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POLICY PAPER

Rationality of the EU ETS: Holding it Together or Preventing Deeper Changes?

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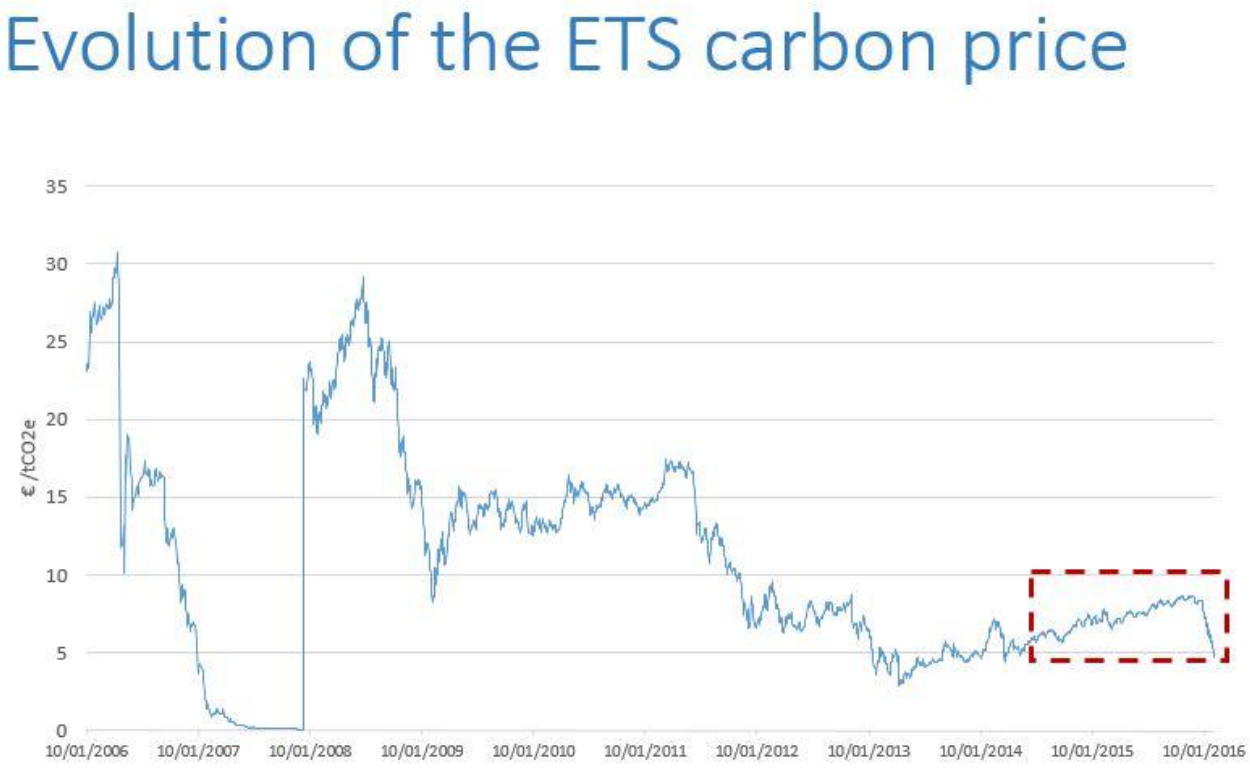
- **Through the 2015 Paris Agreement, governments around the world have set a clear goal of reaching zero net emissions of greenhouse gases (GHG) by mid-21st century with the long-term goal to keep the global average temperature rise below 2°C above pre-industrial levels. To further reduce the scope of climate change, countries will try to keep the temperature below 1.5°C above pre-industrial levels.**
- **The UN Climate Conference in Kyoto in 1997 gave birth to the idea of carbon trading as a low-cost climate mitigation option. Since then, multiple carbon trading schemes have been set up across the globe with 13% of global GHGs now being covered by these mechanisms. Almost half of this falls under the European Emissions Trading Scheme (EU ETS).**
- **The EU ETS is often referred to as the most important climate policy instrument of the EU, yet it is not without flaws. It is the largest carbon trading system in use, often called the pioneer of carbon trading. This policy paper focuses on presenting the rational underpinning of the EU ETS and its significance in the climate change governance under the Paris regime. It focuses on the biggest flaw of the system – the oversupply of cheap allowances - and its causes.**

Overview of the EU ETS

The EU ETS came into force in 2005. It is a cap and trade system, divided into trading phases. The first one started in 2005-2007 as a trial period. The second phase ran from 2008 to 2012, coinciding with the first commitment period of the Kyoto Protocol. Currently, the system is in its third phase, which has started in 2013 and is going to end in 2020. [1] The trading system covers around 45% of all EU's emissions, especially those from the power sector and manufacturing.[2] In this policy paper, the rationality of the EU ETS will be analysed through the lenses of social constructivism to portray how climate change is rendered governable.

The Biggest Flaw of the System

The biggest flaw of the EU ETS, as identified by the European Commission and various experts, is the oversupply of cheap allowances on the EU ETS market. This situation does not correspond with the intended scenario, where the scarcity of allowances drives their prices up, making emitting greenhouse gases more expensive for the producers. However, the price of the allowances has been gradually declining since 2008 (see figure below) and is currently settled around 5 EUR, far away from the desired 30 EUR, undermining the system's effectiveness.[3] The oversupply has resulted in the surplus of ca. 2 billion allowances.[4] This policy paper argues that this flaw is enabled by a certain rationality that lies behind the EU ETS.



[1] Zetterberg, L. (2014). Benchmarking in the European Union Emissions Trading System: Abatement incentives. Energy Economics, 43, 218–224

[2] European Commission. The EU Emissions Trading System (EU ETS). Factsheet. https://ec.europa.eu/clima/sites/clima/files/factsheet_ets_en.pdf.

[3] Jevnaker, T. and Wettestad, J. (2017). Ratcheting Up Carbon Trade: The Politics of Reforming EU Emissions Trading. Global Environmental Politics, 17 (2), 105-124.

[4] European Commission. Market Stability Reserve. https://ec.europa.eu/clima/policies/ets/reform_en.

Actors involved in the system, directly or indirectly, blame its rigid character for its flaws. Because of is political and economic character, the EU ETS is slow in responding to its inefficiencies. Each decision consumes a lot of time and effort and at the end it is often a vague compromise, making the system more complex and confusing. Short-term interests of emitters are in contradiction to the long-term goals of the system, keeping the prices of allowances perpetually low. The long-term rationality of the cap is meeting the short-term rationality of the trade, making the supply (i.e. the size of the cap) rigid, whereas the demand is flexible. This issue has been discussed and reformed at many stages during the existence of the system. However, an effective solution has not yet been found. The European Commission answers this systemic issue with only temporal fixes, stemming from the same rationality.

The Cap

Emitters included under the EU ETS are from energy intensive sectors, including oil refineries, steel works and the production of iron, aluminium, metals, cement, lime, glass, ceramics, pulp, paper, cardboard, acids and bulk organic chemicals, as well as energy generating companies.[5] The EU ETS illustrates the dynamic of self-optimising, responsible actors. It is using the so-called compliance cycle where emitters are obligated to monitor their emissions and send them for verification to certified verifiers. Monitoring brings a notion of normative behaviour, which in the case of non-compliance leads to penalty charges.[6]

Emitters act within the cap and trade. The EU ETS cap is set by the administrative power, namely the European Commission. It is a framework made out of statistics, provided by states and the self-monitoring emitters and it is a numerical target, representing a limit to emitting actions, while saving the Earth from rising temperatures. The EU ETS was established with the idea to fulfil the Kyoto Protocol targets[7] and targets inspired by two EU's Climate and Energy Frameworks with the goal to reduce GHG emissions by at least 20% compared to 1990 levels until 2020 and the second goal of at least 40% emissions reductions by 2030 compared to 1990 levels.[8] The goal for 2020 was reached already in 2015. For the 2030 goal, there has been a 26% reduction compared to 1990 levels so far.

The Trade

The European Commission creates a market for trade purposes, where the external cost of nature should be internalised with the aim to optimise the scarcity and utility aspect of the planet facing climate change.[9] In the 1980s, scientists came up with a single measure to project future trajectories of GHGs, namely tCO2e.[10] This single unit was applied by the Kyoto Protocol and elaborated at the Conference in Marrakesh. The EU ETS market trades allowances (EUAs), corresponding to one tCO2e.[11] The EUAs are standardised and commensurable units. Their abstract character allows market to step in and trade carbon as an asset, detaching it from its complex context and turning it into a numeric reality, where it becomes a tradable unit, showing only its price, requests for buying and selling and its volume. All this information is used purely for market purposes. The EU ETS functions like any other exchange market, including brokers, speculations or hedging. This financial character allowed the financial crisis of 2008 to hit the system and push the prices of

[5] European Commission (2015). EU ETS Handbook. European Comission. Brussels: Climate Action.
[6] Lövbrand, E. and Stripple, J. (2010). Carbon Market Governance beyond the Public-Private Divide. In F. Biermann, P. Pattberg and F. Zelli (Eds.). *Global Climate Governance Post 2012: Architectures, Agency and Adaptation. Cambridge:* Cambridge University Press.
[7] Cut the emissions by 8% compared to 1990 levels between 2008-2012. (Ellerman et al, 2016; Europeum, 2016).
[8] Ellerman, D.A. et al. (2016). The European Union Emissions Trading System: Ten Years and Counting. Review of Environmental Economics and Policy, 10 (1), 89-107.
[9] European Commission (2015). EU ETS Handbook. European Comission. Brussels: Climate Action.
[10] One tonne of carbon dioxide equivalent.
[11] European Commission (2015). EU ETS Handbook. European Comission. Brussels: Climate Action.

allowances under 1 EUR. Overall, the system is prone to economic fluctuations.[12]

Cap and trade is a system of information and allocation. By using the market logic and mechanism, the market decides, how, where, when and by whom are the emissions reduced. The cap ensures that the overall target set by the European Commission is not exceeded. The EUAs function as commodified rights to emit. The aim of the market is to create a situation where there is a scarcity of allowances, raising their prices, and making emitting more costly.[13] In this case, abatement means decoupling strategies and greening of economy. However, the system is not creating the right incentive to decouple.

For instance, in the Czech Republic the so-called switching moment, where the price of natural gas is cheaper than coal, has not yet been reached. The low price of allowances is partly to blame. The European Commission has, through carbon markets, decentralised the decision-making to individual subjects. Emitters, as calculative agents, decide based on prices and market signals if their abatement is cost-efficient or not. Calculations based on the cost-benefit analysis shape the decision whether to abate now or in the future. The Smithian presumption can be traced here, as emitters follow their own interests (buying and selling), with the help of the "invisible hand." The emitter's behaviour is motivated by the idea of saving the cost if not emitting, clearly signifying an economic rationality. The goal of buyers (emitters) is always to get the best deal.

The Power of Lobby Groups

Companies under the EU ETS form lobby groups, which are able to influence the decision-making process, securing their interests and making the best deal out of the system. In other words, they lobby for low prices of the allowances. The power of lobby groups can be traced throughout then whole history of the system.

Already in the preparation phase, they ensured that the set cap is not ambitious enough in order to avoid abrupt increases of their production costs.[14] Further in the first two phases, when the governments were submitting their National Allocation Plans to the European Commission, large emitters asked for more allowances than they needed.[15] As an outcome, the first two trading phases of the system ended up with oversupply of cheap allowances on the market. Emitters received more allowances than they could emit. Thus the first two phases went against the main idea of the cap and trade mechanism, namely the scarcity of expensive allowances on the market.

Big emitters and lobby groups were also able to influence the allocation mechanism leading to inefficiency in the first two phases. The system was, and to some extent still is, distributing allowances for free. In 2007, the price of allowances fell under 1 EUR, since emitters understood how easily they could get their allowances.[16] Large emitters ended up with windfall profits, receiving allowances for free and projecting their prices on customers.[17]

Since 2013, more allowances have been purchased in auctions. The idea of auctioning should tackle the issue of oversupply and low prices of allowances. Some emitters have lobbied for maintaining free auctioning for some sectors.[18] Those emitters that value the allowances the

[12] Crossland, J. et al. (2013). Is the European Union Emission Trading Scheme (EU ETS) Informationally efficient? Evidence from Momentum-Based Trading Strategies. Applied Energy, 109, 10-23.
[13] Newell P. and Paterson M. (2010). Climate Capitalism Global Warming and the Transformation of the Global Economy. New York: Cambridge University Press.
[14] Markussen, P. and Svendsen, G.T. (2005). Industry Lobbying and the Political Economy of GHG Trade in the European Union. Energy Policy, 33 (2), 245–255.
[15] Bryant, G. (2016). Creating a Level Playing Field? The Concentration and Centralisation of Emissions in the European Union Emissions Trading System. Energy Policy, 99, 308-318.
[16] Bryant, G. (2016). Creating a Level Playing Field? The Concentration and Centralisation of Emissions in the European Union Emissions Trading System. Energy Policy, 99, 308-318.
[17] Ellerman, D.A. et al. (2016). The **European Union Emissions Trading System: Ten Years and Counting**. Review of Environmental Economics and Policy, **10 (**1), 89-107.
[18] Schleicher, S.P. et al. (2016). Extending the EU Commission's Proposal for a Reform of the EU Emissions Trading System. FEEM Working Paper No. 27. Milano: FEEM.

most and have the means to decouple, pay in the auction. Some sectors prone to international competitiveness are still under free allocation, but it should gradually phase out, reaching full auctioning by 2027.[19] Nine countries got an exception from full auctioning of their energy sector. The Czech Republic is among them due its dependence on coal in its energy sector. The exception from full auctioning should prevent sudden increases in energy prices.

A New Hope?

At the moment, a new reform for the next trading phase is in preparation. Many actors, directly or indirectly involved in the system, perceive this reform as a way out of the market filled with cheap allowances. The reform for the fourth phase is proposing solutions based on the belief in the cap and trade mechanism. More specifically, an accelerated annual pace of reducing the cap will be introduced, aiming at raising the price of allowances. The current pace is at 1,74% and from 2021 this will be raised to 2,2%. The overall number of allowances to be purchased on the market will thus be lowered.

Another proposed reform is called Back Loading. This measure means postponed issuing of a certain amount of allowances. The European Commission calls this concept a short-term measure, since it can change the current balance between supply and demand. It enables companies to purchase and use already issued allowances on the market and it should secure more stable prices. It does not reduce the overall amount of allowances for auctioning in the third phase, but it changes their distribution.[20] From 2014 to 2016, in an effort to boost prices and curb the oversupply of allowances, a total of 900 million EUAs were gradually withheld from government auctions.[21]

Similar goal as Back Loading has the Market Stability Reserve. This reserve also aims to adjust supply to demand. It should deal with the current surplus and improve the stability of the system to external shocks. It will start operating at the beginning of 2019. The withdrawal will be on the national authorities and the reserve will consist of the back loaded allowances. The unallocated allowances will fall into this reserve. Reduction in the number of allowances should also help lower the cap faster. It is designed as a long-term solution, since it creates a more long-term framework.[22]

Conclusion

The economic rationality of actors involved in the EU ETS brings the risk of prioritising short-term and temporal fixes, since the emitting companies mainly look on their annual financial reports, over long-term climate goals.[23] In the cap and trade system, the economic rationality clashes with the mission of the EU to optimise the environment. The cost of climate change management should be justified by the cost-benefit analysis, run by emitters themselves. This can lead to a situation where the complexity and the physical dimension of climate change is obscured, illuminating the cost-benefit rationale of carbon trading. Emitters prioritise striving for the best deal scenario over reaching the target set by the cap. Their calculating character crystalizes in lobby groups guarding their interests. This adds to the rigid character of the EU ETS. The EU should not turn a blind eye to the systemic issues underpinning the EU ETS if it truly wants to fix it.

[19] Ellerman, D.A. et al. (2016). The European Union Emissions Trading System: Ten Years and Counting. Review of Environmental Economics and Policy, 10 (1), 89-107.
[20] Ellerman, D.A. et al. (2016). The **European Union Emissions Trading System: Ten Years and Counting**. Review of Environmental Economics and Policy, **10 (**1), 89-107.
[21] https://www.reuters.com/article/us-eu-carbon/analysts-trim-eu-carbon-price-forecasts-as-supply-swells-idUSKBN14T19O
[22] Schleicher, S.P. et al. (2016). Extending the EU Commission's Proposal for a Reform of the EU Emissions Trading System. FEEM Working Paper No. 27. Milano: FEEM.
[23] Evernden, N. (1993) The Natural Alien: Humankind and Environment. Toronto: Toronto University Press.

Points for Discussion

The paper offers several points for discussion. How can we solve the rigid character of the system? How can we set a framework where the power of lobby would be minimised? How can we match the long-term goals of climate policies with short-term interests of emitters? Does the new reform bring more systemic and fundamental changes or is it only a temporal fix? And in more general terms, how can we render climate change governable under different rationality? And, can the EU take a pioneer role here?

Prague Climate Talks is a new project aimed at establishing a platform for continued high-level discussion on the complex issue of climate change. Throughout a series of debates it will bring together experts and professionals from varying relevant fields as well as members of the general public.

The project is co-organised by **EUROPEUM Institute for European Policy** and **Glopolis** in cooperation with **Heinrich-Böll-Stiftung Prague** and under the auspices of the **UN Information Centre Prague**.

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