Climate Change

The Shinko Group is engaged in a variety of activities to fulfill the responsibility of a manufacturing company to reduce environmental impact. Among these, the greatest priority is given to responding to climate change, and related activities are conducted throughout the company.
International frameworks such as the Paris Agreement, together with the strengthening of global regulations and expanded application of carbon taxes, are accelerating the trend toward decarbonization in many countries throughout the world. The Shinko Group is working to respond to climate change by clarifying its goals in accordance with its Environmental Policy and Environmental Vision 2050 and by setting medium- to long-term environmental targets. We are strengthening our activities to achieve carbon neutrality as soon as possible and contribute to the realization of a decarbonized society.

Promotion System

To address environmental issues such as climate change, the Shinko Group in Japan has established an Environmental Committee chaired by the Representative Director of Board, President and an Environmental Measures Execution Committee under its umbrella to promote activities to reduce environmental impact. In addition, each domestic plant has established a Green Factory Promotion Subcommittee with members from the manufacturing divisions and related divisions to implement specific climate change measures, including promotion of energy conservation and introduction of high-efficiency equipment in manufacturing processes and plant utility equipment. Overseas manufacturing subsidiaries are also working to reduce environmental impact, including climate change, under their sustainability promotion systems.
The Board of Directors periodically receives reports on the status of initiatives for environmental issues, including response to climate change, and it provides appropriate supervision.

Results of Activities

As the Shinko Group in Japan aims to achieve the medium- to long-term environmental targets (FY2030 and FY2050 targets), it sets targets for individual fiscal years and conducts company-wide activities.
We are aiming to achieve carbon neutrality by promoting and strengthening concrete activities in the following three fields.

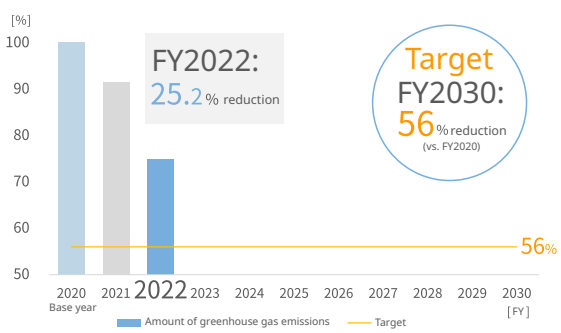
(1) Reduction of CO_2 emissions by promoting energy conservation and improving efficiency
(2) Creation of renewable energy
(3) Introduction of renewable energy

The following table shows the FY2022 targets and results of activities. We were able to achieve results that greatly exceeded our targets for all items.

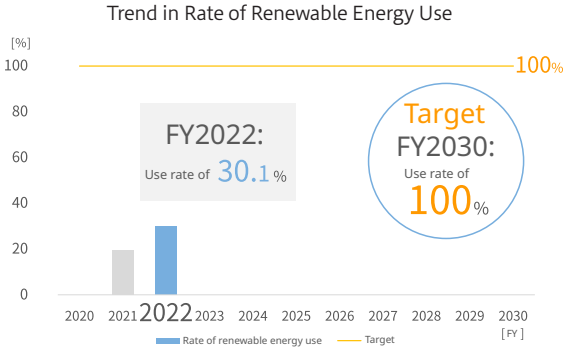
Boundary: Scope 1 + Scope 2 at all business sites in Japan

Target items	FY2022	
	Target	Result
Net reduction in greenhouse gas emissions	11.2% reduction (compared to FY2020)	25.2% reduction (compared to FY2020)
Rate of renewable energy use	Use rate of 8% or more	Use rate of 30.1%

Trend in Net Reduction in Greenhouse Gas Emissions



Trend in Rate of Renewable Energy Use



Activities

(1) Reduction of CO_2 emissions by promoting energy conservation and improving efficiency

At each plant, the Green Factory Promotion Subcommittee, in which all manufacturing divisions, facilities management divisions, and related divisions participate, is central to promoting the reduction of CO_2 emissions through energy conservation and energy efficiency improvements in manufacturing and utility facilities.

By implementing various measures at plants in Japan, including consolidation of equipment, reduction of standby power, and the switch to LED lighting, we are strengthening company-wide efforts to realize low-carbon manufacturing processes and facilities through efficient energy use.

In addition, we have introduced the concept of internal carbon pricing (ICP)*, which converts CO_2 emissions from capital investments into monetary amounts and uses them as a basis for making investment decisions, and we are using it to reduce CO_2 emissions.

Although energy consumption is expected to increase in the future due to the construction of new plants and buildings and the expansion of production facilities in line with the strengthening of the production system, we will further strengthen various measures to reduce CO_2 emissions.

* Internal Carbon Pricing (ICP): A mechanism whereby companies set their own price for CO_2 emissions and use it to make investment decisions

Examples of Activities

We reviewed the future capacity requirements of the nitrogen generating equipment installed at the Kohoku Plant in Nagano City and consolidated the number of units from two to one. This led to a reduction in CO_2 emissions and cost reductions.

【Effects of Consolidation of Nitrogen Generators (FY2022)】

- Power savings: 1.59 GWh
- CO_2 reduction: 702 t-CO_2
- Cost reduction: 22 million yen

(2) Creation of renewable energy

In order to expand the use of renewable energy, our company has been installing solar power generation facilities at its sites for some time.

In FY2022, solar power generation facilities were also installed on the rooftop of the new building being constructed at the Takaoka Plant (Nakano City, Nagano Prefecture), and we expect to use them to supply a portion of the electricity used in the building, which will start operation in the second half of FY2023 (Please refer to the topics on the next page for details). In the future, we will continue to focus on the creation of renewable energy by expanding the installation of solar power generation facilities at existing plants and promoting the installation of solar power generation facilities at the new plant and buildings that are under construction.

(3) Introduction of renewable energy

CO_2 from electricity purchased from external sources accounts for a large proportion of the CO_2 emitted in the course of the Shinko Group's business activities. We have set medium- to long-term environmental targets for achieving a renewable energy use rate of 100% by FY2030, and we are promoting a transition to renewable energy with regard to purchasing electricity.

In FY2022, through the purchase of CO_2-free electricity from electric power companies and the use of non-fossil certificates, we were able to procure approximately 96.5 GWh of renewable energy, resulting in a use rate of approximately 30%, which significantly exceeded our target. At the same time, CO_2 emissions were reduced by approximately 42,000 t-CO_2.

We will continue to strengthen our activities with the aim of achieving a renewable energy use rate of 100%.

We will continue to contribute to the achievement of carbon neutrality and the realization of a decarbonized society by strengthening and accelerating various company-wide initiatives.

Topics

Measures to Reduce Environmental Impact in the New Building at the Takaoka Plant

100% renewable energy plant (our company's first all-electric plant)

Plan to Start Operation in the Second Half of FY2023

The plant uses 100% renewable energy and has net-zero CO_2 emissions.

Boilerless

By changing the hot water production system for air conditioning from a boiler to an electric heat pump, the amount of city gas used as boiler fuel can be reduced.
CO_2 reduction: 255 t-CO_2/year (estimated)

Water Reduction

By changing the cold water production system for air conditioning from turbo chillers to air-cooled chillers, we will reduce the number of auxiliary units (cooling towers) used in chillers and reduce water consumption.
Water reduction: 91,000 m^3/year (estimated)

Introduction of Solar Power Generation Facilities

Solar power generation equipment equivalent to 400 kW of power generation was installed on rooftops to cover part of the electricity used for lighting and utility facilities throughout the new building.
Power generation: 640 MWh/year (estimated)

Waste Heat Utilization

The amount of city gas used as boiler fuel can be reduced by using the heat emitted by facilities to produce cold and hot water for air conditioning.
CO_2 reduction: 474 t-CO_2/year (estimated)