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No. 18 | 2020 25 August 2020

EU Climate Policy in Light of the Corona Crisis

Which climate-policy instruments are crisis-resistant, and which are not?

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Even in times of crisis, the statutory requirements for reducing CO_2 emissions must be met in an effective, affordable and reliable manner. They should also have a counter-cyclical effect where possible, i.e. they should smooth out the economic cycle.

- In the current Corona crisis, it is apparent that, by contrast with all the other climate policy instruments, only the EU Emissions Trading System (EU ETS) is meeting these requirements.
- In order to make EU climate policy crisis-resistant in the long term, the EU should include the CO_2 emissions from sectors such as transport and buildings, that are not yet covered by the EU ETS, in EU-wide emissions trading.
- A crisis-proof EU climate policy must prevent the migration of high-carbon production to third countries ("carbon leakage") by issuing free emission allowances to a greater extent than is currently envisaged and by granting most extensive electricity price compensation.
- As the inclusion of additional sectors into the EU ETS may lead to a sharp rise in allowance prices and thus to a higher risk of carbon leakage, the EU should create a separate EU-wide emissions trading system for those additional sectors as a crisis-resistant interim solution.

Contents

1 Introduction

In July 2019, new EU Commission President, Ursula von der Leyen, announced that the "European Green Deal",[1] with EU climate policy as its centrepiece, would be the main project of her term of office.[2] The EU climate policy targets for 2030 were actually laid down under the Juncker Commission (2014–2019) and on the basis thereof, the EU rules on reducing the EU-wide output of greenhouse gases were revised in protracted legislative proceedings.[3] In view of the EU's international obligations under the UN Paris Climate Agreement,[4] however, and intensive discussions on climate policy in EU Member States such as France and Germany[5], the question of making the targets mandatory and further tightening the long-term EU climate targets for 2030 and 2050, requiring additional revision of numerous pieces of EU legislation on the reduction of carbon emissions, is now at the top of the political agenda.

Since then, the Covid 19 pandemic[6] and the global economic crisis that began in March 2020 have also severely shaken the EU Member States, significantly changed political priorities and given rise to fundamental questions about the future, including that of EU climate policy.[7] Whilst discussions are currently under way on linking public money for a short-term economic stimulus to the pursuance of climate policy targets (green stimulus), the Corona crisis is also providing a stress test of the extent to which various instruments aimed at reducing carbon emissions will withstand crises in the medium to long term. Crucial for EU climate policy in the long term, is whether its climate policy instruments continue to reduce carbon emissions in an effective, affordable and reliable manner even beyond times of crisis. In addition, it would be desirable, and beneficial for achieving political acceptance, if the climate policy instruments had a counter-cyclical effect, i.e. rather slowed down the downturn.

Against this backdrop, the following cep**Input** firstly provides a status report of current developments and discussions on EU climate policy during the Corona crisis, in view of the new strategy on climate policy[8] due to be set at EU level during the German EU presidency in the 2nd half of 2020 (Section 2). In this context, we then ask how crisis-resistant the climate policy instruments of the EU and its Member States are (Section 3) and determine recommendations for the future design of EU climate policy (Section 4).

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1 EU Commission (2019), The European Green Deal, Communication COM(2019) 640 of 11 December 2019.

2 von der Leyen, U. (2019), A Union that strives for more: My agenda for Europa – Political Guidelines for the next European Commission 2019–2024; Reichert, G. (2019), Von der Leyen's tasks for the new EU Commission – Part 2: A European Green Deal, cep**Adhoc** of 26 November 2019 [this and all further links last accessed on 24 August 2020].

3 For a comprehensive analysis see Bonn, M. / Reichert, G. (2018), Climate Protection by way of the EU ETS, cep**Input** 03/2018; by the same authors (2018), Climate Protection outside the EU ETS, cep**Input** 04/2018; Menner, M. / Reichert, G. (2019), Governance of the Energy Union – Regulating EU Energy and Climate Policy, cep**Input** 02/2019.

4 On this Nader, N. / Reichert, G. (2016), Implementing the Paris Agreement on Climate Change, cep**PolicyBrief** 13/2016.

5 On this Menner, M. / Reichert, G. (2019), Carbon Tax or Emissions Trading? EU Requirements and Options for Carbon Pricing in Germany, cep**Adhoc** of 16 July 2019; Menner, M. / Reichert, G. / Voßwinkel, J. S. (2019), Effective Carbon Pricing, cep**Study**; Menner, M. / Reichert, G. (2019), New German Emissions Trading, cep**Input** 10/2019; Hanafi, O. et al. (2019), Carbon Pricing in France & Germany, cep**Input** 11/2019; Hanafi, O. (2020), Energy Taxation in France, cep**Input** 09/2020.

6 On current developments in the Corona crisis in the EU and its Member States, cf. Centrum für Europäische Politik, Corona and Latest on the Corona crisis.

7 Cf. e.g. tagesschau.de of 28 June 2020, EU-Klimapläne: Übersteht der „Green Deal" die Krise?.

8 German Federal Government (2020), Programme for Germany's Presidency of the Council of the European Union – 31 July to 31 December 2020, Together. For Europe's recovery, p. 15 et seq.

2 Status of EU climate policy in the Corona crisis

2.1 Discussion on EU climate targets for 2030 and 2050

On 4 March 2020, shortly before the outbreak of the Corona crisis, the EU Commission proposed the "first European climate law"[9] as the climate policy centrepiece of its Green Deal. In this context, the EU Commission firstly wanted to examine, by September 2020, whether the target set in 2014 of reducing carbon emissions by 40% by 2030 as compared with 1990 (EU 2030 climate target)[10], should be raised to 50–55%. Secondly, it wanted to establish EU climate neutrality by 2050 as a mandatory climate objective by balancing out total carbon emissions, on the one hand, against carbon reduction by means of natural carbon sinks – such as forests which remove carbon from the atmosphere – and technical processes – such as carbon capture and storage – on the other (EU 2050 climate target).

In the meantime, the Rapporteur of the European Parliament has, by reference to the UN Paris Climate Agreement, even called for the EU 2030 climate target to be further increased to at least 65%[11], for which there is no majority either in the European Parliament or among EU Member States. By contrast, the European Parliament has given its support to the proposed EU 2050 target of climate neutrality, with a large majority.[12]

Whereas most EU Member States, including France and Germany[13], continue to support the EU 2050 climate target, opposition is growing among eastern European countries. After Poland recorded its rejection in the minutes of the European Council in December 2019[14], in March 2020, the Czech Prime Minister Andrej Babiš also called on the EU Commission to "forget" the Green Deal, defer its plans to combat climate change and concentrate entirely on dealing with the economic impact of the Corona crisis.[15]

2.2 Climate policy instruments of the EU and its Member States

The proposed European climate law provides that by June 2021, the EU Commission will examine how the applicable EU legislation on climate change would have to be amended in order to realise by 2030 a reduction in carbon emissions of 50–55% as compared with 1990 levels, and climate neutrality, by 2050.

As regards instruments for achieving the EU climate targets, EU climate policy differentiates between two industry groups:

The EU Emissions Trading System (EU-ETS)[16] limits carbon emissions from high-carbon industrial installations and electricity plants as well as aviation (EU ETS sectors) which are responsible for just

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9 EU Commission, Proposal COM(2020) 80 of 4 March 2020 for a Regulation establishing the framework for achieving climate neutrality (European Climate Law); on this Menner, M. / Reichert, G.(2020), European Climate Law, cep**PolicyBrief** 03/2020.

10 Bonn, M. / Heitmann, N. / Reichert, G. / Voßwinkel, J. S. (2015), EU Climate and Energy Policy 2030, cep**Input** 02/2015.

11 European Parliament (2019), Draft report by Jytte Guteland (S&D Group, SE) of 4 May 2020 on the proposal for a regulation establishing the framework for achieving climate neutrality (European Climate Law), p. 38 et seq.

12 European Parliament (2019), Resolution of the European Parliament of 14 March 2019 on climate change.

13 Government of the Federal Republic of Germany and Government of the Republic of France (2020), Common Statement on the European Green Deal and a European Recovery Plan, p. 1.

14 European Council (2019), Conclusions of 12 December 2019, Section 1.

15 orf.at of 17 March 2020, Tschechien: EU soll wegen Coronavirus Klimapläne zurückstellen; Handelsblatt of 30 March 2020, EU-Klimapaket: Der Green Deal der EU wird durch die Coronakrise gefährdet.

16 Directive 2003/87/EC of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community; on this see Bonn, M. / Reichert, G. (2018), Climate Protection by way of the EU ETS, cep**Input** 03/2018. See below Section 3.2.

under half of all CO_2 emissions in the EU. On 4 May 2020, the EU Commission determined that in 2019, despite economic growth of 1.5% in the EU, carbon emissions covered by the EU ETS fell by 8.7% as compared with 2018. This was achieved with a CO_2 price for emission rights (allowances) per tonne of CO_2 fluctuating at € 25 which indicates that the cost of avoiding CO_2 emissions is around that level whereas avoidance costs in the transport sector, arising from maximum CO_2 limits per km irrespective of mileage, are many times higher.[17] In addition, the EU ETS would also function smoothly during the Corona crisis because the industrial companies, power plants and airlines that are subject to it, would continue to comply with their obligations – e.g. to record and report their CO_2 emissions.[18]

The remaining CO_2 emissions from the sectors not covered by the EU ETS – transport, buildings, agriculture and waste management – are to be reduced by Effort Sharing in the EU.[19] This gives each of the EU Member States their own targets for CO_2reduction in the sectors not covered by the EU ETS but largely leaves them to decide for themselves on the measures for meeting their respective national targets. Although additional EU requirements – such as CO_2 limits for motor vehicles[20] and efficiency requirements for buildings [21] – contribute to CO_2 reduction in sectors not covered by the EU ETS, each Member State is ultimately responsible for complying with their own targets. Thus, in order to reduce CO_2 emissions caused by burning fossil fuels in the transport and building sector, France, for example, began pricing CO_2 emissions in 2014 by means of a CO_2 tax.[22] Germany, on the other hand, opted in 2019 for CO_2 pricing by way of an emissions trading system – from 2021 with fixed prices for CO_2 certificates and only from 2026 with flexible certificate prices and a limited number of certificates ("cap") –, and supplemented by numerous additional instruments such as regulatory rules and prohibitions as well as subsidies.[23] Compared with 2018, CO_2 emissions in sectors not covered by the EU ETS fell in 2019 by only 0.5%, i.e. much less than in the EU ETS sectors.[24] CO_2 emissions in transport in particular have not fallen since 1990 and a further major rise is likely due to rising transport volumes in the road haulage sector.

2.3 EU Recovery Plan: Green Deal as EU growth strategy

In order to overcome the economic impact of the Corona crisis, the Heads of State and Government of the European Council basically agreed on an EU Recovery Plan on 23 April 2020.[25] According to the EU Commission's proposals of 27 May 2020, the EU budget 2021–2027 will be increased for this purpose to approx. € 1.1 trillion and loans acquired on the financial markets amounting to € 750 billion (Next

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17 See below Section 3.1.

18 EU Commission (2020), Press release of 4 May 2020, Emissions trading: greenhouse gas emissions reduced by 8.7% in 2019.

19 2013–2020: Decision 406/2009/EC of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020; 2021–2030: Regulation (EU) 2018/842 of 30 May 2018 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030; for a comprehensive analysis see Bonn, M. / Reichert, G. (2018), Climate Protection outside the EU ETS, cep**Input** 04/2018.

20 Regulation (EU) 2019/631 of 17 April 2019 setting CO_2 emission performance standards for new passenger cars and for new light commercial vehicles; on Commission proposal COM(2017) 676 cf. Menner, M. / Reichert, G., CO_2 limits for cars and vans, cep**PolicyBrief** 02/2018. Regulation (EU) 2019/1242 of 20 June 2019 setting CO_2 emission performance standards for new heavy duty vehicles; on Commission proposal COM(2018) 284 cf. Menner, M. / Reichert, G., CO_2 Targets for New Lorries, cep**PolicyBrief** 29/2018.

21 Directive 2010/31/EU of 19 May 2010 on the energy performance of buildings; on this see Menner, M. / Reichert, G. / Voßwinkel, J. S. (2018), Die EU-Energieeffizienzpolitik, cep**Input** 05/2018, p. 7 et seq.

22 For a comprehensive analysis see Hanafi, O. (2020), Energy Taxation in France, cep**Input** 09/2020.

23 For a comprehensive analysis see Menner, M. / Reichert, G. (2019), New German Emissions Trading, cep**Input** 10/2019.

24 European Environment Agency (2020), National action across all sectors needed to reach greenhouse gas Effort Sharing targets, Figure 1.

25 European Council (20209; Conclusions of the President of the European Council following the video conference of the members of the European Council, 23 April 2020; European Parliamentary Research Service (2020), Outcome of the European Council video-conference of 23 April 2020.

Generation EU). These amounts will be invested in a "more sustainable, resilient" economic system in the EU.[26] According to the EU Commission, its Green Deal and climate policy proposals will be no obstacle to the economic recovery after the Corona crisis, on the contrary, they will be "Europe's growth strategy" and "a job-creating engine". In addition, private investment in reducing CO_2 emissions will be "required". To "unlock" this investment, "long-term certainty and predictability" in EU climate policy are essential, i.e. planning certainty for economic operators, and this is to be achieved by means of EU climate targets for 2030 and 2050.[27] The Council also emphasised on 25 June 2020: "The necessary economic transformation towards sustainable growth and climate neutrality, building on the European Green Deal, is a major opportunity to stimulate the Member States' economies [...]".[28]

3 How crisis-resistant are the climate policy instruments

Whilst short-term economic stimulus measures for overcoming the economic crisis by means of a green stimulus are currently the focus of discussion[29], the Corona crisis is also a stress test of the extent to which EU climate policy can withstand crises in the medium to long term. Although the significant drop in economic activity during the Corona crisis has resulted in a reduction of greenhouse gas emis-sions, from the perspective of the medium and long term climate targets, this easing of the problem will only be of a temporary nature. In view of the new strategy on climate policy due to be set in Autumn 2020, the question, brought up indirectly by the EU institutions, is how EU climate policy can be made generally "more resilient". The aim should be for it to provide maximum "long-term certainty and predictability", i.e. planning certainty for the affected companies, investors and consumers – as recently demanded by the EU Commission – during and after the Corona crisis, in the event of future economic fluctuations and crises, including those which are unavoidable and unforeseeable.

To answer this key question of climate policy, the following analysis will examine the medium to long-term crisis resistance of the various instruments of the EU and its Member States for reducing CO_2 emissions: regulatory rules and prohibitions, subsidies and carbon pricing in the form of carbon taxes and emissions trading.

In this regard, a climate policy instrument is deemed to be crisis-resistant if even in times of economic crisis it is not exposed to any significant political pressure for modifications that would be detrimental to its effectiveness, efficiency or planning certainty, and if it has a counter-cyclical effect, i.e. tends to even out fluctuations.

In this connection, an instrument is **effective** if it actually achieves the envisaged reduction in CO_2. It is **efficient** if this takes place as cheaply as possible. It provides **planning certainty** if companies, investors and consumers can rely on its continued existence in their production, investment and buying decisions. It smoothes out economic fluctuations, or has a **counter-cyclical effect**, if the associated costs to economic operators see a higher-than-average fall during an economic downturn and a higher-than-average rise during an upturn. The pressure for modification will then be less than in the case of an instrument that does not respond appropriately to cyclical crises.

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[26] European Commission (2020), Communication COM(2020) 456 of 27 May 2020, Europe's moment: Repair and Prepare for the Next Generation, p. 2.

[27] Ibid., p. 7 et seq.

[28] Council of the EU (2020), Conclusions of 25 June 2020 on the response to the COVID-19 pandemic in the EU energy sector: – road to recovery, Para. 13.

[29] See above Section 2.3

3.1 Regulatory rules and prohibitions

Regulatory instruments are rules and prohibitions regarding CO_2 reduction.[30] In this connection, the state imposes specific mandatory conduct directly upon potential CO_2 emitters or the manufacturers of corresponding products. Breaches of the rules and prohibitions are subject to penalties, notably fines. CO_2 limits on motor vehicles are one example of this. Thus, under EU law, from 2020, newly registered cars in a manufacturer's fleet can only emit an average of 95g CO_2/km.[31]

Effectiveness: Such requirements illustrate the fact that regulatory rules on CO_2 reduction lack crisis resistance: Thus, CO_2 limits for cars are not effective in terms of climate policy because they only focus on the potential fuel efficiency of motor vehicles whilst having no impact on their actual use and thereby on their actual CO_2 output. They cannot therefore guarantee that CO_2 emissions from road transport will be reduced to the desired degree.

Efficiency: CO_2 limits for cars are not efficient because they aim to force reductions in CO_2 irrespective of the associated avoidance costs. These are – depending on the model category and user behaviour – between 300 and 1075 euro per tonne of CO_2[32], whereas in 2019, in the EU ETS, the costs fluctuated at around € 25[33].

Planning certainty: CO_2 limits for cars do not necessarily provide planning certainty for manufacturers either: Many manufacturers can at best comply with the CO_2 limits applicable to the cars in their vehicle fleets in 2020 by increasing the proportion of electric vehicles.[34] Due to the Corona crisis, the market launch of many electric vehicle models, planned for this year, was delayed so that these were not available as planned to compensate for the CO_2 emissions from vehicles with combustion engines. As a result, the increased proportion may not be achievable and additional costly measures will have to be taken at short notice in order to avoid the financial penalties that will otherwise become imminent.[35]

Counter-cyclical effect: Additional high-cost measures, like fines, are pro-cyclical, i.e. they intensify the economic crisis. Consequently, the European associations of vehicle manufacturers and suppliers are also calling for several months' delay before the binding CO_2 limits for 2020 take effect.[36] This would set a precedent for the next economic crisis and thereby result in less planning certainty.

3.2 Subsidies

State subsidies – such as for heat insulation – are an attempt to steer the conduct of potential CO_2 emitters, not directly by rules and prohibitions backed up by fines, but indirectly by way of financial incentives towards low-carbon alternatives.[37]

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30 On this Menner, M. / Reichert, G. (2019), Wirksame CO_2-Bepreisung, cep**Study**, p. 5 et seq.
31 Regulation (EU) 2019/631 of 17 April 2019 setting CO_2 emission performance standards for new passenger cars and for new light commercial vehicles.
32 IW Köln (2019), IW Gutachten: CO_2-Vermeidung im Straßenverkehr, p. 36.
33 See above Section 2.2
34 Auto Zeitung of 14 April 2020, EU: CO_2-Grenzwerte für Autos & Strafen, Klimaziele wegen Corona nur schwer erreichbar.
35 PA Consulting (2020), CO_2 emissions are increasing – Car makers must act; Institut für sozial-ökologische Wirtschaftsforschung (2020), Automobillobby nutzt die Corona-Pandemie – kontraproduktiv gegen Klimaschutz.
36 ACEA et al. (2019), Auto sector letter to von der Leyen of 25 March 2020.
37 On this Menner, M. / Reichert, G. (2019), Wirksame CO_2-Bepreisung, cep**Study**, p. 5.

Unlike regulations, the potential recipient retains the freedom to decide whether it wants to claim the subsidy and change its conduct accordingly – e.g. by way of the subsidised building insulation. The crisis-resistance of subsidies as an instrument for incentivising CO_2 savings is questionable in several respects:

Effectiveness and efficiency: Where subsidies – e.g. in the form of a scrappage bonus for building heating – only finance deadweight because products or services would have been demanded anyway, they lack the envisaged steering effect. Consequently, they are ineffective in terms of climate policy and – since savings in CO_2 give rise to correspondingly unnecessary additional costs – they are also inefficient. In times of crisis, when public money is scarce, these additional expenses come under scrutiny due to their inefficiency. Not all Member States are willing to subsidise as in Germany the roll-out of renewable energy and charge electricity customers an average of € 290 per tonne of CO_2 via the EEG levy in 2017, whilst avoidance costs in the same period averaged just € 7 in the EU ETS.[38] Even with the current allowance price of about € 25,[39] these subsidies are highly inefficient.

Planning certainty: Ultimately, as the EU Commission's plans to finance the green stimulus as part of the EU Recovery Plan show,[40] subsidies for reducing CO_2 will probably have to be financed by borrowing in the future, both by the EU and its Member States. The extent to which they remain available at all as a climate policy instrument, given the tight budgetary situation likely to exist in many Member States for the foreseeable future, is therefore questionable so they do not offer planning safety in the medium to long term.

Counter-cyclical effect: Ongoing subsidy programmes exist irrespective of cyclical developments. In an economic downturn, newly created subsidy schemes may smooth out cyclical effects but they create new problems due to the basic ineffectiveness and inefficiency of subsidies.

3.3 CO_2 pricing

CO_2 pricing may take place by means of a carbon tax or an emissions trading system (ETS). Both aim to put a price on CO_2 emissions.[41] This – in line with the polluter pays principle[42] – holds the CO_2 emitter responsible for the effects of climate change on third parties, due to emissions, and for the costs thereof, so that the latter includes them in its cost calculation (internalisation of external costs). In the case of a carbon tax, the CO_2 price is set directly by the state; in the case of an ETS, indirectly by the market for emissions allowances.

The price signal aims to give the CO_2 emitter a financial incentive for changing its conduct (steering effect). This may consist of generally reducing CO_2-emitting activities – such as driving cars or heating buildings with fossil fuel – as a CO_2 price will make high-carbon goods and services relatively more expensive. On the other hand, carbon pricing may increase the demand for low-carbon technologies and carbon-reducing measures – e.g. fuel-efficient engines, heating of buildings with renewable energy,

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[38] Weimann, J. (2019), Die Zukunft der Klimapolitik: CO_2-Steuer, Emissionshandel oder weiter wie bisher?, Kurzgutachten für den Bundesverband Die Familienunternehmer e.V. | Die jungen Unternehmer, S. 16; Bardt, H. / Schaefer, T. (2018), IW-Kurzbericht 1/2018, Verteilungsprobleme und Ineffizienz in der Klimapolitik estimate the CO_2-avoidance costs for the sources of renewable energy subsidized by the EEG-levy in 2016 in the range of € 106 (onshore wind energy) to € 415 (photovoltaics).

[39] EMBER, EUA Price.

[40] See above Section 2.3

[41] On the following Menner, M. / Reichert, G. (2019), CO_2-Steuer oder Emissionshandel?, cep**Adhoc** of 15 July 2019, p. 4; by the same authors (2019), Wirksame CO_2-Bepreisung, cep**Study**, p. 5.

[42] Art. 191 (2) Treaty on the Functioning of the European Union (TFEU).

building insulation – and thus stimulate corresponding investment which, due to the CO_2 price, will also be profitable without the need for expensive subsidies. By contrast with subsidies, CO_2 pricing does not require public funds – which are especially scarce in times of crisis – but in fact generates revenue.

3.3.1 Carbon taxes

The rate of carbon tax establishes a concrete price for CO_2 emissions. It goes up incrementally and thus sets an incremental price signal providing a financial incentive to avoid CO_2 emissions. Nevertheless, a carbon tax is not crisis resistant.

Effectiveness and efficiency: The CO_2 price indicated by way of the tax is only effective and efficient in terms of climate policy if the tax rate is set in such a way that the reduction target is precisely achieved. This does not work in practice because the amount of CO_2 reduction brought about by the carbon tax is a priori unknown and subject to dynamic change. Firstly, the effect of carbon tax on demand can at best only be roughly estimated. Secondly, demand for carbon emitting activities fluctuates both as a result of habituation effects and depending on economic cycles. In order to effectively and cost-efficiently stimulate CO_2 reductions in line with the long-term reduction targets, the tax rate must be repeatedly adjusted by trial and error.

Planning certainty: The need for repeated changes to the tax rate prevents even medium-term planning certainty because the amount by which the tax rate must be adjusted is unknown.

Counter-cyclical effect: CO_2 taxes are usually established independently of the economic cycle and thus do not have a counter-cyclical effect if they are kept constant. However, in the event of severe economic setbacks, there would be scope to reduce tax rates in the short term as economic activity and thus also emissions would fall. A tax reduction supports the economy. Problems arise, however, when the economy returns to normal growth and runs up against the limits of the predetermined long-term emissions reduction strategy. The tax then has to be raised again, possibly even drastically, because the permitted amount of CO_2 emissions is continually being reduced and time has elapsed during the recession. There is likely to be resistance to rising energy costs from citizens and companies during periods of economic recovery following a crisis. These can put significant pressure on decision-makers to delay the necessary tax increases until a future date or even to suspend or completely revoke increases that have already been decided. Tax rates thus become a pawn in unpredictable political conflicts.

In Germany, for example, due to political pressure during the 2003 recession year, Schröder's government cancelled the annual increase in eco-tax originally planned to last at least another five years. The eco-tax thus became largely ineffective from an ecological perspective.[43] In France, in December 2018, following the gilets-jaunes protests, the government was already forced to revoke the increase in carbon tax it had passed in May of that year.[44] In view of the drastic deterioration in the economic situation during the Corona crisis, it is more uncertain than ever whether the French government will raise the carbon tax sufficiently to reach the emission reduction path or will forego this and thereby either miss the reduction targets or fall back on inefficient regulatory rules and prohibitions. As a result of the Corona crisis, the Netherlands has already decided to postpone the introduction of a carbon tax planned

[43] DIW – Deutsches Institut für Wirtschaftsforschung (2019), Wochenbericht 13/2019.

[44] World Bank (2019), State and Trends of Carbon Pricing 2019, p. 38 et seq.; Hanafi, O. et al. (2019), Carbon Pricing in France and Germany, cep**Input** 11/2019, p. 10 et seq.

for 2021.[45] As a result of these political decisions, there is no price incentive to initiate investment in CO_2 avoidance during the economic recovery phase.

The counter-cyclical levelling of the economic cycle by means of a tax reduction is obtained at the expense of further detriment to effectiveness, efficiency and planning certainty.

3.3.2 Emissions Trading

An emissions trading system like the EU ETS[46] functions according to the principle of "Cap & Trade":

Effectiveness: In an emissions trading system, the total volume of CO_2 emissions, in the sectors which it covers, is limited (cap) by the number of emissions rights (allowances). The cap is gradually reduced over time until the envisaged CO_2 reduction target has been met.

Efficiency: The trade in allowances ensures that the predetermined CO_2 reductions occur where they are most cost effective.[47]

Planning certainty: As the cap means that the predetermined CO_2 reduction target is automatically achieved, no readjustment – such as the introduction of a minimum price – is needed even in an economic crisis.[48] Thus, an emissions trading system also offers planning certainty.

Counter-cyclical effect: Ultimately, the allowance price has a counter-cyclical effect because the cost burden from CO_2 emissions tends to fall during an economic downturn, when fewer allowances are required, and tends to increase during an upturn. Thus, in times of crisis, the impact on costs and liquidity for companies is attenuated.[49]

The crisis resistance – based on effectiveness, efficiency, planning certainty and the counter-cyclical effect – of emissions trading systems, has also been apparent in the Corona crisis, as shown by the development of the allowance price in the EU ETS (Fig. 1): Although the price fell within a few days at the start of the economic crisis, going from about € 24 to about € 15 between 11 and 18 March, since then it has been steadily recovering and stabilised by July slightly above the pre-crisis level.

The price collapse was caused both by a fall in demand and a significant short-term increase in allowance sales. The sales may have been due to the high level of uncertainty about the extent and duration of the economic crisis. A simultaneous collapse in the price of other asset values – including gold[50] – may also indicate a short-term increase in the liquidity requirements of companies in financial distress. Over the following weeks, on the other hand, the price collapse allowed more solvent companies the chance to

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45 DutchNews of 10 April 2020, Dutch to delay carbon tax for industry because of coronavirus.

46 See above Section 2.2.

47 On efficiency by comparison with regulatory requirements and subsidies see above Sections 3.1 and 3.2.

48 On the rights and wrongs of a minimum price in the EU-EHS see Bonn, M. / Voßwinkel, J. S. (2017), CO_2-Mindestpreis – Fluch oder Segen der EU-Klimapolitik?, cep**Input** 05/2017; Menner, M. / Reichert, G. / Voßwinkel, J. S. (2019), Wirksame CO_2-Bepreisung, cep**Study**, p. 22 et seq.

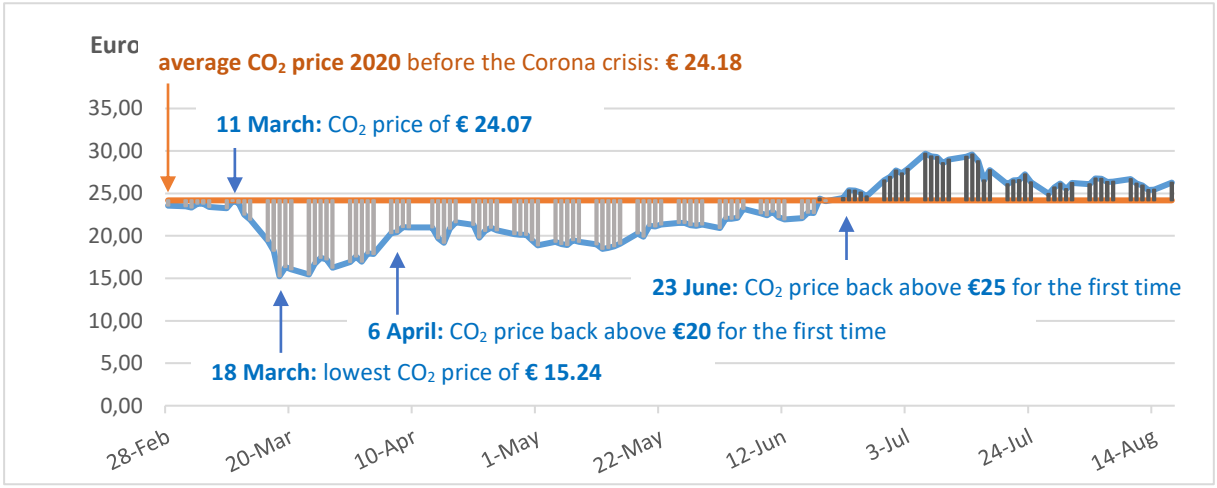
49 With a minimum price, as recently proposed by the German German Academies of Sciences and Humanities, this would not be the case. Cf. Leopoldina / acatech / Akademienunion (2020), Energiewende 2030: Europas Weg in die Klimaneutralität, Ad-hoc-Stellungnahme – Juni 2020, p. 9.

50 Finanz.net, Goldpreis.

purchase cheap EU ETS allowances for future use. The subsequent price rise could also be due, at least in part, to speculation.[51]

Overall, long-term investment decisions are not greatly influenced by short-term price changes in the ETS but are dependent on long-term expectations about climate policy. The CO_2 price in an ETS is determined less by the current supply of allowances but to a much greater extent by the expectation of future scarcity.[52] The assumption that a low demand for allowances will lead to a long-term surplus of supply,[53] does not currently appear to be shared by the EU ETS market operators because otherwise, the EU ETS allowance price would have fallen to a low level over a longer period, as happened in the financial crisis 2008/2009 when it stabilised at about € 5[54,55]. Instead, the EU ETS market operators are clearly expecting that the market stability reserve[56], which has since been introduced to take unused allowances off the market, will still work in the Corona crisis[57] and that the politically planned tightening of the EU 2030 climate target, as well as the likely establishment of the EU-2050 climate target of climate neutrality, will require a faster reduction of the cap. These expectations, based on the transpa-rent requirements of the EU ETS, do not impair either effectiveness or efficiency, but create long-term planning certainty – even when there are short-term price fluctuations. The more that price formation depends on long term expectations, however, the less the ETS has a stabilising effect on the economy.

Fig. 1: EU-ETS allowance price in the Corona crisis 2020 (CO_2 price in euro)



Source: EMBER, EUA Price

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4 Recommendations for the crisis resistance of climate policy instruments

EU climate policy must be designed in such a way that the predetermined CO_2 emissions can be effectively, affordably and reliably reduced, especially in times of crisis, without giving rise to major collateral damage to the economy. By contrast with regulatory rules and prohibitions, subsidies and carbon taxes, emissions trading meets all these criteria. Since the EU ETS has proven itself, according to ordo-liberal principles, to be a rule-based and market-based instrument for CO_2 reduction in the Corona crisis, those sectors that are not included in the EU ETS should now also be subject to EU-wide emis-sions trading.[58] German Chancellor Angela Merkel[59] and the German EU Council presidency are calling for this[60] and the EU Commission is also considering it for CO_2 emissions from buildings and shipping.[61]

Basically, cross-sectoral emissions trading – which includes both ETS and non-ETS sectors – with a uniform price for CO_2 emissions is in economic terms the most cost-efficient way to effectively achieve CO_2 reduction targets (First Best).[62] This is only true, however, if the cost increases caused by the CO_2 price in emissions trading do not result in the migration of high-carbon production to third countries with laxer and less costly climate protection rules ("carbon leakage").[63] Carbon leakage leads to job losses and a reduction in value added – and even causes an increase in global CO_2 emissions if production migrates to countries with lower climate protection standards.[64]

This is a major problem in the EU because its reduction requirements are in some cases much stricter than in other parts of the world and are due to be made even stricter by 2030 and 2050. In order to keep carbon leakage to a minimum, even when allowance prices are rising, the EU should improve the carbon-leakage protection of the EU ETS. For this purpose, companies that are subject to the EU ETS and at risk of carbon leakage, should receive more free allowances than is currently planned.[65] In addition, energy-intensive companies at risk of carbon leakage should also be most extensively compensated where electricity producers pass on their allowance costs through increased electricity prices (electricity price compensation).[66] The carbon leakage problem would be heightened by including non-EU ETS sectors in the EU ETS because the demand for fossil fuels in the transport and building sectors is relatively price-rigid which would push up the allowance price and increase the risk of carbon leakage in sectors that are subject to global competition. A second emissions trading system, separate from the EU ETS, should therefore be set up, at least transitionally, for the non-EU ETS sectors.[67] The industrial companies that are at risk of carbon leakage will thus remain unaffected by the upward pressure on prices caused by the price-rigid demand for allowances in the non-EU ETS sectors.

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