



# Overview of the RFCS Programme

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# Coal and Steel: the Foundation of the EU

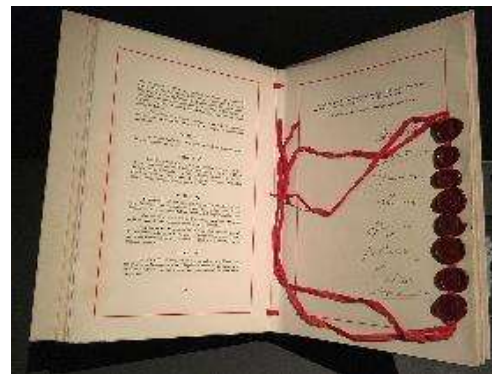
The **Schuman Declaration**: made by the French foreign minister, Robert Schuman on the 9th of May 1950, it was a proposal to place French and West German production of coal and steel under a single authority.

The idea had the ultimate goal to establish a peaceful relation between France and West Germany, based on common interests and political integration. Schuman said that "*[t]he coming together of the countries of Europe requires the elimination of the age-old opposition of France and Germany...the solidarity in production thus established will make it plain that any war between France and Germany becomes not merely unthinkable, but materially impossible.*"

Konrad Adenauer, the first Chancellor of the Federal Republic of Germany, accepted, along with the governments of Belgium, Italy, Luxembourg and Netherlands.

# The Treaty of Paris - April 18, 1951

- 6 founding members signed the Treaty of Paris and **created the European Coal and Steel Community (ECSC)**.
- This paved the way for the **European Economic Community** and subsequently the **European Union**.
- Timeframe: 1952-2002



# The Treaty of Nice – February 26, 2001

- It amended the Maastricht Treaty (or the Treaty on European Union) and the Treaty of Rome.
- It strengthen the institutional structure of the European Union to withstand the addition of the Eastern European countries.
- It contained provisions to deal with the financial consequences of the expiry of the Treaty of Paris and the ECSC.
- **It created the Research Fund for Coal and Steel (RFCS) – 1 February 2003 – to continue supporting research in the coal and steel sectors and keep the related industry competitive and sustainable.**



# The Research Fund for Coal and Steel



- It is funded via the **revenues generated by the European Coal and Steel Community (ECSC) assets in liquidation**, which are exclusively devoted to research in the sectors related to the coal and steel industry, in accordance with the provisions of Protocol 37 to the Treaties on European Union (Protocol on the financial consequences of the expiry of the ECSC treaty and on the Research Fund for Coal and Steel).
- By Council decision, the RFCS programme relies on multiannual technical guidelines for research.
- Each year, the net revenue from the assets has been assigned to the funding of the RFCS in the general budget of the European Union.

# RFCS Governance

The Commission (DG RTD) manages the RFCS programme, now together with REA, with the assistance of the following high-level groups of experts:

- The **Coal and Steel Committee (COSCO)** – this is the Programme Committee), composed of representatives of all Member States.
- The **Coal Advisory Group (CAG)** and the **Steel Advisory Group (SAG)**, composed of experts representing industrial producers and users, research centres, and universities.
- The **Technical Groups (TGs)**, which monitor the ongoing projects and give support to the Commission and to the advisory groups.



# The Paris Agreement

In 2015, the Parties to the UN Framework Convention on Climate Change (UNFCCC) reached an agreement to combat climate change and to accelerate/intensify the actions and investments needed for a sustainable low carbon future (Conference of the Parties (COP 21)).

The European Union has played a key role in brokering the historic agreement in Paris, where 195 countries adopted the first-ever universal, legally binding global climate deal, entered into force in 2016.



# Recent Policy Instruments

## EU Green Deal and Just Transition

Aims to transform the EU into a modern, resource-efficient and competitive economy, ensuring (i) no net emissions of greenhouse gases by 2050, (ii) economic growth decoupled from resource use and (iii) no person and no place left behind. Specifically, the new Industrial Strategy for Europe will guide the twin green and digital transitions for a stronger economy.



## Circular Economy Action Plan

The Commission sets product sustainability principles to guide broader policy and legislative developments. Steel value chain is among the priorities.

## Fit for 55

The Commission targets the reduction of net greenhouse gas emissions by at least 55% by 2030.

Includes supportive regulatory environments such as ETS and CBAM.

## RePowerEU

The Commission expects that around 30% of EU primary steel production will be decarbonized with renewable hydrogen by 2030.

On 21 February 2023 the Council formally adopted an amending regulation to include REPowerEU chapters in the Recovery and Resilience Facility.



# Recommendations of the 7-year RFCS Monitoring and Assessment Report

- To maintain the annual RFCS call for proposal with a **budget of at least €40 million.**
- To update and amend the RFCS legal base, to more closely match the new challenges that the coal and steel sectors will face in the future and **align the RFCS objectives to the new policy priorities of the Commission.** The report developed by an independent group of experts, concluded that it was important to align the programme to the new policy objectives, in particular the European Green Deal and the Just Transition, opening the programme to support breakthrough technologies, and support projects to ensure that no region is left behind in the context of the phase-out of the coal.

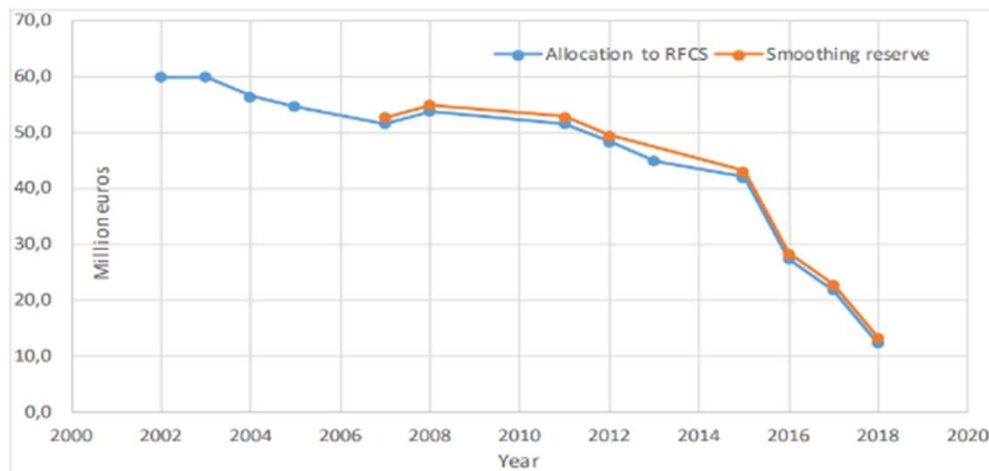


[https://research-and-innovation.ec.europa.eu/knowledge-publications-tools-and-data/publications/all-publications/research-fund-coal-and-steel-monitoring-and-assessment-report\\_en](https://research-and-innovation.ec.europa.eu/knowledge-publications-tools-and-data/publications/all-publications/research-fund-coal-and-steel-monitoring-and-assessment-report_en)

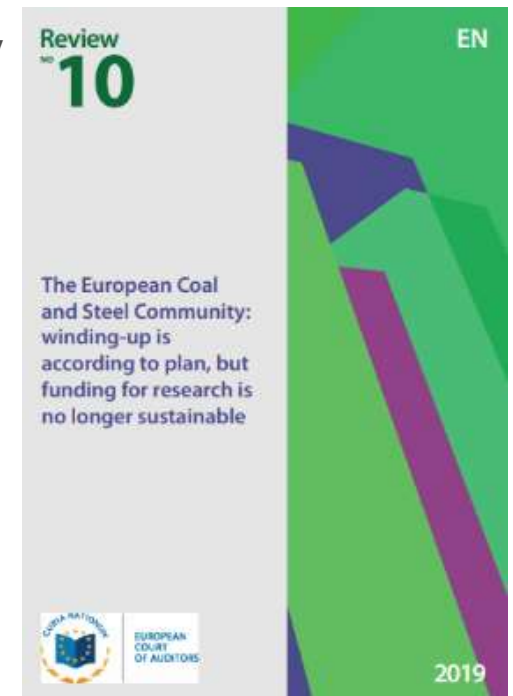
# The Review of the European Court of Auditors

In 2019, a review of the Court of Auditors published a report raising the issue that the interests generated by the original fund was continuously decreasing along with the constant decrease of the interest rate in the financial markets during the last 10 years.

ECA Review 10/2019: « Funding the RFCS on the sole basis of asset management revenue is not sustainable in the current interest rate environment »



Source: Annual accounts of the ECSC in liquidation.



<https://www.eca.europa.eu/en/Pages/DocItem.aspx?did=51111>

# The New RFCS Legal Base

- In 2021, the research funding of the RFCS was lowered to less than 1/3 of the amount that was usually dedicated to the call. In fact, from the EUR 40 million/year usually available until 2015, there was a constant drop down of EU funding, due to the reduction of the bank interests. The EU funding of the last RFCS call reached only EUR 11.3 million in 2021.
- In July 2020, the EC adopted therefore a proposal for a revision of the RFCS legal base.

# The New RFCS Legal Base

3 Council Decisions published in the EU Official Journal.



- Council Decision (EU) **2021/1094** of 28 June 2021 amending Decision 2008/376/EC on the adoption of the Research Programme of the Research Fund for Coal and Steel and on the multiannual technical guidelines for this programme, OJ L 236/69.



- Council Decision (EU) **2021/1207** of 19 July 2021 amending Decision 2003/77/EC laying down multiannual financial guidelines for managing the assets of the ECSC in liquidation and, on completion of the liquidation, the Assets of the Research Fund for Coal and Steel, OJ L 261/47.



- Council Decision (EU) **2021/1208** of 19 July 2021 amending Decision 2003/76/EC establishing the measures necessary for the implementation of the Protocol, annexed to the Treaty establishing the European Community, on the financial consequences of the expiry of the ECSC Treaty and on the Research Fund for Coal and Steel, OJ L 261/54.

# The major novelties of the new RFCS legal base



- To contribute to achieve climate neutrality by 2050, in full **alignment with the European Green Deal**.
- To **pool resources (2021-2027) to respond to new research needs** in steel (i.e. supporting R&I for clean steel breakthrough technologies) and coal (i.e. contributing to Just Transition) via dedicated calls.
- To ensure a financial annual allocation to manage RFCS Call for Proposals of **at least EUR 40M**.

# New Research Objectives of the RFCS Programme

## New art. 4, 5 and 6 for COAL

- ~~4) Improving the competitive position of Community Coal~~
- 4) Supporting the Just Transition of the coal sector and regions
  
- ~~5) Health and Safety in Mines~~
- 5) Improving health and safety
  
- ~~6) Efficient protection of the environment & improvement of the use of coal as clean energy source~~
- 6) Minimising the environmental impacts of coal mines in transition.
  
- ~~7) Management of external dependence on energy supply~~

**Council Decision (EU) 2021/1094 of 28 June 2021** amending Decision 2008/376/EC on the adoption of the Research Programme of the Research Fund for Coal and Steel and on the multiannual technical guidelines for this programme: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32021D1094>



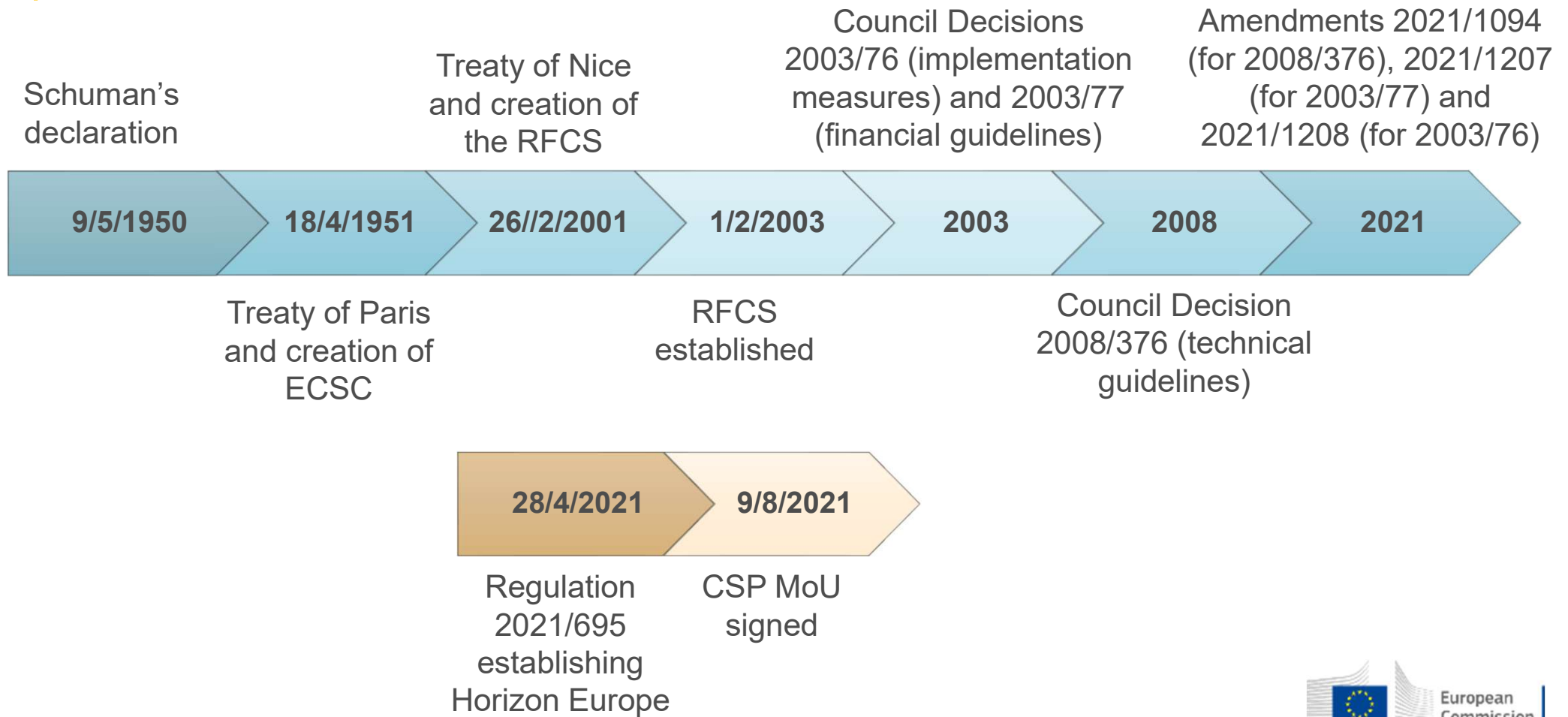
# New Research Objectives of the RFCS Programme

## New art. 8, 9 and 10 and 10b for STEEL

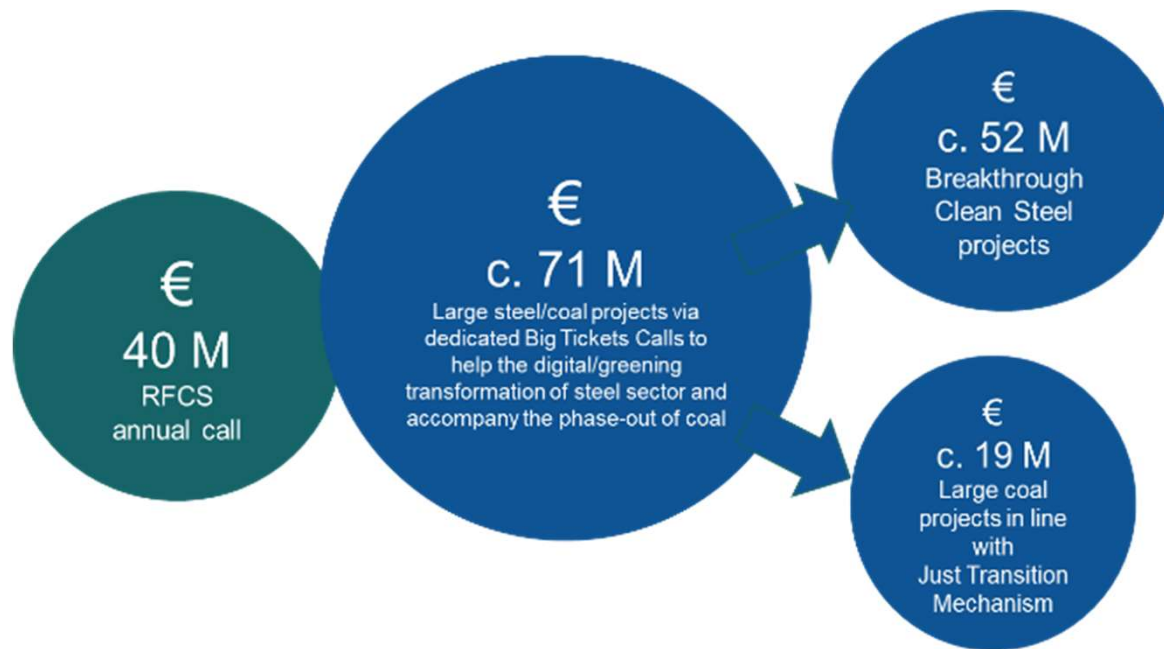
- ~~8) New and improved steelmaking and finishing techniques~~
- 8) New, sustainable and low-carbon steel making and finishing products
  
- ~~9) RTD and the utilisation of steel~~
- 9) Advanced steel grades and applications
  
- ~~10) Conservation of resources and improvement of working conditions~~
- 10) Conservation of resources, protection of the environment and circular economy
  
- 10a) Management of work force and working conditions.

**Council Decision (EU) 2021/1094 of 28 June 2021** amending Decision 2008/376/EC on the adoption of the Research Programme of the Research Fund for Coal and Steel and on the multiannual technical guidelines for this programme: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32021D1094>

# Summary of Fundamental Steps



# The RFCS Funding



From Council Decision (EU) 2021/1094 of 28 June 2021, Article 17a, European Partnerships, point 1:

Part of the Research Programme, namely research on breakthrough technologies for the reduction of CO<sub>2</sub> emissions in the steel industrial sector, may be implemented through co-programmed European Partnerships established in accordance with the rules set out in Article 10 and Annex III to Regulation (EU) 2021/695 of the European Parliament and of the Council.

The distribution of funding is set at **27.2 %** for coal-related research and **72.8 %** for steel-related research, as provided for by Article 4(2) of the implementing measures, decided by the Council in 2003.

# RFCS Calls (1/3)

Criteria	Annual Call	Big Tickets Calls
<b>Type of projects</b>	<ul style="list-style-type: none"> <li>Accompanying Measure (AM)</li> <li>Research Project (RPJ)</li> <li>Pilot and Demonstration Project (PDP)</li> </ul>	Pilot and Demonstration Project (PDP)
<b>Funding Rate</b>	<ul style="list-style-type: none"> <li>AM = 100%</li> <li>RPJ = 60%</li> <li>PDP = 50%</li> </ul>	50%
<b>Budget per project</b>	<p>Annual call 2022:</p> <ul style="list-style-type: none"> <li>AM = max € 1 M</li> <li>RPJ = expected € 1.5 - 3 M</li> <li>PDP = expected € 3.5 – 5 M</li> </ul> <p><i>This does not however preclude the submission/selection of proposals requesting other amounts. The grant awarded may be lower than the amount requested.</i></p>	<p>Ongoing Big Tickets 2023:</p> <p>Expected € 5 - 9 M (and exceptionally up to € 18 M for large demonstrators).</p> <p><i>This does not however preclude the submission/selection of a proposal requesting other amounts. The grant awarded may be lower than the amount requested.</i></p>

# RFCS Calls (2/3)



Criteria	Annual Call	Big Tickets Calls
<b>TRL level</b>	<ul style="list-style-type: none"><li>• RPJ = achieve TRL 4-5</li><li>• PDP = start at TRL 4-5 and achieve TRL 7-8</li></ul>	Start at TRL 4-6 (4-5 for coal) and achieve TRL 7-8
<b>Duration of project</b>	<ul style="list-style-type: none"><li>• AM = should normally range between 18 and 36 months.</li><li>• RPJ and PDP = should normally range between 36 and 42 months.</li></ul>	Projects should normally range between 36 and 54 months.

**Note:** the RFCS calls are implemented by the Research Executive Agency (REA). Implementation (non IT) questions can be directed to [REA-RFCS@ec.europa.eu](mailto:REA-RFCS@ec.europa.eu)

# RFCS Calls (3/3)

Criteria	Annual Call	Big Tickets Calls
<b>Consortium</b>	<p>AM = minimum 3 independent applicants from 3 different eligible countries.</p> <p>RPJ = minimum 3 independent applicants from 2 different eligible countries.</p> <p>PDP = minimum 2 independent applicants from 2 different eligible countries.</p>	<p>Minimum 2 independent applicants from 2 different eligible countries Independent.</p>
<b>Beneficiaries</b>	<ul style="list-style-type: none"> <li>• Independent applicants means that none of the entities must be under the direct or indirect control of the other or under the same direct or indirect control as the other.               <ul style="list-style-type: none"> <li>• EU Member States (including overseas countries and territories (OCTs))</li> </ul> </li> <li>• Non-EU countries: countries associated to the RFCS or countries which are in ongoing negotiations for an association agreement and where the agreement enters into force before grant signature (<a href="https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/rfcs/guidance/list-3rd-country-participation_rfcs_en.pdf">https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/rfcs/guidance/list-3rd-country-participation_rfcs_en.pdf</a>)</li> </ul>	



# Big Tickets 2023 Call for Coal



Ongoing

Opened: 2 February 2023

Deadline: 4 May 2023

Budget: € 34.821.819

Activities are expected to start at TRL 4-5 and achieve TRL 7-8 by the end of the project.

## Specific call objectives are:

1. Mine water monitoring, management and/or treatment.
2. Land monitoring, modelling, stabilisation and/or restoration.
3. Waste and/or spoil treatment of mines in transition.
4. Energy recovery associated with methane emissions.
5. Materials recycling and development of alternative materials, including recovery of critical raw materials.
6. Repurposing mines and coal-related infrastructure.



# Big Tickets 2023 Call for Steel



Ongoing

Opened: 2 February 2023

Deadline: 4 May 2023

Budget: € 130.188.777

Activities are expected to start at TRL 4-6 and achieve TRL 7-8 by the end of the project.

## Specific call objectives are:

1. CO<sub>2</sub> neutral iron ore reduction (Increasing the use of pre-reduced iron carriers).
2. Developing technologies to reduce the specific energy required to produce steel.
3. Circular economy and sector coupling solutions to meet the zero-waste goal for steelmaking.
4. Preparation of steel CO/CO<sub>2</sub> gases for Carbon Capture Use and Storage (CCUS).
5. Process Integration (PI) in steel plants to reduce the use of fossil carbon and associated CO<sub>2</sub> emissions.



# Projects Funded under Big Tickets 2022 for Steel



Project Acronym	Project Title	Research Field	Country	Duration	EU Contribution [million]
<b>MODIPLANT</b>	MODular hybrld technology in the Steel PLANT production	Hybrid heating technology based on electrification and gas-burning properly combined to decarbonize re-heating furnaces.	IT	54 months	8,0 €
<b>FULLH2REHEAT</b>	Demonstrator of Industrial Transformation with Hydrogen for HAV long products rolling mills.	Investigation at semi-industrial scale of the impact of H2 combustion in Reheating Furnace (RF).	LU	54 months	8,6 €
<b>HYDREAMS</b>	Clean Hydrogen and Digital tools for REheating And heat treatMent for Steel	Demonstration of clean H2 oxycombustion at TRL7 with minimal NOx emissions.	FR	54 months	4,3 €
<b>TWINGHY</b>	Digital TWINs for Green HYdrogen transition in steel industry	Demonstration and optimisation of heat transfer process based on hybrid burners in reheating furnaces, progressively decarbonising the reheating process through the increase of H2 in combination with O2 and by monitoring and controlling it through a digital twin.	ES	54 months	4,5 €

# Thank you



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