

Today, the main challenge on the global agenda is undoubtedly to govern climate change and move in the direction of increasingly durable, sustainable and inclusive development. Within this framework, one of the most focused items is the reduction of greenhouse gases, particularly carbon dioxide (CO₂) emissions. The industry, especially the steel industry, one of the major emitters, has long been committed to innovative projects, processes and technologies that can make a significant contribution to reducing environmental impact.

As far as CO₂ emissions are concerned, Marcegaglia Steel - being a coil processing company - already has a lower energy intensity than steel producers. Moreover, it participates with its main production sites in the European Union Emission Trading System (EU ETS), adopted to control emissions and achieve CO₂ reduction targets in the main industrial sectors. Operators in these sectors must obtain a greenhouse gas emissions permit from the relevant national authority and follow their annual reporting, certification, declaration and allowance surrender obligations. Through the analysis of GHG Scope 1 (direct emissions from installations within the boundaries of the organization due to the use of fossil fuels; emissions deriving from the combustion of fossil fuels in heating systems and those deriving from the consumption of fuel by company vehicles) and Scope 2 (indirect emissions deriving from the withdrawal of electricity from the national grid), the Carbon Footprint is represented.

With this document, Marcegaglia aims to emphasize the commitment that it is putting in place, and not just today, to achieve the climate and energy targets that set zero CO₂ emissions by 2050 at European level.

By 2024, the analysis of the environmental impacts of all the main semi-finished products will be completed through the application of the LCA (Life Cycle Assessment) approach which, with the relative EPD (Environmental Products Declaration) registrations, defines the panel of indicators used as an analytical tool. In addition to this, there are actions aimed at reducing GHG emissions in the supply chain: we are raising awareness among our suppliers, sharing with them specific procedures and sustainable sourcing policies. Also for this reason, the supplier qualification system is active, which provides for their analysis according to sustainability criteria.

In the **short term**, the plan calls for reduction, **by 2025**, by 6% of the carbon dioxide emission intensity compared to the 2020 baseline, through interventions in the field of logistics, internal handling, utilities, renewable energy and technological improvements aimed at increasing energy efficiency.

In the field of logistics and internal handling, the projects regard: the modernization of structures serving the port docks; the construction of automated warehouses for the transport of finished products, replacing the current diesel-powered vehicles; and electrification, including that of part of the vehicle fleet.

With regard to the supply of renewable energy, additional photovoltaic systems are being designed to produce energy for self-consumption. By 2024, the existing photovoltaic park will be increased by installing new systems in some production plants for a total potential of at least 7 MWp. Also of note is the start-up of two high-yield cogeneration plants at the Ravenna and Gazoldo degli Ippoliti (MN) sites. Utility interventions include cooling system revamping, LED relamping, burner and thermal treatment system efficiency, steam production through latent heat recovery from flue gas, and water vapor conversion.

Technological improvements include: the enhancement of mathematical models to facilitate dialogue between production lines and the reduction of transients in the setting thereof; the digitalization of all cold coil transformation processes through the Master Model project; the integration, in the main production processes, of sensors and high-tech devices to carry out online checks, with further implementation of the Machine Learning methodology; the robotization of processes and the electrification of plants.

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Also among the short-term projects, the one with H2GS should certainly be included. In fact, Marcegaglia has been called to be part of an important project for the production of sustainable steel: the first real steel plant in the world completely green. The plant will be built in the town of Boden, in northern Sweden, by the steel company H2 Green Steel (H2GS) with the financial contribution of several major international players. The Marcegaglia Group has not only the role of investor, but also the strategic role of industrial partner. The steel complex will come on line in 2024, well ahead of EU 2050 targets, and will be powered by green hydrogen, using only local renewable energy sources (such as wind and hydroelectric power) and high-quality iron ore.

In this temporal phase, GHG reduction measures will also be developed on the basis of an action plan also for the reduction of Scope 3 emissions: we are, for example, already working on accelerating the transition of transport from "road" to "rail" and "barge" modes, with the aim of achieving a significant reduction in carbon dioxide emission intensity by 2025.

In the **medium term (2025-2030)**, decarbonization targets will be consolidated and greatly expanded to bring the reduction in carbon dioxide emission intensity to 30%, compared to the 2020 baseline.

This fundamental second phase includes the implementation of important projects such as the "Carbon Capture Storage" of CO₂ emitted by the production plants and the cogenerator of the Ravenna plant and the transition to hydrogen technology for the heat treatment processes of semi-finished steel products and hot transformations. Commitment to planning for the use of renewable energy sources will continue, including through the installation of new photovoltaic systems.

Long-term projects (2030-2050) will concern strategies aimed at pursuing the targets of the evolution and integration of the steel market, which will bring Marcegaglia to carbon neutrality by 2050. The process of complete decarbonization will be pursued through the improvement of existing technologies and the development of new ones: increasing renewable sources and the use of hydrogen; circular economy projects; machine learning; the development of new Carbon Capture Storage projects; the electrification of processes and vehicle fleets; the separation of CO₂ for reuse or storage. Long-term goals will be developed so that suppliers are included in the scope of work.

In order to better follow the dynamism that characterizes our organization, the industrial development of sites and corporate acquisitions, specific targets are based on CO₂ emission intensity. The inventory of Marcegaglia GHG emissions is defined in accordance with the GHG protocol and includes the use of data quality management systems. Updates are scheduled annually and data is shared with internal and external parties upon request. This policy is subject to periodic review both as goals are met and to assess alignment with new technologies.

Gazoldo degli Ippoliti, 24/01/2022


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