

MISSION NET ZERO

Carbon Neutrality Declaration and MHI Group Initiatives

In October 2021, MHI Group announced MISSION NET ZERO, our commitment to achieving Carbon Neutrality by 2040. Through our products, technologies, and services supporting CO₂ reductions, and in cooperation with partners worldwide, MHI is contributing to making a carbon neutral world a reality.

2040 Carbon Neutrality Declaration

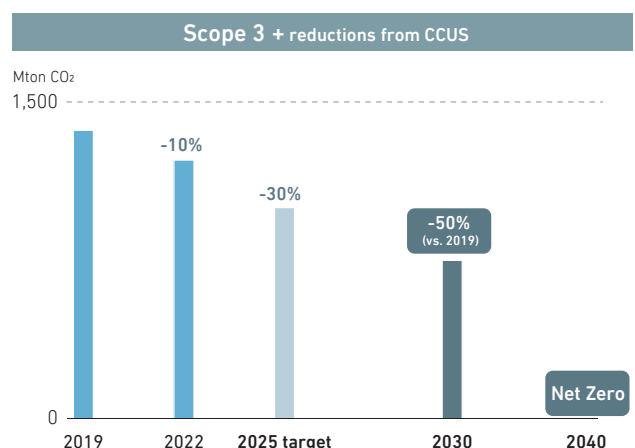
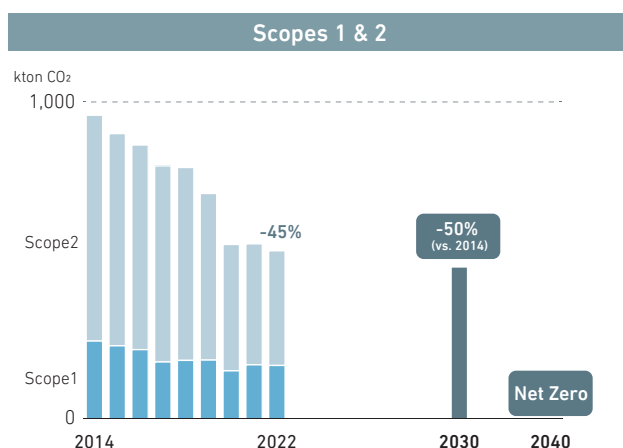
The first goal of MISSION NET ZERO, our 2040 Carbon Neutrality Declaration, is to reduce MHI Group CO₂ emissions (Scopes 1 and 2) to 50% of 2014 levels by 2030, and to reach Net Zero emissions by 2040. Our second goal involves carbon emissions from the value chain in which we operate (Scope 3), the majority of which arise from the customers' use of our products. Here, we aim to reduce CO₂ emissions throughout our entire value chain to 50% of 2019 levels by 2030, after deducting reductions from CCUS.* We will then reduce CO₂ to Net Zero by 2040. This means that we are aiming for Net Zero carbon emissions a full decade earlier than Japan and other major nations' 2050 Net Zero targets. This goal shows our determination to set an example by realizing Carbon Neutrality before the rest of the world. It was formulated as such in order to provide enough time for MHI Group products and tech-

nologies to be implemented around the globe.

Thanks to the success of earlier energy conservation efforts, we are already close to completing our interim target to reduce Scopes 1 and 2 carbon emissions by 50% in 2030, having cut CO₂ emissions by 45% (compared to 2014) in 2022. Nevertheless, recognizing that existing energy-saving efforts alone will not be enough to achieve Net Zero in 2040, we are working toward decarbonization by using our Mihara Machinery Works as a model plant for Carbon Neutrality.

For Scope 3 emissions, a variety of development efforts are underway in order to meet the interim target of 30% reduction in 2025, aiming for 50% reduction in 2030. We reduced emissions by 10% (compared to 2019) in 2022, showing steady progress toward achieving our goal.

*CO₂ Capture, Utilization, and Storage



MHI Group's Approach to Achieving Carbon Neutrality

MHI has defined two growth areas as focuses of our 2021 Medium-Term Business Plan (MTBP), which was originally announced in 2020: the Energy Transition, which aims to decarbonize energy supply, and Smart Infrastructure, which aims to realize the decarbonization, energy conservation, and automation of energy demand. By decarbonizing the generation and use of energy, MHI is contributing both to achieving Net Zero carbon emissions by 2040 and to realizing a carbon neutral world.

In the Energy Transition, we are pushing ahead with the decarbonization of existing infrastructure while building hydrogen and CO₂ solutions ecosystems. Achieving Carbon Neutrality requires both short-term and medium- to long-term initiatives. In the short term, steps to decarbonize and effectively utilize existing infrastructure are needed, from the expansion of renewable energy to the development of hydrogen solutions and other ecosystems. In the medium to long term, we are working to develop hydrogen and CO₂ solutions

ecosystems, with the aim of implementing our decarbonization technologies, such as hydrogen gas turbines and CCS, throughout the entire value chain.

Through our Smart Infrastructure initiatives, we are working to meet customer needs by providing one-stop automation, optimization, and high reliability solutions. Over the years, MHI Group has developed and commercialized a variety of digital products, including control systems for machinery and power plants, remote monitoring and maintenance solutions, and cyberattack prevention products. By intelligently linking all of these products with the Σ SynX (Sigma SynX) platform, we are providing automation, design and equipment optimization, and high reliability solutions as added value to our customers. Today, we are addressing the following areas as priorities for our initiatives: Intelligent Logistics Systems; Decarbonization and Energy Conservation of Data Centers; and Infrastructure to Support Autonomous Mobility.

TOPIC Mihara Machinery Works' Advanced Carbon Neutrality Project

MHI is aiming to achieve a Carbon Neutral Factory with Net Zero CO₂ emissions at our Mihara Machinery Works (Mihara, Hiroshima Prefecture, Japan) by the end of FY2023. In order to offset the 10,000 tons of CO₂ generated annually by Mihara Machinery Works, MHI is working with Chugoku Electric Power to install solar panels on site via a Power Purchase Agreement (PPA). This project is designed to cover all electricity demand within the facility with non-fossil fuel energy.

As of June 2023, installation of solar panels at Wadaoki Plant within Mihara Machinery Works was progressing, with steps to-

ward achieving Carbon Neutral Factories proceeding as planned. Furthermore, Mihara Machinery Works is being used as a proving ground for MHI's decarbonization technologies, including heat source electrification and fuel conversion solutions. The aim is to leverage these initiatives to the development and proposal of new solutions, such as the adoption of renewable energy and other decarbonized power sources, using Mihara Machinery Works as a model plant for the aggressive and rational implementation carbon neutral solutions.

Overview of Carbon Neutrality at Mihara Machinery Works



Outline of Mihara Machinery Works and Project Significance (Itozaki, Kohama, and Wadaoki Plants)

- Some main products: New transportation systems, railway car brakes, printing machinery, and paper converting machines
- CO₂ emissions: approx. 10,000 tons/year (equivalent to 2% of MHI Group Scopes 1 and 2 emissions)
 - Gain real insight into specific procedures and costs for achieving carbon neutral plants
 - Practical steps for formulating the Group's overall Carbon Neutrality strategy and applying to policy design
 - Currently focused on initiatives to achieve 100% reduction of CO₂ while avoiding reliance on carbon credits wherever possible