

## Explanatory note

### The crucial role of PPAs intermediaries for the development of RES and RFNBOs

#### Introduction

In its Q&A document on RFNBOs delegated acts, the European Commission plans to exclude PPAs concluded between a renewable energy producer and a hydrogen producer, if they are concluded through an intermediary that would be a contracting party : “*the role of the intermediaries referred to in the RFNBO delegated act is therefore limited to the role of a facilitator of such contracts but not as a contracting party*”<sup>1</sup>. **We consider that this position does not represent the market reality, as intermediaries (and not only those acting as facilitators) are crucial to encourage the conclusion of PPAs, and thus stimulate hydrogen production, without jeopardizing the respect of RFNBOs production rules (additionality, temporal and geographical correlations).**

These intermediaries can play an important role for both parties, and do not necessarily imply a breach of the three criteria. In fact, intermediaries manage the asset's production forecasts and bear the risk of potential discrepancies that the network invoices to the producer. By protecting the parties and assuming responsibility for balancing the transmission and distribution network, they stimulate demand for PPAs. In addition, the aggregators are licensed to access the wholesale market, acting as an intermediary between the stock exchange and the needs of both parties. **Recognition of the role played by intermediaries to speed up PPAs contractualization process and for a better risk coverage of hydrogen producers is needed, as long as the underlying renewable assets providing power are clearly identified within the PPA and respects all RFNBO production rules.**

To clarify this aspect, please to see the illustrations below.

#### 1. Intermediaries as protectors against market risks

When a hydrogen producer buys electricity from a photovoltaic farm (*just for illustration, can be applied to other renewable assets*) through a PPA contract, the nominal power output of the photovoltaic farm will be oversized compared to the electrolysis needs. Schematically, the parties will have previously designed an optimization calculation, so that during the least sunny hours of the day, the photovoltaic farm will be able to match all the needs of the electrolysis farm.

Consequently, during the brightest hours of the day, the photovoltaic farm will produce more electricity than the electrolyzers can use. This configuration exposes both parties to a double risk. Firstly, if there is an excess of photovoltaic power, the renewable energy producer will not know the resale price of this surplus on the wholesale market. Secondly, if there is a photovoltaic deficit, the hydrogen producer will not know the price at which it will buy its electricity on the wholesale market.

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<sup>1</sup> [Q&A implementation of hydrogen delegated acts](#), European Commission, July 2023

However, **the intermediary can bring value to both parties by acting as an insurer against market risks and complementary RFNBO compliant supply of power.** In the case of a photovoltaic surplus, the aggregator resells the electricity produced on the wholesale market and issues a purchase order for these surplus volumes. In the case of a shortage of photovoltaic power, the aggregator returns the volumes covered by the purchase order at the fixed PPA price. Of course, these volumes cannot be qualified as RFNBOs unless they are traced from additional compliant PPAs, but this insurance remains a major lever for the economic balance of the project.

## 2. Intermediaries as facilitators in case of multiple PPAs

If an electrolyser aims to secure a continuous flow of renewable energy, based on the temporality and regionality criteria, it will have to diversify its renewable energy asset and sign PPAs with a higher capacity than its needs.

Firstly, if the hydrogen producer wants the hydrogen produced to always be qualified as RFNBO, it will need to contract PPAs with different type of renewable energy assets (wind, solar...) to maximize the “renewable load factor” (we consider the hourly temporal correlation as a reference – in France, when not renewable, electrolyzers can produce low-carbon hydrogen). In addition, many electrolysis projects within Europe have a capacity of over 100MW; yet, the majority of onshore renewable energy farms are around 20 to 80 MW. So, a hydrogen producer may have to sign several PPAs with different renewables energy producers.

In this case, the intermediaries could act as facilitators. Signing and handling many PPAs without any intermediary could represent a high administrative burden (operational and contractual) for the hydrogen producer and considerably complicate the contractual process. By contrast, an intermediary which manages the portfolio of renewable energy assets can **offer a one-stop-shop solution and highly ease the PPA contracting and portfolio optimization process.** Depending on the cases, this intermediary may be a contracting party.

## 3. Intermediaries as precontract players to make FID easier

The hydrogen cost at the output of the electrolyser depends on three factors: the CAPEX (price of the electrolyser), the OPEX (price of electricity) and the load factor.

When the hydrogen producer makes its final investment decision (FID), it can estimate the cost of the CAPEX and load factor. However, without PPAs, the cost of electricity remains unsettled. To make a realistic FID, the hydrogen producer will therefore need to have already secured its PPAs. However, the contracting timeline of renewable energy assets differs from the contracting timeline of hydrogen projects (sometimes by several months or years). Indeed, the hydrogen project will need a significant period between the FID and the commissioning during which it will not buy any electricity to the renewable asset – which is not in the latter's interest. Timing alignment is even more complicated when the hydrogen producer needs to contract more than one PPA with more than one renewable energy asset (see previous paragraph).

The intermediaries can act as precontract player to facilitate the FID by contracting with the renewable energy asset before the commissioning of the hydrogen project. **During the period between the FID and the project commissioning, the intermediary will buy the electricity to the price previously defined to the renewable asset and sell it to the wholesale power market. On the commercial operation date, the electricity will be available to the hydrogen producer at the price set out in the FID.**