

CARBON CONTRACTS FOR DIFFERENCE 101

Carbon contracts for difference (CCfDs) are an agreement between governments and businesses that guarantee a carbon price from a carbon pricing system with the goal to incentivise the development of an emission reducing or removing project (a “low-carbon project”). These agreements are inspired by contracts available in financial systems, like options or futures, that revolve around a “strike-price”, a pre-determined price that the holder of the contract is entitled to for a specified period.

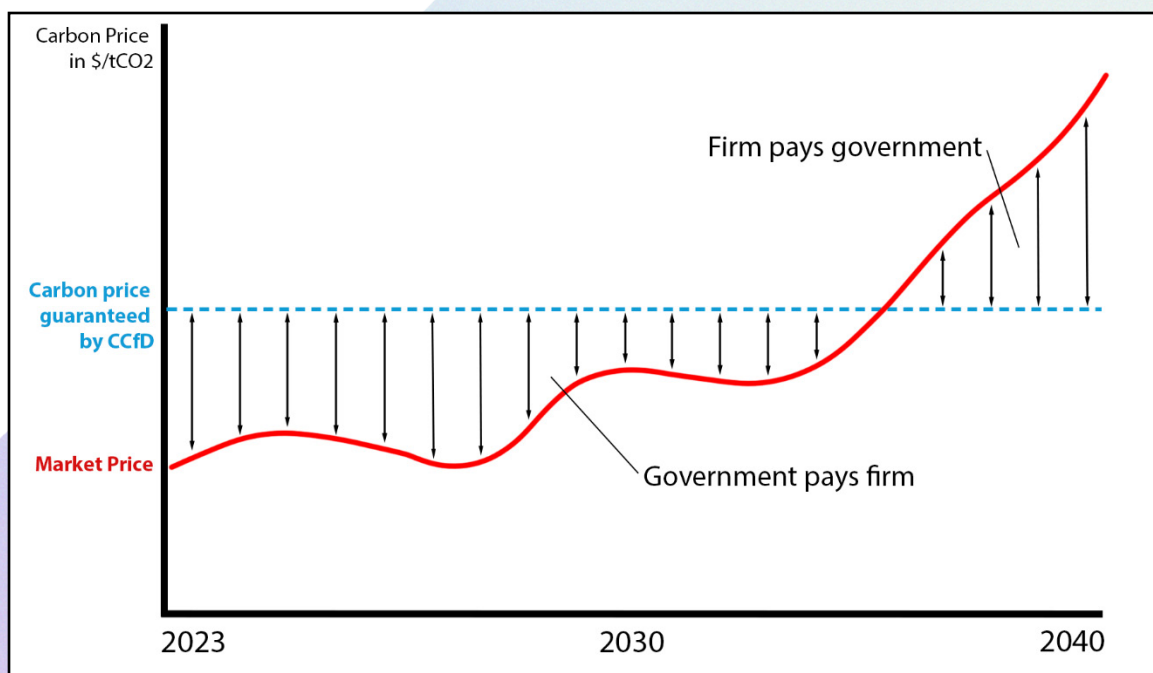
How CCfDs work

The primary purpose of CCfDs is to provide greater certainty for the development of a low-carbon project. In practice, this materialises as providing avenues for de-risking investments made to reduce the costs imposed by a carbon pricing system and making up financing in cases where downside risks materialise. Designs of CCfDs differ based on the carbon pricing system that they are tied to. For example, a contract available in a cap-and-trade system would differ compared to one available in an output-based pricing system (OBPS) since the systems utilise different mechanisms to enforce the carbon price. In a cap-and-trade system, emissions allowances are traded among regulated emitters, like in the EU Emissions Trading System (ETS), whereas in an OBPS a tax and credit market exist to incentivise emission reductions, like in Canada's Federal OBPS.

One implementation of a CCfD in a cap-and-trade system offers a guaranteed payment for the difference between the market price and the strike-price when the former is lower in value, but also requires the contract holder to pay the government the difference between the market price and the strike price when the former is higher (see Figure 1). As a result, this contract helps the firm lock in the carbon price for their low-carbon project, providing greater financial certainty in the case of a low market price.

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Figure 1. Example of a CCfD



Benefits

CCfDs offer several benefits for both project developers and governments/regulatory bodies:

- **Investment incentives:** CCfDs provide project developers with a predictable and long-term revenue stream, reducing the financial risks associated with investing in low-carbon technologies. This makes such projects more attractive to private sector investors.
- **Emission reductions:** By accelerating the deployment of low-carbon technologies, CCfDs contribute to significant emission reductions, thereby supporting national and international climate change mitigation efforts.
- **Regulatory compliance:** CCfDs help governments, regulatory bodies, and regulated emitters achieve their carbon reduction targets (or compliance obligations) by encouraging the adoption of low-carbon technologies and rewarding projects that successfully reduce emissions.

Risks

As with many financial instruments, CCfDs are not without risks and often must be designed for their unique carbon pricing systems and/or domestic context.¹ In particular, some research has suggested that CCfDs could lead to market distortions and unintended consequences within carbon pricing systems.² Despite the potential risks, there have been several deployments of carbon contracts internationally and with several other countries considering their own implementations.³ For example, the Netherlands' [SDE++](#) aims to support industry and scale up clean technology and infrastructure.

1. For example, see IETA's [White Paper](#) on Carbon Contracts for Difference in Canada.
2. <https://www.europex.org/position-papers/carbon-contracts-for-difference/>
3. Initiatives have been launched in both the [UK](#), [Canada](#) and [France](#).

