

Cerame- Unie

Decarbonisation needs and challenges for
the ceramic industry at the EU level
DKG Kolloquium

20/11/2024

**Cerame-
Unie** The European Ceramic
Industry Association



Why ceramics matter?

 **30** Member countries
Pan-European perspective

 **200,000** Direct jobs
Source of employment

 **150 years** Average lifespan of a brick house
Durable products

 **up to 30%** Production costs related to energy
Sensitive to energy prices

 **€5.8bn** Positive trade balance
Export champion

 **€37bn**

EU Production value
Motor for growth

 **80%**

SMEs
Local jobs

CERAMIC APPLICATIONS



ABRASIVES



BRICK AND ROOF
TILES



WALL AND FLOOR
TILES



TABLE AND
ORNAMENTALWARE



SANITARYWARE



REFRACTORIES



TECHNICAL
CERAMICS



CLAY PIPES



EXPANDED CLAY



FLOWER POTS

CU Sectors



Sanitaryware



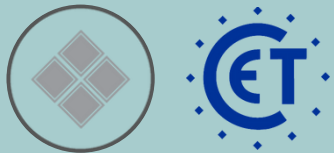
Table-Ornamentalware
& ceramic packaging



Technical Ceramics



Bricks & Roof Tiles



Wall & Floor Tiles



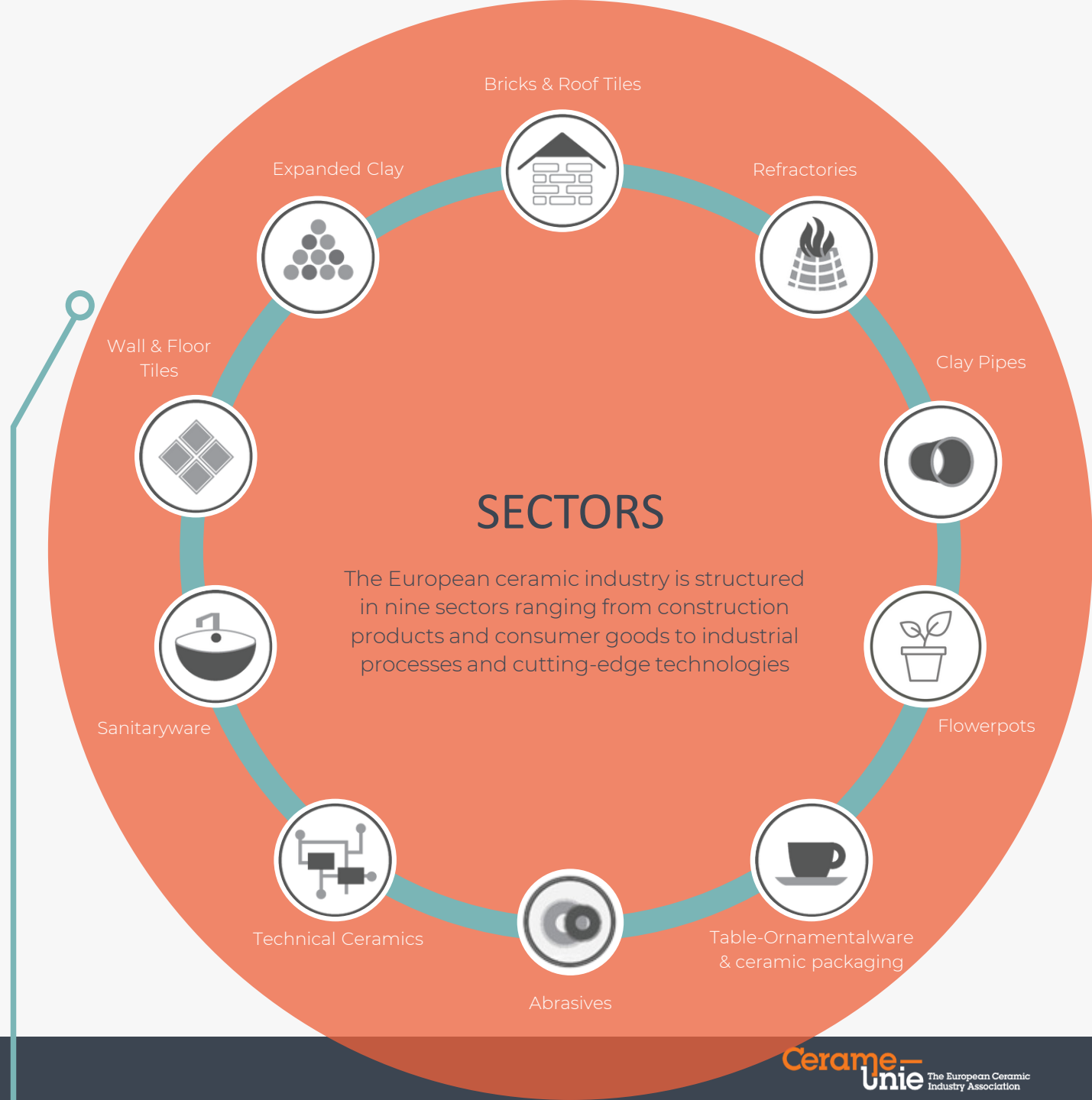
Expanded Clay



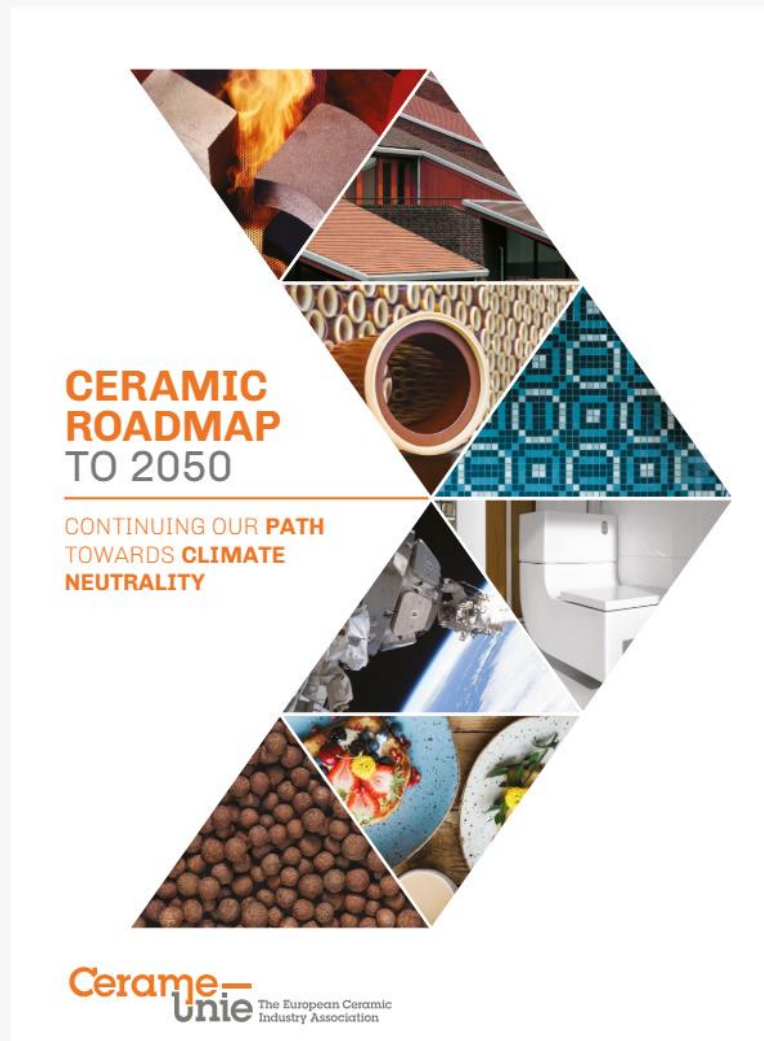
Refractories



Abrasives



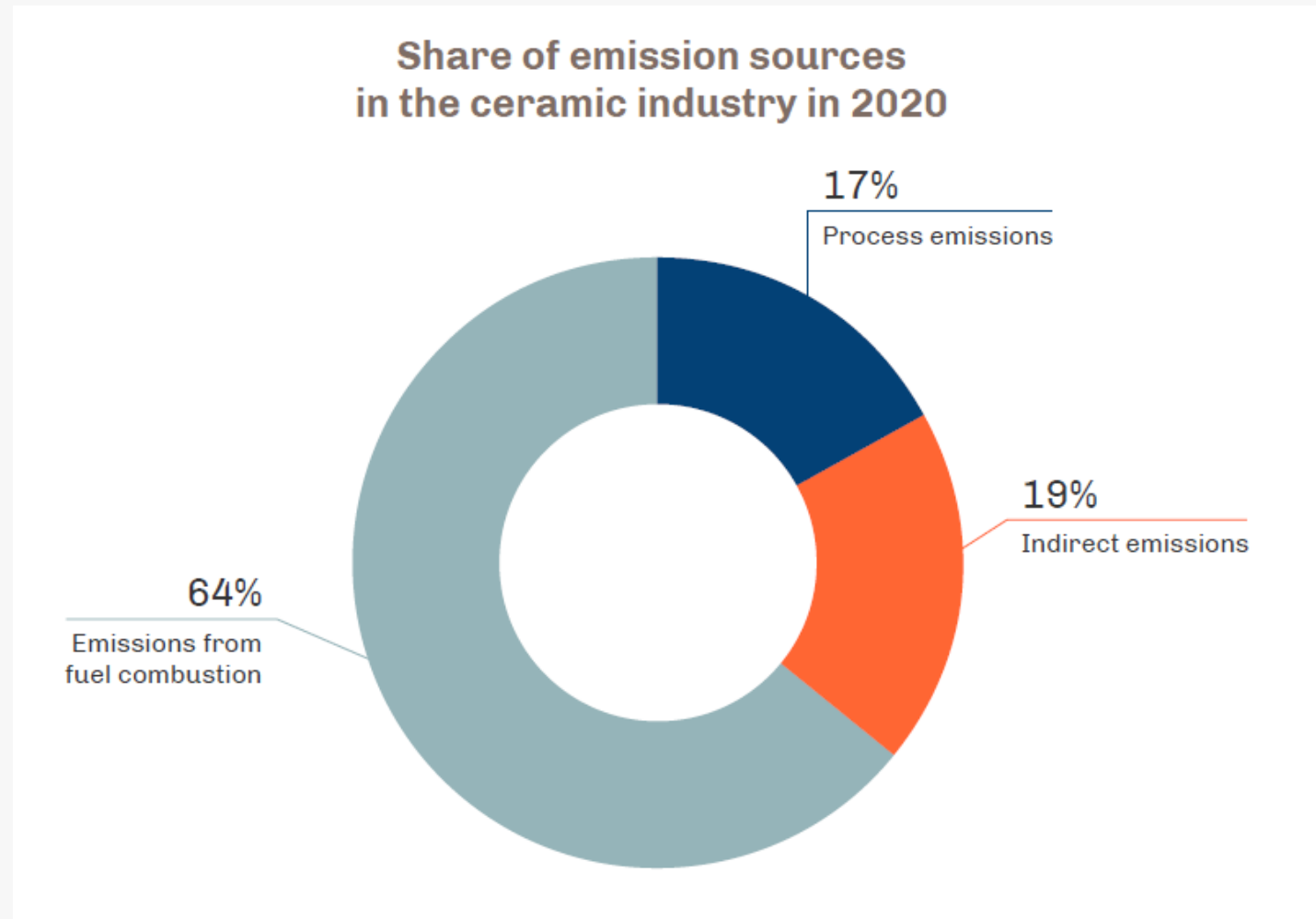
Decarbonisation pathway for the EU Ceramic Industry towards carbon neutrality in 2050



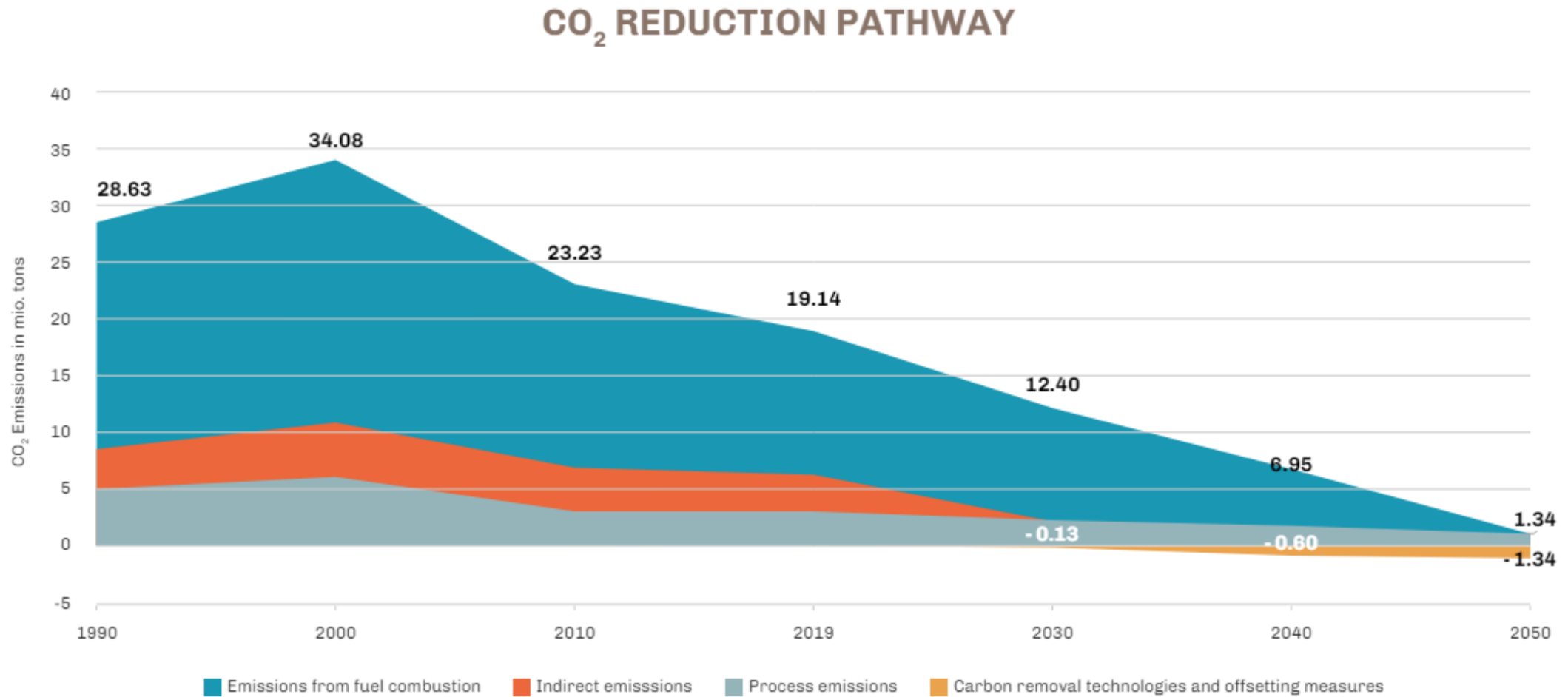
- ▶ Most significant **CO₂ reduction before 1990 – phased out coal;**
- ▶ The EU Ceramic Industry reduced its CO₂ emissions **by 45% since the years 2000s;**
- ▶ **First Ceramic Roadmap** to 2050 published in 2012: => reduction by 68% by 2050;
- ▶ **New Ceramic Roadmap**, published in 2021, shows **what climate neutrality means for EU Ceramics:**
 - ▶ Technologies & decarbonised energy required
 - ▶ Abatement costs
 - ▶ Policy requirements - conditionalities

New CO2 mix in the ceramic industry

18/11/2021



Decarbonisation pathway for the EU Ceramic Industry towards carbon neutrality in 2050



Source: Cerame-Unie

Decarbonisation pathway for the EU Ceramic Industry towards carbon neutrality in 2050

18/11/2021

Our **emissions reduction model** combines a range of measures to achieve gradual reduction of emissions to reach carbon neutrality by 2050.

These include:

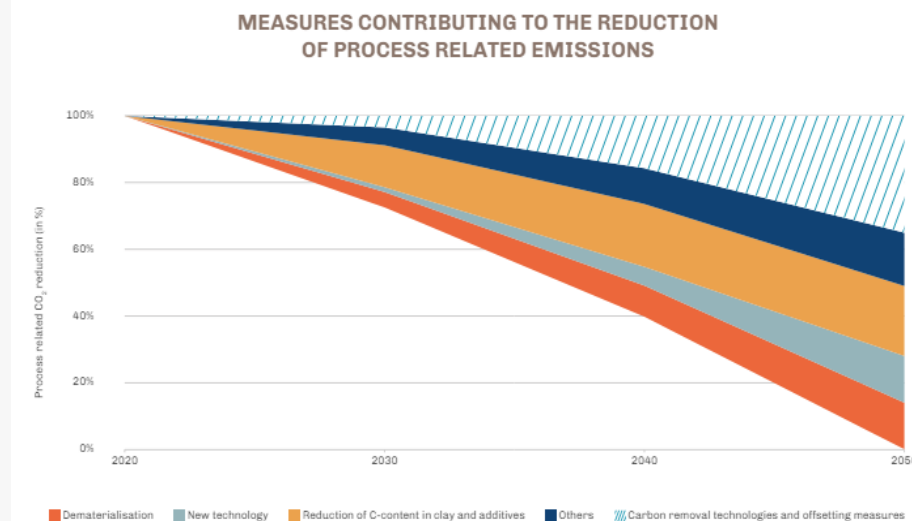
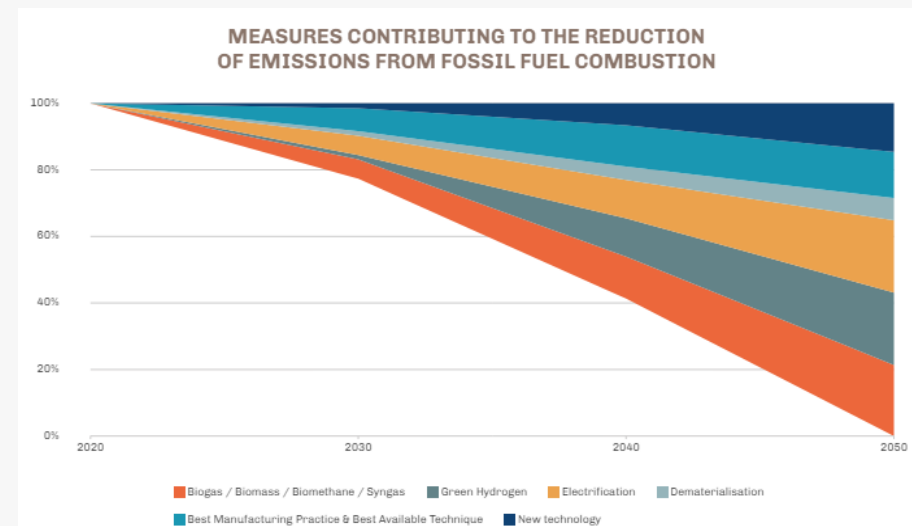
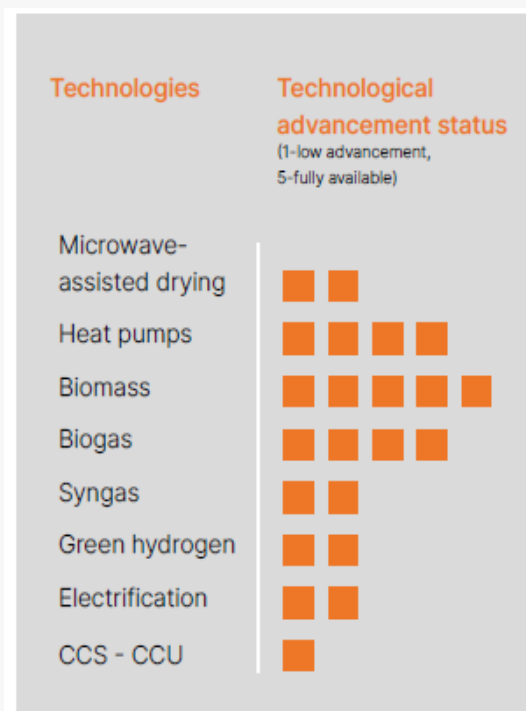
A switch to renewable energy (green H₂, biofuels and decarbonised electricity)

A reduction in process emissions

Innovation and increased efficiency in the manufacturing process

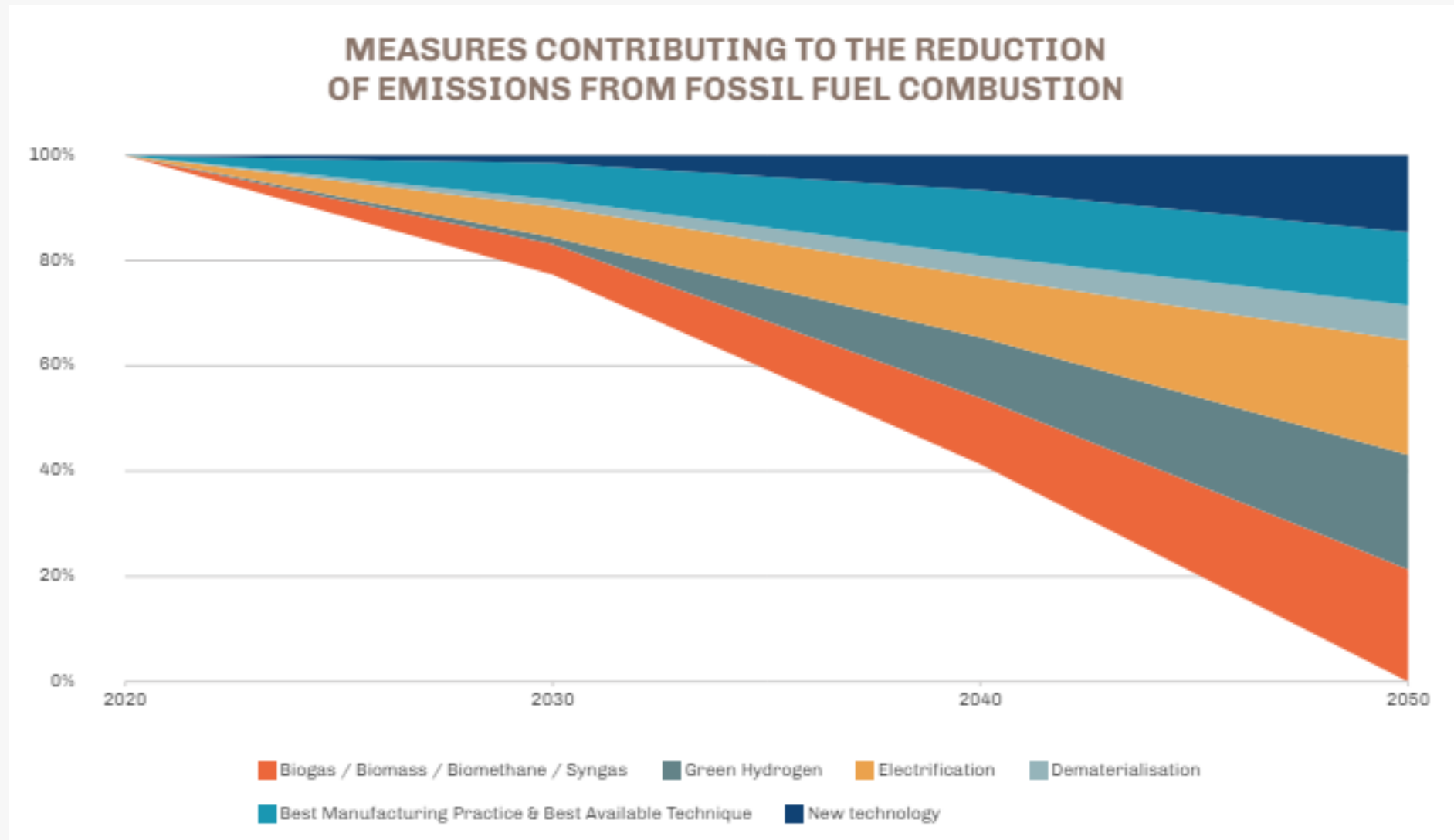
CO₂ capture CCS/CCU

Other carbon removal technologies and offsetting measures



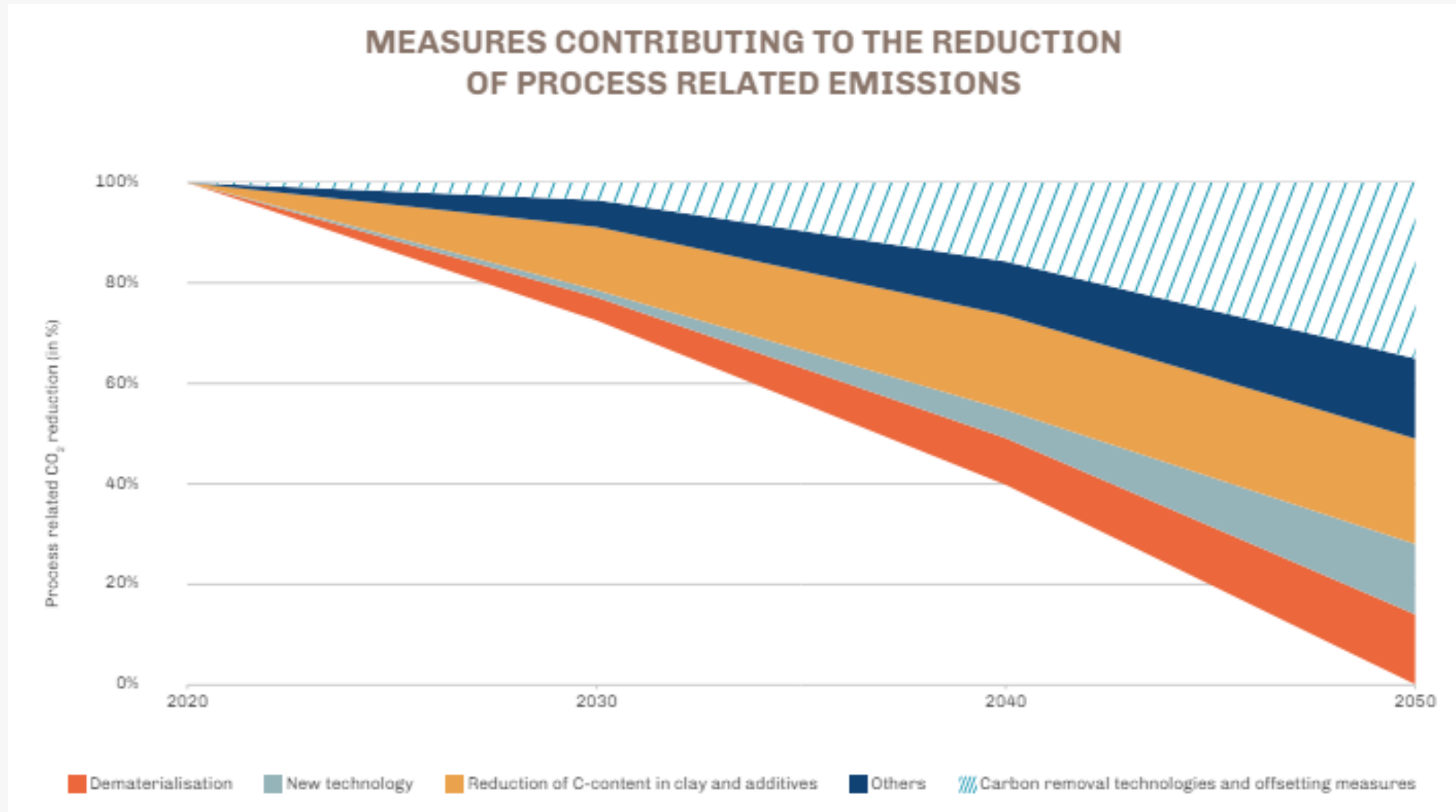
Decarbonisation pathway for the EU Ceramic Industry towards carbon neutrality in 2050

29/11/2024



Decarbonisation pathway for the EU Ceramic Industry towards carbon neutrality in 2050

29/11/2024



Conditions for the successful implementation of the Ceramic Roadmap

- To achieve **carbon neutrality by 2050**, the EU Ceramic Industry needs **access to alternative energy sources**;
- These amounts are **not available to the Industry, currently. Infrastructure & right legal and policy framework** are crucial for their supply.

TABLE OF ALTERNATIVE ENERGY NEEDS DERIVED FROM EMISSIONS REDUCTIONS

Year	Total energy need (TJ)	Biogas (TJ)	Green Hydrogen (TJ)	Green electricity (TJ)	Green electricity (Gwh)
2030	196,350.76	12,836.07	2,852.46	12,836.07	3,565.86
2040	166,911.25	27,811.48	25,315.58	25,315.58	7,032.67
2050	140,087.35	47,065.59	47,778.70	47,778.70	13,272.92

Conditions for the successful implementation of the Ceramic Roadmap



Continuing our
Path towards
Climate Neutrality

- ▶ Continued & sufficient **carbon leakage protection**;
- ▶ **Carbon price should not be affected by market speculation** from investors not covered by EU ETS;
- ▶ **Stable & reliable legal framework** to support long-term investments;
- ▶ **Secure infrastructure & stable supply of green energy**; also for multi-sites companies, small emitters, located in remote areas;
- ▶ **Green energy at competitive price & better mechanisms** to cope with energy crisis;
- ▶ **Sufficient financial support & full access to sustainable finance.**

Ceramic Manifesto 2024-2029



Deeply rooted in Europe

No other industry has a heritage that goes as far back as ceramics. Bronze age pottery, Roman aqueducts and medieval roof tiles are but a few examples that show both our history and the durability of our products.

Today, Europe is the world leader in high quality and strategic ceramic products such as wall and floor tiles, bricks and roof tiles, sanitary ware, tableware, vitreous clay pipes or refractory ceramics for most high temperature processes, or advanced ceramics for transport, defence, medical devices and other value chains.

The ceramic industry is mainly SME driven and provides local jobs and local value creation.



Why ceramics matter

€37 billion
Production value

200,000
direct employment

€5.3 billion
Invested funds balance



Resilience
Producing in and for Europe enhances the EU's strategic supply chain security, reduces dependencies on third countries and supports a resilient Europe.

Building a net zero future
Ceramics support climate adaptation measures as a key for CO2 neutral circular and long-lasting building by significantly reducing the embodied carbon of new houses and by supporting the energy-efficient renovation of existing buildings.

Sustainability
R&D and investments in decarbonisation have ensured that European companies have the lowest carbon footprint in the world.

Innovation
The European ceramic industry is the world leader in both product innovation and innovation in manufacturing technologies.

8 Action Areas

We have identified 8 action areas where European and national policies can help shape a sustainable European ceramics sector.

Numerous challenges facing ceramic industry

Over the past years, ceramics manufacturing has overcome many challenges (COVID pandemic, war in Ukraine, energy crisis). However, today, the industry is facing multiple threats simultaneously. Because of its broad product offering and specialization, not all ceramic companies face the same issues, but some challenges are common to most companies.

High cost of energy
On average, energy accounts for 38% of production costs. The ceramic sector is therefore very vulnerable to energy price volatility.

Lack of international level playing field
European ceramic companies with low-cost products from third countries produced with far less stringent environmental requirements, which risks carbon, jobs and investment leakage.

High capital costs
In order to remain competitive and reduce emissions for the green transition, continuous investments are required which have become costly for firms.

Challenging exports
European ceramics face tariff and non-tariff barriers in several countries, which are increasing their access to important markets.

The role of EU policy

For the manufacturing of ceramics in Europe to be viable and sustainable, a range of EU and national policies must be adapted to restore competitiveness and create the conditions we will allow for further investments to secure the future of the sector in Europe.

No win/lose thinking - effective support for technology readiness and green energy infrastructure is a key requirement
The green transition and the sustainable decarbonisation of the ceramic sector as described in the "Ceramic Roadmap to 2050" - contrary to what many wrongly assume - naturally needs to be acknowledged. The current EU decarbonation target for 2030 requires technologies, infrastructure and decarbonated energy sources that might become reality in the future but are not available in the short term.

No unilateral policies without considering the bigger picture
In parallel, the implementation of unilateral climate policies without ensuring the social and economic sustainability of the decarbonation pathway - contrary to what many wrongly assume - without any real possibility of significant short-term progress on decarbonation. This is not an increase in costs for European companies and, thus, a loss of international competitiveness.

1 An EU wide and ambitious industrial policy
A fundamental shift in the EU's approach is required for the industry to overcome the loss of competitiveness to global markets and maintain its production in Europe.

How can policy help?

- Re-define and promote medium to long term regulatory predictability and stability
- Introduce an industrial chapter in the 2040 EU climate target
- Develop strategies for green intensive industries that are mostly composed of SMEs
- Work on the simplification of administrative and reporting requirements, particularly for SMEs, and set up the structuring in mandatory time and cost-benefit for companies

2 Climate policy for manufacturing
The EU Emissions Trading System (ETS) is an effective driver of green innovation for the European ceramic sector. The required green energy is not yet available and whilst research is ongoing, several other measures will require time to be developed and tested. While the ceramic sector is recognised as being at risk of decarbonation, the current ETS system penalises best performers and does not provide any support for decarbonation.

How can policy help?

- Refine the ETS to incentivise growth in manufacturing while promoting decarbonation
- Continue to expand and strengthen carbon leakage protection
- Expand access to equivalent measures for small emitters (i.e. opt-out) to support SMEs
- Largely revise the EU ETS State Aid Guidelines to enable indirect cost compensation to sectors with the potential for decarbonation and eliminate penalties for overperformance
- Main Carbon Contracts for Difference (CCDFs) available to EU ceramic
- Do not restrict the scope of the Carbon Border Adjustment Mechanism (CBAM) to additional sectors without sectoral cost-benefit and a proper impact assessment
- Quarantine expert adjustments under the CBAM to allow EU producers to remain competitive in export markets
- Sanction obligated entities to make aggressive statements on EUSA
- Re-use EU wide carbon leakage measures for smaller installations under the new ETS 2
- Reduce the cost of decarbonation through sector specific funding for ceramic green transition projects

3 Energy resources and infrastructure for manufacturing
The sector needs to be able to access clean energy. However, green electricity or biogas are currently not available at competitive prices or do not have sufficient distribution networks and storage capacities in all EU Member States (as identified in the Ceramic Roadmap to 2050 - Continuing our path towards climate neutrality).

How can policy help?

- Provide secure access to green energy sources at competitive prices, and significantly increase the available quantities
- Guarantee equal access to green hydrogen for all end-users and support OPEX for on-site production
- Secure robust and reliable electricity grid capacity for industrial consumers
- Introduce new State Aid guidelines for the energy transition of green intensive sectors covering projects facilitating the electrification of installations and giving green intensive sectors access to decarbonated energy sources, including green electricity technologies
- Facilitate a genuine and effective single European energy market, including hydrogen and existing options such as natural gas, improving tariff barriers between Member States
- Improve the possibility, especially for SMEs, of access to Power Purchase Agreements (PPAs)
- Facilitate permitting process for green investments
- Quarantine a better crisis response mechanisms
- Avoid additional energy taxation for renewable technologies under the Energy Taxation Directive

4 Promote sustainable and affordable buildings
Ceramic construction materials are key for both new buildings and renovating the existing building stock. They are general to make buildings energy efficient, CO2 neutral, circular, long-lasting, healthy (both air quality and comfortable). Furthermore, they can ensure fire and flood protection, and noise housing affordable.

How can policy help?

- Re-use the experience of material-neutral policies for construction considering the full life cycle assessment at building level, including the long lifespan of ceramic construction materials which reduces maintenance as well as the durability of ceramic products for circular buildings
- Ensure a level playing field between new and reused products when it comes to technical performance, certification, and standards
- Promote long-lasting, resilient, and recyclable construction products, such as ceramic construction products for durable buildings (ceramic construction materials can have a lifespan of more than 100 years)
- Recycled materials from own production processes (i.e. a grinded scrap) as well as other material streams substituting primary raw materials should be considered as non-green raw materials and included in the definition of secondary raw materials

5 Environmental protection, health & safety and sustainable finance
By committing to using the Best Available Technologies to reduce all forms of pollution, European ceramics ensure the health and safety of our workers, customers and citizens.

How can policy help?

- Continue to improve the Best Available Techniques Reference Document (BAT) under the revised Industrial Emissions Directive with realistic emissions limit values
- Apply market-incentive for Recyclable Crystalline Silica (RCS) ensuring the health and safety of workers
- Issue a fit for industry REACH Revision notably by ensuring that the immediate definition can still be applied to industry
- Guarantee that the Ceramic floor contact material neutralisation safeguard measures and equipment protection by REACH research-backed limits
- Adapt recycling and collection systems to the waste streams and the quantity of waste available in a realistic way
- Simplify the access to sustainable finance with no having to invest in and the adoption of material criteria in SME financial systems
- Adopt a holistic and achievable EU Taxonomy Technical Screening Criteria to encourage sustainable practices in the industry
- Adapt harmonised EU end-of-waste criteria for ceramic construction products

6 Ensuring a level playing field through effective trade policy and a functioning internal market
To maintain the competitiveness of the industry, which in 2022 had a positive trade balance of €5.3bn, a stable, based international order remains crucial to ensure that all EU producers can benefit from a global level playing field.

How can policy help?

- Promote free trade by ensuring fair access to extra-EU markets by removing tariff and non-tariff barriers. Advance the EU-FTA agenda with long partners and diversify the source of critical raw materials
- Ensure fair trading practices by rapidly implementing trade defence measures to fight unfair trading practices in third countries
- Harmonise the internal market by improving the harmonization of packaging and labelling requirements in all EU Member States
- Keep "ambassador" high on the agenda, and restore the long-term practice of designating a "Trade Commissioner" and increase the resources in the DG Trade Trade Defence department to ensure that appropriate measures are implemented in a timely manner
- Introduce new trade instruments ensuring compliance of imports with EU quality, safety, environmental and social standards

7 Effective support for Research & Innovation for all ceramic producers
Access to European funds in R&I is becoming increasingly difficult for SME-focused and heterogeneous industrial sectors such as ceramics.

How can policy help?

- Designate dedicated funds reserved for specific industries such as ceramics
- Promote simplified application processes and easier access to EU funding programmes
- Increase funding for R&I projects above TRL5 more likely to lead to large-scale deployment
- Set realistic emission reduction requirements (under the ETS Innovation Fund) in open calls, since technologies needed to achieve the required goals are not yet available in the market

8 Skills for manufacturing
Automation is a climate-neutral, resilient economy can only be achieved by providing citizens with the necessary skill sets and qualifications for future job profiles.

How can policy help?

- Access to simplified funding opportunities to support the upskilling & reskilling
- Alignment between Academic curricula and skills requirements of EU manufacturing
- Stronger collaboration opportunities between industry, research & training institutions
- Positive communication and promotion of EU manufacturing industries to younger people

EUROPEAN PARLIAMENT CERAMICS FORUM - JOIN NOW!

The European Parliament Ceramics Forum (EPCF), which dates back to the 1994-1999 EP, is a cross-party discussion group whose aim is to facilitate dialogue between the European Institutions and the ceramic industry on all relevant policy developments. EPCF participants include Members of the European Parliament, officials from the European Commission, representatives from the European ceramic industry and trade unions.

For more information on how to become involved, please visit www.epcf.eu

EPCF
European Parliament Ceramics Forum

CERAMIC MANIFESTO

24-29

ENSURING EUROPE'S SUSTAINABILITY WITH CERAMIC MANUFACTURING

Cerameunie
The European Ceramic Industry Association

The ceramic industry faces numerous challenges



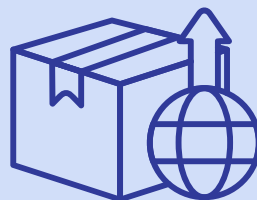
**HIGH COST OF
ENERGY**



**LACK OF
INTERNATIONAL LEVEL
PLAYING FIELD**



HIGH CAPITAL COSTS

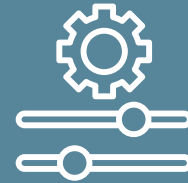


**CHALLENGING
EXPORTS**

Our 6 key policy priorities



ETS REVIEW



EXPORT ADJUSTMENTS & NO SCOPE
EXTENSION WITHOUT PROPER IMPACT
ASSESSMENT UNDER THE CBAM



MATERIAL-NEUTRAL POLICIES FOR
CONSTRUCTION



ACCESS TO GREEN ENERGY



A LEVEL PLAYING FIELD



A HARMONISED APPROACH

Climate policy for manufacturing

How can policy help?

- **Reform the ETS to incentivise growth** in manufacturing while promoting decarbonisation
- Guarantee continued and **strengthened carbon leakage protection**
- **Expand access to equivalent measures for small emitters** (i.e. opt-out) to **support SMEs**
- Urgently **review the EU ETS State Aid Guidelines** to enable indirect cost compensation to sectors with the potential for electrification and eliminate penalties for cogeneration
- Make Carbon Contracts for Difference (CCfDs) available to EU ceramics
- Do not extend the **scope of the Carbon Border Adjustment Mechanism (CBAM)** to additional sectors without **sectoral consultations and a proper impact assessment**
- **Guarantee export adjustments under the CBAM** to allow EU producers to remain competitive in export markets
- Ban non-obliged entities to make speculative manoeuvres on EUAs
- Reduce the cost burden of decarbonisation through **sector specific funding for ceramic green transition projects**



Climate policy for manufacturing

How can policy help?

- **Provide secure access to green energy sources at competitive prices**, and significantly increase the available quantities.
- Guarantee **equal access to green hydrogen** for all end-users and **support OPEX for on-site production**.
- Secure **robust and reliable electricity grid capacity** for industrial consumers **also in remote areas**.
- Introduce new **State Aid guidelines for the energy transition of gas-intensive sectors** (covering projects facilitating the electrification of installations and giving gas-intensive sectors access to decarbonised energy sources, including green electricity & technologies).
- Facilitate a **genuine and effective single European energy market**, including hydrogen and existing options such as natural gas, overcoming tariff barriers between Member States.
- Improve the possibility, especially for **SMEs, of access to Power Purchase Agreements**.
- Facilitate **permitting process** for green investments.
- Guarantee better crisis response mechanisms.
- **Avoid additional energy taxation for mineralogical processes** under the Energy Taxation Directive.



New legislative term - expectations

More focus on industrial competitiveness:

- Following **Mario Draghi Report** on the Future of EU Competitiveness
- Root causes of the competitiveness gap of the EU energy-intensive industries identified as:
 1. High **energy prices**
 2. High **emission costs**
 3. Relevant **investment** needs to decarbonize
 4. An **unlevel playing field** and complex regulation
 5. Untapped potential from **circularity**



Clean Industrial Deal – *first 100 days*



Teresa Ribera Rodríguez

Portfolio: Executive Vice-President for Clean, Just and Competitive Transition

More information

- [Biography](#)
- [Mission letter to Teresa Ribera Rodríguez](#)



Wopke Hoekstra

Portfolio: Commissioner for Climate, Net Zero and Clean Growth

More information

- [Biography](#)
- [Mission letter to Wopke Hoekstra](#)



Stéphane Séjourné

Portfolio: Executive Vice-President for Prosperity and Industrial Strategy

More information

- [Biography](#)
- [Mission letter to Stéphane Séjourné](#)



Dan Jørgensen

Portfolio: Commissioner for Energy and Housing

More information

- [Biography](#)
- [Mission letter to Dan Jørgensen](#)



Jessika Roswall

Portfolio: Commissioner for Environment, Water Resilience and a Competitive Circular Economy

More information

- [Biography](#)
- [Mission letter to Jessika Roswall](#)

Vielen Dank für Ihre Aufmerksamkeit!