Market-based instruments under the EU ‘Fit for 55’ package

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Roundtable on Climate Change and Sustainable Transition

Agenda

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- Overview of the ‘Fit for 55’ package
- Carbon pricing tools
  - ETS
  - Energy Taxation Directive (ETD)
  - EU Carbon Border Adjustment Mechanism (CBAM)
- Concluding remarks

Background

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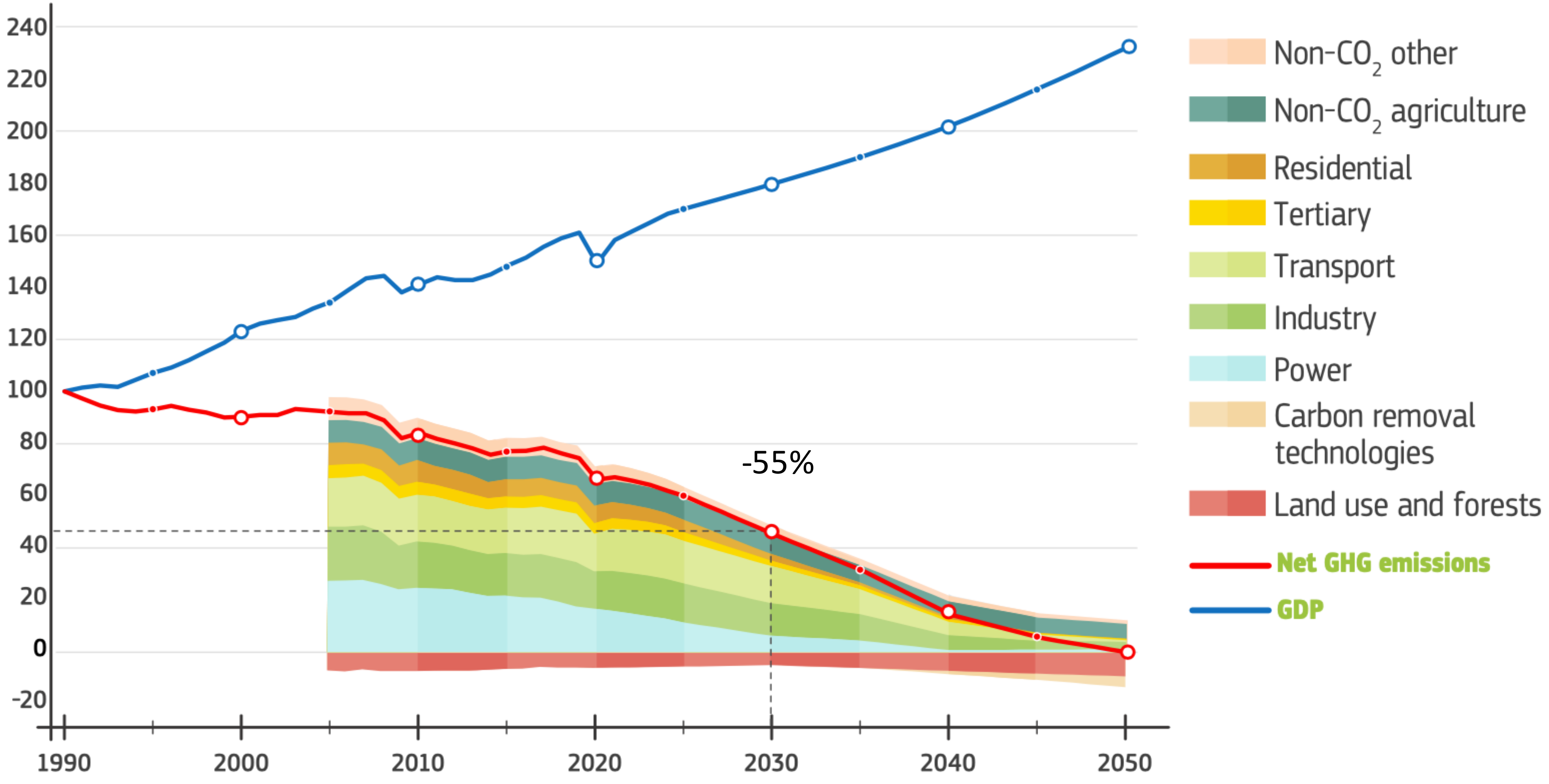
- Climate neutrality in the EU by 2050
- Intermediate target of an at least 55% net reduction in GHG emissions by 2030



Source: European Commission (2020), EU Climate Target Plan 2030 - Key contributors and policy tools

‘Fit for 55’ package

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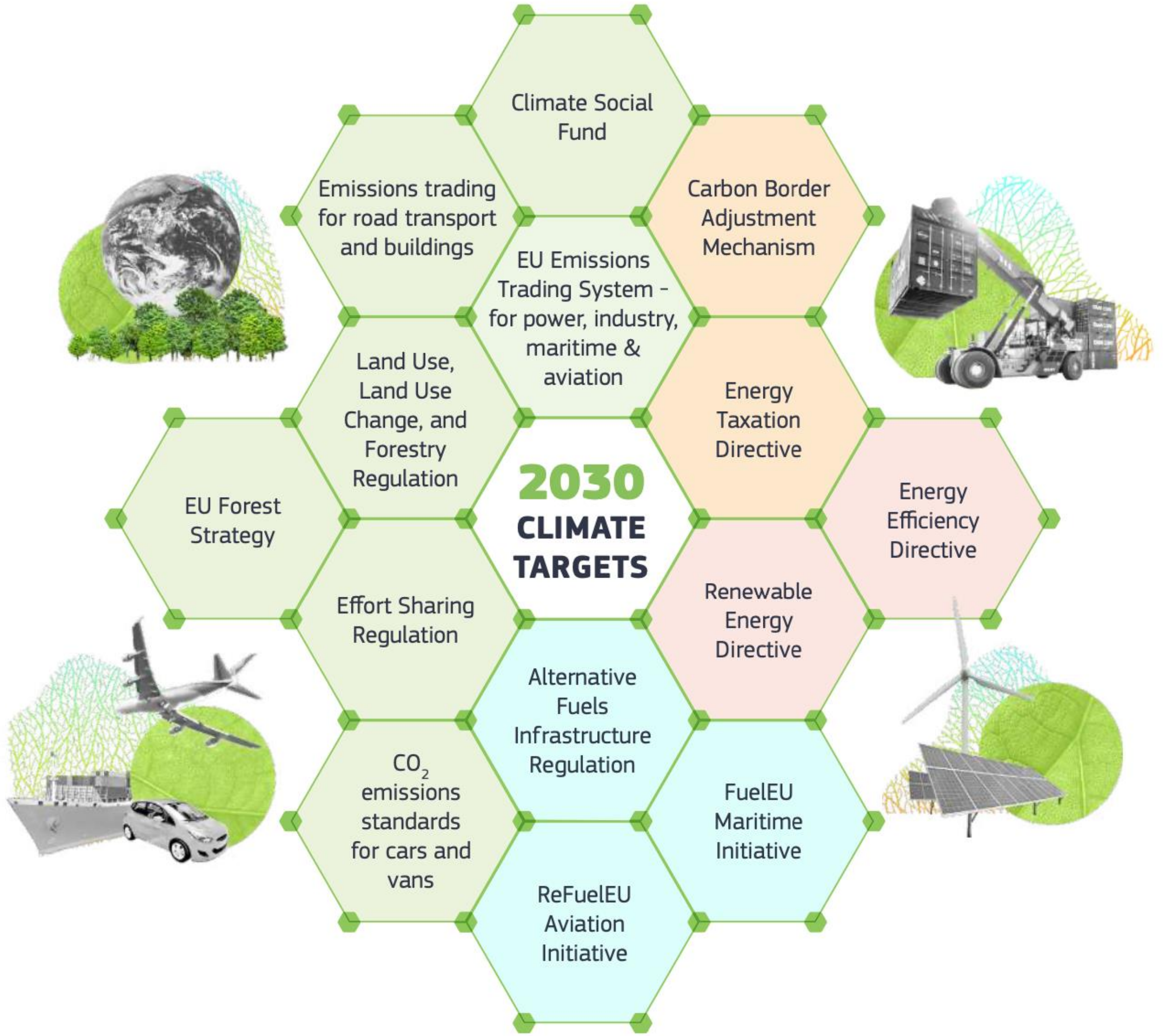
July 2021 package:

- Strengthens 8 existing pieces of legislation
- Presents 5 new initiatives

Additional initiatives expected December 2021:

- Reducing methane emissions in the energy sector
- Revision of the Energy Performance of Buildings Directive (EPBD)
- Revision of the Third Energy Package for gas to regulate competitive decarbonised gas markets



Source: European Commission (2021), ‘Fit for 55’ architecture factsheet

Fit for 55 – tools

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Carbon pricing

- EU ETS strengthening
- EU ETS extension to maritime
- New ETS for road transport and buildings
- Carbon Border Adjustment Mechanism
- Energy Taxation Directive

Ex-ante targets

- Higher EU-wide RES targets and sub-sector targets
- Higher EU-wide EE target and national targets (renovation and energy savings obligations)
- Effort Sharing Regulation / LULUCF

Rules & standards

- Stricter CO_2 standards for cars and vans
- GHG reduction target in transport
- Alternative fuels infrastructure
- Buildings performance standards (upcoming)

Funding and support measures

- Innovation and Modernisation Funds
- Carbon contracts for difference
- Social Climate Fund, Just Transition Fund, etc.
- MFF, Recovery Fund, etc

Fit for 55 - mapping of tools and sectors

<table>
<tr><th></th><th>Electricity</th><th>Industry</th><th>Buildings</th><th>Transport</th><th>Hydrogen</th><th>Removals and Land Use</th></tr>
<tr><td rowspan="3">Pricing</td><td></td><td colspan="5">Revision of the EU Emissions Trading System and establishment of a separate ETS for buildings and road transport</td><td></td></tr>
<tr><td></td><td></td><td colspan="4">Revision of the Energy Taxation Directive</td><td></td></tr>
<tr><td colspan="2">Proposal for a Carbon Border Adjustment Mechanism</td><td></td><td></td><td></td><td></td></tr>
<tr><td rowspan="4">Targets</td><td></td><td colspan="3">Revised Effort Sharing Regulation</td><td></td><td></td></tr>
<tr><td colspan="5">Revision of the Energy Efficiency Directive</td><td></td></tr>
<tr><td colspan="5">Revision of the Renewable Energy Directive</td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>Revision of the LULUCF</td></tr>
<tr><td rowspan="5">Rules</td><td></td><td></td><td></td><td colspan="2">Revision of CO_2 standards for cars and vans</td><td></td></tr>
<tr><td></td><td></td><td></td><td colspan="2">Revision of Alternative Fuels Infrastructure</td><td></td></tr>
<tr><td></td><td></td><td></td><td>ReFuelEU: Aviation</td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td colspan="2">ReFuelEU: Maritime</td><td></td></tr>
<tr><td colspan="2">Third Energy Package for Gas (Q4 2021)</td><td></td><td></td><td>Third Energy Package for Gas (Q4 2021)</td><td></td></tr>
<tr><td>Support & Financing</td><td></td><td></td><td colspan="2">Social Climate Fund</td><td></td><td></td></tr>
</table>

EU ETS strengthening

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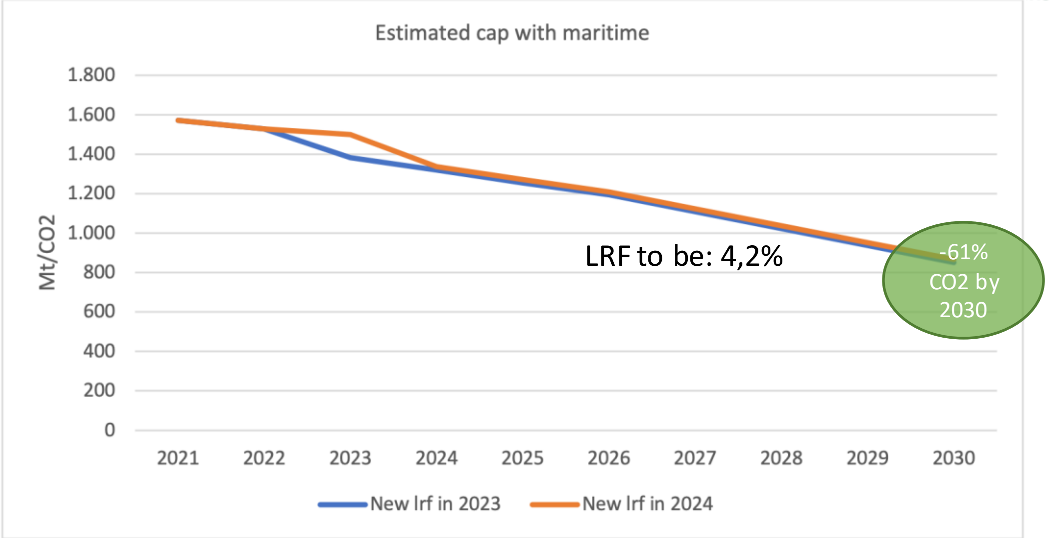
- Ambition
  - 61% emissions reduction target for EU ETS sectors by 2030 vs 2005 (up from 43%)
  - 4.2% linear reduction factor (LRF) (up from 2,2%) and rebase



Source: based on ERCST and BloombergNEF (2021), *The Commission proposal on the ETS review: a cool-headed assessment*

- Free allocation of allowances
  - Conditionality on implementation of measures recommended in energy audits
  - Gradual phase out the free emissions allowances for aviation sector (full auctioning by 2027)
  - Free allocation for CBAM sectors phased out by 2035
- ETS extension to maritime transport
  - ETS covers all emissions from intra-EU voyages, 50% from extra-EU voyages and at berth in an EU port
  - As of 2026 shipping companies will have to surrender 100% of their verified emissions (20% for 2023, 45% for 2024, 70% for 2025)

New ETS for road transport and buildings

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- New ETS for buildings and road transport to be established as a separate self-standing system (review in 2028 to assess feasibility of interlinking)
- The emissions cap will be set from 2026, alongside a LRF to reach 45% emissions reduction by 2030 vs. 2005
- A price-based cost-containment mechanism will avoid price spikes: a new and separate MSR as of 2027
- Point of regulation for this parallel ETS is established further upstream in the supply chain (fuel suppliers) rather than with emitters like in the traditional ETS
- The two sectors will still be covered by the Effort Sharing Regulation
- New Social Climate Fund to “address social impacts of the extension of emissions trading to road transport and buildings”.

ETS use of revenues / Funds

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MS use of ETS Revenues	• 100% of ETS revenues must be used for climate related purposes
Modernisation Fund *- supports lower income EU Member States in the clean energy transition by helping to modernise their energy systems and improve energy efficiency*	• Current Fund: 2% of allowances auctioned between 2021-2030 • New proposal: An additional 2.5% of the cap is auctioned to fund the transition in MS with below average GDP per capita in 2016-18 • The fund cannot finance investment in any type of fossil fuel
Innovation Fund *- supports innovation in low-carbon technologies and processes across all Member States*	• Current Fund: 450 million allowances between 2021-2030 • New proposal: + 50 million + 150 million from road transport and buildings + allowances freed up by CBAM • The scope of the fund includes support of project via carbon contracts for difference
Social Climate Fund (new) *- addresses social impacts of the extension of emissions trading to road transport and buildings*	• €72.2 billion for the period 2025-2032 to support European citizens most exposed to energy or mobility poverty. • Financed by the EU budget, using an amount equivalent to 25% of the expected revenues of emissions trading for building and road transport fuels.

Review of the Energy Taxation Directive (ETD)

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- Energy Taxation Directive (ETD) sets out rules and minimum excise duty rates for the taxation of energy products and electricity used as motor fuel and heating fuel
- Current rules in force since 2003
- Review objective : Making Energy Taxation Greener
- Key elements of the review:
    - **Revised minimum rates based on the energy content** (net calorific value) instead of volume; expressed in EUR/GJ
    - Differentiated minimum tax rates are set out with a ranking according to the **environmental performance** of the energy products
        - Higher rates for fossil fuels and lower rates for renewable products – decreasing the relative price advantage for fossil fuels
    - **End of exemptions** of intra-EU air and waterborne navigation
    - **Enlargement of the taxable base**: simplification to tackle derogations and reductions – widened scope to cover products not yet covered, new uses and sectors (maritime, industry, aviation, agriculture, fisheries, etc.).
    - Effect from Jan 2023 - transitional period 10 years

Review of the Energy Taxation Directive (ETD)

- Minimum rates established taking into acount the environmental performance of energy products and electricity:

<table>
<tr><th>Use</th><th>Conventional Fossil Fuels (Gas oil, Petrol), Non-sustainable biofuels</th><th colspan="2">Natural gas, LPG, non-renewable fuels of non-biological origin</th><th>Sustainable, but not advanced biofuels</th><th>Electricity, advanced sustainable biofuels and biogas, RFNBOs such as renewable hydrogen</th><th colspan="2">Low-carbon fuels, including low-carbon hydrogen</th></tr>
<tr><td></td><td>Reference rate</td><td>Start of 10-year transition (2/3 of reference rate)</td><td>End of 10-year transition (=100% of reference rate)</td><td>1/2 of reference rate</td><td>Lowest rate</td><td>10-year transition (lowest rate)</td><td>After 10-year transition period (=50% reference rate)</td></tr>
<tr><td>Motor fuel</td><td>EUR 10,75/GJ</td><td>EUR 7,17/GJ</td><td>EUR 10,75/GJ</td><td>EUR 5,38/GJ</td><td rowspan="2">EUR 0,15/GJ</td><td>EUR 0,15/GJ</td><td>EUR 5,38/GJ</td></tr>
<tr><td>Heating</td><td>EUR 0,9/GJ</td><td>EUR 0,6/GJ</td><td>EUR 0,9/GJ</td><td>EUR 0,45/GJ</td><td>EUR 0,15/GJ</td><td>EUR 0,45/GJ</td></tr>
</table>

- Possibility for Member States to exempt vulnerable and energy poor households from taxation on heating fuels and electricity.
- Reduced minimum rates for motor fuels (equivalent to rates for heating) used in:
  - Agriculture, horticulture, aquaculture, forestry, stationary motors, machinery used in construction, vehicles used off the public roadway
  - Shipping fuels, to limit the risk of ‘bunker evasion’
- Gradual introduction of tax for aviation fuel over a transitional period of 10 years.
- Sustainable and alternative fuels will enjoy a zero minimum tax rate for a transitional period of 10 years when used for air and waterborne navigation.

EU Carbon Border Adjustment Mechanism (CBAM)

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- Paris Agreement →
  - Continued asymmetry of climate efforts - NDC nationally determined
  - Paris Agreement objectives
    - Carbon neutrality
    - $1.5/2\ ^0C$
- European Green Deal
    - EU Climate Law and carbon neutrality
    - Increase 2030 level of ambition from -40% to -55%
    - EUA prices --- from EUR 5 to > EUR 50
- Aim:
    - Apply equivalent carbon costs between imports and products produced domestically (shadow ETS for covered goods)

EU CBAM design elements

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- CBAM decomposed into **9 key design elements** as identified in the ERCST report '*Border Carbon Adjustments in the EU Issues and Options*'*:

Nine design elements:

- Coverage of trade flows
- Policy mechanism
- Effect on free allocation
- Geographic scope
- Sector/product scope
- Emissions scope
- Determination of embedded emissions
- Calculation of adjustment
- Use of revenue

Five evaluative criteria

- Environmental benefit
- Competitiveness benefit
- Technical and administrative feasibility
- Legal feasibility
- Political and diplomatic feasibility

* ERCST (2020), Border Carbon Adjustments in the EU: Issues and Options, September 2020, https://ercst.org/border-carbon-adjustments-in-the-eu-issues-and-options/

Design element	Proposed design in EC proposal
Implementation timeline	▪ 2023-2025: transitional CBAM entailing no financial adjustments, but focused on monitoring and reporting ▪ 2026: Full implementation of the CBAM
Trade flow coverage	Only imports to the EU are covered. No export rebates, but free allocation of EU ETS allowances maintained (and gradually phased-out by 2035).
Policy mechanism	'Notional ETS' without a cap, whereby importers of covered products have to surrender CBAM certificates (priced on the basis of EU ETS allowances) equal to the embedded emissions in their imports.
Effect on free allocation of EU ETS allowances	The CBAM is put forward as an alternative to free allocation of EU ETS allowances in the covered sectors, and would thus replace free allocation over time. To allow producers, importers and traders to adjust, the reduction of free allocation will be implemented gradually over a 10-year transition period while the CBAM is phased-in. During the period when free allocation is maintained, the CBAM will only apply to those emissions above the free allocation received by domestic producers.
Geographical scope / exemptions	Countries that are part of or linked to the EU ETS (currently Iceland, Liechtenstein, Norway and Switzerland) are exempted. Additional exemptions may be provided for imports of electricity from countries that fulfill certain conditions.
Sectoral/product scope:	Five sectors are to be covered initially: cement, steel, electricity, aluminium, fertilizers. Covered products within these sectors include both 'simple' goods (i.e. primary materials) and more 'complex' goods (i.e. semi-manufactured goods that use primary materials as inputs). The European Commission can add products /sectors to the list through delegated acts.
Emissions scope	Only direct emissions (Scope 1) are covered, including emissions attributed to covered goods and those embedded in input goods deemed to be within the system boundaries of the production process . Indirect emissions from electricity (Scope 2) are not covered, though a review will make recommendations in 2026 on whether to include these going forward.

Design element	Proposed design in EC proposal	
Determination of embedded emissions	For products: ▪ Based on actual emissions at installation level verified by accredited verifiers, with fallback default values set at the average emission intensity of each exporting country for each good, increased by a mark-up (tbd by implementing acts). ▪ When reliable data for the exporting country cannot be applied for a type of goods, the default values shall be based on the average emission intensity of the 10 per cent worst performing EU installations for that type of goods. ▪ During the initial transitional phase (2023-2025), where importers may not yet be able to produce the data required on actual emissions, default values could also apply.	For electricity: ▪ Based on third country-specific default values that correspond to average CO_2 emission factor in tonnes of CO_2 per MWh of price- setting sources in the third country ▪ Where third country-specific default values have not been determined, the calculation will be based on a default value set at the average CO_2 intensity of electricity produced by fossil fuels in the EU. ▪ A different (lower) default value can be established for a a country that demonstrates, based on reliable data, that the average CO_2e emissions factor of price-setting sources in the country is lower than the default value that represents the CO_2 emissions factor from EU fossil-based generation. ▪ If a set of certain conditions are collectively met (e.g. declarant has concluded a power purchase agreement with a producer of electricity located in a third country), a declarant can opt for declaring actual emissions.
Level of adjustment (CO_2 price):	Level of adjustment to mirror the avg. auction price of EU ETS allowances each week. Crediting of policies in country of origin will recognize explicit carbon pricing policies (a carbon tax or ETS), with prices paid deducted from CBAM.	
Use of revenues	The CBAM will not generate revenue in the transitional period from 2023 to 2025. Revenue generated as of 2026 will be collected nationally by competent authorities, and the intent is that most of it will accrue to the EU budget. No mention of earmarking of revenues for specific purposes (e.g. for climate purposes domestically or abroad).	

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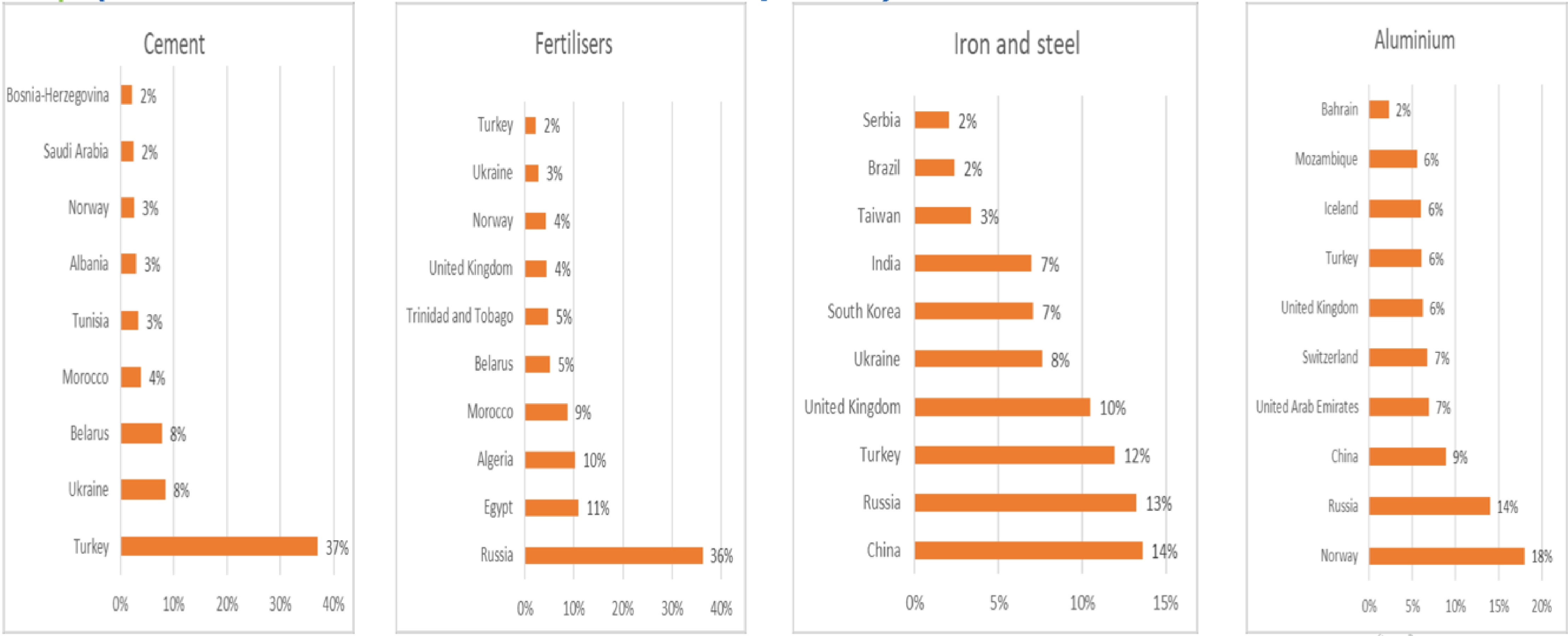
EU CBAM impact on third countries

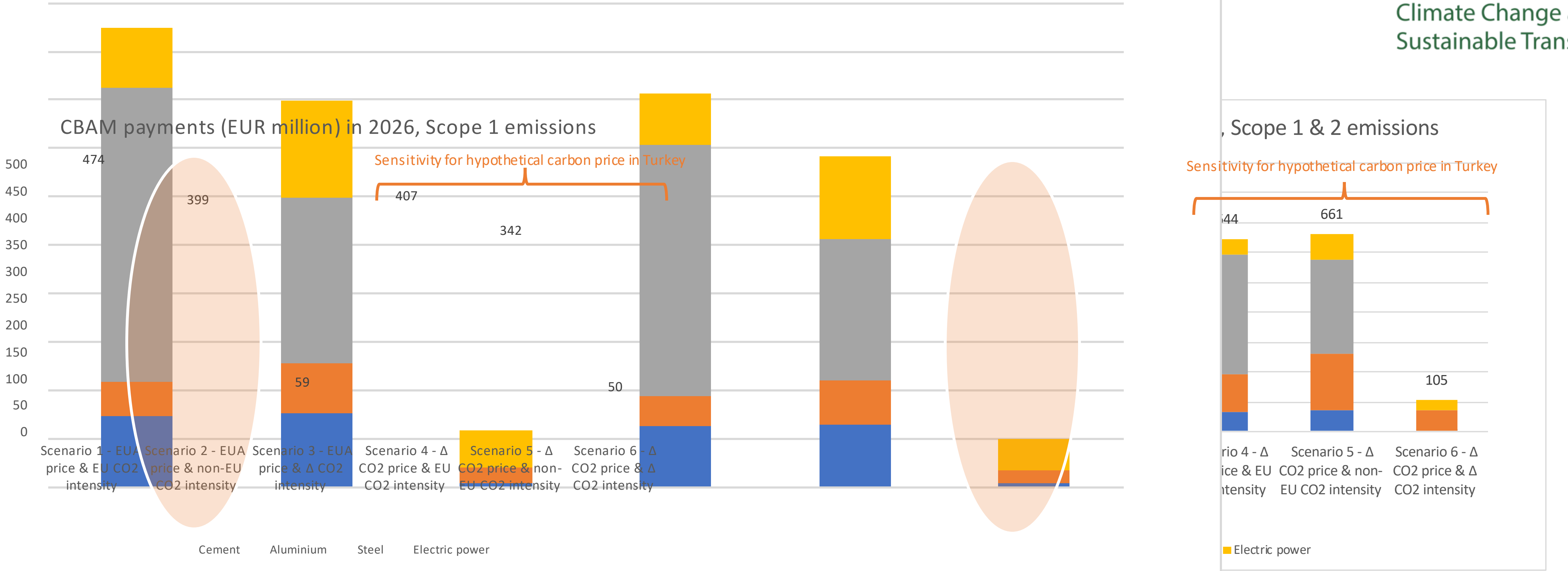
Top 10 exporters in 4 of the sectors (except electricity)
(share of total volume of imports)



**Excluded as Norway is under the ETS*

European Commission

Source: European Commission



Source: ERCST, July 2021. *Implications of EU Carbon Border Adjustment Mechanism for Turkey*. Study supported by EBRD

CBAM "bill" at the border for the four sectors of electricity, cement, steel and aluminium:

- EUR 399 million in 2026 if CBAM covers Scope 1 emissions (Scenario 2)
- EUR 771 million in 2026 if CBAM covers Scope 1 & 2 emissions (Scenario 2)

EU CBAM proposal evaluation (1)

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- The CBAM as proposed is **pragmatic** – a sensible approach given the political and economic challenges facing the EU.
- CBAM seems to have already achieved **success** in one metric: it **got the attention of many trade partners** especially of those most affected in the EU neighbourhood. But that **may also be its main intention** and impact.
- **Timeline** (transition phase and then gradual CBAM phase-in over ten years) **buys the EU and its trade partners time**
- Pragmatic and gradual CBAM can be deemed to be justified and appropriate but is **misaligned with the "hard" ambition expressed by EU climate policy (EGD and the Climate Law both demand ambition)**

In the longer term, the CBAM will have to offer **convincing solutions to deferred/unaddressed issues** in the proposal**:**

- **The lack of provisions for recognizing non-price-based foreign climate policies** risks alienating allies and **seems to be misaligned with the bottom-up approach** that is the hallmark **of the Paris Agreement**.
- Partly out of concern of violating WTO disciplines, the CBAM proposal provides **no protection for European exports**.
- By initially excluding **indirect emissions**, the proposal avoids addressing the **challenge of tackling indirect carbon costs**, which differ from indirect emissions. Inclusion of indirect emissions is likely to be considered after the CBAM review;

***Sources**:

- ERCST, September 2021. *EU CBAM Brief for Policy Makers*
- ERCST, September 2021. *ERCST Guide to the EU CBAM*

EU CBAM proposal evaluation (2)

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- "**How to spend it**" is a very real issue in the debate. The EU should give serious consideration to **directing** a significant portion of **revenues from the CBAM back to affected developing country** producers or governments, given the legitimate concerns about impacts on producers in low-income countries.
  - That applies even more since the proposal sets out **no exemptions for Least-Developed Countries (LDCs)**. Any blanket exemption creates real risks of perverse strategic shifts in trade patterns and trans-shipment. The principle of common but differentiated responsibilities and respective capabilities **(CBDR-RC) is a legitimate concern** that should be **addressed through revenue sharing**.
- Some of the most critical challenges will probably have to be addressed in parallel policies outside the CBAM

***Sources**:

- ERCST, September 2021. *EU CBAM Brief for Policy Makers*
- ERCST, September 2021. *ERCST Guide to the EU CBAM*

Concluding remarks

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- The ‘Fit for 55’ package is a comprehensive mix of different policy tools to enable the EU to meet its decarbonisation ambition in 2030.
- The package has been crafted to create the right balance of policy measures and revenues to drive the transformation. Changing the weight of one tool inevitably has knock-on effects on several others.
- Tools cover a range of sectors (electricity, industry, transport, buildings, land use and forestry); mix of tools for any given sector.
- Carbon pricing remains at the centre of the decarbonisation strategy of the EU
- Complentary targets, rules and suport measures are key to tackle barriers to decarbonisation in fragmented sectors, to promote investment in specific low-carbon technologies, and to tackle social impacts

Thank you

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