



Integration of Green Hydrogen in Industrial Heating Applications: A Case Study of Automotive Paint Booths

PROJECT FACTS

Duration:

May/2026 to September/2027

Country:

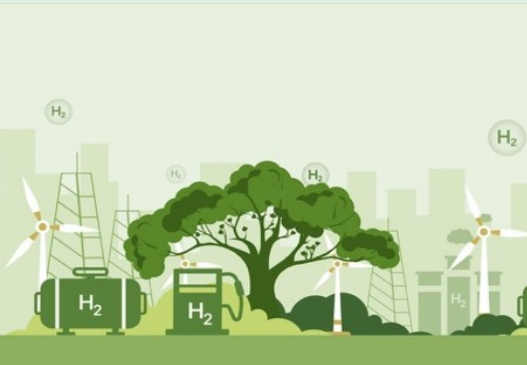
Brazil

Partners:

Tünkers do Brasil, Tünkers
Maschinebau GmbH and Deutsche
Gesellschaft für Internationale
Zusammenarbeit (GIZ) GmbH

Outputs:

- Applicability of replacing fossil fuels-based systems with green hydrogen in automotive paint booths.
- Assessment of the safety standards.
- Evaluation of the possibility of adaptation existing equipment to operate safer with green hydrogen.
- Consolidation of technical knowledge and dissemination.



H2Uppp



PROJECT OVERVIEW

The project focuses on a **comprehensive feasibility study** for converting primary energy from renewable sources into green hydrogen, with the specific goal of enabling its **application in automotive paint booth burners**. Currently, these processes rely on fossil fuels such as LPG or diesel. Brazil is uniquely positioned to produce green hydrogen at scale through water electrolysis, thanks to its abundant renewable energy resources.

The study will use existing infrastructure, specifically a paint booth equipped with an LPG-fired burner, as its reference case, generating results that can define **the technical requirements** and performance parameters necessary for a **safe and efficient transition to green hydrogen**.

Replacing fossil fuels with green hydrogen in industrial operations can significantly **reduce CO₂ emissions**, directly contributing to corporate sustainability targets. Strengthening the domestic clean energy supply chain, while the initiative stimulates local production of equipment and services related to hydrogen technologies, reinforcing Brazil's industrial capacity in clean energy sector. Promote competitiveness and innovation, as the project drives the Brazilian industrial sector to meet international sustainability standards.

OBJECTIVES & EXPECTED RESULTS

- **Specify technical requirements** for integrating hydrogen into existing thermal systems.
- Mapping the hydrogen **production and on-site storage infrastructure**, considering **safety protocols**, compliance with national and international **standards**, **testing procedures**, and required **certifications**.
- Generate **technical knowledge and guidance** that can support similar projects in other industries or manufacturing units.

ABOUT H2UPPP

H2Uppp paves the way for companies to develop the global green hydrogen market through project identification and development, technical support, and trade.

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The International Hydrogen Ramp-up Programme is supporting entrepreneurial engagement in the ramp-up of hydrogen in the Global South and is a programme of the:



Federal Ministry
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and Energy

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