

# Carbon Markets

March 2022

## Contact



**Chris Winkelman**  
Tax Partner / EU&R Lead  
chris.winkelman@pwc.com  
+31 6 515 418 97



**Juliette Marsé**  
Tax Director / EU&R team  
juliette.j.marse@pwc.com  
+31 6 341 961 08

The global growth of 'clean energy' markets is undeniable. The urge for companies seeking to be 'net zero' is significantly increasing and thus also carbon markets are expanding rapidly and strongly. Research shows that the global carbon market is estimated to grow some 30% year-on-year, reaching US\$250 billion by 2030 and potentially US\$1 trillion by 2050.\* At PwC we see the carbon credits schemes globally increase. Some impact our clients by putting a price on carbon. However, we also see that carbon credits create opportunities for funding and additional revenue streams for certain companies. As such, we see an increasing interest around carbon credits and carbon trading. With this document we have intended to provide some high level guidance in the maze called carbon credits.

## Carbon Markets

In order to provide guidance in the vast quantity of carbon markets, we have divided them into the following four subgroups:

1. Closed mandatory 'cap and trade' markets with an official trading platform;
2. Closed mandatory markets with bilateral trading only;
3. Open mandatory markets with trading at an exchange;
4. Open voluntary markets.

The subgroups exist of mandatory and voluntary markets. For the mandatory markets there are annual compliance obligations for monitoring carbon emissions and surrendering the correct amount of carbon credits representing the actual emissions. Not complying would result in penalties. The voluntary markets are aimed at companies that would like to offset their carbon footprint, for example as part of their carbon neutral or 'net zero' strategy. The voluntary markets are not punitively driven.

The subgroups can furthermore be divided into open and closed markets. Closed markets refer to markets that only allow carbon credits specifically created for these markets as eligible for those markets. Open markets refer to markets that allow carbon credits that are generated from projects that represent one t/CO<sub>2</sub> offset or carbon reduction.

## Validation

In order to get started at either the open mandatory or the open voluntary market a project needs to be registered by a carbon credit registry that validates projects that represent carbon offset or reduction and assesses whether this project fulfills all the specific standards (i.e. requirements) of a registry to generate carbon credits. Determining what is the right registry for a specific project is important and can also be relevant from a value creation perspective.

In order to validate the carbon credits in their system each registry has its own Validation/ Verified Bodies (VVB) or listed Designated Operational Entities (DOE) and standards for carbon offsets and reductions eligible to generate carbon credits. VVB's and DOE's are tasked with assessing if projects meet the specific standards and assess them for carbon emissions. Based on the outcome the VVB or DOE determines the carbon credits resulting from a specific project. These carbon credits are then registered in the respective registry.

## Trading

Trading of carbon credits can take place bilateral or at an (online) platform for trading, such as the Carbon Trade eXchange (CTX) or Aviation Carbon Exchange (ACE). For some trading platforms such as ACE, carbon credits have to meet certain conditions to be eligible.



\* PwC's 'Industry in Focus. The race is on: commodity traders sprint into 'clean energy' markets.'

# Subcategories of the various carbon markets



**Key elements** for your organisation to consider with respect to carbon credits:

- Understand carbon costs / revenue stream
- Determine preferred investment / fund structure
- Determine trading strategy including but not limited to preferred trading jurisdictions
- Understand the relevant tax and legal implications
  - Carbon taxes
  - Transfer pricing implications
  - VAT treatment
  - Legal documentation for trading

# 1

## **Closed mandatory 'cap and trade' markets with an official trading platform.**

These markets are regulated markets that are made mandatory by countries or regions that have the authority to impose rules around carbon emissions via carbon credit markets. These markets often work with a 'cap and trade' system, in order to control the carbon market via a capped set of emission rights and to decrease the amount of emissions rights going forward. The value of the carbon credits in these markets is based on the price paid on trading or auctioning platforms or between parties bilateral. By putting pressure on the available carbon credits through the 'cap and trade' system, the price of one t/CO<sub>2</sub> will increase, as the value of carbon credits in this market is based on supply and demand. An example of a closed 'cap and trade' carbon market with a trading platform is the EU ETS market.

# 2

## **Closed mandatory markets with bilateral trading only.**

These markets are also regulated markets that are made mandatory by countries or regions that have the authority to impose rules around carbon emissions via carbon credit markets. These markets usually work with a system that connects the specific market relevant carbon credits to a price for a respective year, but under these systems generally free carbon credits are handed out as well to avoid carbon leakage. The free carbon credits can be traded by companies that don't need all the received free carbon credits (i.e. which are carbon efficient). The price of these carbon credits is based on supply and demand. However, to the extent that there is a set annual price, the trading price will always be lower than the price for the non-covered t/CO<sub>2</sub> under the regime in that respective year. An example of a closed carbon market with bilateral trading only in Europe is the Dutch CO<sub>2</sub> levy.

# 3

## **Open mandatory markets with trading at an exchange.**

These markets are regulated markets that (although subject to certain conditions to qualify) allow for carbon credits that represent a t/CO<sub>2</sub> offset or carbon reduction. Carbon credits for these markets actually represent carbon offset or carbon reduction. The price of these carbon credits is based on supply and demand. An example of an open mandatory market with a trading platform is the carbon offsetting and reduction scheme for international aviation ("CORSIA") for which the carbon credits are traded at ACE.

# 4

## **Open voluntary markets.**

These markets are limitedly regulated and are for parties that are not obliged to meet certain carbon reduction targets. The voluntary carbon credits can but do not have to be traded at a certain platform. The value of these carbon credits is based on the ask and demand of the market. The demand for these credits seems to increase since more and more companies (and people) are moving towards 'carbon neutral' and 'net zero'. However, 'net zero' can often not be achieved by carbon emission reductions only, for the remaining carbon offset voluntary carbon credits play an important role.