease, mainly because of drops in population. In such cases, we believe it is our responsibility, while making cost reductions, to continue to make efforts and take measures such as, for example, increasing customer numbers through tourism revitalization. If, however, it becomes too difficult to maintain railway transportation, we intend to keep overall services going through such means as replacing trains with uses a group company of JR East operates.

**Takaoka:** You are saying that such considerations are the responsibility of railway companies?

**Seino:** I believe it is so. Recently, for example, we have been working with tourist associations and regional industries in order to carry through several local community revitalization initiatives.

Professor Takaoka, do you know the Gono Line? It is a local line running along the foot of the Shirakami Mountains, a World Heritage Site. For 10 years now in cooperation with local people, we have been operating Resort Shirakami, a resort train. Passengers on this train can enjoy on-board live performance of the Tsugaru shamisen and have plenty of time to look at the magnificent scenery as the train slows down at specific places for just that reason. Resort Shirakami has become very popular with customers from urban areas, many of whom are repeat passengers, because it is a train on which they can fully enjoy a slower pace of life. As you can see, it is possible to build up a relationship that is beneficial both to members of the local community and to the public in general, by not simply regarding local trains as having only to serve local communities, but rather making people all over Japan feel that they would love to ride a particular line.

**Takaoka:** I think it is a great initiative that will prove useful in the revitalization of local regions while also being appreciated by urban residents. This is one area in which JR East, with its extremely broad network, can make a difference.

**Seino:** We cannot deny that local railway lines are suffering difficulties, but I believe that along with reducing costs through increased efficiency, it is also important to make effective use of local railway lines and generate such new added value that will make customers want to experience them.

**Takaoka:** Has the formulation of JR East Vision 2020 - *i do mu* - made the Group more energetic?

**Seino:** I think the understanding of Vision 2020 and its penetration within the Group is proceeding very successfully. The awareness of the issues it mentions has increased in each and every employee and the understanding of the direction in which the Group is moving has deepened. In fact, while formulating Vision 2020, I personally visited every branch office and spoke of the thoughts I was including in the vision.



## Shinanogawa power plant problem

**Takaoka:** In terms of your efforts toward improving the environment and energy supply, the Shinanogawa power plant incident was regrettable, wasn't it?

**Seino:** I deeply apologize both for causing so much trouble to local residents and for having worried all JR East customers. We will take all possible measures and improve our internal systems in order to make sure such a problem never happens again.

We have established an external committee comprised of lawyers, electric power experts and other concerned parties as well as an internal committee headed by the vice president to look into the problem. Currently the two committees are instigating measures that will prevent a recurrence. The incident has also led us to start to check all our activities in terms of compliance with laws and regulations in order to discover any other potential problematic points that may currently be hidden.

**Takaoka:** Unlike stations, power plants are difficult for outside eyes to scrutinize, so I think the creation of a strict internal framework and a corporate culture that maintains discipline will be the most significant improvements.

**Seino:** We will continue to make the utmost effort to recover public trust.

## Once again reviewing safety and security

**Takaoka:** Please tell us what you will be mainly working on in the fiscal year ending March 2010.

**Seino:** I consider the fiscal year ending March 2010 to be a year in which we will strengthen our foundations, by which I mean, for example, further deepening our efforts toward ensuring safety - something that is extremely basic. To this end, we have formulated a new five-year basic safety plan - Safety Vision 2013 - which commenced in April 2009.

A special feature of Safety Vision 2013 is that for the first time we have formally codified our *sangen* principle (three actualities): go to the site, make direct observations, and determine the facts. As the base tenet of the Group's safety policy, we have set ourselves the targets of getting into direct contact with the site, thing or person, accurately identifying the situation, and taking appropriate measures. With the aim of achieving full understanding of this goal, managers are currently covering the country explaining the importance of the policy to all employees.

**Takaoka:** In Safety Vision 2013, you mentioned that in the past in regard to earthquakes or other natural phenomena, the accent had been on taking action after something had happened, but that from now on you will emphasize prior risk management by preparing for events that are likely to happen.

**Seino:** I have always considered it critically important to establish firm measures in advance of potential risks, but this is the first time we have clearly set out such a policy in our basic safety plan. In that sense, the *sangen* principle and management of potential risks are the two major points of the new plan.

**Takaoka:** Emphasizing anew safety and security which are the most fundamental aspects for railway operators, I think this is a very superior CSR decision.

**Seino:** I think that there are few people who use our services while worrying if we are going to get them to their destinations safely or not, and JR has an obligation to respond to those expectations. In the past we have had bitter experiences where safety measures have failed and that is why I consider it our most important mission to maintain the situation where passengers take safety for granted. We must, therefore, continue to face the challenge of achieving extreme levels of safety.



## To be a company in which employees feel glad to work

**Takaoka:** You also have a responsibility for your employees. As a company, how are you planning to ensure that your employees lead affluent and fulfilling lives?

**S e i n o :** We have to offer many diverse options. For example, we already provide our employees with opportunities to improve their career paths through training and taking examinations, so naturally I would like to see them taking full advantage of such opportunities and also benefiting from self-education. What is more, I want them to enjoy their jobs. In the end, it comes down to a question of what exactly can a company do? All I can say is that we must constantly discuss matters with our employees and proceed step by step.

**Takaoka:** Does that mean you will improve welfare systems such as maternity and paternity leave so that your employees can achieve a better work-life balance?

**S e i n o :** I want JR East to be a company where women can enjoy their work. To enable individuals, regardless of sex, to work to the best of their abilities, it is necessary to establish an environment where people can both work and take care of their children. We still face many problems in achieving this goal, but we will continue to make improvements in the working environment that will create a culture of improved work-life-balance and support a beneficial harmony of work and childcare. I want JR East to be a company where, after retirement, people, whether male or female, feel glad to have worked.

**Takaoka:** Yes, becoming an organization in which people can be proud to spend their working lives is an excellent goal.

**S e i n o :** I genuinely hope JR East will be such a company.



**Mika Takaoka**

**Education**

March 1999: Completed Ph.D. in economics, Graduate School of Economics, University of Tokyo

**Career**

April 2001: Associate professor, Institute of Economic Research, Osaka City University

April 2006: Associate professor, College of Business, Rikkyo University

April 2009 to present: Professor, College of Business, Rikkyo University

**Social Activities**

- Member, Personal Service Working Group, Global Service Study Group, Ministry of Economy, Trade and Industry
- Expert member, Expert Committee for Environmental Information, General Policy Subcommittee, Central Environmental Council, Ministry of the Environment
- Chair, Study Committee on Drafting Guidelines on Environmental Consideration in International Conferences, etc., Japan Environment Association

**Special Topic 1****Environmental Measures Put into Action**

## Our Mission is to Act on Global Environmental Problems



### Compatibility between Railway Operations and the Environment

Today, public expectations for companies are high under the concept of "corporate social responsibility"(CSR). Because the JR East Group recognizes the compatibility between railway operations which we positions as our main activity and the environment, it considers environmental activities to be the most important issue in meeting its corporate social responsibility.

In comparison with other means of transportation, railways emit much less CO<sub>2</sub>. However, it is true that JR East, overall, emits a relatively large amount of CO<sub>2</sub> in proportion to the total scale of its activities. Rather than rest on the fact of a railway's inherently smaller environmental burden, we have committed ourselves actively and on a long-term basis to tackling environmental problems with the challenge of achieving "new changes" beyond mere extensions of successful past experiences.

### Changes toward Realizing a Low-Carbon Society

Since 1992, when we established the Committee on Ecology and committed ourselves to environmental activities, we have worked in three primary areas - energy conservation, zero emissions, and promoting the use of railways - and have also carried out straightforward environmental activities such as tree plantings. The need to reduce volumes of waste and to recycle has largely penetrated to all levels of the citizenry, but global warming is becoming ever more serious on a global scale. JR East has shifted the axis of its environmental efforts to global warming measures. With a focus on our stations, we are working hard toward realization of a low-carbon society in ways not included in our conventional efforts, including efficient layouts of illumination and introduction of automatic on-off systems at two stations in Tokyo. In 2009, JR East will expand such efforts primarily at stations in the Tokyo metropolitan area. In all business areas, we will also develop stations called "ecoste" - Environment Earth Conscious Station of East Japan Railway Company - stations that are conscious of the environment and the Earth, matched to their surroundings, with cutting-edge environmental technology, enabling users to feel "ecological."

### Seizing Opportunities from Breakthroughs

From now on, environmental efforts across society will accelerate and technological breakthroughs of various sorts are inevitable. The time may come, for example, when renewable kinds of energy, including wind power and solar power generation, will be able to drive electric trains. As the moments arise, we will not miss them, and will seize every opportunity to contribute further in the fight against global warming.

Global warming is no longer something to be debated, but is something against which action must be taken. We will work on the issue, taking action first - immediately - wherever we can, while striving for the future to meet our own, even higher targets.



**Toru Owada**  
Executive Director  
Corporate Planning Headquarters;  
Inquiry & Audit Department;  
Finance Department

**Special Topic 2****Establishment of Environmental Engineering Research Laboratory****From “Partially Optimal” to “Totally Optimal”****Background for Establishing the Environmental Engineering Research Laboratory**

Under the principle of balancing environmental protection with business activities, JR East has carried out environmental activities in each section according to targets established individually. In order to achieve the high target of a “50% reduction of CO<sub>2</sub> in railway operations by fiscal 2031 compared with fiscal 1991 levels” stated in the JR East 2020 Vision - *i do mu* -, we determined that a research and development organization should be created, to be responsible for issuing energy strategies and developing technology for, and from the perspective of, the entire group. In April 2009, we established the Environmental Engineering Research Laboratory.

Conventionally, electricity-related departments have been responsible for reducing use, and rolling stock development departments have been responsible for reducing weight and developing fuel-cell hybrid railway cars. The research laboratory integrates brainpower and technologies across the group - rather than each department pursuing existing technologies separately - and produces innovative environmental technology. Through this integration in a single place, moreover, we are able to move environmental technology from being “Partially Optimal” to being “Totally Optimal,” and make unified efforts on global environmental issues.

**Responsibilities of the Laboratory**

The laboratory has two basic responsibilities. The first is to work on energy strategy for the entire group. It considers what the JR East Group, with railway operations at the core, should do, clarifies the axis and positions of activities, and draws the roadmap for achieving targets.

The second responsibility is new environmental technology. The laboratory determines what new developments JR East should pursue for the benefit of society. Rather than adhere to a notion that we must always be original and create everything ourselves, the laboratory cooperates with external organizations and companies, seeking applications of new technology from whatever source.

### Specific Activities Hereafter

In April 2009, the laboratory began research and development of a next generation "rechargeable battery train," to follow upon diesel hybrid and fuel cell hybrid systems. We will continue these efforts toward realization of such a train - a train that will draw power from overhead lines where available, simultaneously running and charging its batteries, and will then run on battery power where there are no overhead lines.

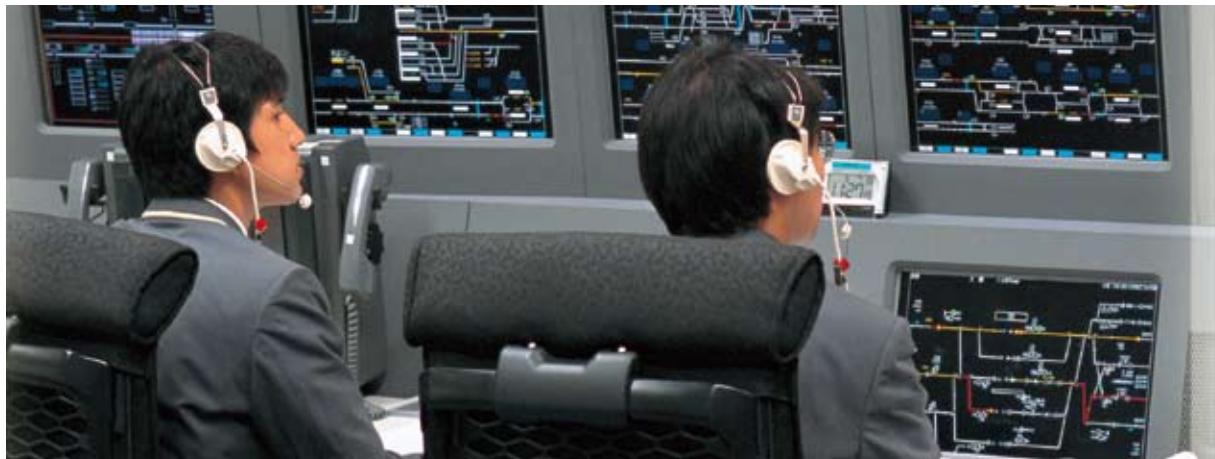
JR East recognizes its environmental responsibility. It is the mission of the Environmental Engineering Research Laboratory to provide the technological foundation enabling us to fulfill that responsibility.



**Seiichiro Oi**  
Executive Director  
Railway Operations Headquarters;  
Technology Planning Department,  
Corporate Planning Headquarters;  
Facilities Department,  
Railway Operations Headquarters;  
Electrical & Signal Network System Department,  
Railway Operations Headquarters;  
Research & Development Center of JR East Group

**Special Topic 3****Establishment of our 5th 5-year Safety Plan, 2013 Safety Vision**

## With Our Two New Approaches, We Aim to Further Increase Our Levels of Safety



### Safety is Our Management's Top Priority

Ever since the establishment of the company, safety has been the priority of JR East's top management. In our JR East Vision 2020 - *i do mu* -, as part of our unwavering commitment to achieve "extreme safety levels," JR East has committed itself to improving its levels of safety. More specifically, we aim to eliminate the number of avoidable accidents through improvements to our operations and maintenance systems. Furthermore, we also aim to increasingly reduce risk from external factors such as natural disasters. In addition, in cooperation with our customers and society, we aim to further improve safety levels at level crossings and platforms.

### Establishment of 2013 Safety Vision

JR East has established and implemented four previous 5-year safety plans. With these plans, we have invested a total of 2.2 trillion yen on safety equipment, making a significant contribution towards the improvement of safety on our railway.

A major characteristic of JR East's 5th 5-year Safety Plan, 2013 Safety Vision, is that we have employed two new approaches: safety-related human resource development and system improvement; and the evaluation of areas of possible risk in order to prevent accidents before they occur.

More specifically, we will continue with our development of Key Safety Leaders and Safety Professionals to serve at the core of our safety programs. Our Key Safety Leaders, to be assigned to each field organization, will possess in-depth knowledge on safety-related matters and be capable of guiding employees and nurturing their successors. Safety Professionals, in addition to holding an in-depth knowledge of safety-related matters, will be capable of addressing a wide variety of issues which occur at accident sites or in unusual situations, and provide appropriate guidance to field organizations in these situations. They will be assigned to each branch office. Both Key Safety Leaders and Safety Professionals will be trained to exert strong leadership for the establishment of safety measures at branch offices and field organizations.

JR East has established a new system to evaluate accident risk as another measure aimed at preventing accidents before they occur. With this new method, we are able to take into account measures for assessing areas of possible risk, which were underestimated in our conventional methods, because accidents fortunately cause no considerable damages. Our new system evaluates all areas of possible risk, prioritizes them and identifies measures, starting with the highest in priority. In addition, as one of the major characteristics of our 2013 Safety Vision and a true hands-on approach to properly recognizing accident situations, JR East has clearly defined its "*sangen* principle (three actualities)" as its safety action standard, identifying the "*sangen* principle" as actual locations, actual objects, and actual people.

### Safety Needs to be Created

Safety is not something which exists naturally. It is something that needs to be created. In order for us to create safety, JR East Group employees need to "think and act for themselves," as indicated in the subtitle of the 2013 Safety Vision. Each employee needs to be able to identify problems and areas of weakness and help to resolve them by him or herself. JR East is committed to heightening our levels of safety through the cooperative wisdom and effort of all Group employees.



**Masaki Ogata**  
Executive Vice President  
Railway Operations Headquarters

**Special Topic 4** Continuing the Challenge — Improving customer satisfaction

## Bringing Out Hidden Customer Comments



### Identifying Customer Needs

Transportation is a service that JR East provides to customers, so, at the front line we must listen sincerely to small or even hidden customer comments and use them to make steady improvements. We believe it is the duty of each and every member of our front line staff not only to listen to clearly expressed opinions and requests, but also to dig out and pay attention to customers' less overtly expressed murmurs and wishes. It is also our duty to immediately make improvements on the spot if this can be done, and if immediate measures cannot be taken, to implement changes at the appropriate branch office or the Head Office, and pass on the details of improvement measures to all workplaces. Such a cycle of actions will not only improve customer satisfaction but also upgrade the overall level of company services. It is critical for us to be constantly aware that the essence of some problems can be determined from comments made by customers as well as from major requests, and that such apparently insignificant comments may well express major problems felt by individual customers.

### Each Individual Customer's Satisfaction

It is our duty to provide a pleasant environment to all our customers, and in April 2009, after receiving an increasing number of calls for us to prevent the effects of passive smoke, we instigated a total smoking ban at stations in the Tokyo metropolitan area. We believe this ban has helped to create more pleasant spaces for all customers using our services. Also, in order to enable customers with baby strollers to use our services more safely, we have posted notices that ask people to be considerate of other passengers.

### Improved Employee Skills

JR East has been promoting customer service improvement initiatives since 2003, as we believe it is necessary to understand individual customer needs when serving them. Although the services customers demand differ according to station and by station area, such as at ticket gates, ticket counters and platforms, and by their situations, we believe it is vital for our staff to constantly recognize and consider what the individual customer in front of them wants and to respond accordingly. Also, it is important for management to recognize and compliment employees who have noticed a customer need and taken the necessary steps to satisfy it. We also believe it is vital for branch office and Head Office staff to work in concert with frontline employees in the process of improving customer services, so that customer satisfaction ultimately becomes a part of each employee's individual sense of achievement, and the results are returned to customers in the form of improved services.

We are committed to creating an environment that meets the diverse needs of our customers, and provide services that guarantee a pleasant railway experience and, therefore, customer satisfaction.



**Yoichi Minami**  
Executive Director  
Railway Operations Headquarters  
Marketing Department,  
Railway Operations Headquarters  
Customer Service Department,  
Railway Operations Headquarters

**Special Topic 5** Maximizing Group Value

## Providing High Quality Services in an Age of Change



### Further Leap in Life-style Businesses

In JR East Vision 2020, we stated that we will continue to aggressively develop our life-style businesses and that we aim to increase the share of our non-transportation operating revenues to approximately 40% of total operating revenues by fiscal 2018. We made this announcement of our Group-wide efforts to set a clear target and work toward its achievement in order to respond to a society that is currently facing drastic changes caused by a declining birthrate, the aging of the population and globalization. To that end, we will recognize stations as important management resources and work toward contributing to the raising of total Group value.

### Building New Businesses and Revitalizing Existing Businesses

In order to coordinate our railway lines, which are used daily by 16.86 million travelers, and our life-style businesses and increase the asset value of our stations, seven or eight years ago we started our Station Renaissance program. In the past we considered stations simply as parts of our railway and life-style businesses. Now, however, we are advancing station development from the perspective of total optimal use of stations and as a form of urban planning in cooperation with communities.

We also believe it is important to press on with our process of continuous improvement of existing outlets in the pursuit of meeting customer needs. Along with the provision of high-quality and high-hospitality products and services that will attract customers, we will initiate high quality design with the aim of making our stations satisfy all the diverse needs of our customers.

One of the most recent issues we have been faced with is the need to revitalize local communities. In this regard, we believe that if we take on the role of introducing local regions to urban areas, by means such as publicizing an individual region's agricultural products and crafts, we will ultimately nurture the revitalization of many of the localities within our service area.

To achieve this, I believe it is vital for us to encourage each and every employee to develop a vision of a better future and through exchanges of ideas turn those visions into realities. We in management intend to consider all suggestions put to us and make speedy decisions about implementation.

Under an environment facing increasingly dramatic changes, we at JR East intend to steadily achieve the targets we published in JR East Vision 2020 and continue to strive for a strengthening of our Group's sustainable growth and management.

The vision of our life-style business is nothing less than initiating business that will be highly regarded by our customers, doing this with the help of extremely sensitive methods and devices.



**Yoshiaki Arai**  
Executive Vice President  
Life-style Business  
Development Headquarters

**Special Topic 6 Future of IT and Suica Businesses**

## From Stations to Cities: New Suica-generated Lifestyles



### Seamless Transportation through Suica

The use of railways has become much easier with the installation of elevators and escalators in stations and the expansion of our through-services network. Other major improvements have come with the introduction of Suica. Passengers no longer have to spend time looking at fare tables to find their destination stations, confirming the fares and then buying tickets from vending machines. Suica has brought the goal of a more seamless transportation system closer by simplifying its use, since all that passengers now need to do is to touch the ticket gate with their Suica, without having to take their tickets or commuter passes out of their cases. Particularly with the interchangeable usage with PASMO in the Tokyo metropolitan area that commenced in March 2007, usage of Suica and other IC cards has increased dramatically.

The goal of nationwide seamless transportation has been brought even closer by Suica interchangeable use, not only with PASMO in the Tokyo metropolitan area, but also with JR West's ICOCA, JR Central's TOICA and JR Hokkaido's Kitaca. Interchangeable use with JR Kyushu's SUGOCA, Nishi-Nippon Railroad's nimoca and Fukuoka City Transportation Bureau's Hayakaken is scheduled to start in spring 2010. With these introductions Suica can be used in all major metropolitan areas. In the future, we will continue to work toward making Suica usable throughout all of our service area.

### Seamless Lifestyle Attainable through Suica

The emergence and spread of Suica has dramatically changed the ticket gate and ticket inspection functions in railway operations, our first business. It has also contributed to the vitalization of our secondary field of operation – our life-style business. The changes brought about by Suica did not stop there, however, but by using the advantages of the IC card, we have created a third business – Suica operations utilizing the card's e-money and identity-verification functions. Suica usage will continue to spread from within stations to city centers and a variety of areas and services, thereby increasing the seamlessness of the modern lifestyle. We intend to continue to advance Suica services to the point where customers will understand the full advantages of Suica use, when, for example, they will be able to access information or benefits simply by touching their Suica.

JR East does not intend to be satisfied with merely achieving a seamless transportation system by spreading the usage of Suica to all railway networks, but means to introduce a totally seamless lifestyle by making Suica the leading source of e-money that can be widely used throughout everyday life. Furthermore, we will continue to propose new lifestyles and create new values that are ahead of their times by providing customers with the timely and appropriate information they need from among the lifestyle information stored in Suica.

### Suica as Social Infrastructure

Suica has now become a part of the social infrastructure and an indispensable facet of everyday life. By doing this, Suica has brought about not only a structural reform of the railway business but also a reform of customer lifestyles. As a prime supporter of this development, we at JR East carry a heavy social responsibility to guarantee and guard Suica's progress as a stable part of the social infrastructure, and we will continue to make all possible efforts to ensure system reliability and the highest possible levels of security.



**Akio Shiibashi**  
Executive Officer  
IT & Suica Business Development Headquarters

## Basic Concept on Environmental Protection and Targets



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 and basic policies for promoting ecological activities (established May 1992)**

#### 【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<sub>2</sub> 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 amount generated, and to use more recycled and resource-saving products to minimize the burden we place 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.  
 • General waste and some industrial waste are disposed of in incinerators. We regard thermal recycling that the heat from incineration is used for generating electricity etc. as a type of recycle measures. Regarding general waste, if in the course of a year, the electricity sold exceeds the electricity purchased for the incineration facility, the waste is regarded as recycled to that extent. When ash and other residue are eventually disposed of, however, those amounts are deducted from the amounts considered recycled.

## INPUT

### JR East's business operations



### JR East Group companies' business operations

- Electricity 5.5 billion kWh
- City gas 9.87 million m<sup>3</sup>
- Other fuels 68 thousand kL (crude oil equivalent)

11.87 million m<sup>3</sup>1,889 t  
(of which 99% is recycled paper)

### Energy use

- Electricity 0.95 billion kWh
- City gas 35.97 million m<sup>3</sup>
- Other fuels 53 thousand kL (crude oil equivalent)



### Water use

10.02 million m<sup>3</sup>

### Office paper use

967 t  
(of which 78% is recycled paper)

**Operating revenue**  
**1,967.4 billion yen**

**Operating revenue**  
**729.5 billion yen**

## OUTPUT

2.26 million t-CO<sub>2</sub>

### CO<sub>2</sub> emissions

0.67 million t-CO<sub>2</sub>

Offices	2,658 t
Stations and trains	42,148 t
General Rolling Stock Centers etc.	831 t
Tickets	464 t
Other field office*1	1,071 t
Power plants	10 t
Total	47,182 t

Construction projects*2	395,843 t
General Rolling Stock Centers etc.	33,629 t
Medical waste	131 t
Other field office	658 t
Power plants	347 t
Total	430,608 t



### General waste discharged

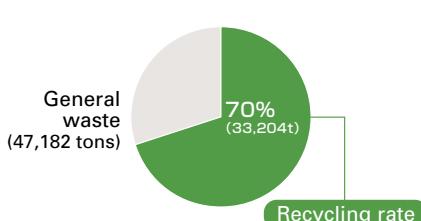
88,067 t



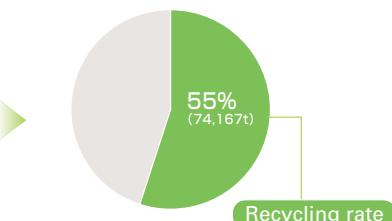
### Industrial waste discharged

38,311 t

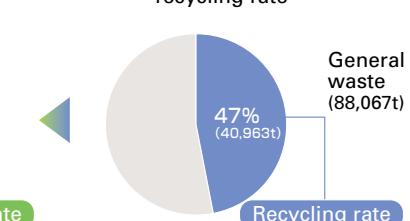
■ JR East's recycling rate



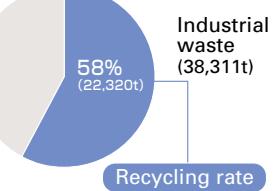
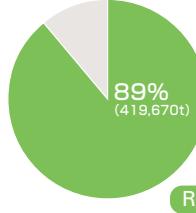
■ Whole JR East Group's recycling rate



■ Group companies' recycling rate



Industrial waste (430,608 tons)



\*1 Other field office Technical center and conductor's depots, etc., engaged in the maintenance of equipment.

\*2 Construction projects Legally, industrial waste generated by contractors through our construction projects.

## Targets and outcomes

■ Accomplishments of environmental targets to be met in the fiscal year ending March 2009 and new targets to be met in the fiscal year ending March 2011

Category of environmental conservation activities	Main activities	Target to be met by fiscal 2009	Base value (base year: fiscal 1991)	Results for fiscal 2009	Results	Targets to be met by fiscal 2011
Measures to prevent global warming	Total CO <sub>2</sub> emissions from railway business activities	22% reduction (as compared with fiscal 1991) (2.15 million t-CO <sub>2</sub> )	2.76 million t-CO <sub>2</sub>	18% reduction (2.26 million t-CO <sub>2</sub> ) - Act on Promotion of Global Warming Countermeasures 24% reduction (2.10 million t-CO <sub>2</sub> ) - relative to target management values *3	Achieved	50% reduction by fiscal 2031(relative to fiscal 1991) 2.76 million t-CO <sub>2</sub> → 1.38 million t-CO <sub>2</sub> (reduction by 1.38 million t-CO <sub>2</sub> )
	CO <sub>2</sub> emissions per unit electricity generated at JR East's thermal power plant	40% reduction	726g-CO <sub>2</sub> /kWh	36% reduction (465g-CO <sub>2</sub> /kWh) - Act on Promotion of Global Warming Countermeasures 38.9% reduction (444g-CO <sub>2</sub> /kWh) - relative to target management values *3	98.9% of the target figure achieved	32% reduction by fiscal 2018(relative to fiscal 1991) 2.76 million t-CO <sub>2</sub> → 1.88 million t-CO <sub>2</sub> (reduction by 0.88 million t-CO <sub>2</sub> )
	Energy-efficient railcar utilization rate	82%	—	86%	Achieved	86%
	[A new establishment] Electricity used for train operation	—	—	4.06 billion kWh	—	2% reduction (relative to fiscal 2007) 4.17 billion kWh → 4.09 billion kWh (reduction by 0.08 billion kWh)
	Train energy consumption per unit transport volume	19% reduction	20.6MJ/car-km	15% reduction (17.5MJ/car-km) - Act on the Rational Use of Energy. 18.9% reduction (16.7MJ/car-km) - relative to target management values *3	99.9% of the target figure achieved	No target has been established because the basic unit is managed by newly adopted "Train electricity per unit transport volume."
	[A new establishment] Train electricity used per unit transport volume	—	—	1.80kWh/car-km	—	2% reduction (relative to fiscal 2007) 1.85 kWh/car-km → 1.81 kWh/car-km (reduction by 0.04kWh/car-km)
	[A new establishment] Energy saving at stations and offices	—	—	15.3 billion MJ	—	4.5% reduction (relative to fiscal 2007) 15.3 billion MJ → 14.6 billion MJ (reduction by 0.7 billion MJ)
	Large refrigerators using specified chlorofluorocarbons (CFCs)	100% reduction	82	100% reduction	Achieved	—
Measures for resource circulation	Recycling rate for waste generated at stations and on trains	45%	—	70%	Achieved	70%
	Recycling rate for waste generated at General Rolling Stock Centers, etc.	85% (Average for 4 years of plan) *1	—	92% (Average for 4 years of plan) *1	Achieved	95%
	Recycling rate for waste generated in construction projects	92% (Average for 4 years of plan) *1	—	90.7% (Average for 4 years of plan) *1	98.7% of the target figure achieved	92%
	Recycling rate for general waste	43%	—	55%	Achieved	No target has been established because all group companies set their own numerical target.
	Recycled office paper utilization rate	100%	—	92% *4	92.0% of the target figure achieved	100%
Chemical substance management	NO <sub>x</sub> emissions from JR East's thermal power plant	63% reduction	994t	61.9% reduction (379t)	98.9% of the target figure achieved	No target has been established because all available measures with the current technology have been taken.
Environmental activities along railway lines	Reduction of noise to 75dB or less along the Tohoku and Joetsu Shinkansen Lines (in designated noise control area) *2	100% (Target to be met by fiscal 2010)	—	81%	Ongoing	100% (Fiscal 2010 targets have been achieved)
Environmental communication	Participation in specific environmental protection activities every year	Participation in tree planting, etc.	—	54 thousand trees planted at 18 locations		Participation in tree planting, etc.
Environmental management	[A new establishment] Setting of numeric targets by all group companies	—	—	Established		All group companies set their own numerical targets

Targets for the JR East Group

\*1 Average for 4 years of plan Fiscal 2006-2009 average.

\*2 Measures to reduce noise along the Tohoku and Joetsu Shinkansen Lines We have completed measures to reduce noise to 75dB or less, following guidance by the national government. In areas not subject to guidance, we are carrying out improvements to be completed in the fiscal year ending March 2010.

\*3 Relative to target management values We manage progress toward achievement of targets for the fiscal year ending March 2009 using values calculated with coefficients in "Voluntary Action Plan on the Environment" by the Japan Federation of Economic Organizations, from the Federation of Electric Power Companies, and from other sources, as of the date that the targets were set, in order to clearly understand changes to our measures on a year-to-year basis.

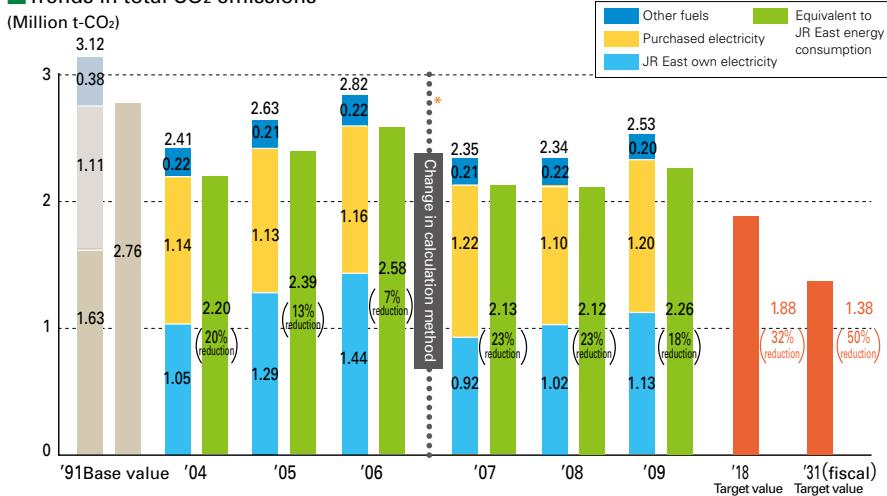
\*4 Recycled office paper utilization rate Papers sold as recycled paper by manufacturers are calculated as recycled paper.

# Measures to Prevent Global Warming

## CO<sub>2</sub> emissions and reduction measures

Our CO<sub>2</sub> emissions in the fiscal year ending March 2009 amounted to 2.26 million tons, an increase of 0.14 million tons from the previous fiscal year. Reasons included higher coefficients for CO<sub>2</sub> emissions by electric power companies, and increased operating rates of our own thermal plants to compensate for less electricity generated by our hydroelectric plants. We are determined to continue to reduce energy used for train operation, which accounts for 70% of the total energy we consume. We will also undertake a range of measures to reduce CO<sub>2</sub> emissions, including energy conservation actions for which new targets are being set for stations and offices.

### Trends in total CO<sub>2</sub> emissions



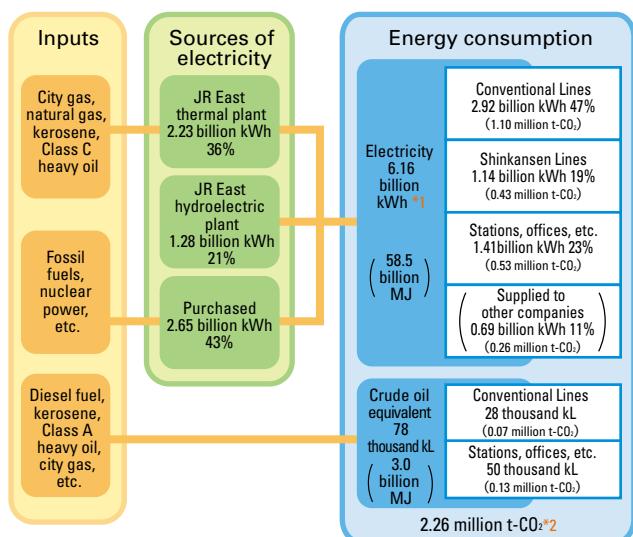
### \*Change in calculation method

Through the fiscal year ending March 2006 CO<sub>2</sub> emissions from use of power and fuels and energy consumption were calculated with reference to the "Voluntary Action Plan on the Environment" by the Japan Federation of Economic Organizations. Beginning in the fiscal year ending March 2007, we have adopted a new method based on Act on the Rational Use of Energy (Energy Conservation Law) and the Act on Promotion of Global Warming Countermeasures (Global Warming Measures Law). Using the former coefficients, emissions for the fiscal year ending March 2009 were 2.10 million t-CO<sub>2</sub> (a reduction of 24% compared to the fiscal year ending March 1991). Also, CO<sub>2</sub> emissions as a specified transportation operator designated by the Energy Conservation Law (the emissions generated only by railway operation, excluding offices and hospitals) will be shown to be 2.13 million t-CO<sub>2</sub> in the report for the fiscal year ending March 2009.

## Energy conservation and CO<sub>2</sub> 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 electric power companies. Besides electricity, we also use diesel fuel and kerosene for diesel train operation and air conditioning at stations and in offices. We will strive to save energy in various ways and reduce CO<sub>2</sub> emissions.

### JR East Energy flow map

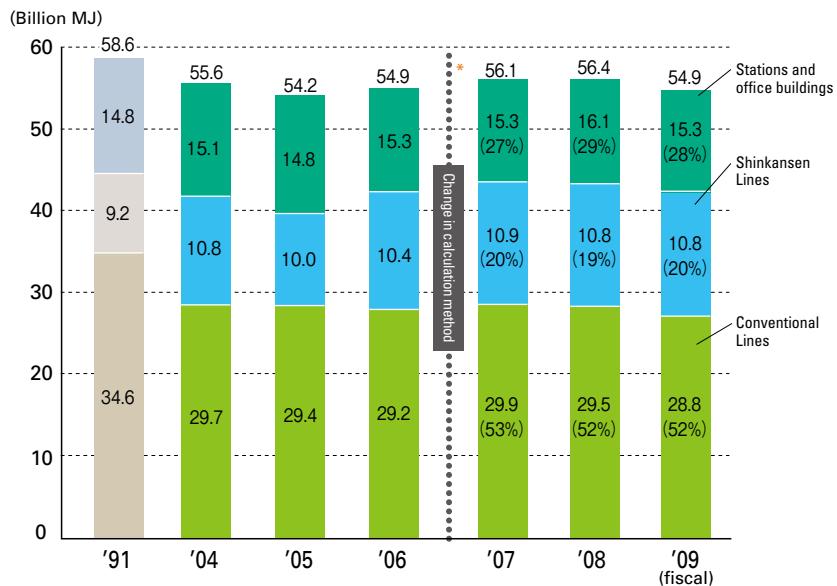


\*1 6.16 billion kWh

After subtracting electricity that we supplied to other companies, JR East consumed 5.47 billion kWh, which is equivalent to power consumed by 1.41 million ordinary homes over a period of 1 year.

\*2 2.26 million t-CO<sub>2</sub>

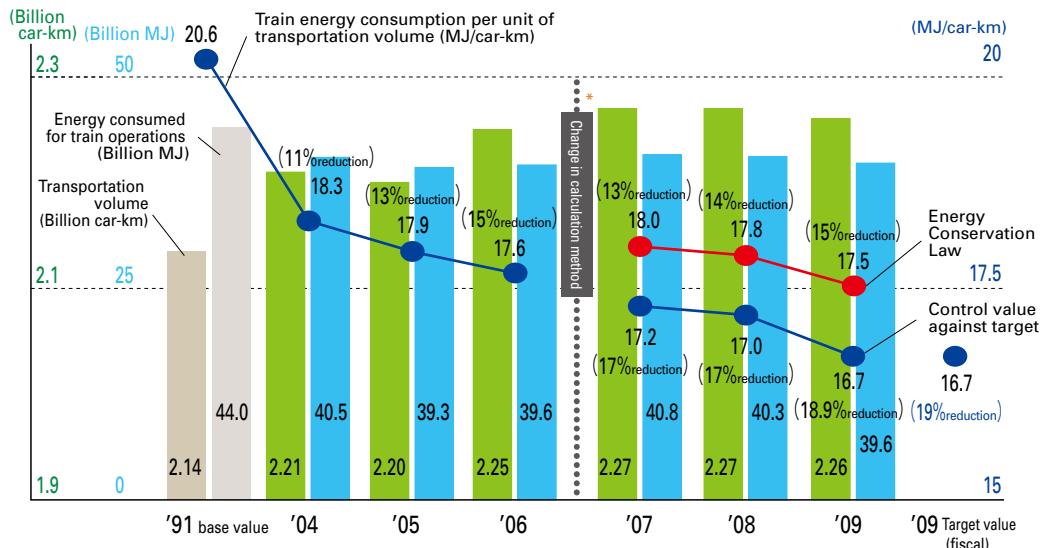
Excluding supply to other companies.

**—Measures to Prevent Global Warming—****■ Composition of energy consumption****\*Change in calculation method**

Until the fiscal year ending March 2006, fuels and energy consumption were calculated with reference to the "Voluntary Action Plan on the Environment" by the Japan Federation of Economic Organizations. Beginning in the fiscal year ending March 2007, we have adopted a new method based on Act on the Rational Use of Energy (Energy Conservation Law) and the Act on Promotion of Global Warming Countermeasures.

**Reducing energy consumed for train operations**

As of the end of March 2009, JR East had 10,529 energy-efficient railcars in operation. This accounts for 86% of our railcar fleet.

**■ Trends in energy consumed for train operations and train energy consumption per unit of transportation volume****\*Change in calculation method**

Through the fiscal year ending March 2006 energy consumption was calculated with reference to the "Voluntary Action Plan on the Environment" by the Japan Federation of Economic Organizations. Beginning in the fiscal year ending March 2007, we have adopted a new method based on Act on the Rational Use of Energy (Energy Conservation Law). Under the former method, energy consumption for train operation for the fiscal year ending March 2009 was 37.8 billion MJ and the energy consumption per unit of transportation volume was 16.7 MJ per car-kilometer or a reduction of 18.9% from the level of the fiscal year ending March 1991.

**—Measures to Prevent Global Warming—**

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.

Energy consumption per unit of transportation volume during the fiscal year ending March 2009 was reduced by 15% compared with fiscal year ended March 1991.



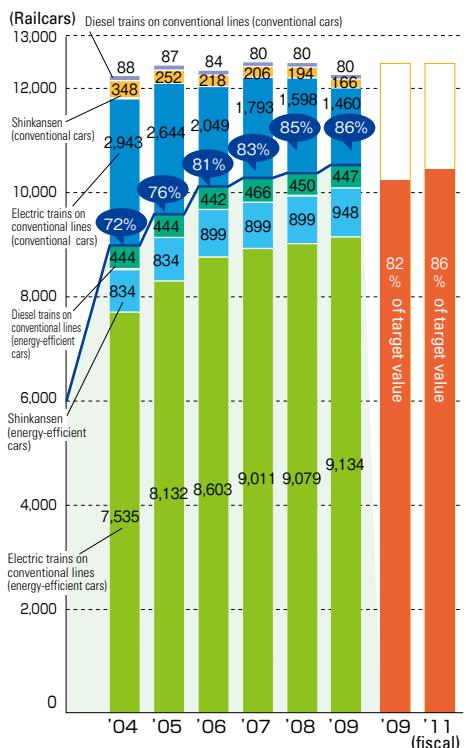
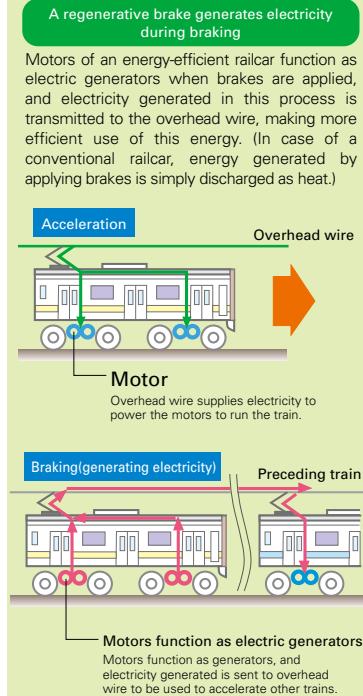
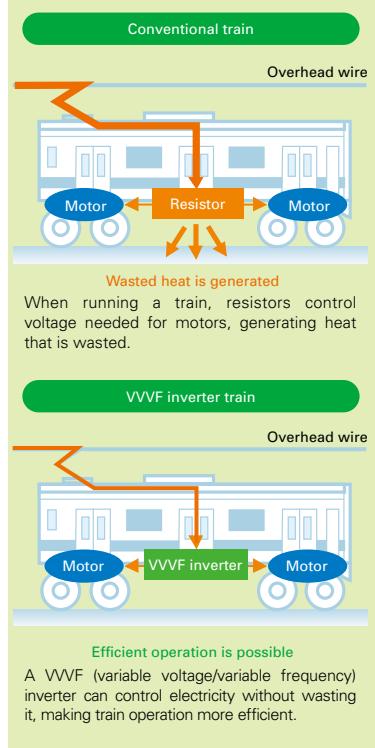
E233 series: State-of-the-art cars introduced on the Chuo Line in December 2006.



E2 series: VVVF inverter railcars used for Shinkansen "Asama" and "Hayate" trains.

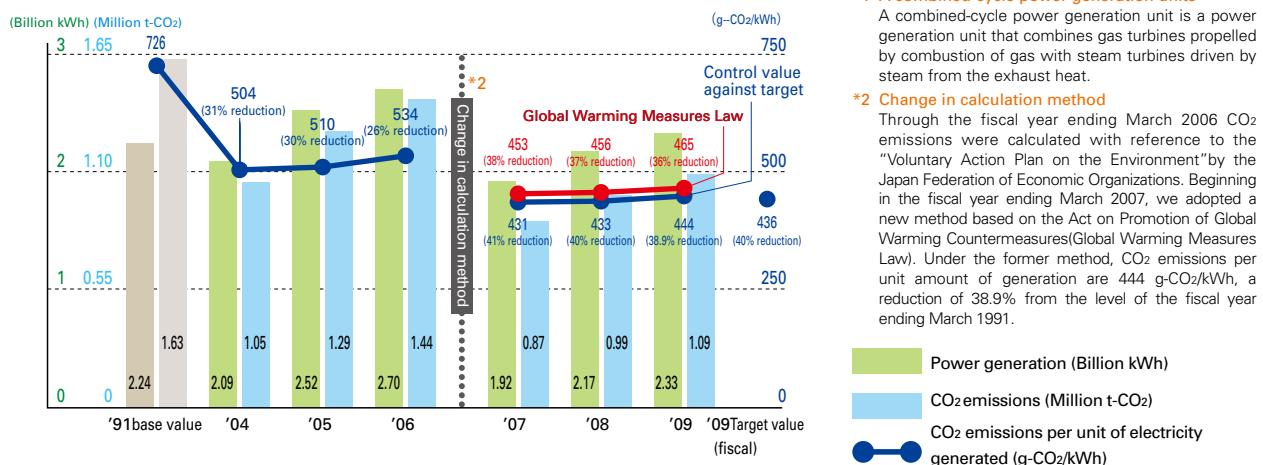


E231 series: VVVF inverter cars for commuter and suburban transportation.

**Trends in energy-efficient railcars****Regenerative brake mechanism****Mechanism of VVVF inverter control**

**—Measures to Prevent Global Warming—****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<sup>\*1</sup> with improved generating efficiency. In June 2006 we replaced kerosene with natural gas as fuel for the No.3 generation unit. As a result of these efforts, we have reduced CO<sub>2</sub> emissions per unit of electricity generated at the plant by 36%<sup>\*2</sup> compared to the fiscal year ending March 1991. In an effort to further reduce CO<sub>2</sub> emissions, we will replace the last steam-powered generation unit using heavy oil with a combined-cycle generation system using natural gas in 2013.

**■Power generation and CO<sub>2</sub> emissions at JR East's thermal power plant****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 will be installed at Tokyo Station above the platform serving Tokaido Line tracks No. 9 and 10, and are scheduled to be operational during the fiscal year beginning April 2010. Also, in preparation for employing wind-power generation, we will carry out research to determine whether there are effects when electricity generated by wind power (which fluctuates according to wind velocity) is routed to a transformer substation.



Solar panel installed atop platform roofs at Takasaki Station.



Installation of solar panels is planned also at Tokyo Station.

**Greening rooftops**

We have been promoting green plantings on the rooftops of stations and office buildings owned by JR East since the fiscal year ending March 2005, in order to reduce "heat island" effects and help reduce energy usage for air conditioning in the buildings. As of the end of May 2009, we had covered a combined rooftop area of about 8,900 m<sup>2</sup> in 30 projects.



**—Measures to Prevent Global Warming—****Environmental management at large underground stations**

When we began our equipment renewal work at Ueno Station and the underground Keiyo Line area in Tokyo Station to eliminate the use of CFCs, we reviewed the capacity of cooling equipment for air conditioning and employed inverter controls. We also endeavor to reduce energy by monitoring operations and exercising optimum operating control based on diagnosis using our Building Energy Management System (BEMS). As a result, in the fiscal year ending March 2009, energy consumption by air conditioning units was down by a very substantial 49% (from the level of the fiscal year ending March 2005) at Ueno and Tokyo Stations.

**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.

**Saving energy in information systems**

Energy consumption by information equipment has increased dramatically over the past several years and has become a real problem for society. We at JR East are promoting Green Information Technology (Green IT) - endeavoring to save energy in information systems and reducing energy consumption by making use of IT systems.

**Saving energy at stations**

At Mejiro Station on the Yamanote Line and Ichigaya Station on the Chuo Line, we worked to promote energy conservation (electric equipment) using a variety of technologies to reduce CO<sub>2</sub> emissions. Specifically, we introduced electric energy meters, evened the levels of illumination on platforms, and introduced automatic on-off systems and LED displays and illumination. As a result, at Mejiro Station, we reduced use of energy related to lighting by about 30%.

■Evening illumination on platforms (only at Mejiro Station)



Before: Intensity was higher at the ends of the platform



After: Intensity is even throughout the platform after changing the layout of lighting apparatus

**—Measures to Prevent Global Warming—****Intermodal Transportation = Reduction of CO<sub>2</sub> 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 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 2009, 96 JR East stations had parking spaces for eleven 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.

**\*Parking spaces for eleven thousand cars at 96 stations**

Parking spaces include those developed by JR East, and those managed by JR East Group companies or in cooperation with local municipalities.



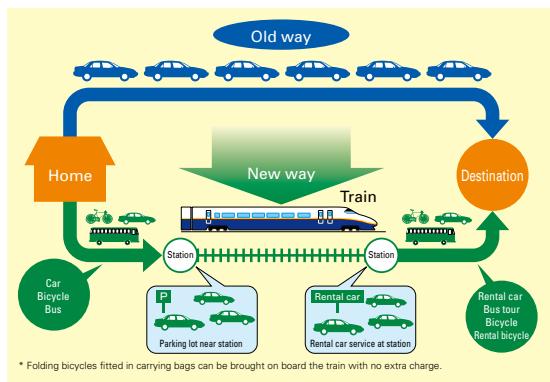
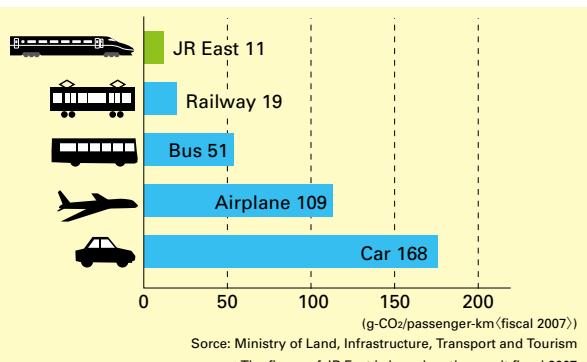
At 10 stations between Tomobe and Iwaki on Joban Line, parking charges are free for express train customers going farther than a specified distance.

**•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.

**\*Intermodal transportation**

Intermodal transportation is provided when a transportation system allows a person to get from an origin point to a final destination by connecting between different modes of transportation.

**■ Intermodal transportation****■ CO<sub>2</sub> 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 recycle.\* In addition, restaurants and retail stores in our life-style businesses produce garbage and general waste. In order to reduce all these various forms of waste, JR East actively supports the approach known as "reduce, reuse, recycle." For recycling in particular, goals are set for each type of waste.

## Recycling waste collected from stations and trains

In the fiscal year ending March 2009, waste collected from our stations and trains amounted to 42 thousand tons, which is equivalent to the amount of household waste generated per year by 105 thousand people in Japan. Since waste collected from our stations and trains includes recyclable materials, we endeavor to properly sort it and recycle it. JR East has installed separate refuse bins for different types of waste at stations, and has established its own recycling centers in the Tokyo metropolitan area to ensure thorough sorting of waste after it has been collected. In June 2008, we raised our recycling targets and achieved a recycling rate of 70% in the fiscal year ending March 2009. Beginning with the fiscal year ending March 2008, thermal recycling has been also taken into account.

## 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 recycling. Starting in the fiscal year ending March 2006, we have included our retired railcars that were sold to outside parties and later scrapped as part of the quantities recycled by the JR East Group when calculating our recycle rates.



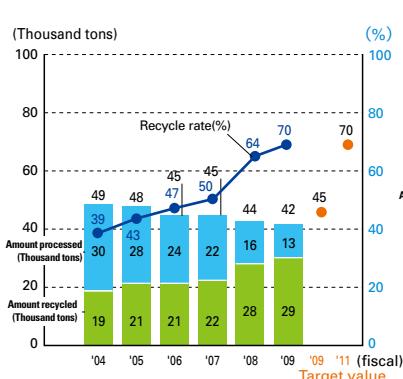
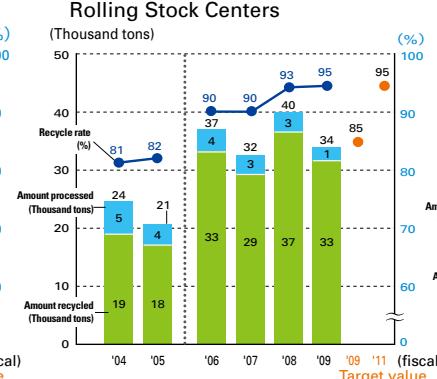
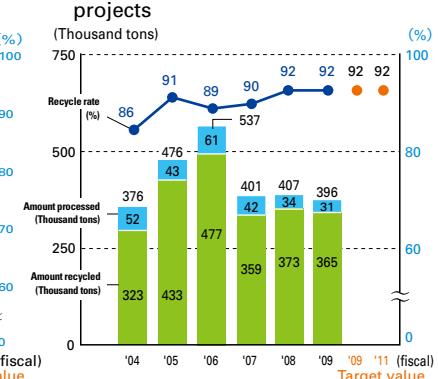
At Nagano General Rolling Stock Center, retired wheels are recycled into brake disk parts.

## Reducing construction waste

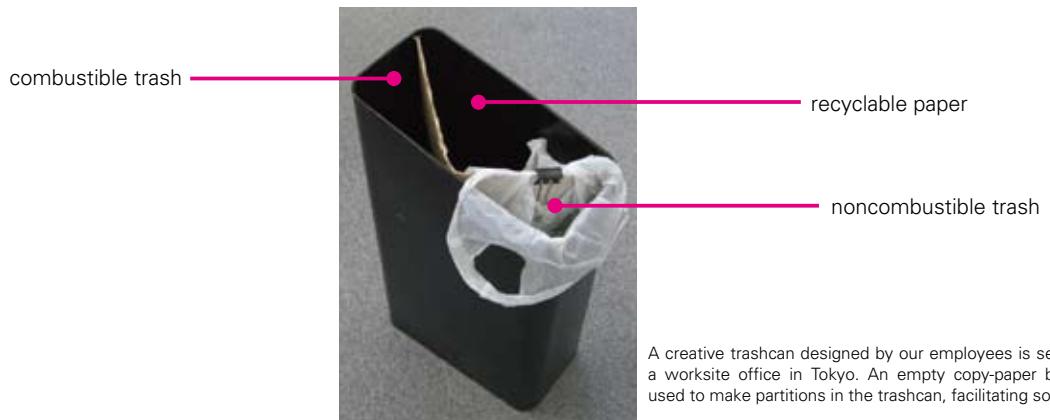
JR East endeavors to reduce waste from construction by requiring subcontractors to use design and construction methods allowing them to properly dispose of construction byproducts and to minimize waste. In the fiscal year ending March 2009, JR East generated 396 thousand tons of waste through construction and maintenance projects at our stations and other structures, including 84 thousand tons of waste through work entrusted to JR East.\*

\*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.

**—Measures to create a sound material cycle—****■Waste from stations and trains****■Waste from General Rolling Stock Centers****■Waste from construction projects****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 2009, we recycled 2,209 out of a total of 2,658 tons of waste (83%).



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.

**Recycling garbage in our life-style businesses**

The Nippon Restaurant Enterprise Co., Ltd., which operates in-station restaurants and makes and sells *ekiben* (boxed meals sold at stations and on trains), works on food recycling. It uses garbage waste generated from its stores and plants on its own farm as fertilizer, and sells or uses agricultural products harvested there in its stores and plants.

In addition, many in-station stores, station buildings and hotels strive for garbage recycling and reduction of waste volume, aimed at achieving the standards under the Food Recycling Law.

**Efficient use of water resources**

As a consumer of 11.87 million m<sup>3</sup> of water annually, JR East actively promotes the use of recycled waste water\*, using, for example, rainwater and water already used for washing hands to flush toilets. At the Head Office building, 21 thousand out of 46 thousand m<sup>3</sup> of water was reused in the fiscal year ending March 2009.

\*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.

**—Measures to create a sound material cycle—****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 ending March 2009, 464 tons of collected tickets, etc., were recycled. Collected magnetic season tickets were recycled into solid fuel.



Used tickets collected at stations are reused as toilet paper 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 Japan Green Procurement Guidelines." 56% of office supplies are subject to green procurement. When we choose a supplier of materials, we investigate its environmental and CSR activities, and use what we find as a factor in our decision.

**Recycling trash within the company**

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

Paper from recycled tickets is used as toilet paper at major stations in the Greater Tokyo Metropolitan area, while magazines collected in magazine trashcans on trains and at stations are recycled into coated paper and used to produce the information magazine "Train Vert," which is distributed on the Shinkansen. Newspapers are also recycled and used internally as copy paper.



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

# 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 base 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 the end of fiscal year ended March 2009, we were using 88 tons of CFC substitutes and only 0.5 ton of CFCs. 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 65 tons of halon gas was still in use as a fire-extinguishing agent as of the end of the fiscal year ended March 2009, we have it under proper control and are replacing it with non-halon agents (such as powder agents and CO<sub>2</sub>) 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. As a company that handles a considerable amount of specified chemical substances, JR East's 14 facilities submitted the data regarding the release and transfer of these substances to relevant authorities in fiscal year ended March 2009, pursuant to the PRTR Law.\*

We are also promoting the introduction of stainless steel railcars that do not require painting. At the end of March 2009, as many as 78% of the 10,594 cars operated on our conventional lines were stainless steel railcars.

Beside their use for railcars, we used 583 tons of organic solvents for painting railway facilities and stabilizing track beds in fiscal year ended March 2009.

\*PRTR stands for "pollutant release and transfer registers."

The formal name of this law is Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof. The law encourages the assessment and control of toxic chemical substances emitted into the environment and measures to prevent negative impact on the environment.

■Amount released and transferred from 14 reporting-required facilities

Chemical substance	Released into air	Released into sewerage	Transferred to other facilities	(kg)	Chemical substance	Released into air	Released into sewerage	Transferred to other facilities	(kg)
2-Aminoethanol	0	1,100	0		Chromium and Chromium(III) compounds	0	0	58	
Bisphenol A-type epoxy resin	0	0	2,500		Methylene dichloride	6,500	0	560	
4,4'-methylenedianiline	0	0	310		Styrene	1,500	0	0	
Ethylbenzene	5,020	0	2,102		Toluene	18,680	0	14,220	
Ethylene glycol	1	0	9,350		m-tolylene diisocyanate	0	0	170	
Xylene	24,290	0	3,649		o-toluidine	0	0	150	

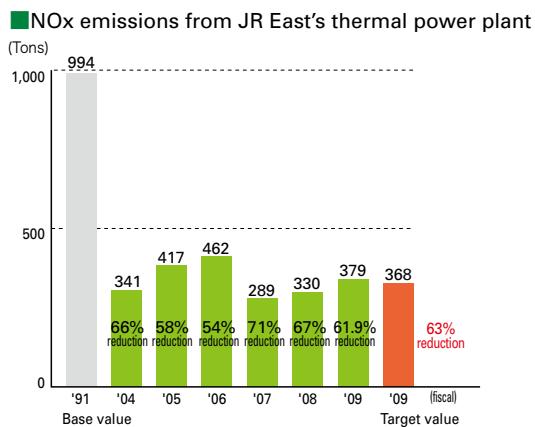
\*Note:

There was no release to soil, public water supply or disposal by landfills.

Among the substances for which reporting is required, those that were actually released or transferred are posted here.

**–Chemical substance management–****Reducing emissions from JR East's thermal power plants**

We use natural gas, kerosene and Bunker C (especially, low-sulfur heavy 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 endeavor both to control the generation of these substances and to reduce the total amount of emissions by installing denitrification equipment, low-NOx burners and dust collectors at the plants.

**Management of PCBs**

Equipment containing PCB's is securely stored at 82 locations and reports on it are filed as required by laws and regulations. We neutralize this equipment to the extent that can be done by PCB waste treatment facilities. In the fiscal year ending March 2009, we treated 87 units of equipment such as transformers and capacitors.

# Reducing Noise along Railway Lines

## 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, etc. In order to reduce noise, we pursue various actions to improve both the trains and our ground equipment. JR East also endeavors to reduce noise during maintenance work on railways, civil engineering structures, etc., to further improve the environment along the lines.

### Measures for the Shinkansen

In accordance with the Japanese government's Environmental Quality Standards for Shinkansen 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<sup>\*1</sup> 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 type railcars, which were developed based on the results of running tests using the Shinkansen test train "FASTECH," 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<sup>\*2</sup>.

**\*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 wave in tunnels**

An explosive sound caused by compressed air being forced out of a tunnel when a Shinkansen enters it at a high speed. The sound is produced at the end of the tunnel.



Test train "FASTECH" uses a low-noise single arm pantograph.

### Measures for conventional lines

We have implemented voluntary measures for conventional lines to minimize noise, installing long rails<sup>\*1</sup> and performing rail-grinding and wheel-truing<sup>\*2</sup>. 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 to make the length of a single rail 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. On double-track lines, we carry out maintenance work on one track during daytime while trains in both directions use the other track. We also endeavor to lessen the need for maintenance itself by increasing the use of labor-saving tracks with wear-resistant rails.

To protect the environment along our railway lines from noise related to train operations and railway maintenance work, we implement measures systematically in accordance with the government's environmental standards and guidelines. We also continue our own similar efforts for tracks and trains on conventional lines, for which no standards are provided. We are determined to make further improvements to the environment along our railway lines by developing technology to reduce noise.

# Improvement of Environment along Railway Lines

## Measures to control dioxin from incinerators

In the past, JR East disposed of some of its waste using its own incinerators. Depending on the conditions inside an incinerator, however, dioxin can be generated. In the fiscal year ending March 2003, we stopped the use of all incinerators with the exception of one large one, which was closed in the fiscal year ending March 2005. We are now working carefully, step by step, on dismantling and removing the closed incinerators themselves.

## Restricting use of herbicides

For the sake of safe train operations, weeds are regularly removed along railway lines. While we generally remove them manually, we also use a certain amount of herbicide. Use and scope of application of herbicides are kept to a minimum and only herbicides whose toxicity to humans and animals is classified as ordinary (the lowest of three levels of toxicity) and toxicity to fish is "A" (the lowest of five levels of toxicity) are used. Application of herbicides is thoroughly covered by rules on avoiding effects on neighboring areas, including suspension of work if spraying conditions are not good. In the fiscal year ending March 2009, 283 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 Temmagawa 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.



Using continuous concrete arches, the Temmagawa Bridge, between Kamikitamachi and Ottomo on the Tohoku Main Line, sits in harmony with the mountains and pastoral landscape of Aomori Prefecture and received the 2008 Civil Engineering Design Prize of the Japan Society of Civil Engineers.

## Use of groundwater in tunnels to purify rivers

Groundwater in underground tunnels is typically pumped out and drained away. JR East, in coordination with local municipalities, promotes draining clean spring groundwater in tunnels into surrounding rivers to purify water and improve the environment. In Tokyo, we started draining clean groundwater to the Nogawa River (via Sugatami Pond) in the fiscal year ending March 2002, to the Tachiaigawa River in the fiscal year ending March 2003, and to Shinobazu Pond in the fiscal year ending March 2004; and, in Kanagawa Prefecture, to the Yahagigawa River in the fiscal year ending March 2008.



Routing tunnel groundwater to the Tachiaigawa River

# Measures for Biodiversity

## Development of railway trees

Rich natural environments extend along JR East's 7,500 kilometers of railway lines, including railway trees planted to shield the tracks from blowing snow and wind. Thankful for the blessings of the trees and other living things, we continue our work to protect and nurture the natural environment around us.

Railway trees are planted to protect tracks from natural disasters, including snowdrifts and landslides, and to ensure safe, stable train operations. In Japan, railway trees were first planted in 1893 to combat drifting snow. Since then, they have been established for various purposes, including to protect against strong winds, landslides in the rain, snow slides in winter and drifting sands in coastal areas. JR East now owns approximately six million railway trees on a total of about 4,200 hectares along our lines. The trees absorb 17 thousand tons of CO<sub>2</sub>, equivalent to 0.8% of the CO<sub>2</sub> 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.



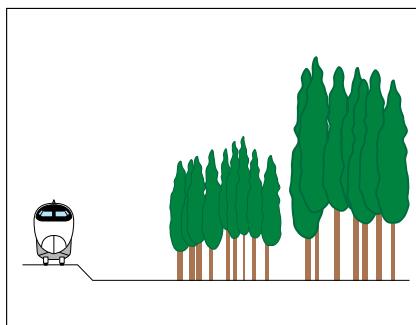
Sekine No.1 railway forest on the Ou Line (forest to protect against blizzards)



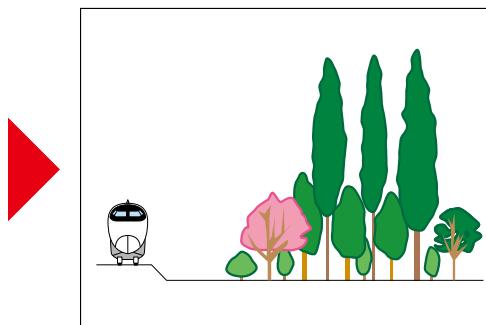
Tenoko No.6 railway forest on the Yonesaka Line (forest to protect against snowslides)

## 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)

**—Measures for Biodiversity—****Planting new railway trees**

On September 27, 2008, a ceremony of planting new railway trees was held at Kakizaki No. 1 railway forest between Kakizaki and Yoneyama on the Shinetsu Main Line. The railway trees had been red pine trees to protect railway tracks from drifting sands blown by strong winds from the Sea of Japan, but were damaged by salt in winter winds and by pine weevils. 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. At the ceremony, about 260 people, including local residents and participants in the organized tour, planted two thousand trees, a part of the 12 thousand trees in 40 varieties which will be replaced.



Tree-planting ceremony for new railway trees (Kakizaki No. 1 railway forest)

**Forest development along railway lines**

Since 1992, we have implemented tree plantings along railway lines to create railway forests. By March 2009, we had planted some 280 thousand trees with the involvement of about 40 thousand people. We are now working together with people in local communities on planting trees in other places as well as along railway lines.

**Adatara Hometown Forestation Program**

The entire JR East Group has taken part in the Adatara Hometown Forestation Program on national woodland in the Adatara district, Fukushima Prefecture, since 2004.

Our plan is to plant various kinds of trees close together in a state similar to what would naturally exist, and have a "hometown forest" develop through natural selection. In May 2009, about 1.8 thousand people joined in our tree planting and planted 17 thousand saplings.



Adatara hometown forestation program

**Akita Shimohama Coast Forestation Program**

At our railway forests along the Uetsu Main Line on the Shimohama Coast, in Akita City, JR East's Akita Branch and the AEON Environmental Foundation jointly staged an event to replant pine trees, replacing those lost to pine weevils. About 880 people joined in, planting about 10 thousand saplings.



Akita Shimohama Coast Forestation Program co-sponsored with AEON Environmental Foundation

# Development of Environmental Technology

## Research and development contributing to environmental conservation

JR East has set "contributing to the Global Environment" as one of the four fundamentals of our R&D initiatives and is committed to the research and development for creating environmentally friendly stations. Specifically, our main R&D initiatives are related to environment assessment using Life Cycle Assessment (LCA), the promotion of resource circulation efforts by incorporating 3R (reduce, reuse, and recycle), and "Applications of new energy systems" such as fuel cells and the power-generating floor system.

## 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. A similar hybrid system will be employed on new resort trains that will enter service in the fall of 2010. This is expected to reduce fuel consumption by about 10% and nitrogen oxide (NOx) exhaust emissions by about 60%, in comparison with current trains. Also, the level of noise when idling at stations and when accelerating on departure is expected to be lower by 20-30dB.



The world's first diesel hybrid railcars operating on the Koumi Line



New resort train (concept)

## Development of fuel-cell hybrid railcars

JR East is proceeding with research on railway systems using fuel cells, a technology with low environmental impact. They feature highly efficient electricity generation and emit only water as a byproduct. Completing the world's first fuel-cell hybrid railcar in 2006, we confirmed its basic performance in test runs at up to 100 km/h and identified issues yet to be resolved. Currently, we are engaged in research on improving the efficiency of the fuel cells and producing and refueling with hydrogen. There are still many challenges to overcome with fuel cell technology, but we are committed to the development of it, with an eye to the day when it will be commercially available.



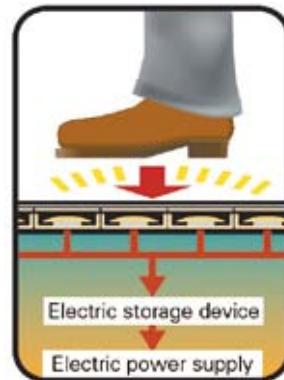
Test run of fuel-cell hybrid railcar

**—Development of Environmental Technology—****Experimenting with power-generating floors**

The third demonstration of a power-generating floor system, with increased capability, has been carried out. The system generates electricity from the pressure of people walking on it. The test was conducted in a passageway at the Tokyo Station Yaesu North Exit ticket gate area from December 2008 to February 2009. Electricity generation is from the vibrations caused by the deformation of piezoelectric elements under the floor as people walk on it. We will continue our research and development for further improvement of power generation efficiency and endurance.



Demonstration experiment at Tokyo Station



Mechanism of the power-generating floor system

**Professor Mika Takaoka of Rikkyo University Inspects a Diesel Hybrid Railcar**

On April 10, 2009, we asked Professor Mika Takaoka of Rikkyo University to inspect the Kiha E200 diesel hybrid railcar, which entered service in July 2007 on the Koumi Line. We explained its environmental superiority and safety.



Mr. Mitsuyoshi Yokota, Assistant office chief, Koumi Line Operations Office, explains the car to Prof. Takaoka.

# Environmental Management System

## Creating an environment-conscious climate

JR East believes 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.

Established in 1992 and chaired by the president and CEO of JR East, the Committee on Ecology 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. The committee, with its headquarters in the Management Planning Department, functions as a cross-departmental body, and its members consist of the general managers of each department.

In order to strengthen environmental management as the JR East Group, by measures such as sharing issues among the group, the JR East Group Environment Management Promotion Conference is held every year, in which all parties responsible for environmental efforts in group companies participate.

■Organizational structure to promote environmental management (as of August 1, 2009)



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 <sub>2</sub> emissions through reduced electricity use and new energy technologies, reduction of CO <sub>2</sub> emission volume throughout the entire transport system, etc.	* Eco station WG * Eco railcar WG * Railway usage promotion 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

**—Environmental Management System—****Implementation of Environmental Education**

For effective environmental management, it is essential that all employees have appropriate knowledge on environmental issues. We provide environmental education lectures to a large number of our employees, ranging from new employees to people who are promoted 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**

<b>Education of environmental-activity promoters at organizations of JR East and group companies</b>
<b>Environment management training (group companies)</b>
<ul style="list-style-type: none"> <li>● Persons trained: those responsible for environment at group companies</li> <li>● Objective: improvement of ability in environment management</li> <li>● Number of participants: 82</li> </ul>
<b>Environment management practical training</b>
<ul style="list-style-type: none"> <li>● Persons trained: those responsible for environment at local organizations, etc.</li> <li>● Objective: improvement of ability in environment-related matters as trainers to field offices, etc.</li> <li>● Number of participants: 32</li> </ul>
<b>Training for personnel responsible for environmental measures</b>
<ul style="list-style-type: none"> <li>● Persons trained: those responsible at each branch office</li> <li>● Objective: acquisition of basic knowledge such as environment-related laws</li> <li>● Number of participants: 16</li> </ul>
<b>Environment education targeting a large number of participants</b>
<p>Training for new recruits: 1,846        Training for work-implementation managers: 240        Training for new on-site supervisors: 163        Implementation of training and lectures in branch offices</p>

**Environment-related commendation system**

Formal recognition was first extended for contributions to environmental preservation during the fiscal year ending March 2006. The system is to encourage JR East bodies and JR East Group companies to be engaged in environmental preservation, as well as to share information on exceptional efforts. As for activities during the fiscal year ending March 2009, two bodies and three group companies were recognized for their responsible, independent approaches to environmental activities.

<b>Recognition from President</b>	JR East Yokohama Branch Office	Helping employees improve environmental awareness by providing environment-related information every week and actively holding facility tours. Also actively participating in environmental preservation activities in the local community.
	LUMINE Co., Ltd.	Creating an in-house educational booklet and designating an ecology month, the company enhances its employees' awareness and has established a system for implementing environmental activities.
<b>Recognition from Director General of Corporate Planning Headquarters</b>	JR East Tokyo construction office	The office promotes efforts, including by cooperating companies, toward 100% recycling of byproducts from construction. It also undertakes zero-emission efforts in various construction projects.
	East Japan Amenitec Co., Ltd.	For window cleaning, the company changed from commercial glass detergent to a solution of effective microorganisms (EM), embodying environment consideration.

**—Environmental Management System—****Internal environmental audits**

At our General Rolling Stock Centers, for example, in-house auditors are trained through external training programs, and conduct routine audits at the centers in order to evaluate environmental activities. When an internal audit pointed out a problem in the management of waste separation, responsibilities for the management of waste and dump sites between JR East and group company were made clear.

**■ISO14001-certified facilities**

Certified facilities	Year and month of certification
<b>〈JR East〉</b>	
Niitsu Rolling Stock Manufacturing Factory	Feb-99
Kawasaki Thermal Power Plant	Mar-01
Tokyo General Rolling Stock Center	Mar-01
Niigata Mechanical Technology Center	Mar-01
Omiya General Rolling Stock Center	Mar-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
<b>〈Group companies〉</b>	
East Japan Eco Access Co., Ltd.	Nov-99
LUMINE Co., Ltd.	Dec-00
Nippon Restaurant Enterprise Co., Ltd. (manufacturing section)	Sept-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 plant 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.

**Environment-related incidents in the fiscal year ending March 2009:****(1) Soil contamination at the former Kamakura General Rolling Stock Center**

**【Outline】** After this center was closed in 2006, we conducted an soil survey in accordance with an ordinance of Kanagawa Prefecture. The result showed that a hazardous substance beyond base value was present in soil and groundwater at a specific location on the premises.

**【Measures】** An investigation of the adjacent area showed that there had been no impact from the contamination. At present, measures are being implemented to cover the area on the premises where soil is exposed, and to prevent the hazardous substance from drifting and contaminating groundwater.

**(2) Spillage of liquid waste at Oji Station**

**【Outline】** Drainage from the south exit of Oji Station was being routed to the Shakujii River through a Tokyo municipal sewer. A drain had been connected to this storm-water sewer when station improvement work was undertaken in 1966, but the reason for the connection is not known because no detailed records from that time could be found.

**【Measures】**

- ① Upon discovery of the fact, we responded immediately and rectified the problem, properly connecting the drain.
- ② When any drainage facility work is conducted, we follow the necessary procedures required by ordinances and regulations.

# 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. We also provide information by publishing small booklets for children, the information magazine "Train Vert" available on the Shinkansen, and through media such as the internet and posters displayed on trains.

## Providing information at events

We participated in the Eco-Products 2008 Exhibition, presenting the environmental conservation activities of the JR East Group. In March 2009, JR East and Tokyo Gas Co., Ltd., co-sponsored a "Gas & Railway" fair based on the theme "low-carbon society" at Shinagawa Station, highlighting our activities and vision of the future for users of the station. We also participate in various events in cooperation with local governments.



Eco-Products 2008 Exhibition

## Ecotourism

Ecotourism develops deeper understanding and affection for Japan's natural environment and culture. We held a special class of the Tokyo metropolitan area's "Beech School" in the Shirakami Mountains, in Akita Prefecture - registered as a World Natural Heritage Site. The school is dedicated to conveying the attraction of the mountains to participants. In addition, more than 400 people participated in ordinary Beech School classes held locally in Akita. We continue to offer our "Hiking from Stations" program, in which participants can enjoy nature near our stations. In the fiscal year ending March 2009, we held 486 tours with about 0.2 million participants.



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



Planting trees at Futatsumori



Visiting a natural beech forest

## Reports on Ecological Activities at JR East

### Case 1: Koganei Train Drivers' Depot, Omiya Branch Office: "Enhancing Ecological Awareness Joyfully"

Worksite profile: Koganei Train Drivers' Depot is located next to Koganei Station on the Utsunomiya Line. In 2006, it acquired international certification of its quality management standards (ISO9001). It endeavors daily to provide safe, quality transport services.

At the depot, a team of 18 employees leads ecological activities, selecting multiple, simple themes that all employees can then enjoy working on.

- ① An "ecology day" is designated and an ecology newspaper is published

The 25th of each month is designated as ecology day. A member of the group designated in turn issues an ecology newspaper on relevant topics, which is posted on a bulletin board and distributed to other offices through JR East's Intranet.

- ② Selecting simple themes to work on

Once every two months, the group meets to decide on multiple themes, such as thorough separation of waste, or the use of personal chopsticks, to improve employees' awareness of the issues.

- ③ Measures to save electricity from air conditioning in the crew room, and keep out the sun

The Kurihashi crew office is used by train crew members who are assigned to limited express trains in through service that use JR East south of Kurihashi and the Tobu Railway north of this station. Use of air conditioning was analyzed by studying and graphing the pattern of use by crew members, so that electricity could be saved when no one was using the office.



### Voice



**Takahiro Eda**  
Koganei Train Drivers' Depot  
Chief Driver

Starting with easy steps, such as separation of waste at workplaces and using one's own chopsticks, we issue an ecology newspaper on various topics and try diligently to save electricity in the crew room. We also visit other companies to see, for example, their landfill sites, and to study issues surrounding environmental preservation.

## -Reports on Ecological Activities at JR East -

**Case 2: Joshinetsu Construction Office, Naganohara Construction District:  
"Ecological Activities Starting with Daily Efforts"**

Worksite profile: The Naganohara Construction District is responsible for relocating railway tracks on the section of the Agatsuma Line that will be submerged by construction of the Yanba Dam, and for construction management in the building of environmentally responsible bridges, tunnels, and other facilities.

In the district, targets are set separately for "efforts at construction sites" and "efforts at the workplace."

## ① Efforts at construction sites

In the area where rare-species raptors such as golden eagles and hawk eagles live, we take into account the impact on ecology and implement measures to protect it, including designating periods when construction work is restricted and reducing visual impact by covering work yards with camouflage nets. When completing construction of the Shiroiwashawa Bridge, we planted sprigs of grass in the entire slope area around the bridge in an effort to preserve the environment.

## ② Efforts at the workplace

From the viewpoints both of preventing global warming and saving energy, we turn off lights in rooms that are not being used, and during breaks, set thermostats to appropriate temperatures in summer and winter, and retain sheets of paper until they have been used on both sides, thus reducing waste.



Reducing visual impact using camouflage netting



Sprigs planted at Shiroiwashawa Bridge



Using the still-blank sides of used paper

**Voice**

**Ryuusuke Higashi**  
Naganohara Construction  
District  
Facilities Engineer

In the Naganohara Construction District, as part of efforts at construction sites, ideas suggested by employees at each construction planning meeting, and the results of daily improvement efforts at construction sites, are shared among all employees in the district. As for efforts in the workplace, we talk informally among ourselves about what should be done, and work together on ecological activities.

## Reports on Ecological Activities at JR East Group Companies

### Case 1: East Japan Amenitec Co., Ltd.

#### "For cleaning windows on the Shinkansen, chemical detergent was replaced with a solution of effective microorganism (EM) cultures"

East Japan Amenitec Co., Ltd., is engaged in activities related to railway transport, including inspection, repair, cleaning and maintenance of railcars, and building-maintenance activities. In the cleaning of cars in particular, we have adopted new cleaning methods and maintenance technology, and make perpetual efforts to identify even better ones, so that we can always offer our customers clean and pleasant cars.

To keep the cleaning friendly to the environment, we have changed from chemical detergent, which we had been using to clean Shinkansen train windows, to effective microorganisms (EM\*) activated solutions harmless to both people and the environment. EM solutions are also effective in deodorizing waste treatment sites.

\*EM

Solutions containing cultures of multiple effective microorganisms - primarily lactic bacteria, yeasts and photosynthesis bacteria - harmless to both people and the environment.



### Voice



**Ritsuko Sakamoto**  
East Japan Amenitec Co., Ltd.  
Shinkansen Morioka Office  
Supervisor

We use several kinds of detergents to clean railcars. Being a woman, I am much concerned about effects on the skin. When I used EM activated solution, which was already being used as a deodorant at waste treatment sites, to clean windows and mirrors, I found it just as effective as chemical detergents. We are now using it with confidence for its deodorizing effect as well as for the lack of harm to people and the environment.

**—Reports on Ecological Activities at JR East Group Companies—****Case 2: JR East Building Co., Ltd.****"Rooftop Gardens Add New Value to Station and Office Buildings"**

In April 2009, JR East Building Co., Ltd., opened the "Ebisu Green Garden" on the roof of the JR Ebisu Building, and continues to operate and manage it.

The garden is highly appreciated by visitors, primarily those who work in the local and surrounding areas and shoppers at Atré Ebisu, for its environmental considerations - for example, its utilizing of recycled wood and arrangements of diversified types of colorful flowers. The greenery also absorbs CO<sub>2</sub>, and, with the efficient use of energy for air conditioning, helps reduce the "heat island" effect.

This fall, a rental vegetable garden called "soradofarm" will open. The rooftop of the JR Ebisu Building will become even more friendly to the environment and to people.

**Voice**

**Hiroshi Kodama**  
JR East Building Co., Ltd.  
South Tower Office  
(previously at the JR Building  
Office Department)

We get a lot of visitors every day. We inspect facilities to make sure they are functioning properly and look around the garden to check the conditions of the flowers daily, so that visitors can spend a pleasant time. Staff stationed there regularly ask visitors if they have any suggestions or requests. Since it opened, various media have taken it up, and it is drawing more attention. The company, together with the staff there, are happy and proud to be part of managing and operating a facility that is "in the spotlight."

## Environmental accounting and management indicator

### Using Environmental Management Indicator in business activities

In the fiscal year ending March 2009, our environmental conservation costs amounted to approximately 73.3 billion yen in investments and 12.3 billion yen in expenses.

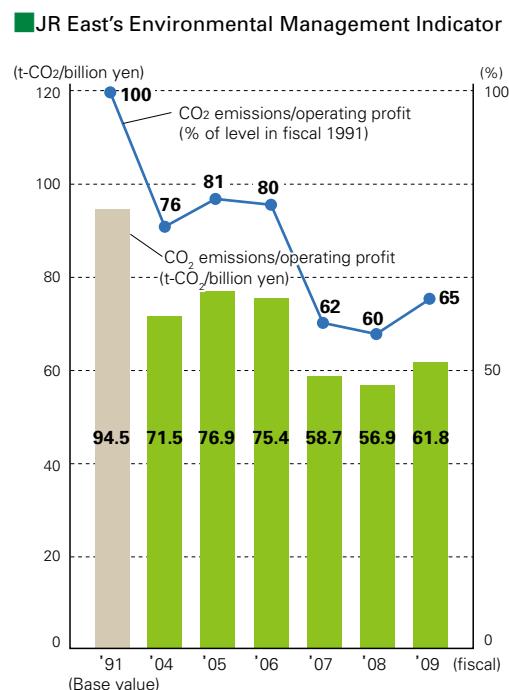
Of these investments, costs for global environmental conservation, which accounted for a large portion, were at the same level as the previous year because we continued acquiring new railcars.

By introducing new train cars, we estimate we will reduce CO<sub>2</sub> emissions by 45 thousand 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<sub>2</sub> emissions, which are a major factor in environmental impacts, by operating profits, which represent our Economic Value Added (EVA).

This means that the smaller the number calculated by this formula is, the more Economic Value Added we have created by giving smaller impacts on the environment. For the fiscal year ending March 2009 the value of the indicator was 61.8 t-CO<sub>2</sub>/billion yen, compared with 94.5 t-CO<sub>2</sub>/billion yen for the fiscal year ending March 1991.

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



## ■ Environmental accounting for the fiscal year ending March 2009

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 2008	Fiscal 2009	
Environmental conservation (pollution prevention) activities along railway lines	8.67	4.86	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 plant	63% 330 tons	81% 379 tons	—
Global environmental conservation activities	64.49	—	CO <sub>2</sub> emissions through business activities CO <sub>2</sub> emissions per unit of electricity generated at JR East's thermal power plant Energy-efficient train utilization rate Train energy consumption per unit of transportation volume	2.12 million t-CO <sub>2</sub> 456g-CO <sub>2</sub> /kWh 85% 17.8 MJ/car-km	2.26 million t-CO <sub>2</sub> 465g-CO <sub>2</sub> /kWh 86% 17.5 MJ/car-km	11.51
Resource circulation activities	0.17	4.99	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	64% 93% 92% 48% 92%	70% 95% 92% 47% 92%	0.84
Environmental management	—	0.71	Taking part in specific environmental protection activities every year ( Railway Line Forestation Programs and Tree Planting under the Adatara Hometown Forestation Program )	37 thousand trees planted at 15 locations	54 thousand trees planted at 18 locations	—
Environmental research & development	—	1.65				—
Social activities	—	0.07				—
Total	73.33	12.28				12.35

## Notes

Capital investment for the period:

323.4 billion yen

Total R&amp;D costs for the period:

16.2 billion yen \*1

Targets for the JR East Group

The above table's relations with the table for Targets and Results are as follows:  
 Environmental conservation costs

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.

## \*1 Total R&amp;D costs

Total R&D costs include 5.9 billion yen of costs for basic research and development commissioned to the Railway Technical Research Institute under a research agreement.

## Pursuing “extreme 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 soft and hard.

### **Safety initiatives in our medium term management plan**

In the JR East 2020 Vision - *i do mu* -, we have set 2 goals to represent our unflagging commitment to “extreme 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.

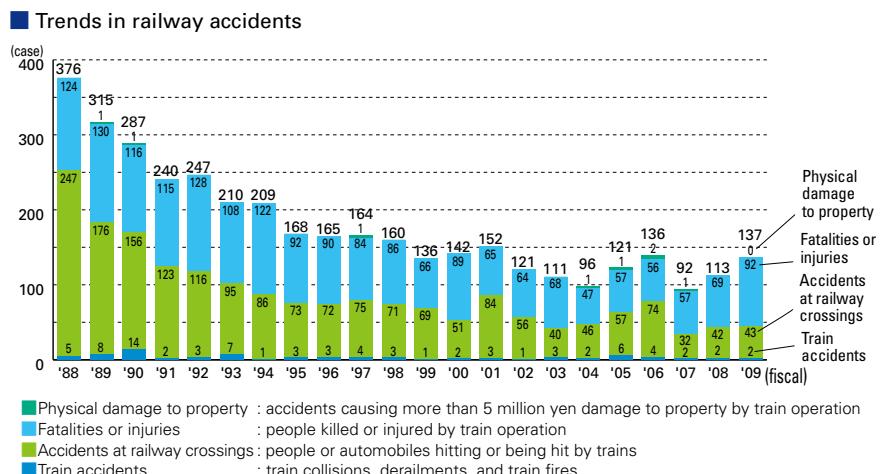
### **Launch of our 5th 5-year Safety Plan, 2013 Safety Vision**

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.

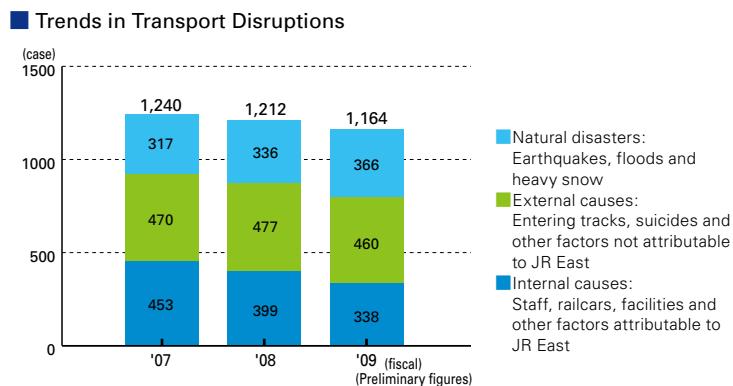
In fiscal ending March 2010, JR East formulated a new 5-year safety plan, 2013 Safety Vision. With this plan, we are undertaking a variety of measures. New to the 2013 Safety Vision are two approaches: safety-related human resource development and system improvements; and, the prevention of accidents before they occur through evaluation of possible risks. 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 “extreme safety levels” through the concerted efforts of all of its employees.

**—Pursuing “extreme safety levels”—****Trends in railway accidents**

In the fiscal year ended March 2009, JR East recorded 137 railway accidents. 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.

**Occurrences of transport disruptions**

Transport disruptions refer to suspensions in operations or to delays of 30 minutes or more. In the fiscal year ended March 2009, JR East recorded a total of 1,164 transport disruptions, 48 less than the previous year, with decreases in both the number of disruptions due to external causes and the number due to internal causes.



—Pursuing “extreme safety levels”—

## Major transport disruptions in the fiscal year ended March 2009

### Details of the Kokubunji Substation fire and its effect on train operations

On April 10th, 2008, railway service was disrupted by a fire at our Kokubunji Substation. The causes of the fire were that a circuit breaker was pushed out, weakening its connection to the main circuit. This resulted in overheating and an eventual fire, the ground connection failed, and this trouble with the grounding wires led to communication lines being burned and to failure of the circuit breaker system. In response, we have installed a locking system to prevent the circuit breaker from being pushed out, improved grounding wires, introduced a back-up system for status monitoring of substations, and employed optical fiber cables for our communication lines.

### Shinkansen service disruptions on Dec. 29th, 2008

On December 28, 2008, railcar troubles on the Nagano Shinkansen and snow and wind damage to the Yamagata and Akita Shinkansen resulted in time schedule disruptions. The day's train service was finally terminated at 1:33 a.m., and there were many changes to plans and data entries to ensure regular operations of all Shinkansen trains on the following day, December 29. These included changes to overnight storage of trains that were not completed until after 5:00 a.m.

Since we had to switch the date of the train control system for the Shinkansen after 5:00 a.m., all Shinkansen operations were postponed until 8:55 a.m. on December 29.

As a countermeasure of this trouble, when effects of train operation disruptions are expected to continue past midnight, the date of the system will be switched no later than 5:00 a.m., through limitations to plan changes and enforcement of working procedures.

# Creation of a culture of safety

## Our 5 cultures of safety

To heighten levels of railway safety, it is necessary to establish and support an unwavering culture of safety. The culture 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 notice

The prevention of accidents through an awareness of the origins of accidents and the sharing of information that would prevent these origins from leading to actual accidents.

### (3) A culture of direct meeting and discussion

Allowing for the open and honest exchange of opinions and public debate 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 on the *Genba*.<sup>\*</sup> This means that the sources of accident prevention can also be found on 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.

<sup>\*</sup>*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.

## 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.

**—Creation of a culture of safety—****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 ended March 2009, JR East held its 17th symposium, "Safety relies on our front-line employees: at the launch of 2013 Safety Vision."



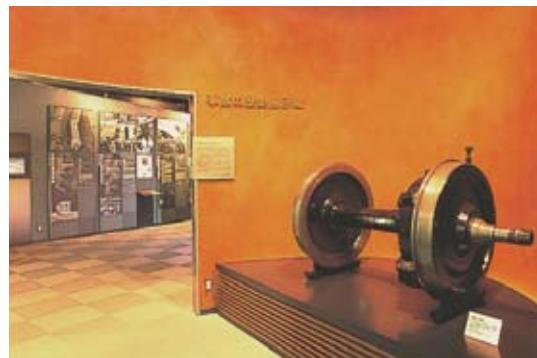
The 17th Railway Safety Symposium

**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.



Driver cab simulator



Accident History Exhibition Hall

# Safety management

## Eliminating the 'buds' of accidents

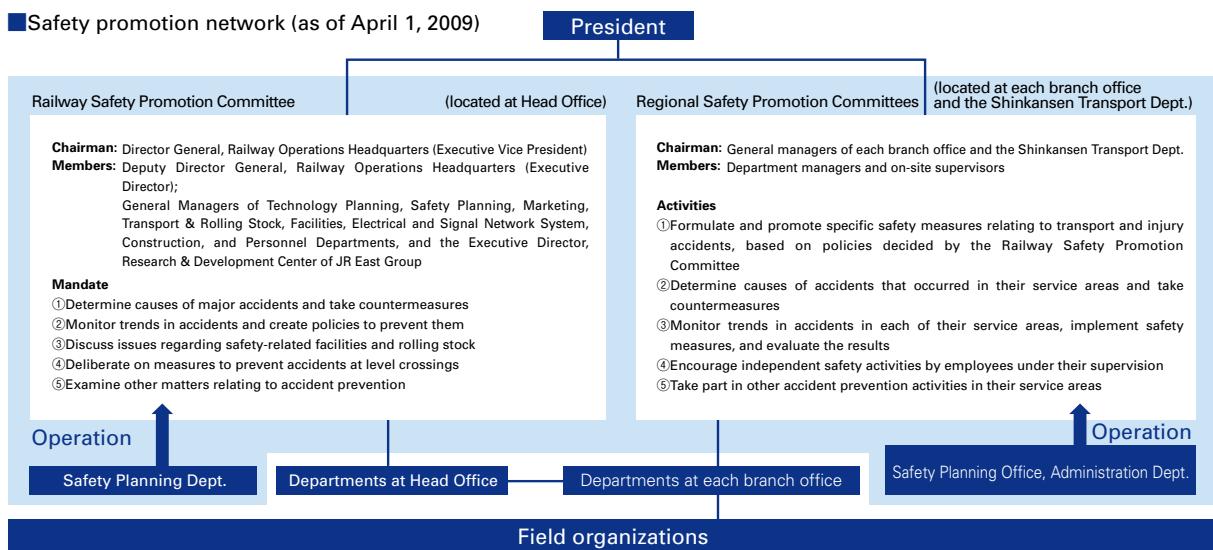
We believe that safety is ensured through management systems that synergistically link the 3 major variables of Employees, Rules, and Safety Equipment. JR East, together with our front-line employees, Head Office, and Group companies as a whole, is working to improve operational safety through the Railway 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 a 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, 2009)



## 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 ended March 2009, executive officers from the Head Office and front-line employees had heated discussions on the theme: "Why do the same sort of accidents and events keep occurring?". The campaign included inspection of nighttime maintenance work, extended discussion time with front-line employees, and sharing of the understanding of the current situation between front-line employees and executive officers from the Head Office.

## Collaboration with group companies

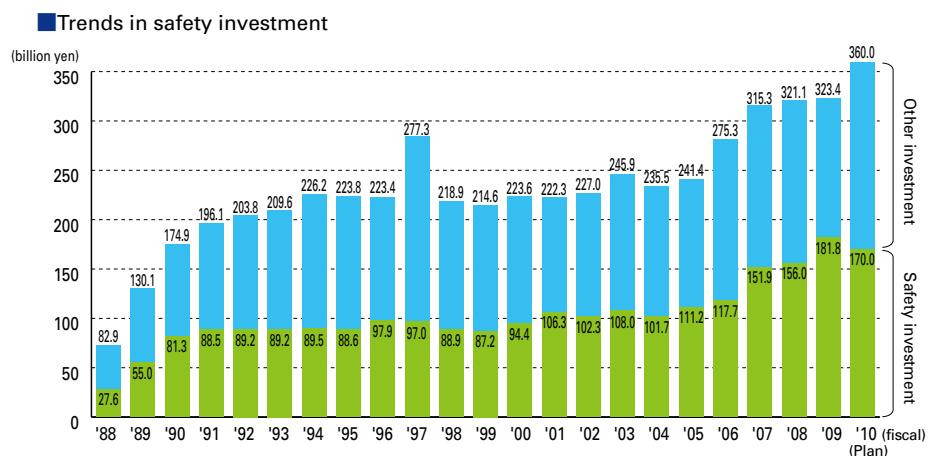
The JR East Safety Network (JES-Net) was established in the fiscal year ended March 2005 as a safety promotion network. This network is comprised of Group and other related companies engaged in work or construction which have a direct influence upon train operations. By April 2009 the number of companies in the network had expanded to 29. JR East is committed to improving the levels of safety throughout the JR East Group through the united effort of each company among the JES-Net members.

## Improvement of safety equipment

### Investment in safety equipment for “extreme safety levels”

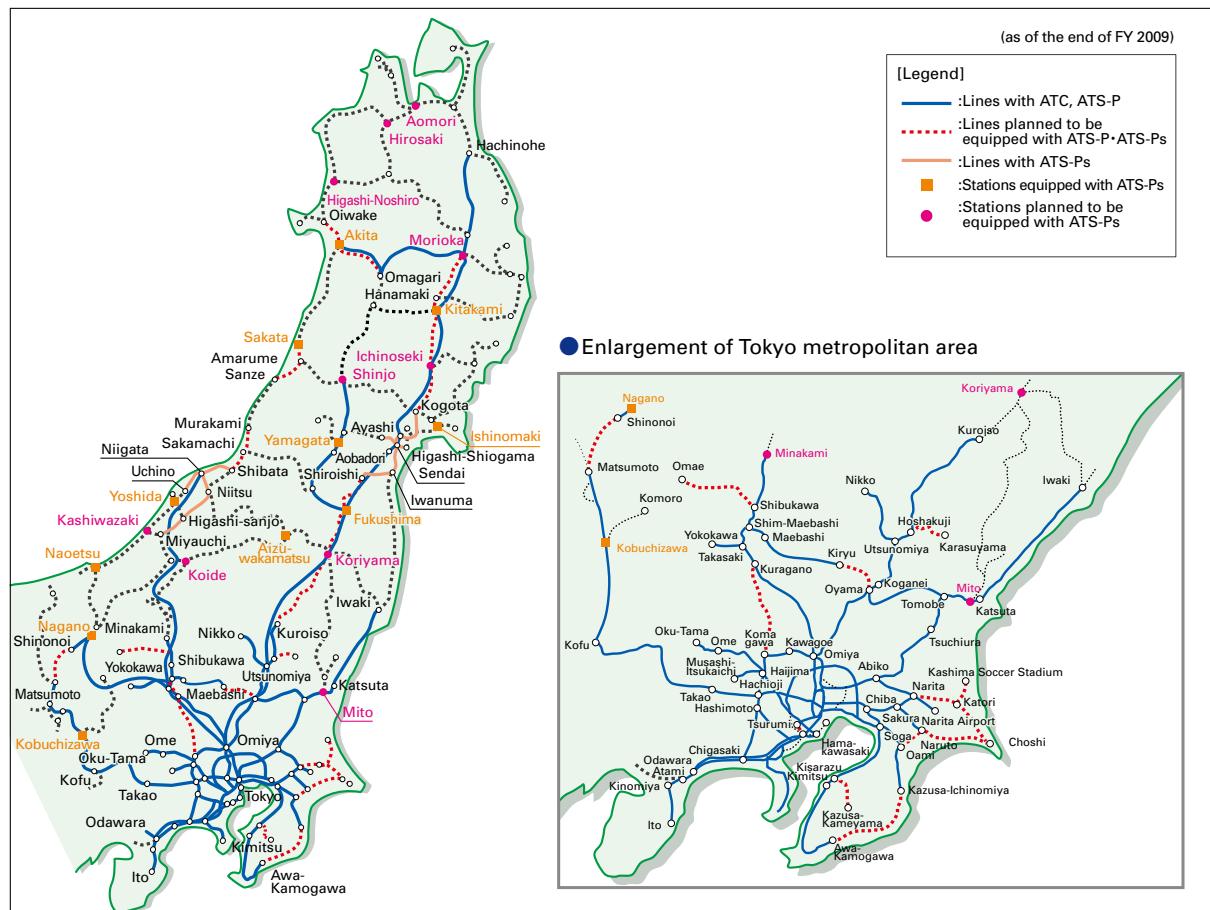
To achieve a more assured level of safety in railway operations, weak points in the current systems must be identified and reviewed from a safety standpoint. Furthermore, safety equipment must undergo intensive and effective assessments in order to prevent the occurrence of accidents in the future. To 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.

For improvements to safety equipment, based on our four previous 5-year Safety Plans, JR East has invested more than 2.2 trillion yen in the last 20 years. In our 2013 Safety Vision, JR East's new 5-year Safety Plan, JR East plans to invest approximately 750 billion yen on safety measures for the 5-year period spanning 2009 and 2013.



### 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; most new installations are in the Tokyo metropolitan area. By the end of March 2009, the ATS-P system had been installed on 1,942.6 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 11 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 on curves, at turnouts, at terminals, and on descending grades.

**—Improvement of safety equipment—****■ 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 fiscal March 2009	Planned completion
Curves	1,470 locations	1,266 locations	Fiscal ending March 2010
Turnouts	825 stations	452 stations	Fiscal ending March 2016
Line terminals	63 stations	47 stations	Fiscal ending March 2016
Descending grades	1,528 locations	99 location	Fiscal ending March 2016

\* Including locations improved prior to July 2006

**Systemization of maintenance work**

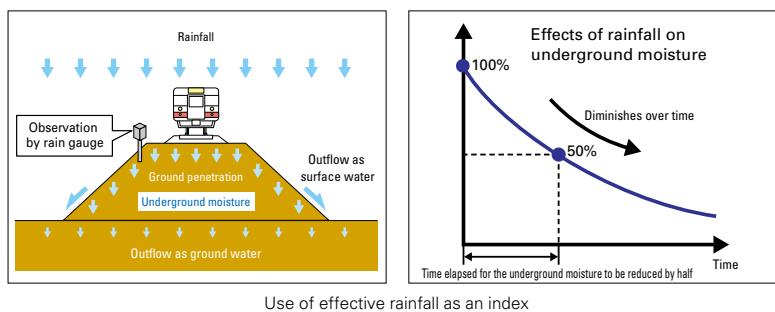
Safety during maintenance work has been improved with the use of TC-type wireless alarm systems. The systems warn employees working on railway tracks when a train is approaching. JR East has also introduced a safety system that enables workers performing maintenance to turn signals red from a handheld 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

**—Improvement of safety equipment—****Introduction of “effective rainfall” as a new index**

When there is heavy rainfall, we ensure safe train operations through the introduction of operational restrictions such as limits to train speed and the suspension of operations. For operational restrictions on conventional lines, we have been using hourly rainfall<sup>\*1</sup> and continuous precipitation<sup>\*2</sup> as our indices. Since June 2008, we have been using “effective rainfall” as a new index 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 index, 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, with the work being completed in June 2008.



Concrete lattice frame protection work

**Seismic reinforcement of elevated bridges**

In response to the 1995 Great Hanshin-Awaji Earthquake, JR East employed a number of emergency seismic-reinforcement measures on rigid-frame elevated bridge columns susceptible to shear failures. Along with expansion of areas receiving countermeasures, we have also been working on seismic reinforcement to elevated viaduct support columns and bridge columns. By the end of March 2008, we had reinforced approximately 18,500 elevated Shinkansen viaduct support columns and 2,340 Shinkansen bridge columns. For our conventional lines, by the end of March 2009 we had reinforced approximately 12,600 viaduct support columns and 540 bridge columns, not including areas requiring additional construction work.

**Early Earthquake Alert System for conventional lines**

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.

**—Improvement of safety equipment—****Prevention 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 suppress lateral movement of the car body. For ground facilities, we are improving the shape of joint bars to lesson the impact of wheels on rail joints in the case of a 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.

**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 ended March 2009, the number had been drastically reduced to 43. 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 red and white large 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.

**Station platform safety**

In fiscal ended March 2009, there were 66 accidents in which customers fell from platforms onto tracks or came into contact with trains. JR East has put a wide range of protection-related devices into place at our platforms to ensure the safety of its customers. These devices include emergency train-stopping systems and image processing devices to detect fallen persons. In addition, our "Platform Safety Campaign" encourages customer awareness and cooperation, both vital for safety on our platforms.

In response to increasing customer expectation and demand for higher levels of platform safety, JR East will introduce automatic platform gates on the Yamanote Line. The gates will initially be installed in Ebisu and Meguro Stations of the Yamanote Line by the end of March 2011 and, after verifying technological issues and the effects on train operations in coordination with other large-scale improvement work, we hope to complete the introduction of these gates to all stations on the Yamanote Line near the end of March 2018.



Automatic platform gates on the Yamanote Line (image)

## 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 line, using information from front-line employees, topology, and wind conditions of the areas, and by adding to the sections that have operation restrictions when winds are strong, we are working to improve our safety observation network to counter these strong winds.

	As of Dec. 25th, 2005: A	As of Mar. 31st, 2009: B	Increase (B-A)
Conventional lines	228 units	674 units	+446 units
Shinkansen Lines	89 units	149 units	+60 units
Total	317 units	823 units	+506 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, 2009>

	Line Name	Section	Location of Installation	Time Completed
1	Tokaido Line	Adjoining Nebukawa Station	Both sides of the line	July 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
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: June 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 Part of north side: Mar. 2009
12	Keiyo Line	Between Shiomi and Shin-Kiba	South side only	June 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	North side only (Both sides on bridge sections)	A part of north side: Mar. 2009

**—Measures taken since the accident on the Uetsu Line—****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.

	As of Dec. 25th, 2005: A	As of Mar. 31st 2009: B	Increase: (B-A)
Number of locations with gale warning systems	6 locations	233 locations	+227 locations

**Utilizing meteorological information to test methods for operational restrictions**

Local gusts are meteorological phenomena, which are said to be difficult to observe with conventional observation equipment such as anemometers. Through meteorological information obtained from 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. Between the periods of January and March 2008, and November 2008 and March 2009, this system was tested on the Uetsu Line between Niitsu and Sakata and on the Hakushin Line between Niigata and Shibata. In February 2009, we added sections of the Uetsu Main Line, Shinetsu Main Line, Echigo Line, Yahiko Line, and Riku-u West Line for additional testing. During the aforementioned testing periods, though we initiated train operational restrictions three times, we did not observe any actual occurrence of local gusts.

**Research on 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 radar can determine wind conditions by detecting the movements of raindrops and rain clouds and is used at some airports for detecting local gusts.

From July 2007, in cooperation with a special research institution, we have been furthering our procedures of meteorological observation and analysis on coastlines along the Sea of Japan during the winter season. Together with information gathered on the characteristics of local gusts, we have been testing the radar's detection capabilities against local gusts.



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

# Safety Research and Development

## 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.

## An automatic train protection signal transmission system for enhanced safety levels

At JR East, we continue to improve our levels of safety through our research and development. In the case of an accident such as a derailment, we have introduced a train protection radio for the transmission of emergency signals to stop other trains. We have also developed a system to automatically transmit emergency stop signals with our train protection radio to further ensure prevention of the occurrence of a secondary accident. Even when train crews are unable to transmit signals manually or promptly, as can happen if there is a major accident such as a train collision, derailment, or overturned train, the system is able to transmit the emergency signals automatically. Since December 2008, the system has been in use on E233 Series Keihin Tohoku Line trains and we plan to introduce it sequentially to conventional lines in the Tokyo metropolitan area.



Operation image of the automatic train protection signal transmission system

## Safety web portal site

To allow our employees to deepen their understanding of the human factors involved in accidents and share information and know-how on human error prevention, JR East developed and runs a web portal site on safety. On this site, useful safety information is regularly provided and available to our employees. The information is stored on the site in a database so that employees can search for necessary information whenever needed. Major content areas of the site include: human factor news, the 4M4E analysis room, a calendar of past accidents with lessons to be learned, and the Challenge Safety blue signal.



Safety web portal site

**-Safety Research and Development-****Training tools for train drivers and conductors**

JR East has developed training tools for personal computers, which can be used both for the education and training of our drivers and conductors. The accident prevention training tool presents situations that drivers and conductors may face and that have major effects on train operations, using these as training materials. This training tool acts to heighten the visual imagery of drivers and conductors with regard to dangers, helping them to envision how errors happen and what they need to do to prevent them from occurring in their daily work. The emergency broadcast training tool for conductors aims to improve emergency broadcasting skills from 5 perspectives: understanding service basics, customer psychology, local areas, traffic operation arrangements, and recovery procedures from troubles.



An example of a training tool for drivers and conductors

## Relationship with Customers



### Learning from customer comments

By achieving a level of service that only JR East can provide, we aim to meet the expectations of both local communities and our service users, thereby alleviating grievances and meeting future needs. To attain this goal, we understand that it is critically important for us to constantly pay attention to customer comments, to learn, for example, exactly what JR customers are interested in or what annoys them, and thus steadily make improvements.

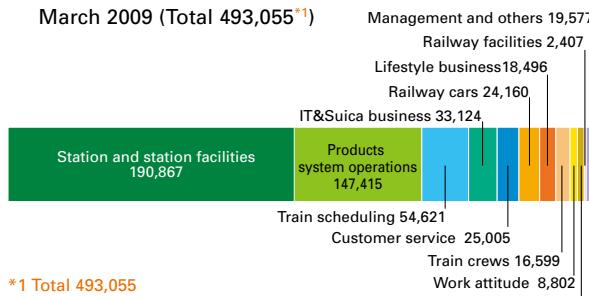
We gather customer comments on a daily basis through a wide-ranging system that includes collection by front line employees, via the Internet and from customer help desks. We are implementing a company-wide initiative to develop a system capable of identifying relevant comments and sharing them with the appropriate departments that can then initiate moves that will lead to improvements in all aspects of our services. We gratefully accept customer comments and act from a customer viewpoint. We believe the origin of customer satisfaction is in each and every customer comment.

### Customer Service Department Role

To meet customer expectations it is vital for us to achieve customer satisfaction improvements through teamwork that goes beyond individual stations, branch offices, the Head Office and departments. With this in mind, in October 2000 JR East established its Customer Service Committee to discuss related issues in a cross-organizational manner. In order to improve our ability to make more strategic and speedier responses, in July 2005 we established a Customer Service Department. In this way we are building a framework that will facilitate active inter-departmental cooperation, collect and manage customer comments, and horizontally develop them internally.

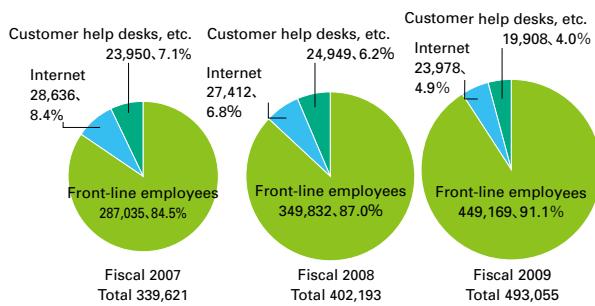
**—Relationship with Customers—****New Green Information System**

In order to more efficiently share and use customer feedback, JR East has constructed a new internal database named the New Green Information System. Comments collected by front line employees and from customer help desks in major stations as well as via the Internet are entered into this database, and the valuable information thus gathered is available at all times to employees at Head Office, branch offices and front line workplaces to help them implement service improvements.

**Subjects of customer comments in the fiscal ended**

\*1 Total 493,055

The chart shows the number of comments on each subject. Some customers commented on more than one subject(grand total 548,533).

**Trends in the number of customer comments by channel****Customer Satisfaction Surveys**

We conduct annual customer satisfaction surveys in order to garner a comprehensive understanding of user evaluation of our services that could not be adequately determined from customer feedback alone, and we quantitatively measure levels of customer satisfaction. We make full use of the results of these surveys in the measures we take.

**Teamwork**

In order to guarantee customer satisfaction, we have designated service promoters operating at many front line workplaces. Furthermore, with a clear awareness that all efforts eventually lead to improved customer satisfaction, we hold regular customer service training sessions and symposiums that involve all Group employees, from top management to front line employees. We are continually working to create a corporate culture where each employee aims to enhance customer satisfaction, by targeting not only front line employees, but also those in sections that do not have direct contact with customers.

**Implementing customer comments**

To enable customers to feel glad to use JR East and encourage them to use it again, we are working on an improvement of our level of customer satisfaction by carrying out improvements based on customer comments from a user perspective. These initiatives include provision of basic railway transportation functions such as customer service, sales and marketing, train schedules and transport information, and improved infrastructure including barrier-free facilities and comfortable and clean toilet facilities.

**Transport Services Improvements**

We are continuously striving to reduce rush-hour congestion on major Tokyo metropolitan area lines. During the fiscal year ended March 2009, for example, the average level of in-train congestion during morning commuting hours declined by 55 percentage points to 183% compared to the fiscal year ended March 1988. This improvement was a result of our many efforts, including such actions as increasing the number of trains in operation, adding more cars to trains, introducing wider-bodied cars such as the E231 and E233 series, introducing through operations between the Saikyo and Rinkai Lines, and opening the Shonan Shinjuku Line.

**—Relationship with Customers—****More Comfortable On-board Air Conditioning**

JR East is working on railcar air conditioning (cooling and heating) to make railway travel more comfortable. On new railcars (E231 and E233 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 comfort and sense of safety for both our female and male passengers, we introduced "Women-only" cars during late night operations. This system started in July 2001 on the Saikyo Line, and in April 2005 it was expanded to include the morning rush hours. In September 2005, such cars were introduced during morning rush hours on the Chuo Rapid Line, followed in May 2006 by the Joban Local Line that becomes the Tokyo Metro Chiyoda Line in central Tokyo, and on the Sobu Local Line in November 2006.

**Total Smoking Ban on Tokyo Metropolitan Area Stations and Trains**

In the past, JR East worked to separate smoking and no-smoking areas, but, in line with customer comments asking us to prevent passive smoking and an increased no-smoking trend in society in general, in April 2009 we removed smoking areas from platforms in major Tokyo metropolitan area stations and initiated a policy of smoke-free station interiors. Smoking had already been banned on all JR East's Shinkansen and limited express trains from March 2007.



Complete smoking ban in Tokyo metropolitan area stations

**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 March 2009, 284 stations (435 AEDs) have been equipped with them. The placement of AEDs in Shinkansen trains has been in progress since February 2009, and as of June 2009, 131 had been installed.

**General Information Desks**

We are shifting the focus of staffed ticket gates from the verification and settlement of tickets and fares to desks that provide information, and are continuing to install general information desks where customers can get comprehensive guidance and information.

**—Relationship with Customers—****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, 2009, service managers are located at 44 stations.

**Enhancement Information Provision**

To provide prompt and accurate information during transport disruptions, we are installing transport disruption information displays in 130 stations, to be completed by March 2010, in addition to our current information provision via train monitors, the Internet and mobile phones.



Information display during transport disruptions

**Making safe and pleasant stations and trains****Barrier-free and Hospitable Stations**

JR East has been working with local governments and other entities to install elevators at approximately 490 stations in accordance with the Barrier-Free Transportation Law. As of the end of March 2009, we had completed installations in 320 stations. 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 2009, approximately 4,000 employees had received level two certification.



Elevators



Escalators

**Barrier-free Railcars**

Starting in December 2006, the new universal design E233 series railcars have been introduced on the Chuo Rapid, Ome and Itsukaichi Lines. We also began their introduction on the Keihin Tohoku Line in December 2007. These modern railcars reflect customer requests provided through questionnaires and on-board surveys. 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.

**—Relationship with Customers—****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 2010, we will renovate the toilets in approximately 90 more stations and thereby increase customer comfort and satisfaction.



Toilets in the Sōbu Line underground concourse at Tokyo Station



Water flow controllers have been introduced

**Prevention of Accidental Trapping of Baby Strollers in Doors**

To prevent baby strollers being accidentally caught in doors, JR East has been working on improvements to railcar door sensor capabilities that will enable them to detect baby strollers. We have carried out three campaigns in conjunction with other railway companies, baby stroller manufacturers, and local governments that urged customers with baby strollers to be careful and asked for the consideration of other customers.

**Increased Escalator Safety**

To prevent injuries to customers when they use escalators, we are carrying out safety enhancements including such measures as stopping sandals getting caught, preventing falls during emergency stops, and preventing steps from descending when escalators stop. Furthermore, JR East is emphasizing its call for improved safety by directly addressing customers with, for example, stickers asking them not to walk while using escalators and encouraging them to hold on to the handrails.



"Let's hold on to the handrail" campaign

## —Relationship with Customers—

## From the Service Front Line – Utilization of Customer Comments

**Customer Guidance for Occasions When Shinkansen, Limited Express, and Express Trains Are Delayed More Than Two Hours**

When Shinkansen, limited express, and express trains arrive more than two hours later than their scheduled arrival times, passengers are due refunds; however, we still receive inquiries asking if passengers can get refunds in particular cases, or comments from passengers who did not know they were entitled to refunds. In order to clarify this matter, we are using posters and onboard announcements to inform passengers about the rules regarding ticket refunds.



**—Relationship with Customers—****Day-to-day customer support****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.

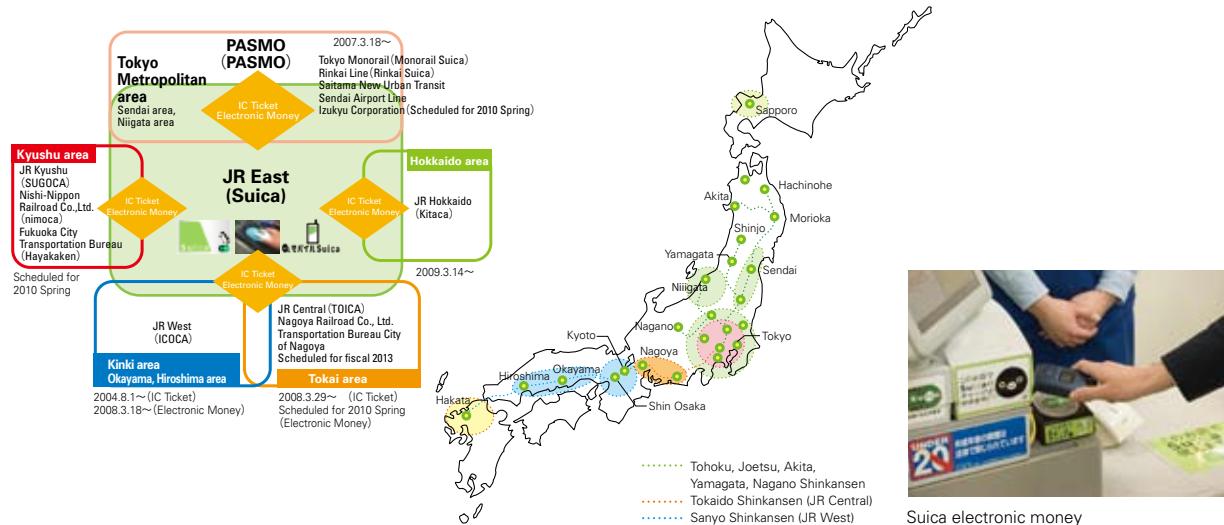


**—Relationship with Customers—****Suica improves customer convenience****Ticketing — Expansion of Interchangeable Usage**

Suica has gained favor with many customers because of its convenience, and the number of cardholders exceeded 29 million as of the end of June 2009. Recently, Suica usage has expanded in several ways. In addition to its use on our lines in the Tokyo metropolitan, Sendai and Niigata areas, Suica is interchangeable with the PASMO card. Almost all train and bus services throughout the Tokyo metropolitan area can now be used with just a Suica card. Interchangeable use has been expanded to include JR West's ICOCA and JR Central's TOICA, and in March interchangeable use with JR Hokkaido's Kitaca began. Further expansion will make Suica interchangeable with JR Kyushu's SUGOCA in spring 2010, allowing Suica to be used in all major metropolitan areas in Japan.

**Electronic Money**

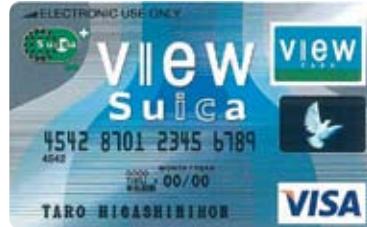
In addition to being convenient to pay fares, Suica is becoming increasingly useful as e-money. It is accepted at many stores in or near railway stations, and now can be used at FamilyMart, Lawson, Matsuya and Aeon stores and at other outlets outside stations. As in the railway business, Suica usage is expanding through the introduction of interchangeability with cards from other companies. In addition to PASMO, ICOCA, and Kitaca, joint arrangements with SUGOCA and TOICA will commence in spring 2010. As of the end of June 2009, Suica was being accepted by 65,360 outlets, and was recording an average of 1.65 million transactions per day.

**Responding to Diverse Needs**

Along with the increase of usage area, Suica functions are also being expanded. Available functions now include Mobile Suica, which allows passengers to purchase JR East Shinkansen reserved tickets and board trains without paper tickets, and View Card, a Suica and credit card combination 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

## Relationship with Society



### With communities

JR East is making contributions to communities through its Station Renaissance program. One such initiative was the transformation of Tachikawa Station into a more user-friendly environment by increasing its barrier-free facilities. At the same time, the ecute Tachikawa commercial space and Hotel Mets Tachikawa helped to generate vitality to the station, which is representative of the community, and thus increased the attraction of the entire area.

On the Yaesu side of Tokyo Station, GranTokyo North Tower and South Tower and GranRoof are continuing to develop; North Tower II will be completed in 2012 and GranRoof in 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 2009, in coordination with land development projects in surrounding areas, we opened Nishi-Omiya Station on the Kawagoe Line and Nishifu Station on the Nambu Line, bringing to the total of 39 stations we have established based on local authority requests since our company was established in 1987. Station building renewal was continued with the construction of free passages in Kioroshi Station on the Narita Line and Sakaori Station on the Chuo Line.



Nishi-Omiya Station



Nishifu Station

**—Relationship with Society—****Childcare Support Facilities**

In cooperation with local governments and childcare business operators, and to support the total participation of women in society and the diversity of lifestyles, JR East is developing a network of nursery schools, childcare stations and other childcare facilities utilizing sites near stations (there were 27 facilities as of June 2009). We plan to continue to provide childcare services that meet a broad variety of needs and actively contribute to local communities, thereby enhancing the value of communities sited along railway lines.



J Kids' Lumine Kitasenju



Chacha Imai Nursery School

**Tourism Development in Cooperation with Communities**

In recent years, there has been a growing demand for balanced tourism development that considers different aspects, such as the maintenance and improvement of local society and the social infrastructure in local communities. In the belief that tourism development ultimately leads to local community development, JR East has launched several long-term initiatives for the creation of tourist destinations in schemes that generally start with the drawing up of concepts in unison with local citizens. In the Sendai-Miyagi Destination campaign, for example, we have united with local residents in order to promote the attractiveness of areas along our railway lines. Furthermore, we see the propagation of such information throughout the entire JR East service area as simply another role that we can play in our efforts to aid society.

JR East will continue to work to create jobs and activate resources in local communities through Group company participation in agriculture, hosting fresh produce markets in collaboration with communities, commercializing traditional craftwork and developing processed agricultural products. Through the development of special events and of two-way information exchange between rural areas and urban centers, we also aim to encourage travel. We will, of course, continue to work for local community revitalization and make social contributions that meet the diverse needs of today's society.

**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 cultures, studied and researched railways, and taken part in international cultural exchanges through our railway business. The Foundation's activities includes the operation of the Railway Museum and the Old Shimbashi Station building, the sponsoring of local cultural activities (16 projects in fiscal year ended March 2009 including a thatched roof preservation project in Tono City, to a total of 60 million yen), and the accepting of trainees from railway operators in Asian countries (46 trainees from nine countries in fiscal year ended March 2009). The Foundation provides information on its website (<http://www.ejrcf.or.jp/english/index.html>) and in Japan Railway & Transport Review (JRTR) and other railway-related English-language publications.

**—Relationship with Society—****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 systemically 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 a hands-on experience. Since its opening, the Railway Museum has proved to be a great success, attracting 1.41 million visitors in fiscal year ended March 2009.

**With the Next Generation**

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 train stations and field trips to railway facilities and branch offices.

**With the International Community****International Cooperation on Technology and Know-how**

JR East shares its technologies and the expertise it has nurtured with people and organizations throughout the world. In the fiscal year ended March 2009, for example, 575 people visited us. Information provision and on-site inspections and seminars covering a wide variety of subjects were provided, including an introduction of the issues and methods concerning privatization of a national railway, such cutting-edge technologies and know-how as Shinkansen trains and the Suica IC fare-card, conservation of the global environment, and our lifestyle services businesses. In addition, based on requests from such organizations as the Ministry of Land, Infrastructure and Transport, we are actively involved in international cooperation through the dispatch of our railway experts to Asian and other neighboring countries to provide on-site advice.



Inspection of the Shinkansen General Rolling Stock Center

**Global Contribution Through International Institutions**

JR East is a member of the International Union of Railways (UIC), the International Association of Public Transport (UITP) and other international railway organizations and conducts exchanges with railway operators around the world. We have recently



Vice Chairman Yoshio Ishida making his inaugural address at a UIC general assembly held in the union's Headquarters in Paris

been endeavoring to contribute to the global promotion and development of railways by hosting conferences of these international organizations and conducting study tours that introduce Japanese railway technologies. In April 2009, JR East's vice chairman Yoshio Ishida was appointed chairman of the UIC, an appointment that has further expanded our Group's ability to contribute to global railway development and which has given us an opportunity to heighten the awareness of Japanese railways throughout the world.

## 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.

### Human resources recruitment and employment

#### 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. During the fiscal year ending March 2010, due to the large number of employees who reached retirement age and in consideration of the necessity of human resources development and the passing on of knowledge and technologies, we are recruiting 1,800 new employees.

#### Employing Persons with Disabilities

As of June 2009, 2.24% 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.

**—Relationship with Employees—**

## **Human resources development**

### **JR East Technical Academy**

In order to motivate young employees to develop into people who can take core roles in development of railcars, facilities and other fields of railway technology, in March 2009 we established the JR East Technical Academy. The inaugural class consists of twenty-four employees who will leave their workplaces for a year to concentrate on technological studies at Head Office. The programs have been designed to enable the participants to thoroughly learn the theory and structure of individual professional fields as well as to enable them to acquire a comprehensive overview of railway technologies and systems. Furthermore, through the course's seminar format, we hope to foster their development into problem-solving engineers who can think for themselves.

### **Skills Development**

Through its General Education Center and network of branch office training facilities JR East provides a wide range of training programs relating to safety, service, technical upgrading, and management. As part of our effort to promote a willingness for self-education in our employees, we offer external correspondence courses designed to increase our staff members' general knowledge and to enable them to earn specific qualifications, as well as internal correspondence programs that assist them in the acquisition of specialized knowledge.

### **Small Groups and Proposal Activities**

JR East encourages its employees to voluntarily raise issues, form small groups to find solutions, and make improvements by utilizing their abilities and by providing mutual help. Approximately 35,900 employees belonging to about 5,300 small groups currently participate in such activities. Proposal activities that solicit ideas and opinions on improvements concerning employee tasks are also very actively carried out. These voluntary activities are one of JR East's most significant driving forces.

## **Favorable work environment**

### **Promotion of Workplace Gender Equality Plan**

Five years after we introduced the F Program with the aim of creating a better working environment for female employees, it has achieved definite results, so we are now promoting the Work-Life Program as its latest stage.

JR East intends to become a company where diverse human resources can fully demonstrate their abilities and achieve their work responsibilities as well as regarding their careers as satisfying and rewarding.

We are currently working on numerous gender equality measures including the development of a work system that, regardless of job type, facilitates a balance of work and childcare, Gender Equality Working Group activities through public soliciting, the holding of forums for achieving gender equality in the workplace, and the operations of our gender equality portal site on our intranet.

### **Work-Life Program**

#### **Three pillars**

- **Support a balance between work and childcare-nursing responsibilities**
- **Enable employees to fully demonstrate their abilities**
- **Improve employee awareness and corporate culture**

#### **Basic concept**

- **Gender equality**
- **Diversity**
- **Work-life balance**



Second phase Gender Equality Working Group

**—Relationship with Employees—****Acquisition of Next-Generation Certification Mark**

JR East has formulated and implemented an action plan required by the Law for Measures to Support the Development of the Next Generation. In November 2008 we were certified by the Minister of Health, Labour, and Welfare as a company actively taking measures to support the development of the next generation of employees and thus acquired the Next-Generation Certification Mark, "Kurumin." We will continue to steadily implement initiatives to achieve gender equality through such activities as the provision of childcare support and other means that will bring about a better working environment for all employees, whether male or female.

**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 recent 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 line care in the workplace, beginning in the fiscal year ended March 2008, we also organized training programs for on-site supervisors in which a total of 1,000 supervisors have participated to date.

**Elder Employee System**

In the fiscal year ended March 2009, JR East introduced the Elder Employee System that enables many employees who have reached retirement age to continue working in Group companies that can benefit from their individual capabilities and skills, thus enabling them to continue to contribute to the Group-wide accumulation of know-how.

**Consciousness Enlightenment about Human Rights**

We are constantly striving to raise the human rights enlightenment among all JR East and Group company employees through the establishment of human rights committees, the provision of training programs and the publishing of newsletters.

## From the Front Line of Technology and Knowledge Transmission - Establishment and Utilization of Training Facilities

In April 2008, JR East established the Yokohama Branch Office Shonan Facilities Training Center, located between Ofuna and Fujisawa on the Tokaido Line. Nicknamed Shonan-kun, the new training facility is equipped with an actual level crossing, a turnout, signal circuits, and ATS; trainees have more opportunities to directly experience inspection and repair tasks and experienced workers can teach them JR East's technologies. The training curriculum includes inspection and adjustment, equipment exchange, and the restoration of services after transport disruptions, which will lead to a decrease in equipment problems and a reduction in the time required for restoration of services after disruptions. Similar facilities have been installed and utilized in other branch offices with the goal of disseminating technologies and knowledge.



Training on wiring for equipment controlling signal devices



Training on exchanges of motors that move points at turnouts

## Maintaining Customer Confidence and Trust

### Basic concept of CSR

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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 high public profile, 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.

### Corporate governance

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#### 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 auditing, Group management, information disclosure, and other important matters while also implementing the various measures required in connection with those systems.

#### Operation, Supervision and Auditing System

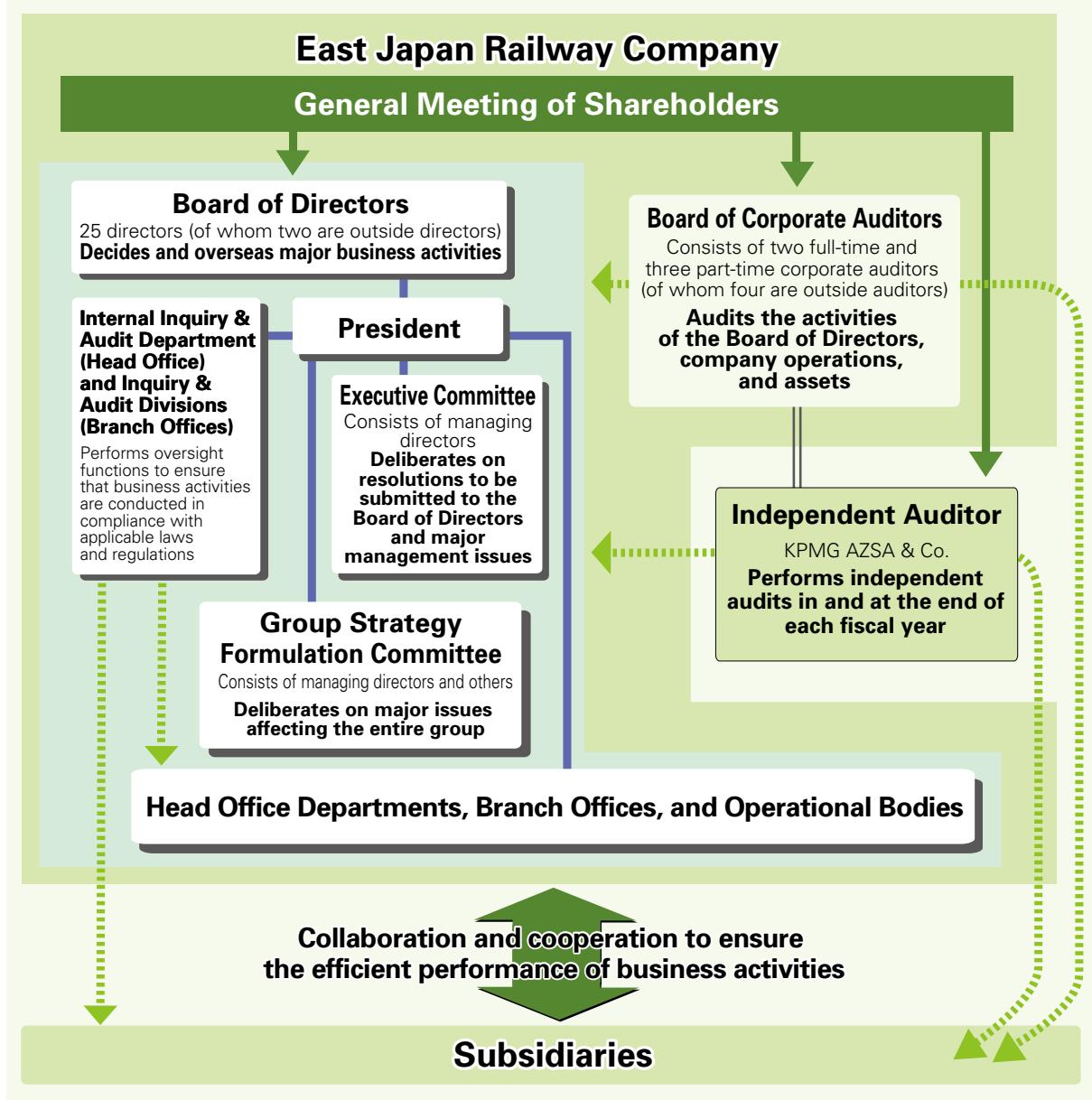
Our Board of Directors, which normally meets every month, decides on key operational issues relating to statutory requirements and other matters and supervises overall operations. Under the Board of Directors is the Executive Committee, which includes all directors with executive functions. Usually meeting 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.

To ensure the veracity of internal audits, 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 audits of corporate auditors are supported by approximately 10 specialized staff. The system for the oversight of directors' implementation of operations, carried out in accordance with rules established by the Board of Corporate Auditors, centers on full-time corporate auditors who attend meetings of the Board of Directors, the Executive Committee, and other important in-house meetings and also investigate 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 & Co., in and at the end of each fiscal year.

■Corporate Governance system (as of August 1, 2009)



## Compliance

### The Basic Concept of Compliance

In order to advance our efforts toward achieving total compliance, in 2005 we adopted a Policy on Legal and Regulatory Compliance and Corporate Ethics, and distributed, to all employees of Group companies, a booklet entitled "Compliance Action Plan" with the aim of raising their awareness of the necessity of compliance. At the same time, we established a Compliance Hotline to receive both internal and external information.

In order to regain the full trust of the public after the Shinanogawa power plant incident that occurred in 2009, in addition to traditional measures, we have now revised the Compliance Action Plan, implemented full inspection of legal compliance matters and strengthened employee education, and are currently involved in a group-wide promotion of compliance management.

### —Maintaining Customer Confidence and Trust—

#### Formulation and Revision of the Compliance Action Plan

In June 2005, JR East formulated and distributed the first version of its Compliance Action Plan which summarized what we consider to be desirable conduct for all Group employees. This was revised in April 2009 to incorporate the objective of constantly reviewing our work operations using laws and regulations as the basis of the reviews, in order to further promote thorough compliance and employee awareness.

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

We conduct full inspections of our compliance in regard to all our operations. Starting with this series of full inspections, JR East will promote continuous reviews of all its operations based on laws and regulations, internal rules, and social norms.

#### Strengthening Compliance Education

JR East conducts compliance education on an ongoing basis and we intend to further reinforce this system. Specifically, to raise the awareness of compliance, within the fiscal year ending in March 2010, we will educate all Group employees using the revised Compliance Action Plan.

##### ■ Compliance Training

Title	Number of sessions	Participants	Contents and objectives	Number of participants
Management School (Compliance Course)	1	Administrative managers of Group companies	Compliance	37
Legal Skills Training	1	Legal affairs managers of branch offices	Enhancement of practical legal knowledge, legal reasoning, and decision-making/problem-solving skills	14
Basic Legal Training	2	Legal affairs personnel of Group companies	Acquisition of basic legal knowledge	50
Regular Legal Seminar	4	Employees of JR East and Group companies	Explanation of new and revised laws, and awareness-raising about compliance	About 180 for each seminar

### —Maintaining Customer Confidence and Trust—

#### Protection of Personal Information

We established Regulations for the Management of Personal Information in 2005, and appointed Chief Privacy Officers who have the task of strictly protecting personal information. We are also working to enhance the information security levels of all our Group companies by ascertaining the holding status of personal information.

#### Risk Management

The Crisis Management Headquarters was established in 2001 to centrally collect and manage information, and to make prompt initial responses in the event of major crises affecting the business operations of Group companies. We further established the full-time Crisis Management Office in 2004, with the aim of controlling risks before crises occur, and to identify potential risks at the earliest possible stage. Furthermore, we have recently established a system that is necessary for us to respond to the emerging risk of the influenza pandemic, and are otherwise striving to prepare effective responses to all risks faced by the Group.

#### Information Disclosure

JR East has a wide range of relationships with many stakeholders, including the 16.86 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.

### The Shinanogawa Power Plant Incident

On March 10, 2009, JR East received an administrative penalty from the Hokuriku Regional Development Bureau, Ministry of Land, Infrastructure, Transport and Tourism in line with the River Act including the revocation of a permit to draw water from the Shinanogawa River because the company's water intake had exceeded the maximum allowed quantity. We would like to express our deepest apologies to residents along the Shinanogawa River and all others involved in this case, and to everyone using JR East's services.

Taking to heart the understanding that we must never make the same mistake again, JR East has established the Outside Experts Committee on Hydroelectric Plant Operations and the Project on Operational Improvement and Reinforcement in Power Plants under the jurisdiction of top executives, through the deliberations of which we intend to consistently instigate improved work mechanisms and systems.

Furthermore, we are actively advancing the improvement of our business practices and cooperating with local communities through our Shinanogawa Power Station Improvement Department which was established in the Head Office on April 1, 2009, as well as through a local office directly under its jurisdiction. We have also transferred from the Tokyo Branch Office all functions related to power generation and supply to the Energy Management Center, which was established on the same day as a Head Office-affiliated organization. By taking these steps, we have clarified the framework of responsibility and the channels for orders and directives while, at the same time, improving communication between front-line facilities and the Head Office.

Since its establishment, JR East has worked to achieve complete compliance and enhanced internal control and we have responded, mainly through our Crisis Management Office, to various situations that have occurred over the years. The Shinanogawa power plant incident, however, has reminded us that if we are to retain the full trust of the public, we must continue to strive for an improved level of employee education on compliance, implement full inspection of compliance in all our operations, and ensure the promotion of compliance management.

## Independent assurance report



### Independent Assurance Report

To the Board of Directors of East Japan Railway Company,

#### 1. Purpose and Scope of our Review

We have been engaged by East Japan Railway Company ("the Company") to perform limited assurance procedures on the Company's Sustainability Report 2009 ("the Report") for the fiscal year ended March 31, 2009. The purpose of our assurance engagement was to express our conclusion, based on our assurance procedures, on whether the environmental performance indicators and the environmental accounting indicators ("the Indicators") for the period from April 1, 2008 to March 31, 2009 included in the Report are fairly generated, aggregated and reported, in all material respects, in accordance with the Company's reporting standards; and whether 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 express our conclusion to the Company, based on our independent assurance engagement.

#### 2. Criteria

The Company applies its own reporting standards, derived, among others, from Environmental Reporting Guidelines 2007 of the Ministry of the Environment. We used these standards as the criteria for evaluating the Indicators. A major part of the Company's reporting standards is described in the Report.

#### 3. Procedures Performed

We conducted our engagement in accordance with the Practical Guidelines of Sustainability Information Assurance (revised February 2008) issued by J-SUS. We have performed the following review procedures:

- Interviewed the Company's responsible personnel to obtain an understanding of the Company's policy for the preparation of the Report.
- Reviewed the Company's reporting standards.
- Obtained an understanding of the systems used to generate, aggregate and report the Indicators, and of the internal controls at corporate and site level.
- Performed an analytical review of the Indicators aggregated at corporate level.
- Examined, on a test basis, evidence supporting the generation, aggregation and reporting of the Indicators in conformity with the Company's reporting standards, and also recalculated the Indicators.
- Made an on-site inspection of the Company's domestic facility.
- Assessed whether all the material environmental information defined by J-SUS is included in the Report.
- Evaluated the overall statement in which the Indicators are expressed.

#### 4. Conclusion

Based on our review, nothing has come to our attention that causes us to believe that the Indicators in the Report are not fairly generated, aggregated and reported, in all material respects, in accordance with the Company's reporting standards, and that all the material environmental information defined by J-SUS is not included in the Report.

#### 5. Independence

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  
July 28, 2009



**Kazuhiko Saito**

Senior Manager

KPMG AZSA Sustainability Co., Ltd.

The JR East Vision 2020 - *i do mu* - was released in March 2008. The JR East Group Sustainability Report 2009 details both the foundations laid by the company in fiscal ended March 2009 to achieve this Vision, and the company's future direction.

We recognize that collecting accurate environmental performance data in a timely manner continues to be one of the challenges to the JR East Group, which gathers data from a great number of work places. In particular, greenhouse gas emissions data would deserve more stringent management, as the tightening of regulations as well as the heightening of social expectations are anticipated. To cope with these requirements/expectations and to move steadily toward the Group Vision, environmental data management levels would need to be improved further.

Although Environment, Safety, and Society are the three pillars of the JR East Group's CSR activities, the Society section of the Report is notably qualitative in its descriptions of systems and measures. It would be important to identify key social performance indicators, set targets for some of those indicators, monitor them and report yearly achievements.

### Following an interview with the President



**Mika Takaoka**  
Professor  
Department of Business  
Rikkyo University

What was most impressive was that Mr. Satoshi Seino, President and CEO, has clear mid-and long-term management plans, looking ahead to 2020 and 2030. In consideration of the 2050 long-term CO<sub>2</sub> reduction target discussed at the recent G8 Summit in L'Aquila, Italy, and the 2020 medium-term target for CO<sub>2</sub> reductions to be discussed in Denmark at the December 2009 COP15, the significance of mid-to-long term visions for environmental issues is evident. With the JR East 2020 Vision - *i do mu* -, the company shows that it is also in line with this trend.

Mr. Seino's statement that "JR East will work on CO<sub>2</sub> emissions reduction with a stronger sense of purpose from now" was an important one. I could sense JR East's strong commitment to do its part in preserving the global environment, and not rest on the established fact that railways have less global environmental impact than automobiles.

Apart from environmental issues, I felt that his idea to invite tourists from far-away places by railways in order to help contribute to regional areas was innovative. Giving consideration to regional areas, I think that measures to increase populations have limitations in their effects. With this in mind, I believe that the promotion of tourism is an inevitable approach for the regeneration of regional economies and I found Mr. Seino's example of the Gono Line to be very persuasive.

I would like to pay attentions to how JR East Group's CSR activities evolve itself, in expectations.

### Future prospects



**Toshiro Ichinose**  
Director and General  
Manager  
Management Planning Department

With Japan hosting the G8 Summit in Toyako, Hokkaido, the fiscal year ended March 2009 was a year highlighted by the heightened interest in global environmental issues. In addition, with March 2009 ending our first full year under the JR East 2020 Vision - *i do mu* -, it was a year in which JR East began its concrete moves to "take a positive and long-term approach to global environmental problems".

Through steady and deliberate measures in our daily business, we were able to achieve nearly all of our environmental targets set for the fiscal year ended March 2009. JR East is committed to its environmental management efforts across the entire JR East Group, working to "reduce our total operational CO<sub>2</sub> emissions by 50% by fiscal ending March 2031 compared with fiscal ended March 1991 levels", and to reach our 2010 environmental goals.

This printed-version of the JR East Group Sustainability Report 2009 is in coordination with the web-version. Selected information has been included in the printed-version to help further attain stakeholder understanding. JR East will continue its efforts to increase the quality of the Report, utilizing the unrestrained opinions of our stakeholders.

## ● History of JR East Group's environmental and social activities

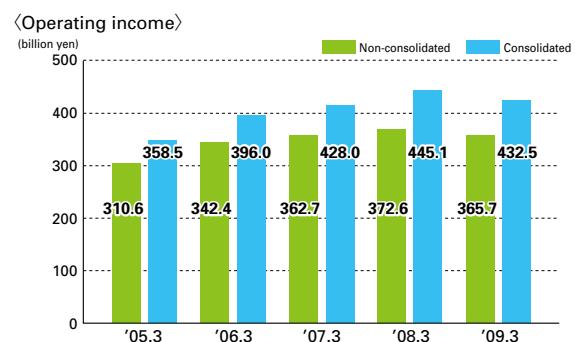
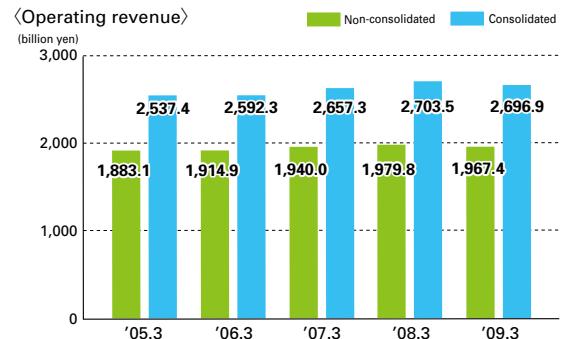
Year	Month	Environmental and social activities
1987	Apr.	Japanese National Railways divided, and East Japan Railway Company established. First Railway Safety Promotion Committee meeting held.
	Jun.	Green Campaign began. Green Counter (now renamed customer help desks) opened for receiving customer feedback.
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.
1993	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.
1994	Mar.	All-day smoking ban extended to major stations in the Tokyo suburban areas.
1995	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.
1996	Feb.	Recycling of used train tickets began in the Tokyo metropolitan area.
	Mar.	First measure to reduce Shinkansen noise completed
1997	Apr.	Ecology education for all new recruits initiated. "Train-ta-kun," a discount car rental service for train passengers, launched.
	Dec.	JR East website set up. Quantitative environmental targets set for CO <sub>2</sub> emissions and others. First annual Environmental Report published.
1998	Mar.	Autonomous Decentralized Transport Operation Control System (ATOS) became operational.
	Oct.	Recycling facility at Minami-Akita Operations Center started operation. Separate smoking zones established at all stations. Smoking banned on all local trains.
	Dec.	Participated in COP3 with the UIC (International Union of Railways).
1999	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.
2000	Feb.	Safety Plan 21 announced.
	Mar.	Omiya Recycling Center started operation (with automatic system for separating used cans from bottles).
	Apr.	Service managers deployed at some stations.
2001	May	Started utilizing copier paper recycled from newspapers collected at stations. Information service on train operations made available by cell-phone.
	Oct.	JR East General Education Center established. Uniforms made from recycled PET bottles introduced.
2002	Sep.	Environmental accounting included in annual Environmental Report.
	Nov.	Environmental targets revised with the announcement of New Frontier 21, the Group's medium-term management plan.
2003	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.
2004	Dec.	JR East Research & Development Center established.
	Feb.	Test runs of the AC Train, a next-generation commuter train, began.
2005	Mar.	Omiya Workshop acquired ISO14001 certification.
	Sep.	Sustainability Report including social and economic aspects published.
2006	Nov.	Sendai General Rolling Stock Workshop acquired ISO14001 certification.
	Mar.	Third set of measures to reduce Shinkansen noise completed. "Guide to Barrier-Free Station Facilities" pamphlet distributed.
2007	May	Test runs of the NE Train, world's first hybrid railcar, began.
	Sep.	First JR East Group Environmental Management Promotion Conference held.
2008	Dec.	Koriyama Workshop acquired ISO14001 certification.
	Mar.	"Safety Plan 2008" announced.
2009	Apr.	"F Program" launched, with the aim of creating a better working environment for female employees.
	May	Adatara Hometown Forestation Program held.
2010	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.
2011	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.
2012	Feb.	Disaster Prevention Research Laboratory established.
	Mar.	Smoking banned in all cars of Shinkansen and limited express trains.
2013	Jul.	World's first diesel hybrid railcars in commercial service, the Kiha E200 type, commenced operation
	Oct.	Railway Museum opened
2014	Mar.	"JR East Vision 2020 - <i>i do mu -</i> " announced
	Jun.	Environmental targets revised
2015	Mar.	2013 Safety Vision Announced
	Apr.	Environmental Engineering Research Laboratory Established
2016	Apr.	Total ban on smoking in specified locations in the Tokyo metropolitan area
	Dec.	Former names are used for some facilities

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)

## Corporate profile (as of March 31, 2009)

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	61,040 (as of April 1, 2009)
Passenger line network	Shinkansen Lines: 1,052.9 km Conventional lines: 6,473.9 km
Number of stations	1,705
Total number of trains in operation per day	12,688 (timetable revised in March 2009)
Total number of passengers per day	16.86 million
Business areas	Transportation, station space operation, shopping center and office building operation, and other services



## Businesses of the JR East Group (as of April 1, 2009)

### 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. / Ikebukuro Terminal Building Co., Ltd. / Boxhill Co.,Ltd. / Kawasaki Station Building Co., Ltd. / Tsurumi Station Building Co., Ltd. / Yokohama Station Building Co., Ltd. / Shonan Station Building Co., Ltd. / JR East Department Store Co., Ltd. / JR Tokyo-West EKIBIRU Development Co., Ltd. / Utsunomiya Station Development Co., Ltd. / Mito Station Development Co., Ltd. / Kinshicho Station Building Co., Ltd. / Chiba Station Building Co., Ltd. / Hirosaki Station Building Co., Ltd. / Station Building MIDORI Co., Ltd.

### Office operations

JR East Building Co., Ltd.

### Hotel operations

Nippon Hotel Co., Ltd. / Takasaki Terminal Building 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. / Delicious Link Co.,Ltd. / JR East Station Retailing Co., Ltd. / JR East Water Business Co., Ltd.

### Trading and logistics businesses

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

### Travel agent and car rental services

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

### Sports and leisure businesses

JR East Sports Co., Ltd. / Gala Yuzawa Co., Ltd.

### Real estate management

JR East Urban Development Corporation / JR East Housing Development & Realty Co., Ltd.

### 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.

### Advertising and publishing

East Japan Marketing & Communications, Inc. / Tokyo Media Service Co., Ltd. / The Orangepage, Inc.

### Cleaning and linen supply services

Shinkansen Cleaning Service Co., Ltd./JR East Transportation Services Co., Ltd. / 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 Kotsu Kikai Co., Ltd. / Niigata Rolling Stock Machinery Co., Ltd.

### Group companies of our branch offices

Tohoku Sogo Service Co., Ltd. / Juster Co., Ltd. / JR Atlis Co., Ltd. / Tokky Co., Ltd. / Shinano Enterprise Co., Ltd.

## Editorial Postscript

We publish this JR East Group Sustainability Report 2009 to provide information of our Group's initiatives in an easy-to-understand manner. Through this publication, we believe we can clarify our challenge and attain higher levels of our customer satisfaction. As a part of our social responsibility, the JR East Group will continue to regard the balancing of environmental protection with business activities as its basic philosophy and take all necessary steps to actively deal with global environmental problems.

In conclusion, we thank everyone involved in the publication of this report and all those who have supported it.

Secretariat, Committee on Ecology, East Japan Railway Company



The J-SUS mark indicates that the reliability of the environmental information contained in the JR East Group Sustainability Report 2009 meets the standard for environmental report screening and logo use defined by the Japanese Association of Assurance Organizations for Sustainability.



## Sustainability Report 2009

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