Carbon Offsetting

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The drive to reach net zero is a challenge for the oil and gas industry. While companies develop their production methods, diversify into renewable energy and work towards electrification of operations, they need to find ways to offset their current carbon output. Carbon offsetting is currently one of the preferred methods with all major energy companies having a portfolio of offsetting projects they support, from alternative energy development to the planting of trees.

Carbon offsetting originated in the adoption of the Kyoto Protocol in 1997 by the United Nations Framework Convention on Climate Change (UNFCCC). It created a number of tools to offset carbon. These include:

- Clean Development Mechanism (CDM);
- Joint Implementation (JI);
- Emissions trading.

In its simplest form, carbon offsetting is a tool that allows a party to in effect reduce their emissions by providing financial or technical assistance to other parties that are delivering greenhouse gas reduction projects. One offset credit is measured as removing one ton of carbon dioxide from the atmosphere. It is a key mechanism in compensating for unavoidable emissions which cannot be directly reduced at source. The four main types of projects that are usually used for carbon offset are:

- Forestry and conservation projects
- Renewable energy projects
- Projects aimed at introducing energy-efficient technology in communities
- Waste to energy projects usually involving capturing methane from waste.

Offsetting projects exist around the world and companies may choose to offset only against domestic projects, i.e. those projects based in the same country as the emissions that are being offset or they can be international, i.e. based elsewhere in the world. Typically, international projects give a wider range of possibilities for investment, however, there are some restrictions on how these can be traded.

The protocol requires that offsets meet a quality criterion including that the credit evidences that the reduction would not have occurred without the finance, that the credits must be removed from the market to ensure they are not double counted and ensuring that the emission reduction in one area does not cause an increase in emissions elsewhere.

These credits can be bought and sold on their respective Carbon Market to allow for greenhouse gas reduction through the most cost-effective and economically efficient allocation of these. However, some markets will only allow trading of credits from domestic offsetting, for example, the EU Emissions Trading Scheme discussed below does not allow trading of international credits, all credits must be from offsetting projects within the EU.

There are two types of market. The compliance/regulated market and non-compliance/voluntary market. The EU Emissions Trading Scheme is a mandatory scheme that works alongside this and applies to those industries which create carbon dioxide, nitrous oxide and perfluorocarbons through actions such as the production of energy, commercial aviation or the energy intensive production of products like aluminum and certain acids. This scheme works on a cap and trade principle where there is a total cap on these emissions within the EU and companies can buy/receive emission allowances. This cap is reduced over time to ensure there is a total emission reduction year on year. Each company which is required to partake in the scheme must have enough allowance to ensure that it’s emissions for the year are covered under it, otherwise they will be heavily fined.

The compliance market is regulated by the international rules defined in the Protocol. Here credits are underpinned by verification and regulatory processes. The credits that are contained within it are widely traded.

- CDM is one type of credit used. When used it produces Certified Emission Reductions (CERs). These CERs can be used by companies to meet their allocation under the EU ETS. CDM also offer the opportunity to go further by offering a CDM gold standard product which ensures that the project also has a measurable impact on sustainable and social development within the local communities.

- JI within the compliance market produce Emission Reduction Units (ERU) which can again be used by companies to meet their allocation under EU ETS. To be deemed a JI, the product must provide reduction in emissions by sources or an enhancement of removals by sinks which is additional to what would have occurred without the funding. It also needs to be approved by the host party and be authorised to participate by the parties involved in the project.

The non-compliance market is non-regulated and any products from this market cannot be exchanged for any compliance market credits. Many use third party verification and use some form independent standards such as the Voluntary Gold Standard or the Voluntary Carbon Standard.

Emission trading allows those that have emission units, CERs or ERUs that are spare to trade to those who are over their targets. Trading schemes such as the EU ETS can be created as climate policy instruments at national and regional levels. The EU ETS is the largest cap and trade scheme. Following Brexit, the UK has announced that it will also operate an ETS scheme which may in due course link to other international ETS schemes.

Offsets are not without their controversy though as they do not deal with the lowering of emissions within the oil and gas industry, rather just preventing any further damage that they would cause, in effect passing on their own obligations to

change. Planting trees only temporarily stores carbon and there is no guarantee that they won't be chopped down earlier than expected. There has also been concerns that only about 30% of the money provided from CERs go to the projects with the rest being consumed by verification, overheads and project developer profits.