

# CLEAN STEEL

## Steel is vital to the EU's economy

### STEEL FOR CLIMATE CHANGE MITIGATION AND SUSTAINABLE GROWTH

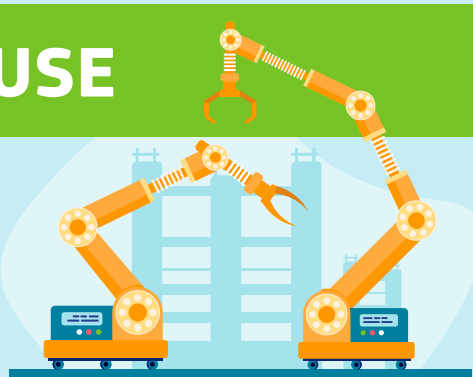
#### EU Steel research:

- RFCS** ~150 running projects on steel processes, products and applications
- SPIRE** Projects with cross-sectorial perspective
- GREEN STEEL FOR EU** Technology roadmap & funding analysis to decarbonise steel industry

#### EU Steel production:

- 168 million tons/year** second largest producer in the world (10% of global production)
- 166 billion €/year** = 1.3% total EU GDP
- 320.000 people employed** directly + 2.6 million EU jobs supported
- Steel industry responsible for **20% to 25%** of Industrial CO<sub>2</sub> emissions in EU (ETS)

### STEEL USE



INDUSTRY 4.0



ENERGY



DEFENCE



BUILDING & INFRASTRUCTURES



TRANSPORTS  
Clean Steel is the major tool to decarbonise cars



HOME APPLIANCES



### ACTORS AND ACTIONS



#### ACTORS

European Commission, Member States, Industry, Universities & Research Institutes



#### NEED

Coordinated Joint Research, Effective Development & Innovation (R&D&I) commitment



#### MEANS

Climate neutral Steel making promising technologies

- Smart Carbon Usage (SCU)
- Carbon Direct Avoidance (CDA)
- Circular economy: 95% of metal recyclable



#### OBJECTIVE

Bridging the gap between EU industry competitiveness and climate / environment concerns



#### ACTIONS TO TAKE

- Accelerate investments to overcome long investment cycles**  
Invest EU, Innovation Fund, Just Transition Mechanism
- Breakthrough technologies**  
Acceleration and deployment of the most promising climate neutral steel making technologies, fostering synergies and sequencing with relevant EU and national Funds and Programmes
- Stakeholder coordination**  
Across countries production, routes and technologies
- Recovery plan**  
Keep manufacturing Local } Economy  
High quality jobs  
Social impact
- Investments required**  
Public and private investments in R&I through a partnership of ~2.5 billion € by 2030 to accelerate decarbonisation of the Steel sector in Europe



today  
**~500** production sites  
23 MS using BF-BOF & EAF routes

#### EXTERNAL FACTOR:

Increase Zero-carbon electricity (higher use of electricity in Steel production)

Carbon free and affordable Hydrogen

- Carbon Border Adjustment Mechanism
- EU Taxonomy on Sustainable Investment

NEED OF ELECTRICITY FOR STEEL PRODUCTION



### EXPECTED IMPACT



#### CLEAN

EU GDP target, green industry, reduction of impact on environment, cities, health, social well-being



#### EMPLOYMENT

impact on areas connected to steel production



#### HIGH QUALITY

Steel Industry Leader in renewable energy technologies



#### EU ECONOMY INCLUSIVE GROWTH

Professional development  
High quality jobs

2030  
**CO<sub>2</sub> emission reduction by 55%**  
(compared to 1990 levels)

#### GOAL

2050 CLIMATE NEUTRALITY

#EUGreenDeal  
#InvestEURResearch