

# MINAS GERAIS/BRASIL SUCCESSFUL CASES

## INDUSTRY

### SINDIFER – UNION OF THE IRON INDUSTRY

The Iron Industry Union of the State of Minas Gerais - SINDIFER was founded on April 30th, 1933, by a group of entrepreneurs and currently represents independent pig iron producing plants in the State of Minas Gerais. Its role involves advocating for the sector's interests and institutional representation in labor, tax, public policies and environmental issues. It also serves as a source of guidance for its members, develops solutions and explores means to keep them up-to-date and aligned with market demands, environmental requirements, social policies, and public policies. This contributes to the strengthening of the sector, which generates over 9.700 direct jobs and more than 45.000 indirect jobs (considering reforestation). The administration is composed of a President, a Board of Directors and a Fiscal Council.

### GREEN PIG IRON



SINDIFER, through the CIT SENAI Institute, conducted a Greenhouse Gas Emissions and Removal Inventory (GHG) using real data from an industry that incorporated electricity cogeneration by utilizing gases from its blast furnaces. The objective was to assess and quantify carbon emissions in the pig iron production chain;



As a result, it was determined that for each ton of ferrous product produced, 2.049 kg of CO<sub>2</sub>e (carbon dioxide equivalent) are emitted;



Taking into account the amount of CO<sub>2</sub> absorbed by the planted forests (1.176.482 tCO<sub>2</sub>) and the pig iron production in 2018, the value of 3.897 kg of CO<sub>2</sub>e/t was determined. In other words, for each ton of pig iron produced, 3.897 kg of CO<sub>2</sub>e are captured from the atmosphere;



Therefore, it is possible to conclude that there is a positive balance of 1,848 kg of CO<sub>2</sub>e/t, meaning that for each ton of pig iron produced in 2018, 1,848 kg of CO<sub>2</sub>e were removed from the atmosphere.



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For additional information, please [click here](#).



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### SINDIFER – SINDICATO DA INDÚSTRIA DO FERRO

#### CHARCOAL AS A DECARBONIZATION SOLUTION



To monitor the charcoal availability and to track the renewal of the forests used, SINDIFER commissioned CANOPY, a company with expertise in the field, to develop a methodology that, using remote sensing, could map potential suppliers of charcoal in nine strategic states, areas of eucalyptus planted forests and provide information on the age of the plantations, the volume of wood in the stands and productivity;



In an initial analysis, it was found that the planted area of Eucalyptus in the nine states within the scope, in various growth stages, totals 4.8 million hectares, with 2 million hectares in Minas Gerais alone. This promotes the absorption of a substantial amount of carbon from the atmosphere and the emission of oxygen;



Besides the climatic benefit associated with the industrial use of charcoal, it also generates carbon stocks that can be increased, resulting in large-scale removal of carbon from the atmosphere, whether in the area of planted forests or through forest restoration and conservation areas;



In carbonization process, i.e. the transformation of wood into charcoal, there is the potential for developing various coproducts, such as bio-oils and other products associated with green charcoal.



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