

RENEWING EU ELECTRICITY MARKET DESIGN FOR REACHING OUR CLIMATE TARGETS

A previous non-paper gave a first sketch of an EU Electricity market design securing the adequate long term signals to guarantee the success of the energy transition while safeguarding a competitive, integrated and efficient European energy market.

This design relies on four major actors: energy producers, a public fund (the “fund”), energy suppliers and energy consumers.

Implementing financial transfers between (i) producers whose production costs are not dependent on fossil commodities and ETS, such as most low carbon generation assets, and the fund to replicate a contract for difference covering their long term costs, and (ii) the fund and consumers, through their supplier to replicate the long term costs of the covered producers, is a necessary tool to meet several key objectives that cannot be achieved solely by the current marginally priced electricity market:

- It is necessary to offer to all consumers the visibility required to invest in their decarbonisation while ensuring social fairness of the transition.
- It is necessary to ensure the coverage of the long term costs of the low carbon assets, both existing and future, that will be necessary to keep a steadfast course on the path to net zero and to maintain adequate supply.

Those transfers, operated after prices are formed and transactions concluded on the spot market will not interfere with the current functioning of the wholesale markets :

- market price will still be set based on the marginal capacity bid, which will maintain the efficient matching between energy demand and available capacities, based on their merit order. Marginal costs would remain unchanged, and bidding practices by capacity operators unchanged.
- There would be not be any distortions in the incentives for a producer, to produce when the demand is the highest : this can be treated in the CfD structure, by a proper definition of the reference production profile, as already handled in renewables support schemes. .

We argue that this is not a theoretical analysis. CfDs have been implemented at a massive scale across the EU to support the development of renewables, both dispatchable (cogeneration or biomass), or not (solar or wind). 20 years of experience have demonstrated the absence of distortion in their bidding strategies and that both systems can be integrated efficiently.

This mechanism would also ensure an efficient pass-through of the infra-marginal rent from low carbon energy producers to all consumers, or long term production cost coverage from consumers to energy producers, insofar as the supply market is fully competitive.

This non-paper will describe in more detail three points related to such a market design : (i) how it would handle existing long term contracts on its inception, (ii) how it would provide for alternative long term coverage opportunities for consumers, such as PPAs directly concluded with producers, (iii) what the nature of the intermediary fund may be.

1/ Inception of the market design reform and treatment of existing contracts

When implementing the aforementioned market reform, certain consumers or suppliers will have already concluded coverages, and certain may be long term¹, over the counter, coverages. It would be useful to define a broad class of long term coverages in sector law, and to foster the development of a liquid market for such coverages, providing long term opportunities for all energy market participants.

Let us take the example of a given wholesale market where, for instance 80% of the production is made up of low carbon generation assets with significant inframarginal revenues to redistribute.

¹ To be defined. For example, coverages exceeding [3] years, i.e. which is a maturity beyond the commonly traded maturities on forward markets.

If a consumer has already subscribed to, for instance, 30% of its supply in such long term contracts with a given producer, with the rest of the supply coming from the wholesale market, a first option would be to apply only the CfD scheme to the 80% of the 70% (i.e. 56%) remainder of its supply, until the expiration of its coverages. Conversely for the producer, the power generation assets already involved in such schemes would also see those production volumes, not traded in the wholesale market, excluded from CfD coverage. This approach simply grants a grandfathering to existing coverages, leaving them untouched until their expiry, but requires the coverage level of a consumer to be known *ex ante* to the operator of the CfD scheme. Such an approach appears to be the closest to the objective stated in considering 30 of the 2022/1854 regulation that “*to the extent that existing or future contractual obligations, such as renewable power purchase agreements and other types of power purchase agreements or forward hedges, lead to market revenues from the production of electricity up to the level of the cap on market revenues, such revenues should remain unaffected by this Regulation.*”

The advantage of the aforementioned option is its simplicity:

- For the producer, the only volumes concerned by the CfD would be the physical volumes sold in the wholesale markets, ensuring simple implementation and auditability.
- For the supplier (cascading to the consumer), the CfD would apply to the volumes acquired from the wholesale market.

Another approach would be to apply the CfD to total market revenues of by producers and to individual consumers' total costs taking into account the effect of existing coverages : for the aforementioned consumer, the CfD would be applied to 80% of its supply, but taking into account a supply cost equal to the sum of 30% of the coverage price, and 70% of the market reference. This approach is simple to implement as long as the coverages have simple price formulas (such as a fixed price). It may nonetheless cause difficulties for consumers that may have subscribed coverages at favourable prices, or induce windfall profits for producers that may have concluded low cost coverages. The return on experience of the 2022/1854 Regulation inframarginal rent redistribution scheme will be useful to confirm the feasibility of this approach, insofar as this is the approach retained for the producer-side mandatory cap defined in article 6. The long term impacts of such an approach would also have to be assessed finely, insofar as it does not provide the same incentives to suppliers.

2/ Treatment of future contractual obligations, such as power purchase agreements

In the same spirit, and in close connection with the approach retained in Regulation 2022/1854, the market reform should ensure that it never deters market participants from entering into long term coverages and contractual obligations. Producers and consumers should remain capable to choose freely whether they prefer the guarantee of a price over their production volumes within a CfD forming part of the general CfD scheme, or whether a freely concluded contract, and to keep looking for more advantageous coverage options than the CfD, as long as both contracts have the same properties in terms of financial stability, e.g. duration and price stability. Similarly to the treatment of existing coverages, two approaches can be described :

In the first approach, counterparties concluding a PPA would notify the volumes and duration of the contract to the fund operating the scheme, whose neutrality would be strictly guaranteed, and corresponding volumes would be retreated from the CfD flows they are eligible to, similarly to the first approach described above for existing coverages at the date of inception of the mechanism. This approach appears to be the most market-oriented, as it allows consumers, suppliers and producers to “opt-out” from the CfD scheme if they prefer so, and to develop their own mix of production sources. In that regard, this solution allows for the continued development of a fully competitive supply market and the integration of new entrants in the supply market. To avoid any unbalanced arbitrage of the central fund, it would be necessary to ensure that both contracts, whether long term contracts freely concluded,

and CfD coverages through the CfD scheme, have the same properties in terms of financial stability, e.g. duration and price stability.

In a second approach, counterparties would remain able to contract PPAs while benefitting of the CfD flows as well on the PPA volumes. This approach is the closest to the solution retained in 2022/1854 regulation and could be envisioned based on its return of experience. The long term impacts of such an approach would also have to be assessed finely, insofar as it does not provide the same incentives to suppliers, in particular as regards incentives to develop their own production tools and challenge the CfD scheme.

3/ Nature of the fund

As regards the nature of the fund taking the role of counterparty on one hand of producers and on the other hand of consumers through their supplier, it is important to remind that, as this fund may, in high power price environments such as the current period, transfer massive monetary amounts, with a high variability in volume, and serves a single purpose fully integrated with the electricity market, it should operate distinctly from national budgets.

Several approaches have been used in the past for such counterparties to CfD contracts with producers and to pass the average cost of the CfD portfolio to end consumers, such as the *EEG Umlage* in Germany, the CSPE (before 2015) in France, or LCCC in the United-Kingdom. It could be either a specially designed account in the regulated accountability of TSOs, taking advantage of their pivotal role in the market, the strong guarantees of TSO neutrality and independence enshrined in sector law, and their strict control by NRAs. It could also be a dedicated entity with its proper regulation safeguarding independence and neutrality, under NRA control, separated from the national budget.