

***EFET Insight into* Renewable Power Purchase Agreements**

What are renewable Power Purchase Agreements?

Renewable Power Purchase Agreements (renewable PPAs) are commercial contracts for the purchase of renewable electricity (RES-E) from a specific producer at an agreed price or pricing formula (and potentially volume) over a defined period of time (usually between 7 and 15 years). They can cover all or part of the production of a RES-E facility.

The buyer (offtaker) could be a *corporate* – using the electricity to meet its electricity consumption needs, or an *intermediary*, such as a utility – using the electricity to balance its portfolio and selling the electricity further on to suppliers or industrial consumers.

Why do we use renewable PPAs?

From the perspective of buyers:

- They are a way for buyers to contribute to the decarbonisation effort and to evidence the renewable origin of the electricity that they consume.
- They are a means to fix long-term electricity costs. This helps buyers to manage more effectively the risk of electricity prices going up in the future.

From the perspective of sellers:

Renewable PPAs are a revenue stabilisation mechanism for RES-E project developers and producers. They are commercial contracts, which, much like government support schemes, offer sellers price certainty.

- In the context of new projects, the guaranteed price that PPAs offer facilitates access to funds from lenders and helps to reduce the cost of capital in project financing.
- For existing RES-E installations, renewable PPAs help to manage future price risks, supporting their continued operation.

Overall benefits:

- Renewable PPAs help to bring new volumes of RES-E online, thereby supporting the decarbonisation of the electricity system. They make it easier for companies to contribute to the decarbonisation effort and evidence that they are using renewable sources of energy – information which can be important to the consumers of products produced by those companies.
- They are an important alternative to financial support schemes in times of declining availability of public funds for RES-E.
- They are a means to secure long-term investment in new RES-E generation, thereby contributing to the security of supply of the system.

How widely are renewable PPAs being used?

Renewable PPAs have grown steadily in Europe since the early 2010s and currently amount to over 11 GW in cumulative contracted capacity.

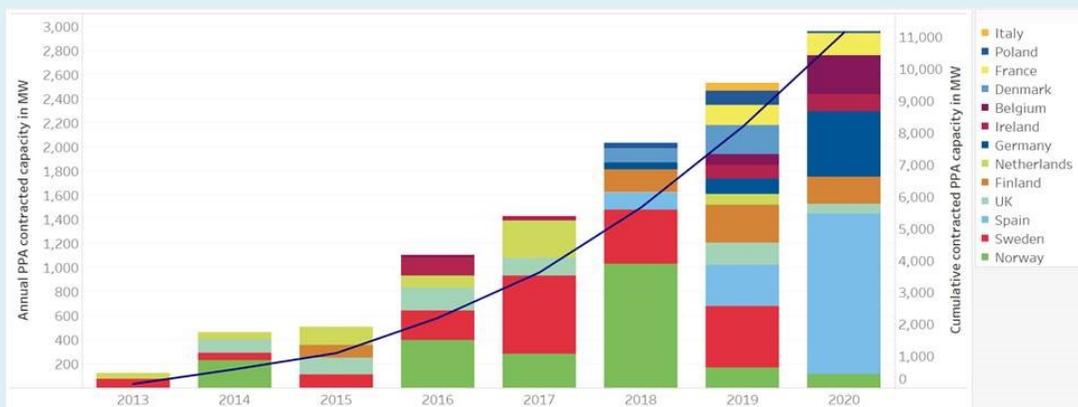


Figure 1: Growth of renewable PPAs per country, 2013-2020 (Source: RE-Source)

In 2021 about 58% of those volumes were corporate PPAs, while most of the remaining volumes were contracted through utility PPAs (European PPA Market Outlook 2022, Pexapark). The types of technologies used for the production of electricity under renewable PPAs vary per country, with the majority of the volumes being contracted for wind, followed by solar power, as shown below.

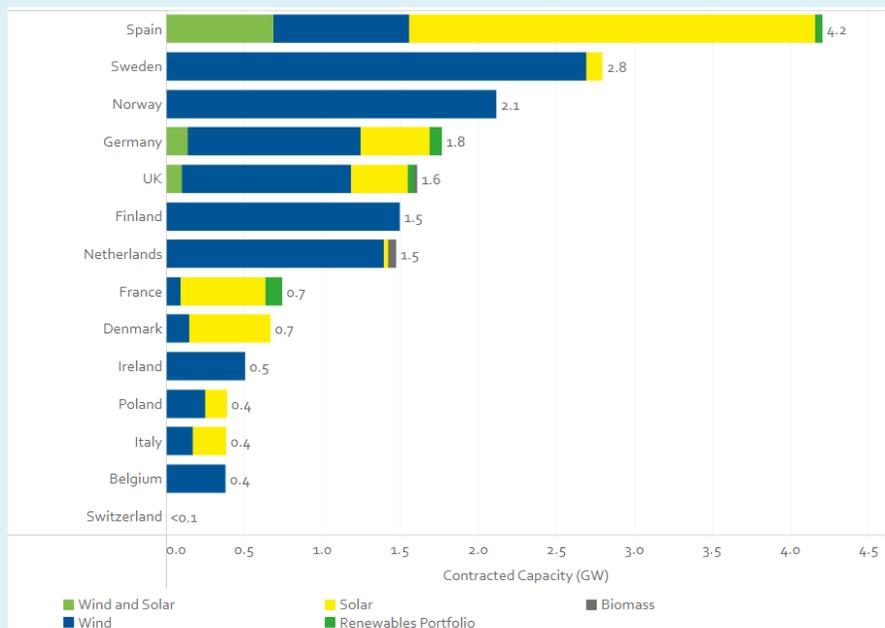


Figure 2: Renewable PPAs per technology type and country (Source: Re-Source)

How do renewable PPAs work?

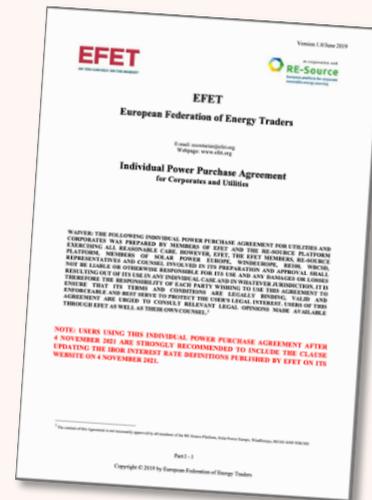
Renewable PPAs can take various shapes and forms, depending on the preferences of the contracting parties. They can be bespoke contracts or based on a standard template (such as the EFET renewable PPA).



The EFET standard PPA

Key features of the EFET standard PPA contract:

- ✓ Developed with consumers (RE-Source platform)
- ✓ Facilitates negotiations between the parties
- ✓ Standardises the conditions of PPAs (quantity, underlying certificate or guarantee of origin, price, settlement, balancing obligation, etc.)
- ✓ Builds confidence of authorities and banks
- ✓ Already available in 6 languages (English, German, French, Italian, Spanish, Polish)



The standard is freely accessible via [our website](#)

There are different types of PPA transactions – some of the most popular include physical and financial PPAs – and various structuring options representing different risk profiles. The EFET standard PPA (version 1.0/June 2019) is flexible and can be easily adapted to the needs of specific projects. The template contains a set of:

- **individual terms (part I)** which cover the commercial parameters and need to be negotiated by the parties, such as volume, pricing structure, supply period, balancing services and responsibility; and
- **general provisions (part II)** which include, among others, the electricity and certificate* transfer process, default and remedies, termination conditions and force majeure, credit clauses, change in law, and dispute settlement.

The current template can be used both for physical and financial settlement. It can be easily adapted to different pricing structures (fixed, floating, hybrid) and products (pay-as-produced, pay-as-forecasted, or fixed band). EFET also procures **guidance notes** for national PPA markets that allow users to adapt the standard provisions to local requirements, including national laws and local market practices. Please visit our [website](#) for the guidance notes for Germany, France, Italy, Spain, and Poland.

* **Certifying the renewable origin of the electricity produced under a renewable PPA:** Energy attribute certificates (or green certificates), such as Guarantees of Origin (GoOs) in Europe, are an indispensable part of renewable PPA contracts. They attest to the renewable origin of the produced electricity and serve as a basis for claims to renewable electricity consumption.

What benefits do PPAs have for decarbonisation?

Renewable PPAs **facilitate the growth of renewable electricity:**

- Most RES-E generators have high up-front investment costs and find it difficult to secure investment from lenders unless the returns are guaranteed through financial support schemes. Renewable PPAs offer an alternative to public financial support, which equally provides guarantees on returns to lenders. In line with Europe's carbon neutrality target, this helps to ensure that RES-E continues to grow even as financial support (particularly for onshore wind and solar) is being phased out in a number of jurisdictions.

What benefits do they bring to consumers?

Renewable PPAs benefit consumers in several important ways:

- **Price certainty:** renewable PPAs are long-term contracts, which help direct consumers, such as corporates, to fix the price of the electricity that they consume. This helps them to manage price risks and reduce costs. Household consumers can also benefit from reduced costs as their suppliers may be buying electricity from utilities, which have contracted volumes through renewable PPAs, or may sign renewable PPAs directly with producers.
- **Claim to renewable electricity consumption:** A renewable PPA means that an offtaker is supporting directly the production of RES-E, certified by green certificates such as GoOs. The direct link between a consumer and a renewable generation facility established by a renewable PPA helps to increase the confidence in the sustainability claims made on the basis of the contract. It also alleviates concerns about greenwashing, which are sometimes associated with other forms of RES-E procurement.

How can we facilitate the growth of renewable PPAs?

1) *By endorsing contractual standardisation*

The EFET standard PPA provides buyers and producers with the legal certainty and necessary tools to minimise project-related, credit, and counterparty risks. Our template offers a sound legal framework, as well as flexibility, allowing users to tailor the contract to their needs. Contractual standards like the EFET template can help facilitate the uptake of renewable PPAs, as they make it cheaper and easier for inexperienced buyers to negotiate and sign PPAs. Standardisation also speeds up the negotiation process by limiting it to the commercial and project-related clauses only.

2) *By phasing out public financial support not allocated on a competitive basis*

In some jurisdictions continued financial support schemes, particularly those where support is not allocated on a competitive basis, are a disincentive for RES-E developers/ producers to sign PPAs, as they would obtain a higher price from the support scheme. This prologues unnecessarily the cost burden on consumers, who finance the public support schemes, while a cheaper alternative - which would still be sufficient for RES-E producers to cover their costs - exists in the form of a PPA with a private party – a corporate or an intermediary.

3) *By removing national-level rules creating disincentives for the uptake of PPAs*

Another considerable challenge to the growth of renewable PPAs comes from national-level rules (interpretations of the Commission EU ETS State Aid Guidelines) according to which energy-intensive industries get compensation for the indirect EU ETS costs when sourcing electricity from conventional generation, but not when sourcing electricity through renewable PPAs.¹ Since renewable PPAs are usually priced on the forward curve (i.e., on expectations of future wholesale electricity prices), which is influenced by the carbon price, not including PPA-sourced power in these measures effectively penalises consumers who purchase renewable power through PPAs.

4) *By removing barriers to the issuance of Guarantees of Origin*

Guarantees of Origin (GoOs) are an indispensable part of a PPA contract, as they are evidence of the renewable attributes of the electricity that has been produced under the contract. Without them, buyers cannot make claims towards their environmental and sustainability targets. It is essential that GoOs are issued to every RES-E producer upon request, regardless whether the producer receives financial support or not.

5) *By issuing forward transmission rights with longer durations*

Forward transmission rights are financial instruments that entitle the holder to receive compensation in case of cross-zonal congestion. They are essential for cross-border PPAs, as without them a producer cannot export the electricity to the bidding zone where the consumer is located, which means that the consumer cannot claim the green certificates associated with the contracted electricity. Transmission System Operators (TSOs) should issue forward transmission rights up to 5 years ahead to start matching the contract duration of at least the shortest PPAs.

For more information on renewable PPAs, you can also refer to the **RE-Source Platform Renewable Energy Buyers Toolkit**, an [open-source toolkit](#) developed to promote and facilitate the growth of renewable PPAs

¹ See Commission study on [“Competitiveness of corporate sourcing of renewable energy”](#)



In summary

Renewable PPAs are an essential commercial contractual tool **supporting the growth of renewable electricity**.

- **For producers** they offer price certainty, which is needed to secure investment, in the case of new RES-E projects, or manage price risks and ensure continued operation, in the case of existing facilities.
- **For buyers** they are an important mechanism for managing electricity consumption costs and delivering on environmental and sustainability ambitions.

For society as a whole, they help to reduce the cost of the decarbonisation effort by decreasing the need for costly public financial support.

To facilitate their growth, **we recommend**:

- Facilitating and encouraging contractual standardisation
- Phasing out costly public financial support schemes not allocated on a competitive basis
- Removing national-level rules creating disincentives for the use of renewable PPAs
- Ensuring that GoOs are issued to every RES-E producer upon request, regardless whether the producer receives financial support or not
- Issuing forward transmission rights up to 5 years ahead to match the contract duration of at least the shortest PPAs