Realization of a Green Society - Contribution to 2050 carbon neutrality -

As natural disasters due to climate change have been increasingly serious and more frequent, taking measures against global warming is a pressing issue. In order to achieve carbon neutrality by 2050, we will contribute to the realization of a green society by reducing CO2 emissions from road use (CO2 emissions from automobiles), road maintenance and management, and increasing the amount of CO2 absorbed through road greening. We will contribute to the achievement of a green society.

Targets for carbon neutrality in 2050

Long-term strategy as a growth strategy based on the Paris Agreement (approved by the Cabinet on October 22, 2021) The goal is to reduce greenhouse gas emissions to zero as a whole by 2050, i.e., to achieve "carbon neutrality by 2050.

Global Warming Prevention Plan

(approved by the Cabinet on October 22, 2021) In FY2030, we aim to reduce greenhouse gas emissions by 46% from FY2013 levels. We will continue to take on the challenge of achieving an even higher goal of 50%.

Power consumption in road management

Annual electricity consumption for road management is approx. 3 million MWh

The amount of renewable energy generated on roads is only approx. 13,000 MWh (remaining at approx. 0.4% of the above electricity consumption).

On expressways, road lighting and tunnels account for more than 50% of electricity consumption.



Direction of contribution to carbon neutrality

<Reduction in emissions>

[Road Use] Reduce consumption of fossil fuels used for automobiles.

sections designated as general nationa

[Road maintenance and management] While reducing the consumption of fossil fuel-derived energy used for road maintenance and management, switch to renewable energy sources for electricity used in road infrastructure.

<Improved absorption>

[Road greening] Promoting CO2 absorption through road greening (Approx 400,000t in FY2019)

2019 CO2 emissions by sector

In the road sector, a total of approximately 180 million tons of CO2 was emitted in the "transportation" and "other business" sectors (approx. 16% of the total).



330,000

MWh

(22%)

Tunne

480.000

MWH

(31%)

160.000

Expresswa

Total

1.52

million

MWh

Toll gates MWh

220,000MW (10%)

250,000

MWh

Offices (14%)

90,000 MWh SA/PA

(administrative offices,

etc.)

(6%)

Breakdown

of electricity

expressways

consump-

tion on

(FY2013)

energy

generation

percentage

on roads

(FY2020)

Total

* Electricity consumption and

power generation are estimates

Reducing CO2 emissions from vehicles on roads

In order to reduce CO2 emissions from vehicles using the roads, we will promote the development of an environment for the widespread use of next-generation vehicles, as well as energy conservation through the mitigation of traffic congestion and further streamlining of logistics, thereby promoting low-carbon road transportation.

Background / data

- Status of EV charging facilities
 - Roadside Rest Area (Michi-no-Eki) : 877 (74% of total) ※July, 2021 SA·PA: 383 (43% of total) * March, 2021
- Yokohama City Conducts Nation's First Social Experiment to Install EV Charging Facilities on Public Roads %June, 2021~March 2022(planned)
- Number of EV charging facility information signs installed %As of January, 2021 Directly controlled national highway : 84points, Highways : 279points

Enhancing the environment for the spread of next-generation vehicles

Based on the results of the social experiment, we will promote studies for the installation of EV recharging facilities on public roads, and support research and development of non-contact power transfer technology for the electric road systems.

Cooperate with businesses to provide locations for EV charging facilities and hydrogen stations in SA/PA and Road-

Ongoing efforts to reduce carbon footprint of road transportation

Promote measures for road traffic flow by improving road networks and mitigating traffic congestion, improve logistics efficiency by using double-trailer truck, promote the use of

Environmental improvement for spread of next-generation vehicles

Support for research and Installation of EV chargers on development of wireless power transfer technology

public roads (Yokohama City)





EV charging facility information signs





side Rest Area (Michi-no-Eki).

Promote the development of EV charging facility information signs

Provide incentives for using expressways when acquiring next-generation vehicles[Ref.1] to encourage traffic shift to expressways and spread of next-generation vehicles.

bicycles, and promote the use of public transportation by strengthening the functions of transportation hubs.



Hydrogen stations (image)



Ongoing efforts to reduce the carbon footprint of road transportation





Promote the use of bicycles

Energy conservation and greening of road infrastructure

While curbing the energy used for road maintenance and management, we will promote the energy conservation and greening of road infrastructure by converting the electricity used for road infrastructure to renewable energy and improving CO2 absorption through road greening.

Background / data

- The rate of LED road lighting on directly-controlled national highways is approximately 30% (as of FY2021 March).
- Introduction of solar power generation facilities
- SA PA 89 facilities (Approx. 10% of total) * March, 2021
- The effect of absorbing carbon dioxide by road greening is approximately 400,000 tons.

Reduction of energy consumption, use of renewable energy

Promote the use of LED lighting to reduce energy consumption in road management.

To realize further energy saving and upgrading of road infrastructure,

- Promote the development of new road lighting technologies
- Promote technological development for the implementation

Promotion of road greening

Promote greening of roads to serve as CO2 absorption points, and green infrastructure to reduce drainage into sewers and

of solar power generation pavement in cooperation with related parties

Model introduction of solar power generation facilities in order to develop guidelines for the installation of solar power generation facilities utilizing road space.

rivers by storing and infiltrating rainwater.

Reduction of energy consumption, use of renewable energy



Promotion of road greening







" [Ame Niwa" [Ref. 1]] at Shijo Horikawa intersection

-History of Roads in Japan -Technical Standards -2040 Vision for Roads in Japan -Statistics









Ref. 1: A space with a structure for storing and soaking in rainwater

