

What does the IPCC say about carbon pricing?

Answer: In its 2022 report, the IPCC confirms that carbon pricing is effective when it comes to decreasing greenhouse gas emissions.

"There is abundant evidence that carbon pricing policies reduce emissions."
[1]

"Among the wide range of climate policy instruments, pricing carbon such as a carbon tax or an emissions trading system has been one of the most widely used and effective options to reduce GHG emissions (robust evidence, high agreement)." [2]

The IPCC also highlights the fact that countries should implement more ambitious carbon pricing policies:

"While the coverage of emissions trading and carbon taxes has risen to over 20 percent of global CO₂ emissions, both coverage and price are lower than is needed for deep reductions" [3]

"The High Level Commission on carbon pricing estimated an appropriate range as USD 40-80/tCO₂ in 2020, rising steadily thereafter. In practice the extent and level of carbon pricing implemented to date is far lower than this or than most economic analyses now recommend" [4]

Finally, the IPCC does make the point that carbon pricing is a necessary tool, but not a sufficient one, to successfully achieve the ecological transition and maintain a stable climate. [5]

In brief: In its 2022 report, the IPCC confirms that carbon pricing is effective when it comes to reducing greenhouse gas emissions. There is abundant evidence that carbon pricing policies reduce emissions. The report also underlines the fact that countries should implement carbon pricing more ambitiously, both in terms of coverage and in terms of how high the price of carbon should be.

1. IPCC. 2022. AR6 WG3 Chapter 13 Section 13.6.3.3 : Evaluation of Carbon Pricing Experience. [Link](#)
2. IPCC. 2022. AR6 WG3 Chapter 2 Section 2.8.2 : Comprehensive Multinational Assessments. [Link](#)
3. IPCC. 2022. AR6 WG3 Chapter 13 : Executive Summary. [Link](#)
4. IPCC. 2022. AR6 WG3 Chapter 1 Section 1.8.2 : Illustrations of Multi-dimensional Assessment: Lock-in, Policies and 'Just Transition'. [Link](#)
5. See Laser Talk: Will carbon pricing be sufficient by itself?

What do the experts say about carbon pricing?

Answer: Besides the IPCC, there is a broad consensus among experts in favor of carbon pricing.

More than 3600 academic economists, including 28 Nobel Laureate Economists, have published an open letter which states that carbon pricing is *“the most cost-effective lever to reduce carbon emissions at the scale and speed that is necessary.”* [1]. The open letter also insists on the fact that all the revenue from the carbon pricing scheme must be returned directly to citizens. This document was signed by economists from across the political spectrum, and it is the petition that has gathered the most signatures in the entire history of economics.

The European Association of Environmental and Resource Economists (EAERE) also published an open letter in support of carbon pricing [2]. Their statement was signed by more than 1700 economists.

A poll asking 445 experts, from 39 different countries, about this topic, shows that there is a general consensus on the fact that more ambitious carbon pricing policies are necessary to achieve the ecological transition [3]. More than 98 % of these experts recommend higher global carbon prices than the ones we have now. *“Experts’ average price recommendations are [\$50 per ton of CO₂] for the year 2020, increasing to \$92 in 2030, and to \$224 in 2050.”* [3]. We are currently well below that threshold; the average global carbon price being around \$5/tCO₂ [4].

When experts recommend carbon pricing policies, they generally specify that they must go together with measures that counterbalance their impact on households.

In brief: Besides the IPCC, there is a broad consensus among experts in favor of carbon pricing. More than 3600 academic economists, including 27 Nobel Laureate Economists, have published an open letter which states that carbon pricing is *“the most cost-effective lever to reduce carbon emissions at the scale and speed that is necessary.”* [1]. It is important to note that when experts recommend carbon pricing policies, they generally specify that they must go together with measures that counterbalance their impact on households.

1. Climate Leadership Council. 2019. *Economists’ Statement on Carbon Dividends*. [Link](#)
2. EAERE. 2019. *Economists’ Statement on Carbon Pricing*. [Link](#)
3. University of Copenhagen. 2022. *Survey: Strong consensus among experts for higher CO₂ prices*. [Link](#)
4. IMF. 2023. *Is the Paris Agreement Working? A Stocktake of Global Climate Mitigation*. See page 8. [Link](#)

Will carbon pricing be sufficient by itself?

Answer: Even though carbon pricing is the most effective tool to reduce emissions, it is not sufficient, by itself, to fulfill our climate goals. Experts underline this fact, and the Citizens' Climate Lobby acknowledges it.

As stated in the report issued by the IPCC, additional climate measures are needed to supplement carbon pricing:

“Nonetheless, winning support will require a mix of policies which go beyond carbon pricing, and include subsidies, mandates and feebates.” [1]

“However, many researchers recognise that complementary policies must be developed to set current production and consumption patterns toward a path consistent with achieving the Paris Agreement goals as cap-and-trade or carbon taxes are not enough.” [2]

Moreover, predictive models show that even though carbon pricing is important to decrease emissions, it will not allow us, by itself, to attain carbon neutrality in time [3].

Finally, the IPCC's special report on the 1.5°C objective also asserts that carbon pricing is a central lever for any emission reduction scenario compatible with 1.5°C, but that, again, this lever has to be coupled with other measures:

“While an explicit carbon pricing mechanism is central to prompt mitigation scenarios compatible with 1.5°C pathways, a complementary mix of stringent policies is required.” [4]

There is no miracle solution. We will need all the tools at our disposal to achieve the ecological transition and to maintain a stable climate.

In brief: Even though carbon pricing is the most effective tool to reduce emissions, it is not sufficient, by itself, to fulfill our climate goals. Experts underline this fact, and the Citizens' Climate Lobby acknowledges it. There is no miracle solution. We will need all the tools at our disposal to achieve the ecological transition and to maintain a stable climate.

1. IPCC. 2022. AR6 WG3 Chapter 3 Section 3.8.4 : Enabling Factors. [Link](#)
2. IPCC. 2022. AR6 WG3 Chapter 11 Section 11.6.1 : GHG Prices and GHG Markets. [Link](#)
3. See Laser Talk: Will carbon pricing policies decrease greenhouse gas emissions?
4. IPCC. 2018. Special Report: Global Warming of 1.5°C. Section 2.5.2.1 : Price of carbon emissions. [Link](#)

Will carbon pricing policies decrease greenhouse gas emissions?

Answer: The IPCC is clear about that in its 2022 report: carbon pricing policies do decrease greenhouse gas emissions. This solution already proved itself in a lot of countries where it was implemented. A significant reduction of greenhouse gas emissions was achieved even by putting a relatively low price on carbon.

In Europe, the emissions covered by the Emissions Trading System (EU ETS), have decreased by 40% since 2005 [1]. Carbon pricing, through the ETS, is the number one factor responsible for this reduction. In the United-Kingdom, the implementation of a national carbon pricing scheme for power plants made it possible to transition away from coal and to reduce the emissions of this sector by more than 50% in less than 5 years [2].

More broadly, a study following the situation in 142 countries for more than 20 years compared the evolution of emissions between the countries that use carbon pricing (43 out of 142) and those that do not [3]. During this period, while all the countries under study saw an increase of emissions, the countries using carbon pricing saw their yearly emissions increase 2% slower than the countries that do not. All things being equal, each additional increase of the price of carbon by \$10/tCO₂ induces a reduction of yearly emissions of about 3%.

In the United States, carbon pricing coupled with redistribution in the form of “climate income” is introduced by the bill called “*Energy innovation and Carbon Dividend Act*” (EICDA) [4]. A modeling study estimated that if the EICDA was implemented in 2022, the greenhouse gas emissions of the United States would plummet by 52% in 2030 [5].

As for the scale of the entire world, the IMF published a report evaluating the consequences of implementing carbon pricing in the countries that emit the most greenhouse gas [6]. It showed that the goal of the Paris Agreement, to stay below 2°C of global temperature increase, would be achieved simply under the condition that the six main industrial power-houses (China, USA, India, European Union, Canada, United-Kingdom) adopted a price for carbon around \$50/tCO₂.

In brief: The IPCC is clear about this in its 2022 report: carbon pricing policies do decrease greenhouse gas emissions. In 142 countries studied for more than 20 years, a significant reduction of greenhouse gas emissions was achieved even by putting a relatively low price on carbon. In Europe, the emissions covered by the Emissions Trading System (EU ETS), have decreased by 40% since 2005. Worldwide, the 2°C goal would be achieved if six industrial power-houses adopted a price for carbon around \$50/tCO₂.

1. European Environment Agency. 2023. *Greenhouse gas emissions under the EU Emissions Trading System*. [Link](#)
2. LEROUTIER, Marion. 2022 *Carbon pricing and power sector decarbonization: Evidence from the UK*. Elsevier. [Link](#)
3. BEST, Rohan, BURKE, Paul. J., & JOTZO, Frank. 2020. *Carbon Pricing Efficacy: Cross-Country Evidence*. Environmental and Resource Economics. [Link](#)

4. United States Congress. 2018. *H.R.763 – The Energy Innovation and Carbon Dividend Act of 2018*. [Link](#)
5. HAFSTEAD, Marc. 2020. *Carbon Pricing Calculator*. Resources for the Future. [Link](#)
6. PARRY, Ian, BLACK, Simon & ROAF, James. 2021. *Proposal for an International Carbon Price Floor among Large Emitters*. IMF STAFF CLIMATE NOTES 2021/001. [Link](#)

Does carbon pricing prompt climate investments?

Answer: Yes, carbon pricing prompts households and companies to invest in efficient low-carbon options.

Governments, companies and households must routinely invest in equipment (cars, buildings, boilers, machines, etc.). We call “brown expenses” all investments in equipment that relies on fossil fuel, whereas we call “green expenses” the investments in low-carbon equipment. In order to achieve the energy transition, brown expenses must decrease and green expenses must increase.

The 2022 IPCC report underlines the fact that, worldwide, existing capital flows are already enough to fund the energy transition. The issue is not to find more money. The issue is to reorient the world’s investments such that they go from brown expenses to green expenses [1].

The same report states that carbon pricing is effective in channeling the flows of investments towards green expenses [2]. The price signal gives a powerful economic incentive to companies and households to reorient their investments towards green expenses, thus reducing their greenhouse gas emissions.

In order to reduce uncertainty and risk when it comes to investments in low-carbon options, investors (financial institutions and companies) need a credible, stable and clear signal coming from governmental authorities [3]. This is why the trajectory of carbon prices must be predictable over time.

Ambitious and predictable carbon pricing is a solution supported by the Net-Zero Asset Owner Alliance, under the aegis of the United Nations, in their position paper on the subject [4]. This alliance comprises 89 investment institutes, totaling more than 9.5 trillion dollars of assets under management [5]. More than 200 multinational companies, which represents in total more than 1,5 trillion dollars of yearly turnover, also showed support for this measure by signing an open letter in its favor [6].

It is important to note that many measures, in addition to carbon pricing, are necessary to muster climate investments [2]. Such as green subsidies, research and development funding, state-guaranteed loans, development of green bond markets, contracts for differences, etc.

In brief: Yes, carbon pricing does redirect the investments made by households and companies towards efficient low-carbon options. In order to successfully achieve the energy transition, brown expenses must decrease and green expenses must increase. According to

the IPCC's 2022 report, carbon pricing is an effective tool to reorient financial flows towards green expenses. In order to reduce uncertainty and risk related to investing in low-carbon options, the trajectory of carbon prices over time must be predictable.

1. IPCC. 2022. *AR6 WG3 Summary for Policymakers*. Section E.5.2 [Link](#)
2. IPCC. 2022. *AR6 WG3*. Chapter 15, section 15.6.2. [Link](#)
3. IPCC. 2022. *AR6 WG3 Summary for Policymakers*. Section E.5.4 [Link](#)
4. UNEP. 2022. *Net-Zero Asset Owner Alliance Position Paper on Governmental Carbon Pricing*. [Link](#)
5. UNEP. 2024. *Members of the Members Net-Zero Asset Owner Alliance*. [Link](#)
6. We Mean Business Coalition. 2023. *COP 28 : Businesses urge governments to phase out fossil fuels*. [Link](#)