



Sustainability action · Project Renewable Energy and Energy Efficiency

Ituiutaba Biomass Energy Project, Brazil

The project entailed the modification of the Ituiutaba Ceramic manufacturing plant to enable it to use renewable biomass in place of unsustainably harvested timber from local forests.

Project

The plant produces ceramic bricks and roof tiles for the local market of Minas Gerais, and also for the neighbouring states of Mato Grosso and Goiás. Prior to the implementation of the project, the plant burned about 20,500 m³ of native wood per year in its kilns. The wood was harvested in the surrounding area, with no re-planting or sustainable forest management system in place, and its use in the ceramic plant was contributing to the rapid destruction of the valuable Cerrado ecosystem.

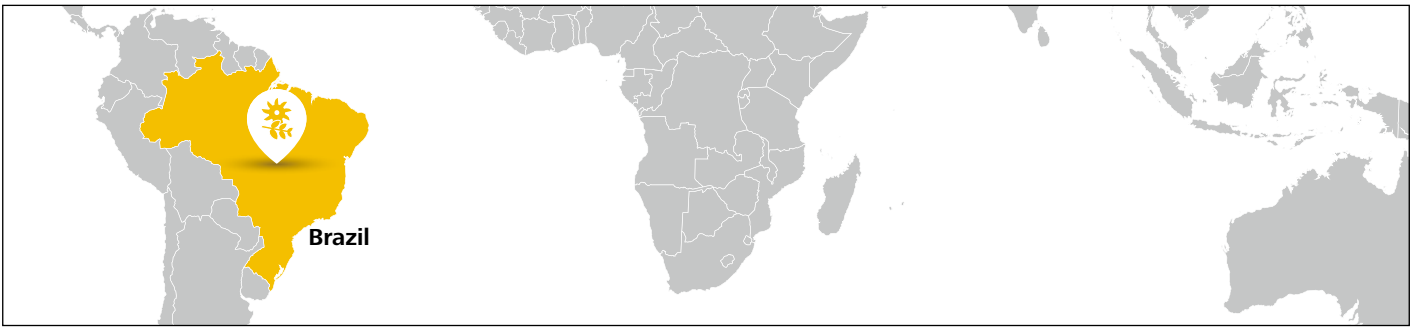
The Ituiutaba Ceramic company wished to reduce its impact on the environment by ceasing the use of native forest wood, and

switching instead to renewable biomass sources such as waste sawdust and wood chips from local factories processing sustainably sourced timber, as well as sugar cane bagasse, corn straw, and rice husk.

Converting the kilns used for firing the bricks and tiles to use renewable biomass in place of native timber was a pioneering practice in the region. Significant investment was required to adapt the plant's equipment and processes in order to accommodate the new fuel types, whilst maintaining production volume and quality. Given the level of investment, and associated operational and financial risk, the conversion was only made viable through the commercialisation of carbon credits.

The project has been certified under the SOCIALCARBON® Standard which provides further assurance of its positive contribution to social and environmental sustainability.

Checklist	Additionality and permanence	3 rd party verified	Transparency	Annual CO ₂ -reduction	Social and environmental benefits	Marketing material
Project 301 634	According to the rules of the VCS and Social Carbon Standard	By TÜV NORD	Provided by Markit Registry	16,000 tCO ₂ e	As documented in our database	High resolution pictures available



Location

The Ituiutaba Ceramic factory is located in Ituiutaba, a municipality of 100,300 inhabitants in a region known as Triangulo Mineiro, in the state of Minas Gerais, southeastern Brazil. The natural vegetation in the region ranges from savannah to dense forest, supporting an enormous diversity of plant and animals species. However, urban pressures and agricultural activities, as well as unregulated and unsustainable harvesting of timber for fuel and construction, have been rapidly reducing the biodiversity of this ecosystem.

Project achievements

Socio-economic impact

- The project has provided training for employees in the construction and implementation phases, and the mechanisation of some of the processes limits employees' exposure to the heat from the kilns and need to carry heavy loads, thereby providing a safer working environment.
- The factory owner has made significant improvements to employee comfort and welfare including sun-protection, installation of fans, safety equipment and upgraded restrooms.
- The factory provides employment opportunities for women and the disabled, who have historically been excluded from this sector
- The factory helps employees with the provision of food staples, medicines, medical assistance, and even toys for workers' children.
- As a result of these initiatives the factory has a very low employee turnover in comparison with the average for the ceramic industry.
- On a broader community level, the company is committed to engaging with local stakeholders and supporting local initiatives, and has also funded the renovation of a local school, using products from the factory in the reconstruction.

- Leftover ash is collected and delivered to dairy and cattle farms and farmers use this as compost for their pastures and tree plantations.
- Waste potsherds are donated and used for road construction and maintenance.

Environmental impact

- The project reduces deforestation and in doing so helps to preserve the biodiversity of the valuable Cerrado ecosystem.
- The brickworks closely monitors and controls water usage to reduce its environmental impact further, and only uses water from artesian wells in the area.

