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CSR Overview

Pursuing Think-and-Act Initiatives to Realize Our **Corporate Philosophy**

The Corporate Philosophy and Safety Charter all of our executive officers and employees created in the wake of the Fukuchiyama Line accident form the foundation of JR-West's management. These documents foster in all of our executive officers and employees a common attitude that they bring to the work of steadily creating a corporate culture that places top priority on safety; responding to the expectations of customers, society, shareholders, suppliers, and other stakeholders; and achieving sustainable development into the future. Toward that end, JR-West is committed to continuously thinking and acting as a unified entity.

Corporate Philosophy

- 1 We, being conscious of our responsibility for protecting the truly precious lives of our customers, and incessantly acting on the basis of safety first, will build a railway that assures our customers of its safety and reliability.
- 2 We, with a central focus on railway business, will fulfill the expectations of our customers, shareholders, employees and their families by supporting the lifestyles of our customers, and achieving sustainable growth into the future.
- 3 We, valuing interaction with customers, and considering our business from our customers' perspective, will provide comfortable services that satisfy our customers.
- 4 We, together with our group companies, will consistently improve our service quality by enhancing technology and expertise through daily efforts and practices.
- 5 We, deepening mutual understanding and respecting each individual, will strive to create a company at which employees find job satisfaction and in which they take pride.
- **6** We, acting in a sincere and fair manner in compliance with the spirit of legal imperatives, and working to enhance corporate ethics, will seek to be a company trusted by communities and society.

Establishment of JR-West's Corporate Philosophy and Safety Charter

Following the Fukuchiyama Line accident, we engaged in round after round of debate on the direction our company should be taking and the values we should uphold in building a corporate culture that places top priority on safety, and then we formulated our Corporate Philosophy in March 2006 by revising the Management Philosophy we established immediately after we became a company.

At the same time, we established a new Safety Charter a specific code of conduct regarding safety — by implementing revisions aimed at motivating our executive officers and employees to take specific actions in pursuit of safety - our foremost mission — so that we never forget the Fukuchiyama Line accident.

Safety Charter

We, ever mindful of the railway accident that occurred on April 25, 2005, conscious of our responsibility for protecting the truly precious lives of our customers, and based on the conviction that ensuring safety is our foremost mission, establish this Safety Charter.

- 1 Safety is ensured primarily through understanding and complying with rules and regulations, a strict execution of each individual's duty, and improvements in technology and expertise, and built up through ceaseless efforts.
- 2 The most important actions for ensuring safety are to execute basic motions, to rigorously enforce safety checks, and to implement flawless communication.
- 3 To ensure safety, we must make a concerted effort, irrespective of our organizational affiliation, rank, or assignment.
- 4 When uncertain about a decision, we must choose the most assuredly safe action.
- 5 Should an accident occur, our top priorities are to prevent concomitant accidents, and to aid passengers.

Promoting CSR under the Direct Leadership of the President

To enhance our ability to promote CSR as one of management's core tasks, we have been holding CSR Promotion Committee meetings since June 2006. The president serves as chairperson of the committee, while its membership comprises full-time directors, full-time corporate auditors, and general managers of headquarters divisions. We also established the CSR Implementation Office as the executive office of the CSR Promotion Committee.

The CSR Promotion Committee comprehensively examines the current status and issues of each area of operations from a CSR perspective, and makes necessary improvements. Safety initiatives are special matters that are fundamental to our operations, and the president bears ultimate responsibility for these as they are pursued under a safety management structure that clearly identifies a safety manager, who oversees safety-related work, and supervisors in charge of training drivers and other staff.

Relationship between Stakeholders and the JR-West Group

Having employees who are motivated, take pride in their work, and provide high-quality service results in satisfaction and a sense of safety and peace of mind for customers, and contribution to the invigoration of the West Japan area. With the profits earned under such conditions we will assure the sustainability of operations, and build good relationships with shareholders and suppliers.



Pursuing CSR by Thinking and Acting Based on the Field

To support and foster the values put forth in our Corporate Philosophy, we have specified eight high-priority fields in reflection of society's demands and use these in enhancing the value we provide to stakeholders.

In upholding our Corporate Philosophy, all JR-West Group employees at all of our workplaces maintain a constant awareness of customers and, with a common understanding of the various issues that arise at front-line work sites, believe it is important to autonomously and collaboratively work to solve them with a sense of urgency. The JR-West Group pursues CSR by having every one of our employees embrace this "thinking and acting based on the field" as the guiding principle of conduct.



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Safety Measures

Basic Approach

Safety is the highest priority of JR-West. To establish a corporate culture that places top priority on safety, we are moving forward with various tangible and intangible initiatives. Safety is the core strategy of the JR-West Group Medium-Term Management Plan 2017 we formulated in March 2013, and we aim to attain higher levels of safety by steadily implementing our new Safety Think-and-Act Plan.

Having caused the Fukuchiyama Line accident, JR-West will continue to focus on implementing, as a critical safety measure, the risk assessments we introduced in light of our inability to prevent that accident. In addition, we will move forward with various initiatives aimed at ensuring employees of the JR-West Group never forget the Fukuchiyama Line accident and can implement think-and-act measures putting human life and safety above all else. Supplementing these intangible steps with ongoing and proactive equipment maintenance and renovation, new technology development, and other safety-related investments, we are committed to attaining higher levels of safety in our operations.

Overview of the Safety Think-and-Act Plan 2017

"Ensuring that an accident such as that on the Fukuchiyama Line will never again occur" is the duty of the JR-West Group, and our determination to fulfill that duty will never change. In accordance with this determination, we will work to ensure that the customers who use the railway services of the JR-West Group are transported safely to their destinations, and we will work to steadily increase the level of safety so that there are no incidents of serious injuries or fatalities among anyone involved in our operations. "The Safety Think-and-Act Plan 2017" gives shape to the actions that we will take to achieve those objectives.

Implementation of the Safety Think-and-Act Plan 2017 began in April 2013. This plan sets forth concrete quantitative targets that we will use in continuously working to achieve higher levels of safety. Under the Safety Think-and-Act Plan

2017, we have two objectives to achieve over the five-year period through fiscal 2018 — "No railway accidents that result in casualties among our customers" and "no labor accidents that result in fatalities among our employees" — and three objectives to achieve for fiscal 2018 — "30% reduction in railway accidents with casualties on the platform", "40% reduction in accidents at level crossings", and "50% reduction in transport disorders due to internal factors". The Safety Think-and-Act Plan 2017 lays out four main courses of action for achieving these objectives. These are: "Continual effort to realize safe, reliable transport service"; "Increase level of risk assessment"; "Increasing safety awareness and implementing think-and-act initiatives with the highest priority on human life"; and "Investment in safety".



 Enhance technological capabilities and skills Improve communications Understand and utilize the human factor Improve front-line capabilities • Recruit and nurture human resources and enhance motivation • Foster Group unity • Cooperate with customers and society

Establishment of Safety Management Based on Risk Assessment

JR-West has adopted risk assessment as a concrete approach for putting together preemptive safety measures. Risk assessment consists of quantifying risks and taking appropriate actions for matters that should be addressed as high priorities, and we are implementing risk assessment in all of our front-line work sites and branches, and in our head office.

We conduct risk assessments that are based on large volumes of safety-related information reported by employees, involve related workplaces and Group companies, and are carried out at the workplace level, and we reduce risk based on these assessments. In addition, branches and the head office provide assistance for risk reduction measures that cannot be handled by individual workplaces alone.

Investment in Safety

JR-West's railway system is operated with massive amounts of equipment and facilities. We regularly and properly maintain and renovate equipment and facilities for operations, and invest in equipment and facilities that are specifically for safety and disaster prevention in order to make our operations as safe as possible.

Under the Basic Safety Plan covering the five years beginning with fiscal 2009, we invested a total of approximately ¥468 billion to install ATS equipment and platform emergency buttons, improve level crossings, and take other steps to make our operations safer.

Platform Safety Measures

To prevent railway casualty accidents, we are moving forward with measures aimed at improving platform safety.

Platform Emergency Buttons

JR-West is installing emergency buttons for notifying train crews and station personnel that something is amiss. As of the end of fiscal 2013, these buttons had been installed at 307 stations for conventional lines and at all Shinkansen stations.



Platform emergency button (Left) For Shinkansen station (Right) For conventional line station

Level Crossing Safety Measures

Since its formation as a company, JR-West has worked to increase the safety of level crossings through approaches such as elevating tracks and consolidating level crossings to reduce their number. We have also installed level crossing warning devices and gates, sensors to detect objects on tracks, level crossing emergency buttons, and other devices to enhance safety.

Level Crossing Emergency Buttons

We are installing emergency buttons to notify train drivers when a vehicle or something else is stranded on a level crossing or level crossing conditions are otherwise unsafe. Installation of these buttons has been completed at all class 1 and class 3 level crossings.



Emergency button

Installation of ATS (Automatic Train Stop) Equipment

JR-West is drawing upon all of its resources to install ATS equipment for avoiding train collisions and preventing accidents due to excessive speed. In fiscal 2013, we completed installations at all locations required to have them by June 2016 under a Ministry of Land, Infrastructure, Transport and Tourism ordinance.

Earthquake Safety Measures

JR-West is steadily moving forward with earthquake resistance reinforcement of bridge piers and stations, measures for preventing derailments, and enhancement of measures for preventing trains from entering disaster-affected areas, such as strengthening the system of seismometers for detecting earthquakes.

On the portion of the Sanyo Shinkansen Line between Shin-Osaka Station and Himeji Station, installation of derailment prevention guards is steadily moving forward.



Sanyo Shinkansen derailment prevention guards

Tsunami Safety Measures

JR-West is implementing countermeasures for the tsunamis that may accompany the anticipated Tokai, Tonankai, and Nankai earthquakes.

The Shingu Station–Wakayama Station segment of the Kisei Line, which runs along the coastal area of Wakayama Prefecture, is particularly susceptible to tsunami damage, and we are advancing various measures to protect it.

Installation of Ladders and Stairs

To enable smooth evacuation from trains, we have equipped them with ladders that have handrails and installed stairs to enable evacuation from railway lines to highways and other elevated ground.



Train exit platform for evacuating from trains at locations between stations

Evacuation Guidance App

JR-West has developed a smartphone app that uses GPS to show the current location, areas vulnerable to a tsunami, the nearest evacuation site, and the route to the site. This app has been installed on the smartphones crew members carry for their work.

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Customer Satisfaction

Basic Approach

The JR-West Group, the core of which is railway operations, is a provider of services that are used by large numbers of people on a daily basis and is, therefore, performing a socially important role.

In charge of an enterprise that is of immense significance to the public, we aim to continue to be a corporate group providing services that will make customers into "fans of JR-West," who will want to use our services on an ongoing basis. We will do this by continuing to live up to the confidence placed in us by our customers and society, and maintaining our practice of customeroriented management, to enhance the value we provide.

Toward that end, it is critical that we have a clear grasp of customers' needs and expectations, accurately anticipate social trends, and steadily reflect this information in safety and services. We must, in other words, be highly sensitive to customer needs in our daily work, and reflect what we learn in the services we provide. We must also come up with our own ideas on how to serve customers, consistently act on these ideas, and provide high-quality services that will result in even greater customer satisfaction.

We would like to note that we have a very great appreciation for the importance of high transport quality. By implementing meticulous, stable transport measures and enhancing our ability to provide information from the customer's perspective, we will continue working to achieve high transport quality that allows customers to use our services with confidence.

Furthermore, we will respond with even greater speed and sincerity to the precious "customer voices" we have heard in the form of recommendations and opinions ever since the JR-West Group was founded in 1987, and, based on the

Aims of the JR-West Group's CS Initiatives (JR-West Group's Medium-Term Management Plan 2017)



Objective: Make customers into fans of JR-West

"customer voices" we have heard, move forward with the enhancement and improvement of our services from the customer's perspective.

We will also strive to gain understanding of our company's initiatives by actively and broadly communicating to customers and society both the improvements we have made based on "customer voices" and the service vision we aspire to.

We aim to practice customer-oriented management by incorporating these initiatives into our corporate culture. To be a railway that continues to be loved in the future, the JR-West Group, aiming to increase its "fans", is taking a strong next step in customer satisfaction.

Provision of Services Offering Even Greater Convenience and Comfort

Start of Nationwide Reciprocal Use of Transport IC Cards

Starting on March 23, 2013, ten different transportation IC cards, including the ICOCA IC card issued by JR-West, can now be used on transportation systems throughout Japan. A holder of one of these ten cards, therefore, can use it to ride a

train or bus operated by any of the participating transportation system operators.

These cards can also be used to make purchases in the affiliated stores of any participating IC card system.



Symbol indicating acceptance of any of 10 IC cards

Lowering the Threshold for Providing Information on Train Delays

In the past, train delay information was posted on JR-West's website only for delays of 30 minutes or longer. From August 2012, however, we lowered the threshold for providing delay information to cover trains behind schedule by 15 minutes or longer (10 minutes or longer for morning rush hour service in the Kyoto, Osaka, and Kobe areas and for Shinkansen service) and

began presenting information at a more detailed geographic level in March 2013. In addition, we made our website accessible from smartphones and added visual information of alternative means of transport for abnormal circumstances.

Furthermore, for the customers using the principal lines in the Kyoto, Osaka, and Kobe areas, we made it possible to obtain train delay certificates on our website.



Smartphone screen for providing information on railway operations

Kansai-Airport Express Haruka Onboard Information in Four Languages

JR-West has taken various steps to enhance services for foreign visitors. For example, we have introduced an Internet reservation system that can be used from overseas, begun to offer multilanguage interpretation services at stations, and updated our foreign-language website.

For the Kansai-Airport Express Haruka, we increased the number of languages used on the onboard electronic information displays from two — Japanese and English — to four, adding Korean and Chinese as of the timetable revision implemented in Spring 2013. We also added Korean and Chinese to the stickers explaining how to use the luggage storage space on each car.



Electronic display providing information in Japanese, English, Korean, and Chinese onboard the Kansai-Airport Express Haruka

Initiatives for Putting Customers at Ease under Abnormal Operating Conditions Further Enhancement of Information on Timetable Disruption

To enhance guidance during timetable disruption, we increased the number of information displays for abnormal circumstances. Using these displays and posters, we provide information, including graphics showing routes, to guide customers to the nearest station of another railway that they can use to get on with their trip. We are also using smartphones equipped with Super-TID (Traffic Information Display) technology providing information on current locations of nearest and following trains, as well as other information on the adjusted train schedule. These smartphones were deployed to conductors' offices in Kyoto, Osaka, and Kobe in July 2012. Going forward, we will continue to enhance our provision of information on earliest arrivals and other matters during abnormal operating conditions.



Information display for abnormal circumstances

Enhancing Responses to "Customer Voices" Swifter, More Conscientious Responses to "Customer Voices"

Customer opinions, wishes, and inquiries are where CS begins. JR-West swiftly determines the exact nature of these "customer voices" and responds in appropriate ways. The JR-West Customer Center works to minimize the amount of time people contacting us by phone are kept on hold, and strives to improve the information provided under our website FAQs. In addition, when a response cannot be given immediately, the Customer Center provides intermediate updates and takes other steps, as well, in conscientiously responding to customer feedback.

We maintain a database of all the "customer voices," use it to identify from overall themes in which solutions are needed, and systematically act to make improvements.

Responses to "Customer Voices"



Breakdown of "Customer Voices"

Approximately 36,000 items of customer feedback were received in fiscal 2013.



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ESG Section

Coexistence with Local Communities

Basic Approach

For the JR-West Group, which has railway operations as the core of its business, it is impossible to exist apart from the areas we serve.

That is why we emphasize being a "railway company that coexists with communities" under "Our Future Direction — The Ideal Form for JR-West" in the "JR-West Group's Medium-Term Management Plan 2017," which we are currently implementing.

We believe, therefore, that there is nothing more important than invigorating communities by engaging in an ongoing dialogue with the people of the areas we serve, developing a shared understanding of the area's aspirations and problems, and working together to develop solutions. In addition, to make this relationship as meaningful as possible, we have entered into agreements for comprehensive coordination and cooperation with local governments and businesses. In taking this approach, we painstakingly consider what we, as the JR-West Group, can contribute, and we strive to achieve higher levels of railway quality, and promote the expansion of non-railway businesses and the development of new businesses, by developing operations that have railway operations at their core and are closely tied to local areas.

Coordinating with communities is also essential for social contribution activities. We, therefore, are pursuing activities in five areas — safety, the global environment, social welfare, railway culture, and communities — that are closely related to our railway operations and other business activities.

By steadily advancing meaningful initiatives rooted in local areas, we are working to contribute to the invigoration of the West Japan area.

Coexistence with Communities—Overview



Promote initiatives as a company
 Promote initiatives in workplaces
 Promote initiatives through the foundation
As a member of local communities, move in concert with them and

cultivate mutual understanding as a company and as individual employees Local communities

<Kansai Urban Area> Creating Residential Environments with Outstanding Comfort and Convenience

Under a shared understanding of cooperation and collaboration JR-West is working with local governments and other stakeholders to advance measures one by one, discussing specific actions and role assignments along the way.

Advancing Childcare Support Initiatives Developing a Government-Approved Kindergarten Facility in Shiga Prefecture

In Shiga Prefecture, with which JR-West has signed a comprehensive collaboration agreement, we had been examining possibilities for establishing children's daycare facilities adjacent to stations. With preparations now moving forward, we aim to open a daycare center, with the cooperation of a local daycare operator, at Otsu Station on the Biwako Line in April 2014. Plans call for this daycare center to be government-approved (approval will be applied for) and to be available to families regardless

of the employment status of parents or guardians.

We are also working to establish "JR Kids Room" daycare facilities adjacent to stations to make the railway belt of which Otsu Station is a part, more convenient and pleasant for people with children.



Rendering of a daycare facility

Responding to Local Needs with Facilities and Services Near Stations

JR-West is improving station functions. We are enhancing commercial centers at stations, making station access better by expanding the Ekirinkun rental bicycles service and enhancing collaboration with other public transportation operators, and steadily upgrading restrooms and benches.

Opening of piole Himeji

In April 2013, we successfully completed construction of a new station building as the culmination of our Himeji Station project, and opened the piole Himeji (Main Building) commercial center. Together with the renovation of existing facilities, the project resulted in the new piole Himeji shopping center with

space for roughly 200 stores. On a wall of the main building, a giant panel providing indirect lighting with approximately 62,000 LEDs delights customers with white egrets, rippling water, and other artistic animation.



piole Himeji

Opening of VIERRA morinomiya

In March 2013, we opened the VIERRA morinomiya commercial center at Morinomiya Station on the Osaka Loop Line. VIERRA

morinomiya is designed to serve the daily shopping needs of both station users and local residents. To go along with the opening of this new facility, we also added the new south exit to ease access from the station. VIERRA morinomiya



<Other West Japan Areas> Contributing to the Creation of Towns that are Appealing and Convenient

In the West Japan area, JR-West is working with local governments and residents to make stations and surrounding areas more convenient for daily life, and improve transfers to other public transportation systems.

Decision to Extend Electrification of the Kabe Line

For the Kabe Line, which JR-West has continued to operate from Yokogawa Station to Kabe Station, even after terminating operation of the non-electrified section of the line stretching north of Kabe in 2003, a committee was established in 2008 to invigorate the line. The committee, on which JR-West is participating, has developed and implemented various measures to rejuvenate the local area. One of those measures, agreed in February 2013 with the city of Hiroshima, calls for the extension and electrification of the Kabe Line from Kabe Station for approximately 1.6 km, and the establishment of two new stations.

Promoting Collaboration with Local Companies

With the cooperation of the Ryobi Group, which signed a memorandum for mutual cooperation toward improving the convenience of public transportation in 2011, JR-West held the "Railway Day Fair" to promote greater understanding of public transportation.

In March 2012, we worked with The San-in Godo Bank, Ltd., which signed a business cooperation agreement for local development, to carry out a project aimed at encouraging strong local communication by greeting customers on their way to work at Tottori, Yonago, Matsue, and Hamada stations.

<Other West Japan Areas> Leveraging Tourism to **Revitalize Local Communities**

Working with Local Communities to Pursue Tourism Campaigns

In fall of 2012, JR-West implemented the San-in Destination Campaign in Tottori and Shimane prefectures. Through this initiative, we worked with local governments and companies to hold events aimed at generating a deeper appreciation of the attractions of the San-in area, prepare secondary axis routes from stations to destinations, and take other steps, as well, across a wide range of areas.

In addition, for customers from other countries, we held

the "Detective Conan Mystery Tour." For this event, we partnered with local organizations to host travel agents, who came from overseas to gather information. With our partners, we also prepared PR materials for overseas markets.



San-in Destination Campaign

Further Enhancement of Social Contribution Activities Initiatives Aimed at Building a Secure Society

Through the JR-West Relief Foundation, established in the wake of the Fukuchiyama Line accident to help create a society that affords safety and peace of mind, we are working to provide physical and emotional care for the victims of accidents and disasters, and build safe communities.

Holding of Emergency First Aid Fairs

Every year, the JR-West Relief Foundation holds Emergency First Aid Fairs to educate people who use train stations on the importance of emergency first aid when they find themselves at the scene of an emergency. In fiscal 2013, approximately 4,400 people participated in training on how to use automated external defibrillators (AEDs) and perform cardiopulmonary resuscitation.

Activity Assistance for NPOs

The JR-West Relief Foundation broadly solicits applications for grants it provides for activities and research on accident and disaster preparation, and on the provision of physical and emotional care following accidents and disasters. In fiscal 2013, the foundation provided 38 projects with grants totaling ¥34,230,000. It also regularly contributes to Ashinaga, an organization providing educational and emotional support for orphans. Ashinaga uses the funds it receives from the foundation to partially cover the operating expenses for two programs, one for high school students who have received Ashinaga scholarships and another that is a camp for elementary and junior high school students. All of the students participating in these programs live in the Kansai region.

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Environment

Basic Approach

The JR-West Group has established the direction described below regarding protection of the global environment.

[Basic Concepts]

JR-West, working in unison with its Group companies, will endeavor to protect the global environment and contribute to the realization of a society in which sustainable development is possible.

[Code of Conduct]

- 1 Aiming to be a corporate group that is friendly to the global environment, we will engage in appropriate and effective resource usage.
- 2 We will develop technologies and engage in creative innovation to protect the global environment.
- 3 We will act with a constant awareness of the need to protect the global environment.

Initiatives to protect the global environment are important corporate social responsibilities. JR-West believes it is important to helping build a sustainable society by redoubling its efforts to lower its impact on the environment through the efficient and effective use of energy and other resources, and by avoiding environmental risk in a manner based on legal compliance. At the same time, we aim to contribute to the realization of an energy-efficient society by collaborating with other public transportation operators and local communities to increase the convenience and attractiveness of railways and create a railway that increasing numbers of customers will choose to use.

Environment Targets

Previous Targets: JR-West Group New Targets: JR-West Group Medium-Term Management Plan Medium-Term Management Plan 2017 Item 2008-2012 Fiscal 2013 Target Fiscal 2013 Actual Fiscal 2014 Target Fiscal 2018 Target 76.8 % Energy-saving railcars as a percentage of total railcars 75 % 77 % 83 % Energy consumption rate *1 (vs. fiscal 1996) (12%) (16.0 %) (3 %) *2,3 Same as above (vs. fiscal 2011) (3 %) Energy consumption volume (entire company) (2 %) *2,3 (2 %) (vs. fiscal 2011) Same as above (for conventional line operation, (4 %) (9%)*2 station offices, etc.) (vs. fiscal 2011) Station and train garbage (recyclable) recycling rate 85 % or greater 97.8 % 96 % or greater *2 Facility construction 96 % or greater Railway material recycling rate 90 % or greater 92.2 % Rolling stock 91 % or greater

*1 The energy consumption rate is the amount of energy consumed per rolling-stock kilometer (MJ / Rolling-stock km).

*2 Included in the JR-West Group Medium-Term Management Plan 2017

Note: figures in bracket () are negative values

The Global Environment Overall Perspective

JR-West, working in unison with its Group companies, will endeavor to protect the global environment and contribute to the realization of a society in which sustainable development is possible.

Think and Act Eco Actions at the Individual Level

Global Warming Prevention Initiatives

- Reducing CO₂ emission volumes and saving energy Promoting use of public
- transportation Encouraging environmental

communication

Realizing a **Recycling-Oriented Society**

- Recycling of garbage from
- stations and trains • Recycling of waste from maintenance and construction work

Promoting Initiatives to Protect the Global Environment Systematically

Preserving Biodiversity

- Tackling environmental protection with local communities Incorporating environmental
- consideration into business activities

Risk Management and Legal Compliance

- Considering line-side
- environments
- Managing chemicals

Advancing Environmental Management

^{*3} The fiscal 2018 target considers the estimated increase in energy consumption related to the start of Hokuriku Shinkansen operations

Advancing Reductions in Energy Consumption Volume to Wisely Use Limited Energy Resources Active Introduction of Energy-Saving Railcars

Train operation accounts for more than 80% of the energy used in our railway operations. To reduce the amount of energy we use to operate trains, we are gradually introducing railcars

equipped with VVVF inverters, regenerative brakes, and other energy-saving functions. As of the end of fiscal 2013, 76.8 % of our railcars were energy-saving models.



225 Series energy-saving railcars

Promoting Energy-Saving Train Driving

JR-West is promoting train driving that minimizes energy consumption while also achieving safe, on-time operation. In fiscal 2013, we carried out test runs based on theories and driving methods that had been the subject of careful consideration, and proceeded to implement new driving approaches in the field. Furthermore, these efforts are not limited to our electric trains; we are also performing research on energy-saving driving approaches for our diesel-powered trains.

Continuing to Implement Electricity Saving Measures to Address Tight Supply Conditions

The JR-West Group as a whole is carrying on with efforts to save electricity. In addition to strictly managing air conditioning thermostats, turning off lights whenever they are not needed, and other ongoing efforts, we are also applying knowledge we gained in examining possibilities for eco stations to move forward with efforts to subdivide lighting circuits into smaller units and convert lighting fixtures to LEDs and other high-efficiency technologies. Furthermore, to the extent possible, we are taking actions like reducing lighting usage inside trains that are in service, changing escalator speeds, and reducing the numbers of automatic ticket gates and ticket vending machines in use.

Contributing to the Building of a Low Carbon, **Recycling-Oriented Society through the JR-West Group's Business Activities**

Pursuing the 3Rs for Waste (Reduce, Reuse, Recycle)

JR-West is recycling garbage by placing bins for separated garbage in stations and trains, and having customers deposit their garbage in them accordingly. In fiscal 2013, we collected 4,900 tons of recyclable garbage and recycled 97.8% of it.

Recycling of Recyclable Garbage from Stations and Trains



Recycling of Railway Material



Meanwhile, in the construction of railway facilities and the design of railcars, we have adopted the use of construction methods and design approaches that curb waste. We are also working to reuse and recycle waste. In fiscal 2013, the amount of waste we generated came to 156,000 tons, and we recycled 92.2%.

Promoting Environmentally Friendly Business Operations

JR-West Group companies pursue environmental initiatives in accordance with their industry and business conditions. To date, the Heart-in convenience store operation has switched to LEDs for lighting in all of its Kyoto-Osaka-Kobe area stores, and multiple companies have undertaken initiatives including the introduction of water-conserving toilets and recycling of food waste. The real estate business has adopted the use of energy-saving facilities for residential properties and equipped all properties (for sale) with water-conserving toilets and other eco-friendly features. In addition, roughly 70 Group companies are disclosing the amounts of water, paper, and energy they consume.

Entry into the Business of Solar Power Generation

To bolster the stable supply of electricity, while lowering environmental impact, we are building a megasolar project (large-scale solar power generation facility) in the Asa region of Yamaguchi Prefecture. Operation of this facility is slated to around the winter of fiscal 2015.

- Generating capacity: 5MW
- Generated energy per year: Approx. 5.10 GWh Enough to power approx.



1.020 ordinary homes Rendering of the megasolar project CO₂ savings: Approx. 3,710 tons

when completed

Promoting Use of Public Transportation

Use of public transportation helps to lower CO₂ emissions, so, to encourage the use of public transportation, JR-West has worked with other transportation operators to promote the arrangement of transportation options to and from stations.

In addition, we are publicizing lifestyles that make use of railways and give customers a real sense of helping to protect the environment. In fiscal 2013, we instituted the Park & ICOCA service at four stations, opened an Ekirinkun rental bicycle service outlet at Ishiyama Station on the Biwako Line, and added bicycles to seven other outlets.

Transportation Usage, Energy Consumption and CO₂ Emissions of Domestic Modes of Transportation (FY2010, Nationwide)

Railway Bus	Car	Other (Including airplane)	(%)
Transportation Usage Ratio			
29	5	51	15
Energy Consumption Ratio			
<mark>6</mark> 2		74	17
CO ₂ Emissions Ratio			
<mark>5</mark> 2		75	18

Source: Summary of Transportation Statistics, Transport Research and Statistics Office, Ministry of Land, Infrastructure, Transport and Tourism The GHGs Emissions Data of Japan, Greenhouse Gas Inventory Office of Japan