

Accumulator System (ACCUM)

As a new measure toward reduction of the environmental burden in non-electric zones, we developed an experimental train, NE Train Smart Denchi Kun, featuring a battery drive train system. The result of our efforts was the start of operation of the EV-E301 (ACCUM) train on the Karasuyama Line in March 2014. The EV-E301 series cars have an accumulator for the main circuit, enabling them to operate in non-electrified zones. On electrified sections, the train raises its pantograph to receive power for operation and for charging the accumulator. When the train enters a non-electrified zone, the pantograph is lowered and the train operates on accumulated power alone. When the brakes are applied, regenerated power is used to charge the accumulator, which can also be recharged at terminal stations where rapid-recharging facilities have been installed. The introduction of the EV-E301 series has made possible the elimination of exhaust emissions and reductions in CO₂ and noise emission levels from those generated by diesel engines.



EV-E301 Series

Large-scale solar power generation facility

JR East launched operation of its first large-scale solar power generation facility – with an output capacity of 1,050kW – on the grounds of the Keiyo Rolling Stock Center on February 28, 2014. The electricity generated will be used at the Center, and will also help to operate trains by sending power to overhead lines, with the aim of reducing our CO₂ emissions. The mega-solar plant will generate about 1,000 MWh per year, and is expected to reduce CO₂ emissions by about 500 tons annually.

We will begin operation of a 4MW-class large-scale solar power generation facility between Tomobe and Uchihara on the Joban Line within FY2015. Going forward, we will look at the establishment of additional solar power generation facilities on our own sites while contributing to the spread and promotion of renewable energy.



Large-scale solar power generation facility
(Keiyo Rolling Stock Center)

Promoting the introduction of renewable energy

Taking advantage of the beautiful natural environment of northern Tohoku, while endeavoring to reduce CO₂ emissions on a broad scale through the generation of environmentally friendly renewable energy such as solar, wind power, geothermal and biomass, we hope to contribute to regional areas through economic revitalization as well. We have been conducting a study of wind conditions since March 2014 between Michikawa and Shimohama Stations on the Uetsu Main Line in Akita Prefecture, and are currently investigating the viability of wind power generation.

Also, we are a member of the Hakkoda regional geothermal power study group, which comprises Hirosaki University, Aomori Prefecture, the city of Aomori and several private companies. The aim is to develop Aomori Prefecture's first geothermal power plant, and to that end we are currently conducting a viability study in northwestern Hakkoda.



Windmill (image)



Geothermal study (exploration)