

The New Electricity Market Design – How to design PPAs creating a healthy investment environment in the EU?

Summary of the REKK Regional Energy Forum held on November 7, 2023

The European Union's electricity market rules aim to incentivize the clean energy transition while also addressing the objectives of energy security and affordability. Unprecedented high price spikes in 2022 challenged the current market design and EU heads of government called on the European Commission to present proposals to reform the electricity market. The document which the Commission presented on March 14, 2023, is now being debated in the Council and the European Parliament.

The core aim of the Commission's proposal is to make the EU energy market more resilient and make the energy bills of European consumers and companies more independent from the short-term market price of electricity. This can be done by way of using more long-term contracts, such as **power purchase agreements (PPAs)**. The proposal addresses the current barrier of the credit risks of buyers by obliging Member States to ensure the availability of market-based guarantees for PPAs. The proposal also requires that public support for new investments in infra-marginal and must-run renewable and non-fossil electricity generation will have to be in the form of **two-way Contracts for Difference (CfDs)**. Excess revenues will have to be channelled to consumers. A third element is to design so-called „forward contracts”, that also allow more suppliers and consumers to protect themselves against excessively volatile prices over longer periods.¹

On November 7, 2023, we invited **representatives of academia and the energy sector** to talk about the current proposal on the reform of the EU electricity market design and to discuss whether the new framework will reach its aim to strengthen long-term markets and provide long-term investment signals.

The two introductory presentations by **Pál Ságvári, Deputy President of the Hungarian Energy and Utility Regulatory Authority (MEKH)** and **Lukasz Kolinski, Head of Unit for Renewables and Energy System Integration Policy at DG Energy, European Commission** emphasized the challenges we face in the European renewable energy development: we need to double the renewable energy production in the next 8 years if we want to achieve the targets set by the EU decarbonisation policies. Europe also needs a reform, which ensures that wholesale prices will not be driven by mainly short-term markets, and which also incentivises investment and use of flexibility. Consumer rights and transparency also need to be improved. In the European Commission's view, we have to use all available instruments proposed in the new EMD, including PPAs and CfDs. The 2021

¹ Press release: Commission proposes reform of the EU electricity market design to boost renewables, better protect consumers and enhance industrial competitiveness, 14 March 2023, https://ec.europa.eu/commission/presscorner/detail/en/IP_23_1591

achievement of reaching 8 GW of renewable energy PPAs in Europe (up from 3 GW from the previous year) is a very promising signal, however, this development was concentrated in a few EU countries only and the bulk was delivered to a few large-sized companies. The aim here is to diversify PPAs into all EU member states and make them accessible to many participating off-taker companies. This should be ensured with mainly market-based instruments. One idea is also the opening of support schemes to bidders that have PPAs.

Speakers also emphasised, that higher renewable deployment will require higher flexibility in the power system. Clear market signals must be created for new technologies, including battery storage. As regards batteries, many countries have made significant progress, including Hungary, which is about to announce an auction call for new battery storage investments. It was also highlighted that in many cases developments in new technologies were not market-driven but promoted by subsidy schemes. These schemes should be designed in the future by applying CfD mechanisms.

The introductory remarks were followed by two expert panels. In the first roundtable discussion, **Monika Morawiecka, Senior Advisor at the Regulatory Assistance Project (RAP), Pedro Linares, Professor at IIT-Comillas Pontifical University and Georg Zachmann, Senior Fellow at Bruegel** discussed together with Lukasz Kolinski whether the European Commission's proposal provides the right incentives for the expected long-term markets to emerge.

The expert panel highlighted that the core of the problem with the EU market functioning is that to have a higher certainty for renewable energy investors and corporate buyers in their long-term investments and planning, we need more reliable, less volatile, and more liquid long-term markets. Even in those few countries with reasonable liquidity in long-term markets, the contracts are 2-3 years long, not long enough for capital-intensive technologies. Off-takers are looking for green energy due to their ESG commitments and to secure more stable prices for their electricity, even if it turns out to be more expensive. The absence of reliable long-term signals for market participants on both the consumer and supplier side undermines the opportunities for long-term PPA contracts between private participants. Renewable energy developers would need long-term commitments from the off-taker sides to further boost their investments, and to secure 10-year contracts with a minimum length, that are bankable. This situation was worsened by the European energy crisis, where liquidity on the forward markets further deteriorated, mainly due to the increased costs of providing the required guarantees for these long-term contracts driven by the skyrocketing energy prices. The following period of high inflation also increased financing costs. We can thus observe increasing LCOE values for PV and wind developments in the year 2023 which was unprecedented in the previous 15 years.

The opinion of the panelists was mixed concerning whether private PPAs or state-backed CfDs are the better solutions to further boost renewable energy deployment in the EU markets. PPAs are still in their infancy, they are still risky for most consumers, as they are not really bankable over a period of ten years, a typical length of a renewable energy PPA. PPAs would need a higher level of standardisation, as their transaction costs are very high presently. The typical time requirement to negotiate a PPA is one year, which includes high costs of contracting (high legal and other service cost). Besides the standardisation of PPAs, experts were divided over the issue of using state warranties, as proposed by the European Commission, to reduce off-taker risks of PPAs. In the view of some panelists, this solution would entail moral hazard problems, as PPAs would be signed by companies not suitable for a 10-year contract, and the resulting failures would increase public financing needs and societal costs. There are additional critical points here, like the expectation of companies that governments will save them in a similar crisis, so they undertake higher-risk contracts (a moral hazard problem as well). Public involvement in the PPA market should be avoided, as it is important that PPAs continue to be purely market-based.

Long-term markets are also hindered by the fact that larger-sized incumbent companies still dominate in many energy markets, having their own natural risk mitigation by owning a sizeable generation portfolio. Therefore, they are immunised in high price environments and are not in need of long-term markets and hence are not incentivised to actively participate in renewable PPA developments.

Concerning the CfDs, the opinions were also mixed. CfDs are easier to standardise, easier to trade and access. CfDs are also a good solution to spread the risks amongst all participants, so they can be effective tools to reduce the financing costs of the renewable energy developments. But CfDs should not only be offered by governments. Panelists emphasized, that it should be avoided that CfDs lead to stronger state intervention, which would further deteriorate the market functions and dry forward markets. Centralized auctions for both government-backed and private CfDs may also facilitate market creation and transparency.

There was no consensus in the first panel on which instruments would function better, and if the application of the two instruments could be applied parallel without any adverse effect on each other. However, due to the very demanding renewable energy targets both instruments should be applied from now on, as Europe needs all instruments to deliver the required results in renewable energy developments.

In the second panel discussion, László Szabó, Director of REKK discussed the risks associated with PPAs with market participants: **Zsolt Jamniczky, Deputy CEO of E.ON Hungária Zrt., Mihály Darida, State Aid and Energy Lawyer at MVM Zrt., István Pócs, Country Manager for Hungary at EDP Renewables Hungary Kft. and Valerio Capizzi, Head of Energy for EMEA at ING.** The second panel showed higher agreement concerning the applicability of tools for ensuring investment into renewables. Market participants judged the market-oriented PPAs as a more suitable tool to pursue the European green energy goals, compared to government-driven CfDs. In this sense, participants also judged governmental interventions in PPAs, including state guarantees, as distorting instruments, which should be avoided. In addition, guarantees would increase public debt, which means that many countries will not be able to apply these due to their limited ability to further increase their indebtedness.

The off-taker risk is a crucial aspect, as it is challenging not only in Central Eastern Europe (CEE) but also in the whole of Europe to find companies with creditworthiness that guarantee a 10-year or longer contract. In CEE, Poland managed to build up the highest PPA portfolio, while others seem to be only starting this process. In Hungary, few PPAs are realised, many of them are in their infant phase. E.ON works with a solution, which applies a risk-sharing instrument, distributing the PPA amongst more off-takers. In E.ON's Green Cloud service customers sign a PPA contract with the producer and a partial supply contract with E.ON, the revolving 2-year contract reduces risks for all sides. Panelists emphasised that further risk-sharing instruments should be explored that work on a market basis.

An important driver of PPAs is the ESG requirements for companies to increase their renewables-based energy procurements. ESG helps in two ways: on one hand, companies are pushed to PPA markets, as these are real green investments in contrast to guarantees of origins (GOs), which are frequently seen as not suitable instruments to prove green commitments (greenwashing). On the other hand, due to ESG goals banks are looking for green financing opportunities, as they also have to improve their green financing portfolios. Thus, the bank sector is willing to provide cheaper financing to green PPA contracts.

Participants also addressed three additional constraints in the European power system. The renewable energy integration issues, mainly grid bottlenecks, will increasingly be present in many countries. Also, land availability causes limitations to project development. In addition, the NIMBY

effect gets also stronger in the case of onshore wind developments. This means that there is also a supply risk, whether there will be enough projects for PPAs.

Concerning the co-existence of the two instruments (corporate PPAs and government-backed CfDs) the market participants expressed higher concerns about crowding-out effects than the speakers of the first panel. E.g. if government-driven CfDs were applied at a much wider scale, that would reduce the opportunities of the more market-oriented corporate PPAs.

However, the big question remains, if corporate PPAs and CfDs would be sufficient to create long-term markets and thus to reach the targeted strong renewable energy deployment, and what role national governments should play in creating the needed long-term markets.

The two opening presentations are available on our [website](#).