

Sector Integration – More progress than expected

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At present, the public and political debate is primarily focused on the subjects of sustainability and climate protection. The effective and efficient use of resources is increasingly gaining in importance. In the field of energy and climate policy, *sector coupling* has become a central term. In general, this is defined as the connection between different sectors of the economy with the aim of creating synergies for greenhouse gas emission savings. A large part of the CO₂ emission reduction so far has been undertaken in power generation and in industry in general. The aim is now to broaden the focus to other sectors of the economy in order to leverage their potential for greenhouse gas emission reductions.

For EEX Group, sector coupling constitutes a particularly relevant subject. Today, EEX Group already integrates numerous energy and commodity markets across geographic boundaries. Power, emissions and gas trading, in particular, are relevant for sector coupling. In this context, transparent exchange trading in these commodities permits the effective and efficient use of resources. It creates the basis for synergies, both between different commodities, and across geographic regions. As a result, these markets can make an important contribution to sector coupling.

So far, the sectors included in the European Emissions Trading Scheme (EU ETS) have made a significant contribution to greenhouse gas emission reduction. But a large number of ideas and innovations offering high potential for greenhouse gas emission savings, e.g. through the use of new technologies, have also been developed in other industries. Rather than simply connecting these sectors, the synergies between them have to be used. This process – the expansion of the energy transition – can be described using the term "sector integration".

One aspect most of these new ideas share is that they need a CO₂ price signal (comparable with the one in the EU ETS) to be commercially advantageous and to enable their large-scale implementation. As a result, the expansion of CO₂ pricing has a high priority, which is also confirmed by the current political debate regarding this subject. In this context, the focus is on the sectors in which Germany will not achieve the agreed targets otherwise. This concerns, in particular, the transport and heating sectors, which are also the centre of the current political debate. Moreover, Germany is also at risk of missing the CO₂ reduction target in agriculture. To achieve these targets as efficiently as possible, in future, targets should not be set for individual sectors or individual years since such a detailed specification is not in line with the concept of sector integration and contradicts the integrative consideration of emission reduction requirements.

A cross-sector price signal creates an efficient option for implementing common targets in connected sectors. Two fundamental options are available for creating such a price signal – emissions prices can be determined either through administrative measures (taxes/levies) or via trading instruments (emissions trading). In this respect, it has to be noted that the biggest possible climate protection effect is not achieved by committing to a certain price level as early on as possible.

Instead, clear framework conditions have to be established for cross-sector pricing on the market. On the basis of this price signal, actors in the different sectors of the economy can implement emission reduction measures. In emissions trading, the price level increases with an increasing scarcity of certificates. As a result, emissions are reduced wherever costs are lowest. Moreover, the price signal also responds flexibly to external factors, such as the development of the economy. This, in turn, sets

the right short- and long-term incentives for all actors to reach overall CO₂ reduction targets through the integration of various sectors. Furthermore, in its special report on climate policy, the German Council of Economic Experts advising the Federal Government found that fixed price paths do not provide additional planning security for market players.

As seen from the perspective of EEX, the potential of emissions trading should be fully exploited for the expansion of CO₂ pricing. The emissions trading price signal constitutes the basis for the efficient attainment of greenhouse gas reduction targets at the lowest possible economic cost - with free market pricing on the wholesale market being decisive for this. However, this is nothing new for market participants that operate on a large number of markets every day, while final consumers are not directly affected by short-term fluctuations in the price of emission allowances.

Today, emissions trading already provides a cross-sector price signal which can be expanded with further sectors. The entire EU ETS design is based on expandability both in a geographic and in a sectoral respect. In a geographic respect, the EEA-EFTA states (Iceland, Liechtenstein and Norway) participate in emissions trading, in addition to the EU member states. A linking of the trading systems with Switzerland is planned from January 2020. In a sectoral respect, the EU ETS has already been expanded several times both at a national and at a European level. Examples of this comprise the inclusion of air transport and of the aluminium sector at a European level and the national expansion with additional plants from the heating sector in several member states.

The use of emissions trading for CO₂ pricing is also supported by its global connectivity. At present, there are 20 emissions trading systems worldwide in economies representing more than one third of the global economic output. Moreover, at the moment, China is building a nation-wide emissions trading system – which is likely to become the biggest in the world. This provides significant potential for co-operation opportunities. A reinforced cooperation is an important milestone in approaching a global level playing field for CO₂ pricing. The common European approach of the EU ETS forms the basis on which Europe can use these opportunities.

Likewise, converging framework conditions also constitute a good basis for global trading in commodities which can make a contribution to the success of the global decarbonisation efforts. This, first and foremost, concerns hydrogen, for which a global market is currently developing.

In addition, the common approach to reducing emissions (which has largely been harmonised within the EU ETS) also counteracts internal distortions within the EU internal market. As seen from an institutional perspective, the trading approach ensures that Europe remains able to act. This is because, in the field of trading, decisions can be taken with a qualified majority vote, while the principle of unanimity, e.g., applies under tax legislation.

In general, emissions trading offers three options for expanding CO₂ pricing: Firstly, the joint expansion of the EU ETS with new sectors at a European level; secondly, the national “opt-in” of sectors into emissions trading; and thirdly, the creation of a specific ETS for additional sectors of the economy – separately from the existing EU ETS. As seen from the perspective of the market, the Europe-wide expansion appears to be the most desirable option, followed by national opt-ins.

Both options are provided for under the regulation, they are tried and tested and, as a result, could be implemented relatively easily. Several current legal opinions have intensively covered the various options for using emissions trading¹. These have, e.g., found that, upon the approval of a national

¹ See „[Rechtliche Optionen und Konflikte einer Einbeziehung des Straßenverkehrs in den Emissionshandel](#)“ (Ohms Law Firm); „[Die Einbeziehung des Transportsektors in das Europäische Emissionshandelssystem](#)“ (Prof. Dr. Nettesheim)

opt-in of sectors (such as transport or heating), the EU Commission could also permit other member states to directly integrate these sectors into the ETS at a national level. This could quickly lead to a dynamic development which would require the member states to “put their cards on the table” with regard to their respective climate policy ambitions. If this method is adopted, national measures will support the common European approach.

The third option of creating new – initially national – ETS systems, in principle, also ensures the long-term connectivity both for further sectors and member states. Politically, it offers the leeway needed to define an emissions cap and a reduction path independently of the current EU ETS. As a result, a price level independent of the EU ETS could, e.g., be established in the transport sector.

A number of questions arises irrespective of the concrete political instrument chosen (tax/levy or trading): Which sectors are affected? How will the revenue from taxes and/or auctions be used, e.g. in the form of compensation? Which market participant is specifically required to pay these costs?

Consensus has largely been established with regard to the fact that any form of CO₂ pricing should be integrated into a more comprehensive reform of taxes and levies to ensure an optimum steering effect. Examples of this include a lowering of the power tax and renewables support levy. These measures should restructure the tax and levy system so that their burdens reflect the effects of emissions. Other burdens would then have to be offset with CO₂ pricing and adjusted to it to create a level playing field for emissions reductions between the different sectors.

In addition to a lowering of the burden on power, the subsidisation of renewable energies should also be further developed concurrently. In this field, too, the concepts of price and volume based policy instruments need to be weighed to ensure target achievement. In the subsidisation of renewable energies, the decision to consistently rely on volume-based policies leaving pricing to the market has resulted in reduced costs for the expansion of renewable energies.

Today, different sectors are already being integrated in various forms. This, first and foremost, takes place on the markets. Trading platforms, such as EEX, bring together a broad range of market participants from different sectors and with different business models. Market participants trade a broad range of different commodities, such as power, gas and emission allowances. These are the basic components of sector integration. The market is used to weighing developments in different market segments and optimising its response based on price signals. Today, as a result of emissions trading, the costs of greenhouse gas emissions are already included in many of these markets. There are many aspects supporting the expansion of this type of pricing to other sectors in order to create an important basis for sector integration. This, in turn, permits the efficient and effective use of resources and, ultimately, the achievement of the climate and energy policy targets.

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