## Decarbonization Roadmap

Scopes 1+2



Planned CO<sub>2</sub> reduction 2021

# Circular & Biogenic Materials

The use of substitute materials in our Electric Arc Furnaces as a replacement for fossil carbon

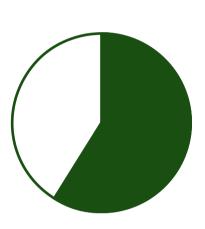


## Carbon substitution 2025

Pilot trials with secondary alternatives.

# Low-Carbon Electrical Energy

Purchasing electrical energy from renewable or low-carbon sources over fossil sources



#### Renewable energy consortium 2024 – 2030

An initiative with about 20 other partners to build, operate and utilize renewable electrical energy (PV/Wind) in Germany.

#### Renewable gases

Switching from natural gas to hydrogen or biomethan



#### Hydreams 2023 – 2028

Multi-year EU research project that investigates hydrogen-oxycombustion and its impact on steel and equipment.

#### Electrification

Switching installations and vehicles from fossil fuels to electrical energy



#### Hybrid rolling mill furnace Ugine 2025 – 2029

Switching the first zones of the existing furnace from natural gas to electrical energy.

### Electric forge furnace Sorel 2025

Switching a natural gas-fired forge furnace to electrical energy.

#### Electric heat treatment furnace Hagen 2026

Replacement of a natural gas-fired heat treatment furnace with an electric one.

#### **Efficiency**

Increasing our efficiency through digital transformation, improvement programs and investments



#### Rolling mill furnace Emmenbrücke 2021

Replacement of the walking beam furnace with state-of-the-art furnace and induction heating.

## MES Ugine 2021 – 2030

Modernization of the manufacturing execution system.

#### Forge press Sorel 2024

Replacement of the forge press with state-of-the-art equipment.

Scope 1

Scope 2

Scopes 1+2

Lighthouse projects (excerpt)