



Capital to create value

Natural Capital

Aichi Steel is deeply involved with natural capital as it uses a large amount of electricity, fuel, and water in the manufacturing processes of its products, including the melting of steel scrap and heating and cooling of materials. Any deterioration of the natural environment can therefore have a serious impact on our business activities. On the other hand, we are also a resource-recycling company that manufactures specialty steel mainly from steel scrap, which is a waste product that has completed its role in society. We believe that we can contribute to the preservation of the global environment by applying and developing the technical capabilities we have accumulated. To this end, we are promoting activities that lead to the restoration of natural capital, in addition to the efficient use of resources and the reduction of our environmental impact.



Environmental Management

To achieve the Vision 2030 management guideline of "Contribution to a sustainable global environment," Aichi Steel formulated the Aichi 2025 Environmental Action Plan to chart a course of action through to 2025. We defined targets to accomplish by 2025, and we are currently working to achieve these targets, focusing on the three pillars: eco-energy, eco-production, and eco-management.

Eco-energy	<ul style="list-style-type: none"> Pursue energy efficiency Reform manufacturing processes Adopt clean energy
Eco-production	<ul style="list-style-type: none"> Develop environmentally friendly products and technologies Contribute to next-generation infrastructure Pursue resource circulation
Eco-management	<ul style="list-style-type: none"> Ensure fulfill environmental responsibilities Conserve nature and biodiversity Communicate and disclose environmental information

Conceptual diagram of environmental policies

Eco-program for a happy, smiling and prosperous future

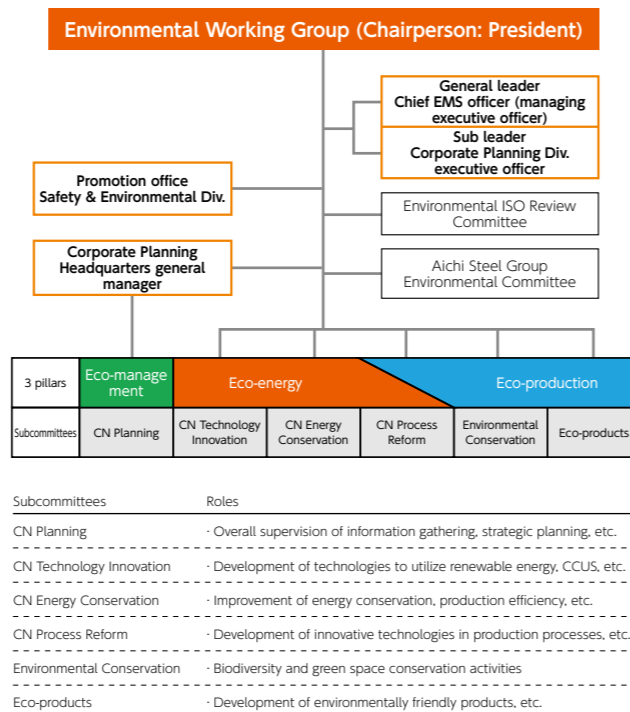


Pursue the potential of materials and create new value

Aichi Way 伝承 (Inheritance) 感謝 (Gratitude) 創造 (Creation)

Promotion Structures

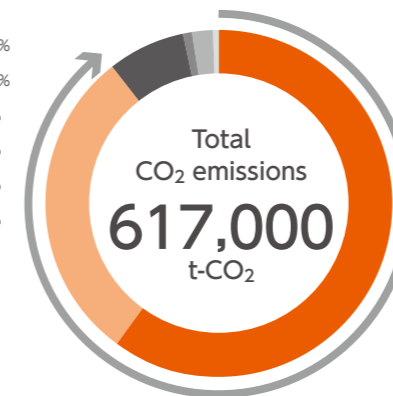
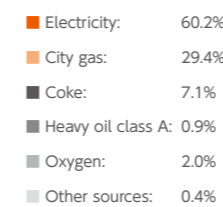
Aichi Steel is working to implement environmental management through effective employment of the PDCA cycle mainly through the Environmental Working Group, which operates under the supervision of its Board of Directors with the president as chairperson. The Environmental Working Group is in charge of executing strategy, establishing targets, and checking progress in accordance with company policies and the Aichi Environmental Action Plan. Six subcommittees have been established under the Environmental Working Group with clear areas of responsibility to promote efficient and targeted activities based on specialized perspectives. In addition, the Aichi Steel Group Environmental Committee was established to share information and successful case studies to promote Groupwide activities.



Eco-energy

Approximately 90% of Aichi Steel's CO₂ emissions come from the use of electricity to melt steel scrap in the steel making process, and from the use of city gas to heat steel materials. Based on the roadmap formulated toward achieving carbon neutrality by 2050, we are promoting the reduction of energy consumption through efforts to deepen the energy-saving technologies that we have cultivated, the elimination of waste in our daily operations, and drastic improvements in manufacturing processes. In fiscal 2022, in addition to ongoing energy-saving activities and the introduction of solar power generation facilities, we began exploring the use of future decarbonization technologies such as hydrogen and Carbon Capture, Utilization, and Storage (CCUS).

Breakdown of CO₂ emissions in FY2022 (Scope 1 + Scope 2 emissions from Aichi Steel on a non-consolidated basis)



Pursuit of eco-energy

Aichi Steel's energy conservation activities are being promoted through working groups that engage in activities from three perspectives: thorough horizontal deployment of effective measures to maximize energy efficiency and minimize energy loss in manufacturing processes, visualization of energy consumption by building an IoT infrastructure (visualization of waste), and the fostering of awareness among employees of energy conservation.

(1) Reduction of heat loss by applying low-emissivity coating to steel heating furnaces

We are working to reduce heat loss due to radiated heat by applying low-emissivity coating to steel heating furnaces. After conducting verification using a model facility, we were able to reduce heat loss due to dissipation to less than half that of the conventional method. In the future, we plan to expand the target facilities to include in-house steel heating furnaces to further reduce heat loss. In addition, we are minimizing standby operation loss by improving compressor control and reducing the amount of energy used by improving facilities.

Person in charge of promotion



Yuki Nakashima
Environmental Management Group,
Safety & Environmental Division

I am in charge of promoting plant-specific roadmaps for achieving carbon neutrality, the secretariat for related capital investment, and evaluation/follow-up of energy-saving improvements. Carbon neutrality is a matter of social concern and an important issue for Aichi Steel that is also technically challenging. For this reason, I feel a lot of pressure, but I also find it very rewarding because I can contribute to the environment. I will continue to work together with our members to realize a decarbonized society as soon as possible.

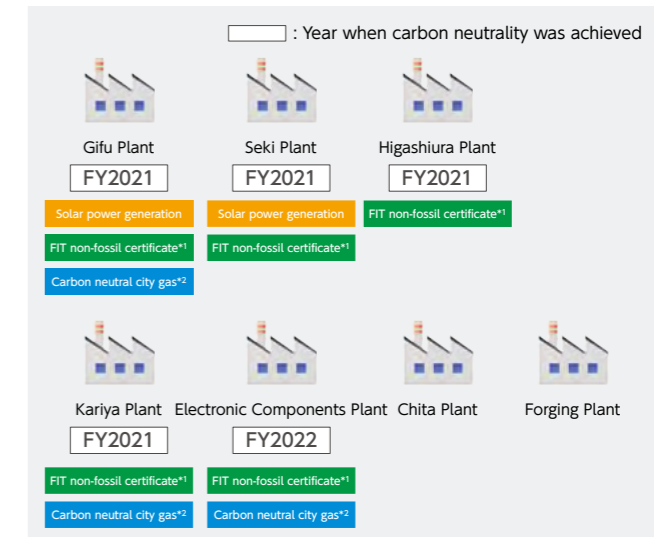
(2) Visualization of energy usage status

We are building a system that enables us to collect and analyze real-time and precise energy usage status by utilizing IoT. In the future, we will link operational data to the system and analyze data on a line-by-line and facility-by-facility basis, thereby enhancing energy management, such as the improvement of energy efficiency and flexible adjustment to demand response.

Adoption of clean energy

Aichi Steel is working to expand the introduction of solar power generation and the adoption of clean energy for the utilization of hydrogen in the future. By purchasing feed-in tariff (FIT) non-fossil certificates*1 with tracking in fiscal 2021, the power used at four plants (Gifu Plant, Seki Plant, Higashiura Plant, and Kariya Plant) was virtually converted to renewable energy. In fiscal 2022, solar power generation facilities were installed at two plants (Seki Plant and Gifu Plant), which began operation in fiscal 2023. In anticipation of future hydrogen utilization, we have also introduced gas burners that can use both hydrogen and city gas as fuel. Going forward, we will develop technologies and conduct verification trials.

Achievement of carbon neutrality by plant



*1 Certificates of the environmentally friendly value of electricity generated by non-fossil power sources (power sources that generate electricity without using fossil fuels such as coal and oil), which are subject to the FIT program established to promote the spread of renewable energy
*2 City gas produced using carbon neutral LNG, in which CO₂ generated in the processes from mining to the combustion of natural gas is offset by CO₂ credits (carbon offsetting)

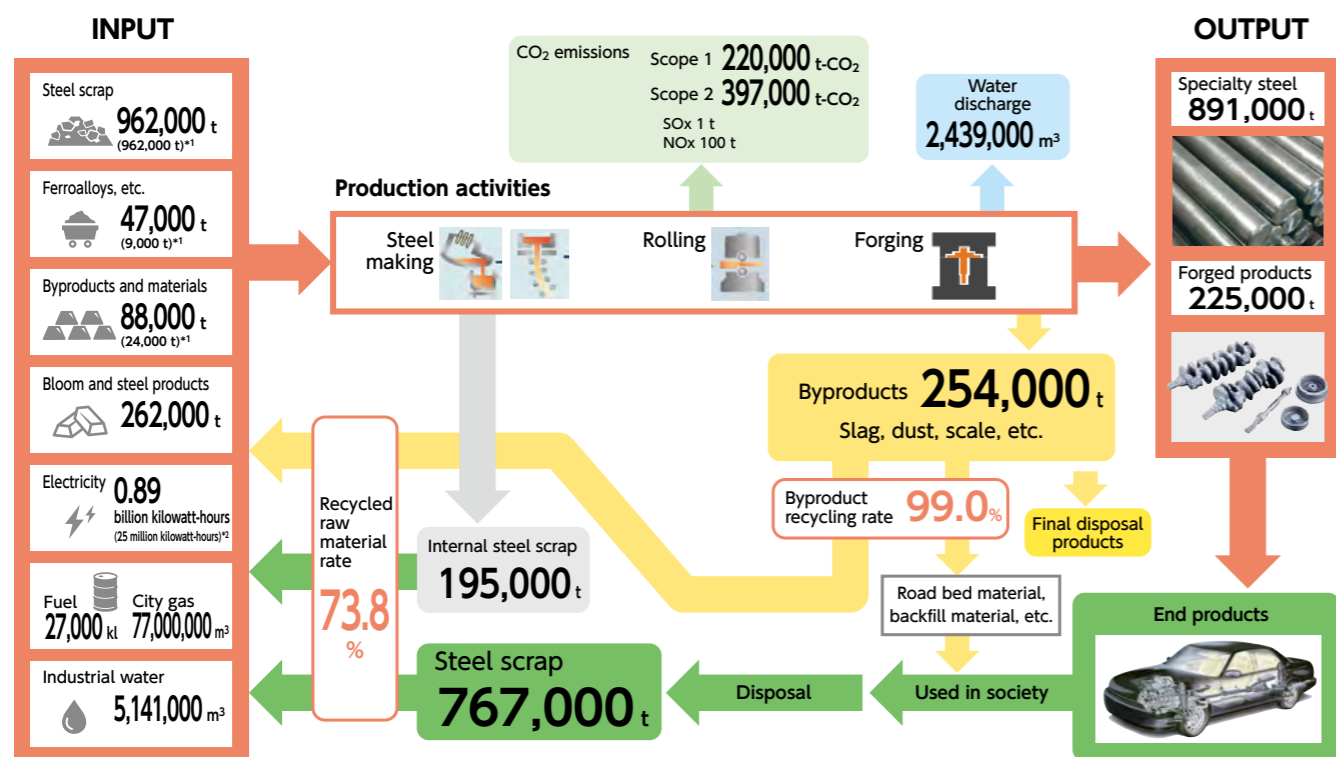
Eco-production

Aichi Steel is a resource-recycling company that realizes both the recycling of steel resources and economic value by turning steel scrap generated from the dismantling of automobiles and infrastructure into high-quality specialty steel products, automotive components, and other products. We aim to transition to a circular economy by further accelerating our efforts to reuse products and parts and recycle waste and raw materials while reducing resource input and consumption through the efficient use of resources and energy.

Pursuit of resource circulation

Aichi Steel is conducting 4R activities (Reduce, Reuse, Recycle, Renewable) to effectively use limited resources and energy without waste.

4Rs	Examples of our initiatives	
Reduce	<ul style="list-style-type: none"> Reduce the amount of resources and energy used in manufacturing, and reduce waste 	<ul style="list-style-type: none"> Minimize energy consumption and maximize efficiency in manufacturing processes Develop high-performance materials such as magnets with less use of scarce resources Reduce waste by expanding the reuse of by-products such as slag
Reuse	<ul style="list-style-type: none"> Reuse materials that have been used repeatedly 	<ul style="list-style-type: none"> Reuse heat used in electric furnaces as energy for steam boilers, etc. Develop heat storage systems that can use plant waste heat at temperatures of 400°C or higher
Recycle	<ul style="list-style-type: none"> Use waste and other materials effectively as raw materials and energy sources 	<ul style="list-style-type: none"> Expand use of low-grade steel scrap
Renewable	<ul style="list-style-type: none"> Use renewable resources and energy 	<ul style="list-style-type: none"> Expand the use of in-house solar power generation facilities Expand the use of electricity derived from renewable energy sources



*1 Amount of raw materials, *2 Amount derived from recycled energy

Eco-management

Based on the belief that symbiosis with local communities and nature is necessary for its sustainable growth, Aichi Steel is working on local environmental conservation activities in collaboration with related organizations.

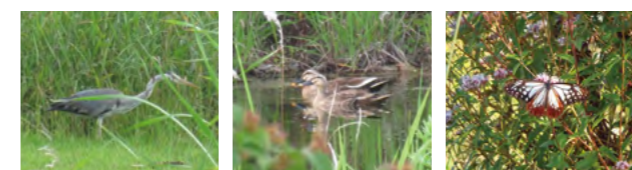
Biodiversity conservation efforts

As part of its conservation activities, Aichi Steel has been working since fiscal 2012 to create an environment where 50 indicator species that have traditionally inhabited the area can gather, under the slogan of "creating a forest where beetles live" in the Nakashinden green space, which covers an area of approximately 20,000 m² adjacent to the Chita Plant. In addition to forestation through tree planting and biotope maintenance, we use this initiative to foster environmental awareness through employee volunteer activities such as rice planting and harvesting to interact with nature. The indicator species are regularly monitored to provide reference for future maintenance. Currently, 19 indicator species have been identified, and a variety of organisms have started settling in the area. In 2019, we obtained Business Location in Harmony with Nature certification (ABINC certification) from the Association for Business Innovation in Harmony with Nature and Community (ABINC)*4. In 2023, we also received the 3rd ABINC Award Special Prize in recognition of our efforts as an outstanding example of corporate activities for biodiversity conservation.

*4 An association established to promote symbiosis between nature and people in corporate activities



Conceptual image of the corporate green space, Nakashinden green space



Species observed in Nakashinden green space (left: blue heron; middle: spot-billed duck; right: chestnut tiger)

Forestation for water sources

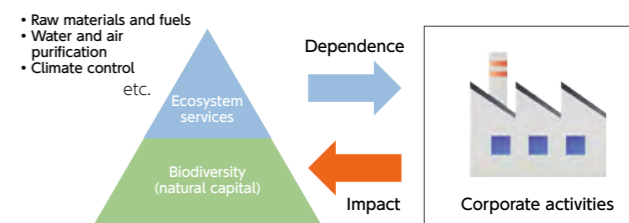
Aichi Steel uses water from the Aichi waterworks, which has its source in Otaki Village, Nagano Prefecture, for the operation. As part of our activities to protect this water source, we have been engaging in water source forest cultivation activities since 2006. In 2019, we concluded a "foster parent of forest" agreement with Otaki Village. We have designated approximately 12 hectares of forest as FOREST of AICHI STEEL GROUP, where our employees and their families regularly conduct thinning and pruning work in cooperation with Otaki Village and local residents to promote the creation of a rich forest.



Collaborative activities with related organizations

Aichi Steel also focuses on environmental conservation activities in collaboration with related organizations. One of these organizations is the Chita Peninsula Ecosystem Network Council, in which local governments, universities, NPOs and other private organizations, and companies participate to promote activities to form an ecosystem network through the vision for the nature in the region and efforts to achieve it. We conduct collaborative activities and information sharing with the aim of having corporate green spaces owned by participating companies certified as Natural Symbiosis Sites*5 promoted by the Ministry of the Environment. Through these efforts, we will actively work toward the realization of "nature positivity," which will halt the loss of biodiversity and restore nature.

*5 Sites recognized by the Ministry of the Environment as areas where biodiversity is being conserved through private sector efforts and other measures



Person in charge of promotion



Yuki Hattori
CSR Promotion Department,
General Affairs Division

Nakashinden green space is positioned as a hub for coexistence with nature, and through monitoring of indicator species and tree planting, we are developing it as a place to consider the ecosystem from the three perspectives of research, nurture, and feel. In addition, we have been promoting the forestation in Otaki Village to create a place of interaction where people can connect with nature and local communities. We will continue to engage in activities to promote such connections, using the green space as a place for environmental learning in collaboration with employees and their families, Group companies, and local residents through various activities in harmony with nature.

Person in charge of promotion



Tatsuya Mori
Environmental Management Group,
Safety & Environmental Division

To transition to a circular economy, it is important to eliminate waste one by one. We have been promoting the recycling of waste generated within the company toward the goal of zero emissions, and are currently working toward 100% recycling of battery electric vehicles (BEVs) and fuel cell electric vehicles (FCEVs). We will continue to work daily toward the realization of a sustainable society, as well as environmental management system (EMS)*3 activities, which are the foundation of this transition.

*3 A system for reducing the environmental impact of corporate activities