

Review of Operations

JR East's five-route Shinkansen network

Operation on the extension of the Yamagata hybrid Shinkansen from Yamagata to Shinjo started in December 1999 (see text).



TRANSPORTATION

SHINKANSEN BULLET TRAIN NETWORK

OVERVIEW JR East operates three Shinkansen lines. The 535.3-kilometer Tohoku Shinkansen runs between Tokyo and Morioka. The fastest train on this line covers the distance in 2 hours and 21 minutes. The 303.6-kilometer Joetsu Shinkansen links Omiya to Niigata. Minimum time between Tokyo and Niigata is 1 hour and 37 minutes. The 117.4-kilometer Nagano Shinkansen extends from Takasaki to Nagano. This service cuts travel time between Tokyo and Nagano to as little as 1 hour and 19 minutes.

JR East tries to make its Shinkansen lines as appealing and accessible as possible to a broad range of passengers. Higher speeds, through service to conventional lines and added capacity within about 100 kilometers of Tokyo are notable areas of progress. JR East focuses on optimizing services to continuously expand the Shinkansen commuting market.

OPERATIONAL HIGHLIGHTS

Yamagata Hybrid Shinkansen Extended to Shinjo

The Yamagata hybrid Shinkansen, which began running in July 1992, has increased capacity to keep pace with

solid demand. In December 1999, the conventional line sector of the Yamagata hybrid Shinkansen was extended from Yamagata on to Shinjo, a distance of 61.5 kilometers and through service between Tokyo and Shinjo began. The average travel time between Tokyo and Shinjo is now 3 hours and 25 minutes, a reduction of roughly 30 minutes. The fastest train links these two cities in 3 hours and 5 minutes. Interest-free loans from an organization backed by local public-sector entities provided all of the funding for this project. In addition, local governments provided large-scale free parking areas (“park & ride” parking facilities) holding a total of about 2,800 cars at five stations. Making this service even more attractive, JR East conducted effective marketing campaigns and offered a variety of promotional and discounted tickets. As a result, passengers on the Yamagata-Shinjo sector doubled during the new service’s first six months compared to the same period prior to the start of this new service.

Revenues from the widened conventional line sectors of hybrid Shinkansen services are credited to intercity and regional networks (see map).



The Yamagata hybrid Shinkansen

New rolling stock made its debut on the Yamagata hybrid Shinkansen when the line was extended from Yamagata to Shinjo. This helped increase demand for travel on the new sector, which serves many hot spring resorts (see text).



Akita hybrid Shinkansen

Offering more capacity and higher speeds than before, the Akita hybrid Shinkansen has market share from airlines (see text).

Passenger Numbers on Akita Hybrid Shinkansen Grow

The Akita hybrid Shinkansen, launched in March 1997, offers through service between Tokyo and Akita. The fastest train covers the entire route in 3 hours and 49 minutes. Capacity on this route has been raised by adding departures and increasing the length of trains to meet strong demand since its launch. In December 1999, average travel time was further reduced by five minutes following the introduction of new rolling stock. As a result, this service has attracted an increasing number of passengers from airlines. Whereas rail had a market share of less than 50% prior to this service, trains now account for about 60% of travel between Tokyo and Akita.



The Max all-double-decker Shinkansen train

JR East's Max is meeting the growth in Shinkansen commuter demand (see text).

Steady Growth of Shinkansen Commuters Continues

The number of Shinkansen commuters has grown steadily. Since JR East's inception in 1987, Shinkansen commuter-pass revenues have increased by approximately 13 times. To serve the rising number of Shinkansen commuters, JR East operates Max all-double-decker trains, mostly during the morning and evening rush hours. When two 8-car Max units are combined, the result is a 16-car double-decker train with 1,634 seats, the largest capacity in the world for high-speed service.

TRANSPORTATION

TOKYO METROPOLITAN AREA NETWORK

OVERVIEW This network consists of 1,117.4 kilometers of tracks that link central Tokyo with surrounding areas. Most of these lines are within a radius of about 100 kilometers from Tokyo Station. JR East claims nearly half of the Tokyo rail transportation market, which is both immense and profitable, in terms of both passenger-kilometers and operating revenues.

By increasing frequency, lengthening trains and taking other steps to use existing facilities effectively, JR East has boosted capacity with small capital outlays. The Company has not once adjusted fares since its inception, except to reflect the introduction and revision of the consumption tax. Faced with sizable investments needed to boost capacity, most of the other major private railways have been compelled to raise fares repeatedly on most of their lines during the same period. Thus JR East's relative competitiveness has risen. Upgrading commuter services is a primary objective in this sector. The Company is taking many steps to increase capacity and relieve congestion as well as raising train speeds and operating guaranteed-seat commuter trains.



Morning rush hour in a Tokyo metropolitan area station

During peak times, some of JR East's Tokyo metropolitan area network trains run at 120-second intervals (see text).

OPERATIONAL HIGHLIGHTS

The Yamanote Line, Keystone of Tokyo's Commuter Network

With a population of about 33 million, the Tokyo metropolitan area generates enormous demand for railway transportation, particularly among commuters. JR East commuter lines extend outward from Tokyo in five directions, serving areas that huge numbers of people who work in the capital call home. Every day, over 2.5 million passengers change from a suburban commuter train to the Yamanote Line encircling Tokyo.

High-Tech Trains Start Running in the Tokyo Area

In March 2000, highly sophisticated commuter trains began entering service in the Tokyo area. All cars on these trains are computer-controlled. Temperature is automatically adjusted according to outdoor conditions and the number of passengers. This control system also smooths acceleration and deceleration. Among other improvements to passenger services is a minimal height difference with platforms for easy wheelchair access. Another advantage is a preliminary rolling stock inspection sequence that can be completed in only about five minutes from the operator's seat, far less than the previous 30 minutes or so. This dramatically improves productivity.

Preparing to Introduce an Automatic Fare Collecting System Using IC Cards

JR East is currently working toward the 2001 introduction of a new automatic fare collecting system using a new type of contactless IC card. An IC pass that functions as a commuter pass and prepaid card will greatly simplify station access by eliminating the need to buy tickets. Passengers also benefit by gaining another means of riding JR East trains without using cash. For JR East, the IC card system means improvements in station operations and lower expenses. In addition, this technology makes it possible to offer new services and develop new businesses linked to IC cards.

Saitama Shintoshin Station Opens

In April 2000, the first passengers passed through the gates of Saitama Shintoshin ("new urban center") Station. Located north of the Tokyo area in the city of Omiya, the new station serves an area where 18 Japanese governmental organizations have been transferred from central Tokyo. Serving about 22,000 passengers daily at this time, the station is expected to grow to a volume of about 150,000 eventually. The station has escalators, elevators, specially equipped rest rooms and other facilities to make access easy for older and physically challenged passengers.



The new E231 series high-tech commuter train

Incorporating highly sophisticated technology, this new commuter train offers outstanding comfort while helping to raise efficiency (see text).



New Automatic Fare Collecting System Using IC Cards

With the new IC card fare collecting system, scheduled for introduction in 2001, passengers with IC commuter passes can ride JR East trains without buying tickets or using cash (see text).

TRANSPORTATION

INTERCITY AND REGIONAL NETWORKS

OVERVIEW Made up of 5,464.4 kilometers of rail lines, these networks represent over 70% of JR East's total network. They provide non-Shinkansen intercity services and regional services not included in the Tokyo metropolitan area network. The vanguard of the intercity network is a fleet of sleek limited express trains. JR East continues to upgrade services with new rolling stock, more frequent departures and more convenient connections to Shinkansen lines. On regional lines, the Company is striving to raise efficiency. This primarily involves efforts to keep schedules closely in line with demand and the use of railway cars that require only a single operator.

OPERATIONAL HIGHLIGHTS

Stimulating Demand With Attractive Rolling Stock

In July 1999, JR East began operating *Cassiopeia*, an all-double-decker limited express train made up entirely of twin sleeping compartments. The train runs between Tokyo's Ueno Station, a major terminal, and Sapporo on the northern island of Hokkaido. In March 2000, *Super Hatsukari* limited express service made its debut. Running between Morioka and Aomori, the three trains consist of newly designed equipment and cut the shortest travel time between the two cities by 10 minutes to 1 hour and 58 minutes.

TRANSPORTATION

TRAVEL AGENCY SERVICES

OVERVIEW JR East's travel agency services are closely linked to its railway operations. The Company sells an array of domestic and international travel packages, mainly through its *View Plaza* (travel centers) chain. Most of them are at stations, locations that attract large numbers of people. One focus is promoting a new type of travel product to increase demand for rail travel within Japan. JR East bundled rail tickets with reasonably priced car rental services and/or multi-night accommodations, thereby offering travelers an economical way to enjoy extended stays. Furthermore, JR East is providing information on unique travel experiences available in its service area.



The Super Hatsukari limited express

Operating from March 2000, this new limited express train made travel to the northern part of the Tohoku region easier and more pleasant. JR East expects this service to spark greater interest in rail travel (see text).



View Plaza provides broad range of travel packages

JR East operates about 160 *View Plaza* outlets within its service area, selling a variety of domestic and international travel packages. *View Plaza* conducts campaigns aimed at stimulating demand for domestic travel, and thus attracting more passengers for JR East's trains. For overseas travel, *View Plaza* focuses on promoting a broad line of its *View World* packages.

OPERATIONAL HIGHLIGHTS

Meguri Hime Campaign is a Big Success

JR East commenced a marketing effort targeting housewives with no small children, a potential source of new travel demand. Named *Meguri Hime*, or "touring princess," the campaign combines convenient one- and two-day packages with reasonable prices and carefully targeted advertisements. The packages are based on the results of a comprehensive market survey and interviews with housewives. As of June 2000, *Meguri Hime* had attracted more than 140,000 customers, demonstrating its ability to tap new sources of demand.



"TRAINING" campaign

One way in which JR East uses advertising to increase demand for rail travel in Japan. *Meguri Hime* is a part of this campaign (see text).

MERCHANDISE SALES

RETAILING AND RESTAURANTS

OVERVIEW JR East's retailing and restaurants sector targets the over 16 million people who ride JR East trains every day. In addition to the *Kiosk*, *JC* convenience stores, and *Mini-convenience store* formats at or near stations, JR East operates stores specializing in books, CDs and other types of merchandise as well as restaurants. To meet diversifying customer needs, alliances are formed with other companies to create new types of stores. This sector also includes sales on trains, mainly food and beverages.

OPERATIONAL HIGHLIGHTS

Bolstering the Kiosk Network Through Alliances

JR East's *Kiosk* has traditionally sold mainly newspapers, magazines and snack items at stations. In recent years, this familiar outlet has brought new kinds of retailing to stations by taking on a number of different faces, including book stores, CD shops and drug stores. A tie-up with leading ticket seller *Pia Corp.* led to the May 1999 opening of a *Ticket Pia KIOSK*. The following October, the first *Mujirushiryohin COM KIOSK* opened. This was made possible by an agreement with *Ryohin Keikaku Co., Ltd.*, whose *Mujirushi Ryohin* (no-brand merchandise) brand has widespread support, especially among younger shoppers. As of June 2000, there were 13 *Mujirushiryohin COM KIOSKS*, mainly in the Tokyo area.

REAL ESTATE LEASING

SHOPPING CENTERS (LEASING SPACE TO TENANTS)



Mini-convenience store

JR East has started switching selected Kiosk locations at stations to small convenience stores. Each of these Kiosks has an average sales area of about 30m², approximately one-third the size of a typical full-scale convenience store. The new format has already proven popular among women and young people in addition to the Kiosk's traditional customer groups. As of July 2000, there were 127 of these *Mini-convenience stores* (see text).

The Sunflower Plan

JR East has about 220 stations that each serve in excess of 30,000 people in a single day. Based on a blueprint called *The Sunflower Plan*, JR East is rapidly and aggressively proceeding with numerous developments to utilize space at suitable stations opened up by the alteration of station facility layouts for commercial purposes. In April 2000, JR East opened *Arcade Akabane* at Tokyo's Akabane Station, which serves 160,000 people daily. This 21-store shopping mall includes a diverse range of retail stores and restaurants. *Arcade Akabane* was an immediate success. These projects show how the effective use of relatively small investments can generate returns within a short period of time. Similar investments are under consideration at busy JR East stations, such as Tokyo and Ueno.



Arcade Akabane

Housing 21 stores, this shopping mall at Akabane Station is ideally located to attract many customers from among the large volume of commuters, students and shoppers who pass through this station (see text).

OVERVIEW Stations and nearby land are highly profitable assets of JR East. Shopping centers on station land raise the value of existing assets while offering passengers the convenience of being able to do their shopping at stations. When developing these facilities, JR East is concentrating on creating a composition of tenants that reflects customers' needs, the nature of the site and the characteristics of the local market.

OPERATIONAL HIGHLIGHTS

Emphasis on Selling Daily Necessities

In addition to developments at larger stations, JR East is focusing on the development of smaller shopping centers, mainly at busy stations on the outskirts of Tokyo. These centers sell groceries, books, general merchandise, fast food and other items closely tied to daily activities. One such shopping center, *Mitaka Lonlon*, opened in October 1999 at Mitaka Station to the west of Tokyo. Activities go beyond new developments. At some locations, JR East has transformed fashion-based station shopping facilities into "everyday-living" formats, thereby attracting primarily passengers commuting to work and school.



Lumine Machida

Lumine Machida shopping center opened in September 1999 at Machida Station in southwestern Tokyo, a region that is home to many commuters. JR East passengers and other shoppers have quickly come to use this *Lumine* for a variety of daily errands.

Lodging for multi-night stays offers a new type of travel

For some time now, JR East has been providing a new type of travel. At the nucleus of this concept is a network of 19 pleasant and reasonably priced accommodations that target families and groups. When developing these facilities, JR East builds even stronger ties with each locality by working jointly with a local government or other organizations. Offering more activities at each location is another way in which JR East is working to attract more guests (see text).



OTHER SERVICES

HOTEL OPERATIONS

OVERVIEW Hotels are a powerful vehicle for generating income from real estate holdings and are mutually beneficial with railway operations and travel agency operations. There are mainly three types of hotels. *Metropolitan Hotels* are full-service hotels located mainly in central Tokyo, prefectural capitals and cities where the Shinkansen stops. *HOTEL METS* are small-scale urban hotels serving mainly business travelers by offering the quality accommodations comparable to a full-service urban hotel at lower prices. Occupancy rates have been consistently high. The *Folkloro* and *Familio* facilities are designed for multi-night stays and play a pivotal role in JR East's drive to propose a new type of travel. These facilities target families headed by parents in their 30s and 40s. JR East established *JR East Hotel Chain* to manage these three types of hotels effectively. This centralized system better enables hotel operations to benefit from JR East's network and generate economies of scale. Among specific actions are stronger chain management as well as joint advertising and procurement activities.

OPERATIONAL HIGHLIGHTS

Expansion Continues at HOTEL METS

The *HOTEL METS* was created to offer a new concept in hospitality for business travelers: the quality accommodations comparable to a full-service urban hotel at lower prices. Two of these hotels opened in July 1999, one in Nagaoka and the other in Kitakami. Both are growing regional cities with Shinkansen stations. In April 2000,

another hotel opened in Musashi-Mizonokuchi in suburban Tokyo. These additions increased the *HOTEL METS* network to 11 locations. Popular among many types of guests, *HOTEL METS* achieved an average occupancy rate of 88.5% during the year ended March 31, 2000. More hotels are planned in the future, chiefly in the Tokyo area. One example is Shibuya, a major stop on the Yamanote Line.

OTHER SERVICES

ADVERTISING AND PUBLICITY

OVERVIEW Spaces in stations and trains of JR East, whose network is used by more than 16 million passengers daily, are ideal for a broad range of advertisements. JR East is promoting advertising services by utilizing such spaces. For example, a single 11-car Yamanote Line train has space for more than 1,500 individual ads. All benefit from high readership. Efforts continue to target the development of new advertising techniques in a manner that addresses the needs of customers and bolsters advertising revenues.



New Advertising Media

The development and installation of a variety of new advertising media at stations and inside trains is a constant theme of advertising activities. Among them are advertisements on Kiosk roofs, a highly visible advertising space above automatic fare collection gates, stickers placed on the gates themselves, and innovative advertisements that make use of station floors.

OPERATIONAL HIGHLIGHTS

Developing a Property Licensing Business

JR East has a large volume of intangible assets that generate revenues through the rights for use in a variety of products. Among them are express train logos and videos shot from train windows. One of the most successful licensing ventures thus far is a popular computer simulation game called *Densha-de GO!* (Let's drive a train) that allows users to operate trains.



View Card Goes International With VISA

In April 2000, all *View Cards* acquired a VISA function. This dramatically improved convenience for cardholders. In addition to being accepted at JR East stations and Company-related shopping centers, hotels and other facilities in Japan, this *View Card* is honored at any of 17 million VISA-affiliated merchants in the world (see text).

OTHER SERVICES

CARD BUSINESS

OVERVIEW The JR East Group's credit card, *View Card* has a growing number of holders, mainly people who patronize JR East stations, shopping centers and hotels. From April 2000, *View Cards* are honored at all VISA member merchants, too. On the basis of applications received, the number of *View Card* customers was about 1.9 million in July 2000. JR East plans to continue the aggressive expansion of its credit card business. Growth will enable the Company to meet Japan's rising demand for cashless purchasing power as well as to generate valuable cardholder data on purchasing patterns that can be incorporated in marketing programs.

OPERATIONAL HIGHLIGHTS

Cash Advance Services Are Expanded

Since October 1999, holders of *View Cards* have been able to receive cash advances at selected CDs and ATMs of some major banks and Japan's Postal Savings System, in addition to CDs and ATMs at stations, dramatically boosting convenience for cardholders.

OTHER SERVICES

HOUSING DEVELOPMENT AND SALES

OVERVIEW Most housing developments are located along JR East railway lines. In addition to selling residential sites, activities focus on the development and sale of houses and condominiums, primarily in the Tokyo metropolitan area. These developments reflect three key themes at JR East. First is linking developments with railway operations. Second is supplying high-quality housing by cooperating with the development plans of local governments and entities. The third theme is creating communities that are pleasant and comfortable places to live and kind to the environment. At the same time, JR East continues to make effective use of assets that it owns.

OPERATIONAL HIGHLIGHTS

More JR East Condominium Projects

Most JR East condominium development projects are located in the Tokyo area. In Saitama prefecture, JR East started sales of units at *View Sight Tower* and *View Park Kitayono* prior to the April 2000 opening of nearby Saitama Shintoshin (“new urban center”) Station. In Yokohama, sales began at *View Park Yokohama Tomiyacho*. All units were sold at all three locations due to the proximity to JR East stations.



eki-net Web site

JR East's Internet Businesses

In response to growth in e-commerce, JR East is active in the world of Internet businesses. Through an alliance with a major bookstore, customers have been able to pick up books ordered over the Internet since December 1999 at some convenience stores at JR East stations. Steady growth in demand led to the April 2000 expansion of this service to 78 stores at 72 stations.

JR East's Web site inaugurated new services in April 2000. Visitors can enter reservations for seats and travel packages, check timetables, fares, connections and other related items, as well as view information on train operations in the Tokyo area. A new subsidiary called JR East Net Station Co., Ltd. was founded and it has opened an electronic mall called *eki-net*. Merchandise purchased through *eki-net* can be picked up at stores at JR East stations. Tenants include not only JR East Group companies but also other major firms involved in groceries, books, CDs, household goods and many other products and services. JR East plans to develop Internet businesses by building on its strengths while aggressively forming links with other companies.

OTHER SERVICES

INFORMATION SERVICES

OVERVIEW Data processing is essential to a broad range of JR East's operations. Expertise includes the development and operation of systems for railway business operations and train movements as well as consolidated financial data and the management of funds. This same knowledge is being applied in supporting Internet businesses of the JR East Group.

OPERATIONAL HIGHLIGHTS

Centralized Financial Management Functions for the JR East Group

To make the JR East Group's financial operations more centralized and efficient, JR East formed a subsidiary called JR East Management Services Co., Ltd. (JEMS). Responsible for financial matters like accounting and consulting, JEMS provides a unified platform for processing consolidated financial data and disseminating information to these companies. JEMS is working on a system for the centralized management of all funds at the JR East Group.

**New Training Center Opens Its Doors**

Completed in April 2000, the JR East General Education Center consolidates the functions of two previous training facilities at a site near Shin-Shirakawa Station, a Tohoku Shinkansen stop. Up to 1,200 individuals from JR East and its group companies can be accommodated at once. With this center, JR East is better able to conduct rigorous technical and safety training programs and develop the skills of all employees. This reflects JR East's philosophy of fostering employees who are in step with the 21st century.



Autonomous Decentralized Transport Operation Control System (ATOS)

JR East has been installing and operating *ATOS* on the main parts of the Tokyo metropolitan area network since 1997. *ATOS* enables operational control and automatic routing of conventional trains from a single operations center, eliminating the need to perform these tasks at stations. In addition, *ATOS* upgrades passenger services by automating electronic signs that provide information as well as announcements. JR East will continue to concentrate on preventing operating problems while extending the scope of *ATOS* coverage (see text).

including train timetables, crew scheduling, rolling stock management, facility management, electricity supply, accident and disaster countermeasures and information management are monitored and controlled from *COSMOS*. In parts of the Tokyo metropolitan area, JR East in 1997 started full-scale operations of a management system for conventional lines called *Autonomous Decentralized Transport Operation Control System (ATOS)*.

Measures to Prevent Operating Problems on the Chuo and Other Lines

In August 1999, JR East experienced operating problems due to malfunctions in its transportation system and lightning that severely inconvenienced passengers. This led to a series of measures designed to prevent the reoccurrence of such problems, a stance rooted in JR East's policy of placing top priority on providing safe and stable transportation services. JR East is currently enhancing *ATOS*, introducing new rolling stock and taking other steps to improve safety.

Measures to Prevent Concrete Falls

Falling concrete in tunnels of another railway company in Japan raised concerns about safety in June 1999. JR East responded by conducting emergency inspections of its own tunnels. As of February 2000, thorough inspections had been completed and all repair work finished.



New Tunnel Inspection Car
Replacing visual inspections, a new tunnel inspection car now examines tunnel interiors using sophisticated laser equipment. This raises both speed and accuracy of these inspections (see text).

TECHNOLOGY, SAFETY AND CORPORATE CITIZENSHIP

New Research Facilities

To become a company known for its technical services, JR East has started construction on the JR East Research and Development Center (provisional). The center, which is slated for completion in 2001, will bring together and reinforce JR East's diverse research facilities. JR East plans to develop technology that can lift safety and efficiency to even higher levels at this new center. In particular, JR East will cater to an even more diverse spectrum of customer needs by applying information technology to a greater range of business fields.

The Relentless Quest for Higher Goals in Safety

JR East has placed emphasis on investments and the development of technologies that target safety. During the year ended March 31, 2000, these efforts have played a major role in reducing train accidents by about two-thirds compared with the fiscal year ended March 31, 1988. In the past fiscal year, JR East launched *Safety Plan 21*, its third five-year safety plan. Building an even safer railway system from a medium-term perspective that can prevent accidents is one objective. Another is fostering a culture of safety in which all employees can implement safety measures on their own. Together, these actions will allow JR East to continue to provide safe and stable transportation services.

Advances in Train Control Systems

In 1995, JR East introduced the sophisticated *Computerized Safety, Maintenance and Operation system of the Shinkansen (COSMOS)* to oversee operations on the Tohoku and Joetsu Shinkansen lines. All principal aspects of Shinkansen operations,

The Technological Revolution in Maintenance

JR East's Series E231 and 209 rolling stock are superior to previous models in many respects: lighter weight, lower energy consumption and a design that minimizes the need for maintenance.

Additionally, JR East has developed facilities that have an extended service life but require little or no maintenance. One example is a simple, integrated overhead wiring system that reduces replacement costs by approximately 20%.

Manual labor has been relied on to perform a large share of the inspection and maintenance work on rolling stock and facilities such as tracks, wires and signals. JR East is adopting sophisticated machinery and robots to replace such tasks with procedures that are automated or rely on a computerized system. By aggressively promoting these techniques, JR East is improving safety, modernizing work practices, and raising the efficiency of maintenance activities.

More Accessible Stations

In consideration of Japan's rapidly aging population and the need to create a barrier-free society, JR East is making escalators standard components of stations. Work is already under way. By March 2002, JR East plans to have escalators at about 80% of stations within a radius of about 50 kilometers from central Tokyo, including all stations in the 23 wards of Tokyo. The basic policy is to install at least one escalator for each platform, and to provide separate up and down units where space and other conditions permit. As of March 31, 2000, there were 900 escalators at 223 JR East stations, increases of 147 escalators at 33 stations compared with the March 31, 1999 level.



Ecology Campaign

JR East is conducting an ecology campaign to raise awareness of environmental issues among passengers. As part of this campaign, JR East devoted all advertising space on selected energy-efficient 209 series commuter trains in December 1999 and January 2000 to posters and compositions submitted by children on the theme "preserve our earth." JR East is working on disseminating information about its environmental activities, such as issuing an Annual Environmental Report from 1996.



Niitsu Plant Earns ISO 14001 Certification

JR East's Niitsu Plant, which manufactures series E231 and other energy-efficient rolling stock, obtained ISO 14001 certification in March 1999, an international standard for environmental management systems. The plant has cut consumption of resources by reducing power needs, generating less waste and recycling materials. Actions to increase greenery around the plant and bring about continuous improvements in environmental systems related to rolling stock production were other factors. Work toward ISO14001 certification is progressing at JR East's Kawasaki Thermoelectric Power Plant and rolling stock maintenance facilities.

Ecology and the Efficient Use of Natural Resources

Railways account for about 30% of passenger transportation in Japan but only 7% of energy consumption. JR East plays an important role in preserving the environment. The Company is constantly striving to develop more ways to minimize its impact on the environment. Basic management policy is to ensure a quality environment for passengers and communities; to foster progress in ecological technologies; and to heighten awareness of environmental issues among employees. This policy is more than just words: among the concrete goals set in the Company's action plan for the fiscal year ending March 31, 2002 is a 10% reduction in energy consumption of train operations per passenger-kilometer.

By using energy more efficiently, JR East is reducing the volume of CO₂ emissions resulting from its operations. For example, the new Series 209 rolling stock need only 47% of the power used by the older cars they replaced. As of April 2000, about 5,700 (55%) of the over 10,000 cars running on conventional lines had been replaced with this new technology. At its power plants, JR East is installing equipment with a higher thermal efficiency. Collectively, measures such as these have slashed CO₂ emissions resulting from JR East's operations in the year ended March 31, 1999 by 11% compared with the level recorded in the year to March 31, 1991.

Each year, JR East passengers discard approximately 60,000 tons of refuse. Trash is sorted at stations and concourses for reuse. Paper, for instance, is mixed with polyethylene to make trash bags used throughout the JR East organization. Efforts such as this have raised JR East's station and train refuse recycling rate to 31%, much higher than average of 10% for all waste materials in Japan.