Institute for Energy Economics and Financial Analysis

Carbon pricing in the EU

Higher prices are needed to account for the real cost of carbon to the global economy.

Fact Sheet

The European Union's (EU) Emissions Trading System (ETS) is central to the bloc's efforts to combat climate change, forcing polluters to decarbonise or pay for their greenhouse gas emissions. An expansion of the scheme by 2030 will cover 75% of EU emissions.

The EU is a global leader in carbon pricing. But despite **EU carbon prices** being the **highest in the world**, they are **still too low** to account for the real cost of carbon to the economy. **Weak prices are reducing ETS revenues** that can be channelled to finance the energy transition.

What is carbon pricing?

NET ZERO

An important policy tool that helps countries meet their **net-zero commitments.**

Creates a **financial incentive** for businesses to **curb emissions** by **raising funds** from polluters.

The revenue can then be used to **boost lower-carbon solutions** and **enable a fairer transition.**

This tool applies the "**polluter pays**" principle, which was first introduced by the Organisation for Economic Co-operation and Development (OECD) in 1972 and later inscribed into the Treaty on the Functioning of the European Union. The principle dictates that **the costs of pollution are borne by those causing it, rather than the person or wider community that suffers the effect of environmental damage.**

Existing EU carbon pricing schemes

ETS

Applies to all EU27 member states, plus Norway, Iceland and Liechtenstein. It is linked to Switzerland's ETS.

In 2022, the ETS covered 38% of the EU's greenhouse gas emissions—approximately 2.7% of global emissions.

An expanded scheme called ETS 2 will be launched in 2027 to include emissions from buildings, transport and marine sectors. By 2030, the ETS could almost double in size to cover 75% of the bloc's emissions. This expansion was one of several key pieces of legislation that were introduced in 2023 as part of the EU "Fit for 55" package.

Carbon Border Adjustment Mechanism (CBAM)

Applies to EU trading partners.

Now in its transitional phase, the CBAM will start applying a price per tonne of carbon from 2026, when imports of cement, iron and steel, aluminium, fertilisers, electricity and hydrogen will be liable for EU carbon pricing.

This will have the twofold effect of **protecting EU producers** from potentially cheaper imports from territories with lax climate policies and **encouraging jurisdictions outside the EU** to lower carbon emissions.

Current carbon pricing levels do not reflect the actual costs of climate change and are too low to cover the costs of emissions on society.

Revenues from carbon pricing globally are nearing US$100 billion—but they account for only about 1% of the global cost to society of these emissions.

Higher prices are needed in the near term to drive further investment into clean technologies and help meet net-zero goals.

The EU is working to encourage trading partners to introduce carbon pricing mechanisms and lower emissions through the CBAM.

Revenues from carbon pricing schemes will continue increasing to become more aligned with the true cost of emissions.

Many academic studies have sought to estimate the true cost of emissions, with recent analyses suggesting a range between US$125 and US$300 per tonne of carbon dioxide equivalent.

According to the International Energy Agency (IEA), carbon prices in OECD economies are expected to increase to US$140 per tonne by 2030 before rising by 79% to US$250 per tonne by 2050.

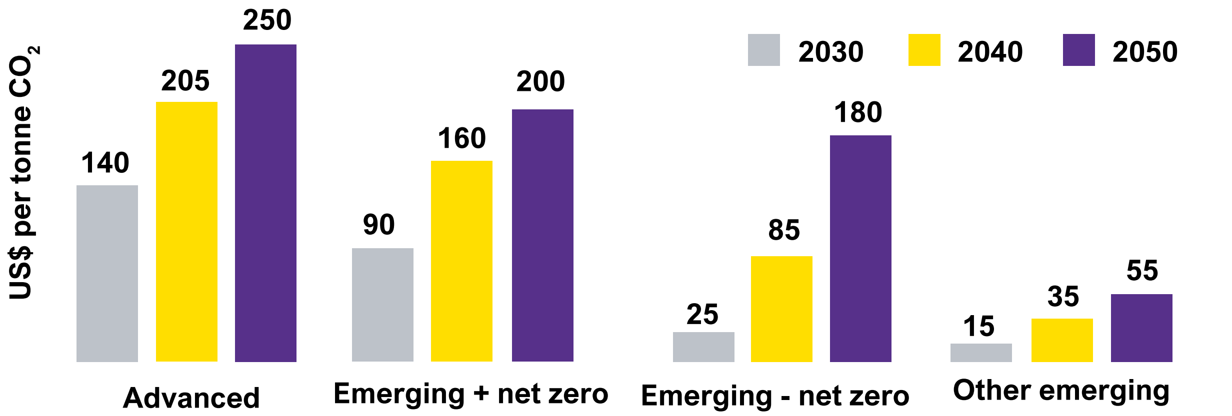
The London Stock Exchange Group predicts that **the cost of the ETS could increase beyond €400 per tonne** of carbon dioxide equivalent **by 2040** as the EU seeks to reduce emissions by 90% by that date.

According to the IEA, "advanced" or OECD countries will likely pay higher prices for emissions reduction relative to other emerging countries with or without net-zero policies.

This is due to the principle of common but differentiated responsibilities in relation to climate change, which states that countries that bear the most responsibility and have the greatest resources should shoulder more of the cost burden.

There is an ongoing debate on whether the EU CBAM undermines the principle of common but differentiated responsibilities. CBAM currently mandates that starting from 2026, all EU trading partners will pay the same carbon price as EU manufacturers, with no distinction between advanced or OECD and emerging economies.

Carbon (CO_2) Prices for Electricity, Industry and Energy Production in Selected Regions for the Net-Zero-By-2050 Scenario



Source: International Energy Agency, Global Energy and Climate Model 2023 Key Input Data

Read the report: [Carbon Pricing: Governments Increasingly Make Polluters Pay for Climate Change]