

## Just how fit is the EU's Fit for 55 climate strategy for Europe's economy?

Fit for 55 is the European Commission's package of measures to make sure it hits its climate targets. We don't think economies will be impacted particularly strongly over the medium term. But as the EU turns its back on fossil fuels, some sectors could face major disruption

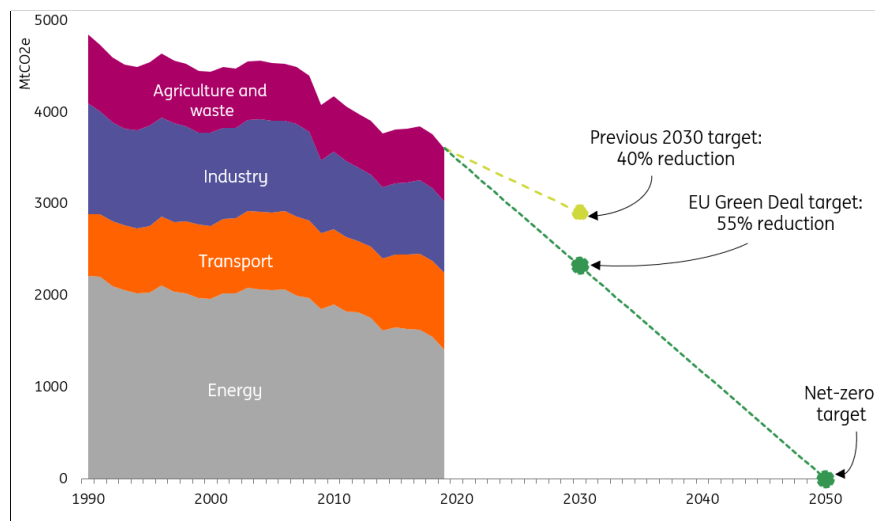


Fit for 55 is the European Commission's new target to cut greenhouse gas emissions by at least 55% by 2030, instead of the previous 40% target

### Unpacking the Fit for 55 package

Fit for 55 is the European Commission's legislative tool to make the ['European Green Deal'](#) a reality. It targets cutting greenhouse gas emissions by at least 55% by 2030 (compared to 1990 levels), instead of the previous 40% target. With Fit for 55, the European Union is the first major economy to move from setting climate targets to planning climate action.

## EU-27 historic emissions by sector, projection and targets



Source: ING Research, European Environment Agency

The package contains a dozen proposals (which can be found [here](#)) to overhaul energy legislation, introduce new technical standards, and push through minimum carbon taxation at the national level. Essentially, the package aims to push the cost of carbon higher, whether through direct pricing via carbon taxation and the emissions trading system (ETS) or implicit pricing via regulation.

Several of these new propositions focus on the residential and transportation sectors, which makes sense since the EU's climate policy has [historically](#) predominantly focused on decarbonising the power and industrial sectors.

## Key proposals included in the Fit for 55 package

<b>Increased targets</b>
<ul style="list-style-type: none"> <li>• New emissions targets for sectors not covered by the EU ETS</li> <li>• Increased renewable energy targets</li> <li>• Increased energy efficiency targets</li> </ul>
<b>Price reforms</b>
<ul style="list-style-type: none"> <li>• Changes to carbon pricing: EU ETS Directive</li> <li>• Proposal for a carbon border adjustment mechanism (CBAM)</li> <li>• Changes to the Energy Taxation Directive</li> </ul>
<b>Regulatory reforms (new standards)</b>
<ul style="list-style-type: none"> <li>• CO<sub>2</sub> standards for cars and vans</li> <li>• Deployment of alternative fuels infrastructure</li> <li>• Changes to the Energy Efficiency Directive and Energy Buildings Directive</li> <li>• Changes to Renewable Energy Directive</li> </ul>

Source: ING Research, BNEF

## What's new for carbon in Europe

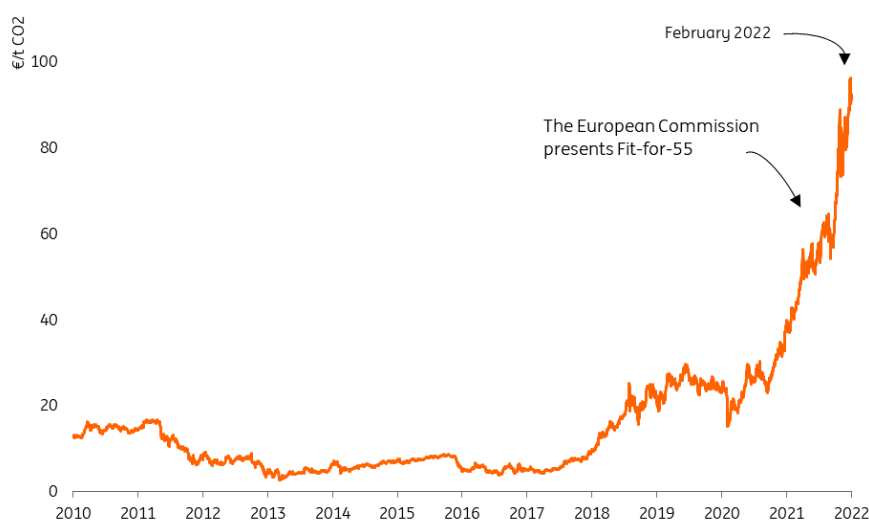
The current ETS has been in place since 2005. It is a cap-and-trade scheme, a cost-efficient form of carbon pricing. According to the [European Commission](#), the scheme has led to a large reduction in emissions since it was introduced. However, the scheme's coverage only concerns the power

sector and energy-intensive heavy industries (cement, iron and steel, aluminium, fertiliser, etc.), accounting for about 40% of EU emissions.

As part of the Fit for 55 package, the European Commission announced that it would create a new ETS for two sectors: road transport and building heating, which account for a total of 40% of all EU emissions. Carbon prices have already tripled in 2021 to around €90 per ton CO<sub>2</sub>, [making the business case for green technologies viable and fastening the transition](#), such as carbon capture and storage (CCS). We have already unravelled the economics of carbon pricing as an efficient instrument against climate change in a [series of articles](#).

## Europe's carbon price tripled in 2021 to €90 per ton CO<sub>2</sub>

European carbon price in mandatory EU ETS market, in €/CO<sub>2</sub>



Source: ING Research, Refinitiv Datastream

Due to its impact on the competitiveness of EU industries, the European Commission also proposed to implement a green tariff on goods entering the EU to [level up the playing field](#) with the rest of the world on carbon pricing and to limit the risk of carbon leakages. The so-called carbon border adjustment Mechanism (CBAM) should come into force fully in 2026, after reporting only a three-year transition period. [In a previous study](#), we already concluded that the current EU ETS price level at around €100 per ton CO<sub>2</sub> particularly affects rubber and plastic production and base metals manufacturers' competitiveness in their domestic markets relative to foreign producers. High carbon prices without an international level playing field could motivate these industries to move production out of the EU.

According to the [European Commission](#), revenues from emission trading would generate about €12bn per year on average between 2026-30 for the EU budget. The carbon border levy (CBAM) would generate another €1bn per year between 2026-2030 for the EU budget. Overall, both schemes would raise the EU budget by 1.2% by 2030.

## The EU carbon strategy relies on reforming the EU ETS and introducing a carbon border levy

Summary of the key changes and expected impacts induced by the new EU carbon strategy

<p><b>EU Emission Trading System</b></p> <ul style="list-style-type: none"> <li>• Sectors covered face an overall target of 61% reduction (vs previous 43% compared to 2005)</li> <li>• Reducing the cap with a one-off rebasing and increase annual linear reduction factor to 4.2%</li> <li>• Expand to shipping from 2023 (progressively, full force by 2026) and create new ETS market for buildings and transport from 2026</li> <li>• Phase out free allocation by 2036</li> </ul>	<p>Increased targets</p>	<ul style="list-style-type: none"> <li>• Tighter cap guarantees emissions reduction and fuels the price of carbon</li> <li>• Extending the sector coverage forces more cost-efficient emissions reductions overall</li> <li>• Phasing out free allowances leads to more industrial abatement</li> <li>• The Commission <i>estimates</i> the share of energy expenditures in household's income to rise by about 1 point of percentage by 2030. <i>Potentially regressive</i> impact but depends of how generated revenues are redistributed</li> </ul>
<p><b>Carbon border adjustment (CBAM)</b></p> <ul style="list-style-type: none"> <li>• Introduction of a CBAM from 2026 (transition period starting in 2023): charging the carbon content of import to mirror domestic carbon pricing</li> <li>• CBAM focus on carbon-intensive industries: cement, iron and steel, aluminum, fertilizer and power initially</li> </ul>	<p>Regulatory reforms</p>	<p>Price reforms</p> <ul style="list-style-type: none"> <li>• Replacing free allocation by CBAM means increase market demand and fuels price</li> <li>• Aim is to preserve the competitiveness of EU industries</li> <li>• Achieves negative carbon leakages rates by 2030 (emissions not only reduced in the EU but also in rest of the world)</li> <li>• Preliminary results show Russia, China and Turkey as most affected</li> </ul>

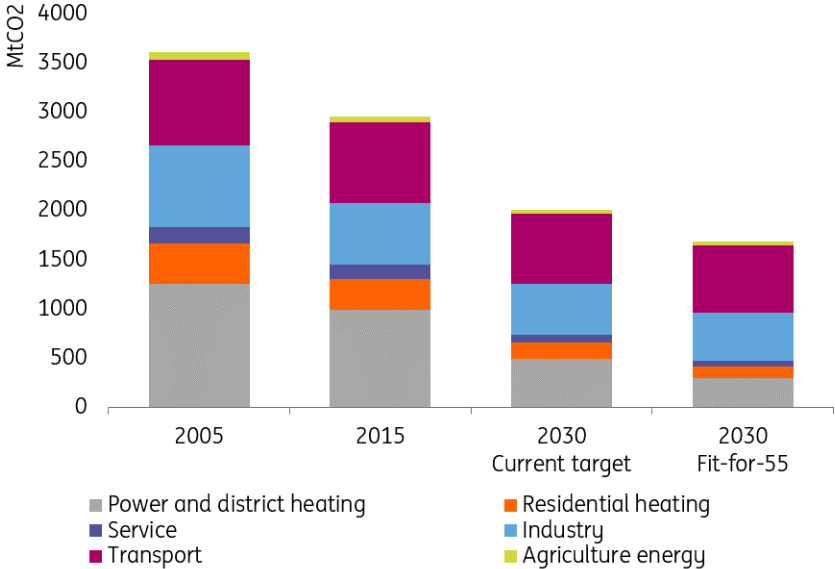
Source: ING Research, BNEF

## Fit for 55 is likely to have a broadly neutral macro impact on GDP and employment

Should the Fit for 55 be fully implemented, the EU as a whole would be on track to achieve carbon neutrality by 2050. The European Commission *designed* Fit for 55 to target a reduction of more than 60% of greenhouse gas emissions for power generation and residential heating by 2030 compared to 2015. Alongside carbon pricing, the Commission has set ambitious proposals to further roll-out renewable energies and building renovation by 2030. For example, it will require the public sector to renovate 3% of its buildings each year to drive the renovation wave – to compare with the current 1% for the overall building stock.

# Power generation and residential heating would achieve a total reduction of more than 60% of emissions by 2030 (vs 2015)

Sectoral greenhouse gas emissions reductions from the energy system, current vs new target



Source: ING Research, European Commission

We have summarised four recent empirical articles on the impact of carbon pricing on the growth rates of gross domestic product (GDP) and employment, see overview below. None of the articles below could find empirical evidence supporting the view that carbon taxes are job or growth killers, but several highlighted the sectoral discrepancies and potential regressive impacts on low-income households and microenterprises.

## A growing carbon empirical literature finds no robust negative effects of carbon pricing on GDP growth and overall employment

Carbon price	Assumption & methodology	Summary of findings	GDP impact	Employment impact
<b>Yamazaki (2017), Jobs and climate policy: Evidence from British Columbia's revenue-neutral carbon tax</b>				
20\$/tCO <sub>2</sub>	<ul style="list-style-type: none"> <li>Focus on British Columbia's carbon tax (Canada): broad-based tax on fossil fuels.</li> <li>Difference-in-difference regressions. Annual data panel over 2007-2013.</li> <li>Higher carbon prices impacts labor through three mechanisms: output effect (-); redistribution effect (+); (3) factor substitution effect (uncertain, left out of analysis)</li> </ul>	<ul style="list-style-type: none"> <li>Modest but positive impact on employment with output effect dampening employment while redistribution effect enhance employment.</li> <li>Employment declines in emission-intensive and trade-exposed industries while employment rises in clean service industries</li> <li>Employment impacts differs across sectors due to differences in the output effect and redistribution effect of the tax</li> </ul>	Out of scope	Modest positive impact*
<b>Bernard &amp; al (2018), Effects of British Columbia's Carbon Tax on GDP</b>				
20\$/tCO <sub>2</sub>	<ul style="list-style-type: none"> <li>Focus on British Columbia's carbon tax (Canada): broad-based tax on fossil fuels</li> <li>VAR framework. Test whether gasoline and diesel carbon taxes had any impact on GDP changes of the province, either positive or negative</li> <li>All revenues from carbon tax fully returned to individuals and businesses (lower income tax rates and subsidies to low income earners)</li> </ul>	<ul style="list-style-type: none"> <li>No statistically significant effect of carbon taxes on GDP change</li> <li>No evidence of asymmetry in the price impact</li> <li>Over time there is complete pass-through of B.C. gasoline and diesel carbon taxes onto prices paid by consumers</li> </ul>	No adverse GDP impact	Out of scope
<b>Metcalfe &amp; Stock (2020), Measuring the Macroeconomic Impact of Carbon Taxes</b>				
40\$/tCO <sub>2</sub>	<ul style="list-style-type: none"> <li>Dataset of 31 countries part of the EU ETS over 1985-2018</li> <li>Carbon pricing covers 30% of emissions</li> <li>Caveat: mix of countries with already substantial carbon tax rates with those with very low levels &amp; not controlling for trade interactions (carbon leakages)</li> </ul>	<ul style="list-style-type: none"> <li>Employment initially rises and then subsequently falls</li> <li>No robust evidence of a negative effect of the tax on the growth rates of GDP or employment</li> </ul>	No adverse GDP impact	No adverse employment impact
<b>Metcalfe &amp; Stock (2020), The macroeconomic impact of Europe's carbon taxes</b>				
40\$/tCO <sub>2</sub>	<ul style="list-style-type: none"> <li>Further builds on Metcalfe &amp; Stock (2020) to investigate the impact of a carbon tax on emission reduction</li> <li>Seek for European evidences before discussing feasibility in the US</li> </ul>	<ul style="list-style-type: none"> <li>Zero to modest positive impact on GDP and total employment growth rates. But not always statistically significant.</li> <li>Employment initially rises and then subsequently falls</li> <li>Cumulative emission reduction around 4-6% over period</li> </ul>	No adverse GDP impact	Modest positive impact**
*4.5% increase over six year period, but larger decrease in wage rate in the meantime, ** between 0.35-1.15 point of % cumulative impact over six year period (depending on the hypothesis)				

Source: ING Research

Other results, based on the [example of Spain](#), further show that what governments do with carbon revenues ultimately shapes the response of the economy to the energy transition. This is something that the European Commission intends to address through the creation of a [Social Climate Fund](#) to recycle carbon revenues. In practice, it will be up to the Member States to design policy plans to use the fund's money (i.e. lowering labour taxes, lump-sum redistribution to households, reducing public deficit etc.), so that macroeconomic response could vary across countries.

The simulation released as part of the European Commission's [impact assessment](#) suggests that the impact of the Fit for 55 package on both GDP and employment is negligible. Investments from companies and governments should broadly benefit from the transition over the next decade and fuel short term demand. Three hypotheses to fund capital expenditures could unfold: (1) reallocation of expenditures from consumption to investment, (2) borrowing additional capital without crowding out consumption, and (3) fewer fossil fuel capital expenditures offset greener capital formation. However, in the short term, transition shocks might occur and country by country differences could be large, depending on the dependence on fossil fuels, the structure of demand and the vulnerability of households and small businesses.

In the best-case scenario, the EU could avoid the long-term [costs associated with increased](#)

[physical risks of climate change](#), but this of course depends on the willingness of other countries to act in a comprehensive and coordinated way.

## Fossil fuel extraction industries to suffer the most, starting with coal

The required shift in investment patterns and the evolution of output will have lasting impacts on the composition of GDP and employment, with more negative repercussions in some sectors than others.

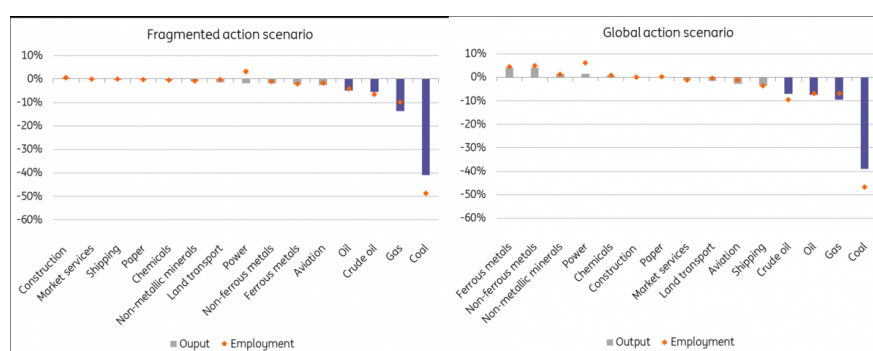
In this regard, the European Commission’s [impact assessment](#) provides two important conclusions, echoing those of the literature: (1) global coordination is key to maximise the benefits of the transition (notwithstanding the way that carbon revenues are recycled) and (2) the higher the openness of a sector to trade and the higher its carbon intensity, the larger the impact tends to be.

As expected, energy-intensive and internationally traded goods would suffer the most from the implementation of Fit for 55 under a scenario where other regions of the world don’t follow the EU’s climate lead, particularly fossil fuel extraction subsectors with coal losing more than 40% of its added value by 2030 compared to business-as-usual.

In terms of employment, the construction and the power sectors are likely to gain most from a higher level of climate ambition, given that the switch to renewable energies and the need to increase energy efficiency in buildings tend to be labour intensive. But expect labour frictions along the way related to the ability of the labour market to match demand and supply and to the capacity of the training/educational system to adapt to higher labour mobility needs (across regions, skillsets and sectors).

## The higher the openness to trade of the sector and the carbon intensity, the larger the output and employment impacts should be

Average impact of -55% GHG reduction on EU sectoral output and employment by 2030 (deviation from baseline, %)



Source: ING Research, European Commission

Not all EU countries will be affected in the same way. The countries most dependent on fossil fuels for power production, building heating or heavy industry will logically be the most exposed to

losses in value. For employment, countries with an ageing and poorly-insulated building stock, such as Belgium, France and the Netherlands, could benefit from labour needs for building retrofit.

## Green energy, transportation and buildings channel the investment wave

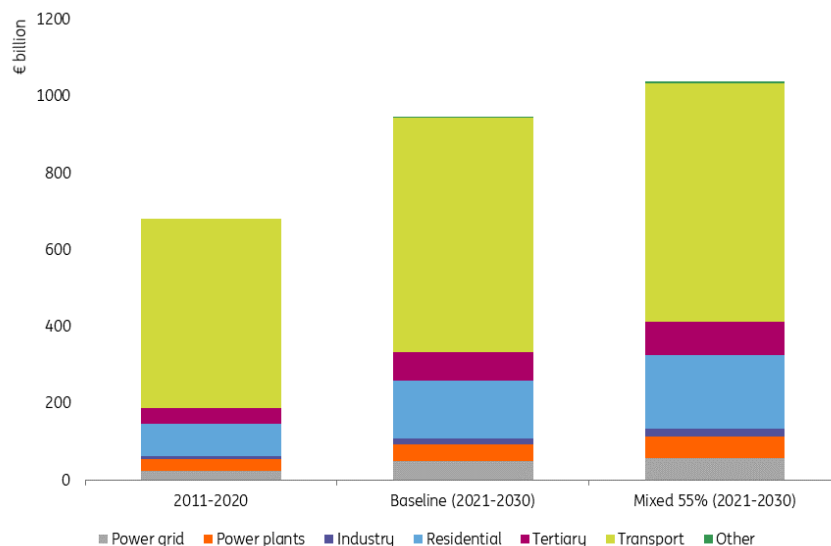
On the other hand, the decarbonisation of the economy would imply significant investments in electricity supply, energy-efficient buildings and low-carbon mobility solutions – investment themes that were already at the core of [EU's recovery plan](#).

According to the European Commission, roughly a third of additional investment needs are in car replacement, compared to the previous decade. The same goes on for residential energy efficiency needs. Meaning additional annual investments in building and transportation should reach €360bn on average starting now (i.e. 2 percentage points of EU GDP) to raise relevant investments from €683bn per year in the last decade to more than €1tr in the next one.

Overall, Fit for 55 has the potential to trigger the reallocation of resources necessary for the transition, shifting capital away from the fossil fuel sector to green investments solutions in transportation, power supply and the building sectors.

## Two-thirds of additional investment needs are in the transportation and residential sectors

Average annual investment needs to achieve Fit for 55 target



Source: ING Research, European Commission

## What are the next steps and can we expect this package to be passed?

Details of each proposal will be fiercely negotiated in parallel at the European Parliament and between EU countries within the European Council. Both the European Parliament and the European Council must jointly approve the plan. The ultimate deadline for the entire package to be



adopted is before the next European Parliament elections in May 2024, but some proposals could be passed before given the stringent emissions reduction schedule. [Some countries](#) have already voiced their concerns, particularly over the risks that a second ETS for road transport and building heating would worsen the social challenges associated with the energy transition. A watering down of the current proposal is therefore not unlikely.

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