

L’approvvigionamento di energia rinnovabile off-site

TRANSIZIONE ENERGETICA & DECARBONIZZAZIONE

Centrica Energy Marketing&Trading

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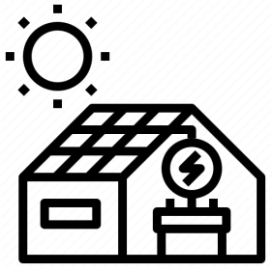
10 June 2021

Green energy options for consumers

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Own Asset:

- Develop, build, own and operating renewable assets (most *tangible*)



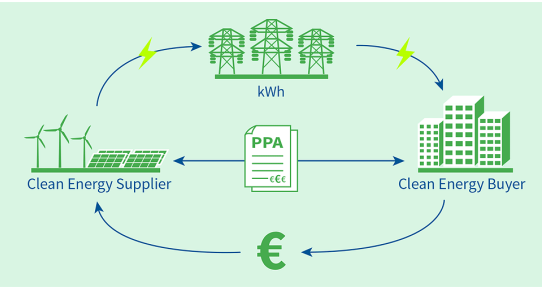
Certificates' backed supply:

- Buying green electricity from a supplier ('green tariff') or buying electricity in the wholesale market in combination with green certificates or guarantees of origin (GoO) (most *virtual*)



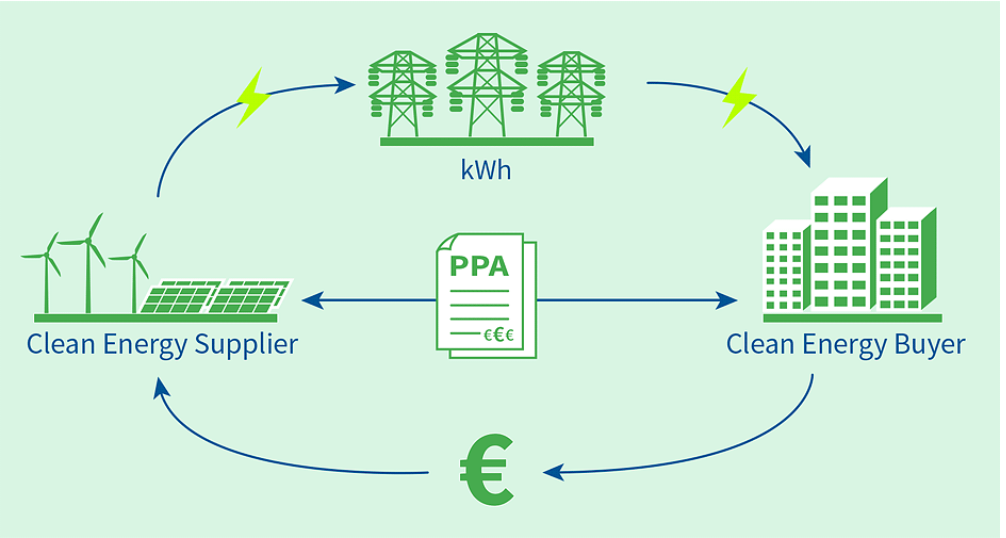
PPA contracts

- Can take many forms and structures
- When 'physical', operation is outsourced, but with commercial direct connection to specific assets
- Increasingly preferred for CSR i.e. raises visibility among customers, employees and investors



What is a Power Purchase Agreement (PPA)?

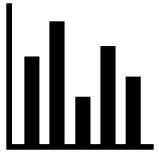
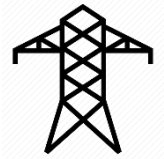
- A contractual agreement between energy buyers and sellers
- The term PPA has generally been reserved for somewhat structured and often longer-term contracts, sometimes spanning even more than 20 years, not for standard electricity forwards or futures



- Renewable PPAs are contracts between the owner of a renewable generation asset (the electricity seller) and an off-taker (the electricity buyer).

The main terms in a Corporate PPA (CPPA)

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- **Volumes**  Fix (hourly to yearly), ‘as-produced’
- **Price**  Fix, floating, variable, indexed, collars, etc.
- **Duration**  Usually 5yrs or more, option to extend
- **Profile**  Baseload, ‘as-produced’, fixed-shape, etc..
- **Type**  **Physical:** energy delivered to corporate or BRP and/or supplier; excess or deficit consumption managed by BRP

   **Virtual:** long term financial hedge on electricity costs, entered as a separate contract to supply contract

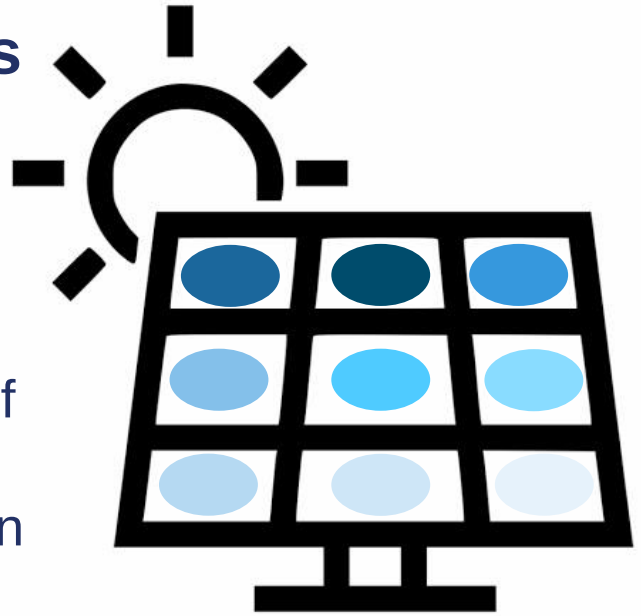
Natural players on the buy side of PPA contracts are supply companies and large users who want to contract renewable energy ‘directly’ from solar or wind farms

The good reasons for entering into a CPPA

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IPPs, Investors, Generators

- **Financing**: support the investment in a new project i.e. bankable
- **Risk sharing/shifting:** some of the risks e.g. profile, can be shifted to the corporate who can absorb production with its load
- **Simplicity**: a merchant approach i.e. going to market, requires resourcing, skills and capabilities very specific



Centrica facilitates targets of producers and corporates by managing the risks involved in PPA with its advanced skills in energy trading

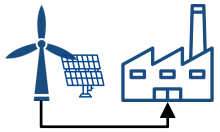
Corporates

- **Hedging:** ability to lock the electricity and carbon price for the long term, at least for part of the load
- **Savings:** ability to achieve wholesale price levels when committing for the long term
- **Corporate social responsibility:** contribute to achieve sustainability and improve public image
- **No capital intensive**: does not require upfront investment like it was own initiative

Market configurations of corporate sourcing

In the industry, CPPAs have many names – but again they all trace back to the 2 overall models – **direct PPA, sleeving PPA (Centrica PPA)**

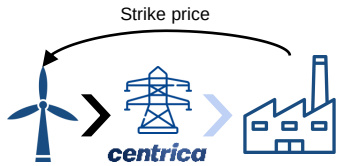
1. Private wire PPA
   Or on-site PPAs



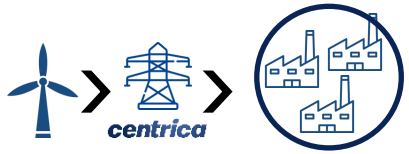
2. Sleeved PPA



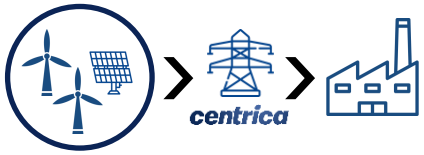
3. Virtual PPA



4. Multi buyer PPA



5. Aggregation PPA



6. Self-owned off-site



7. Cross-border PPA



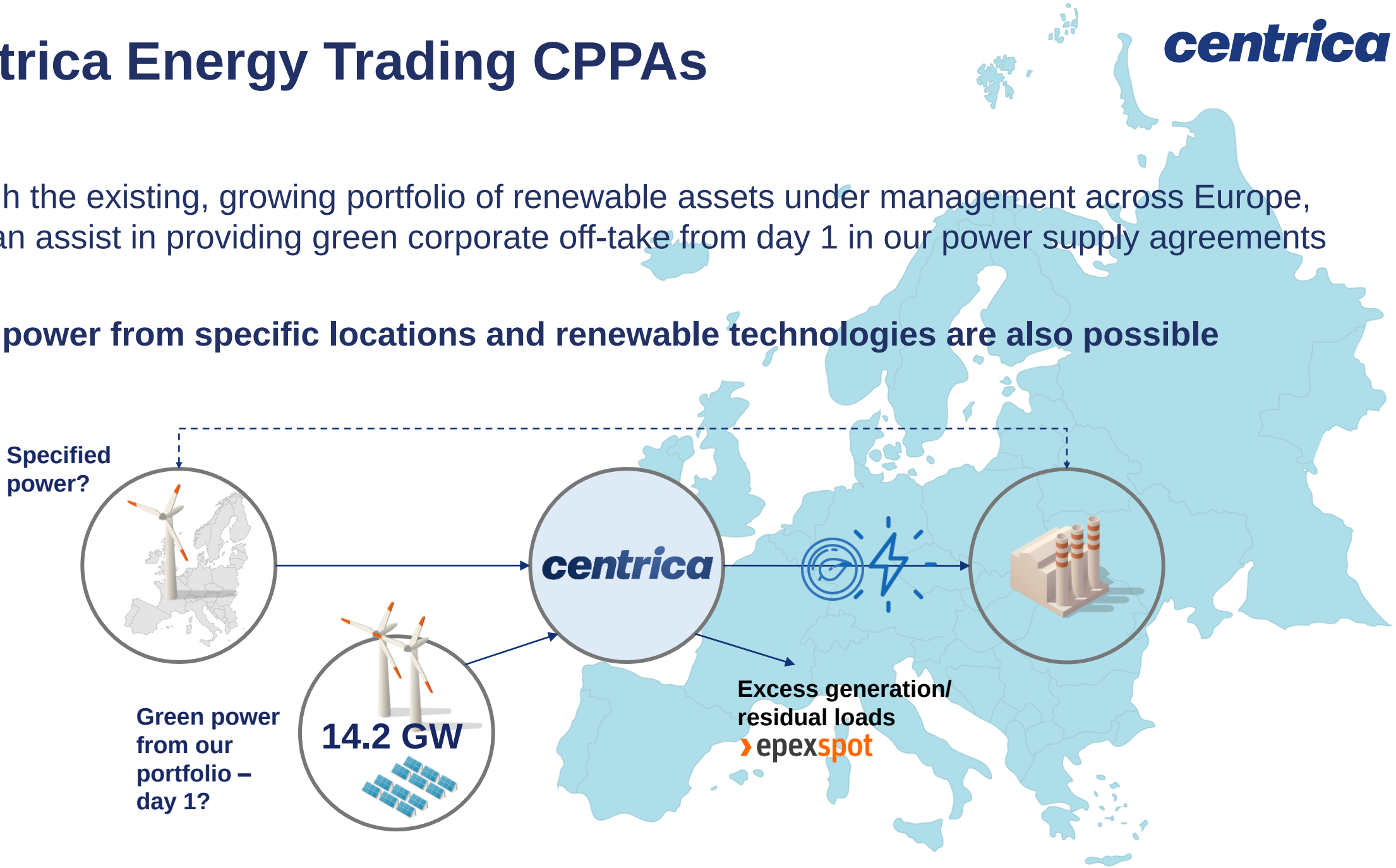
8. Guarantees of Origin



Centrica Energy Trading CPPAs

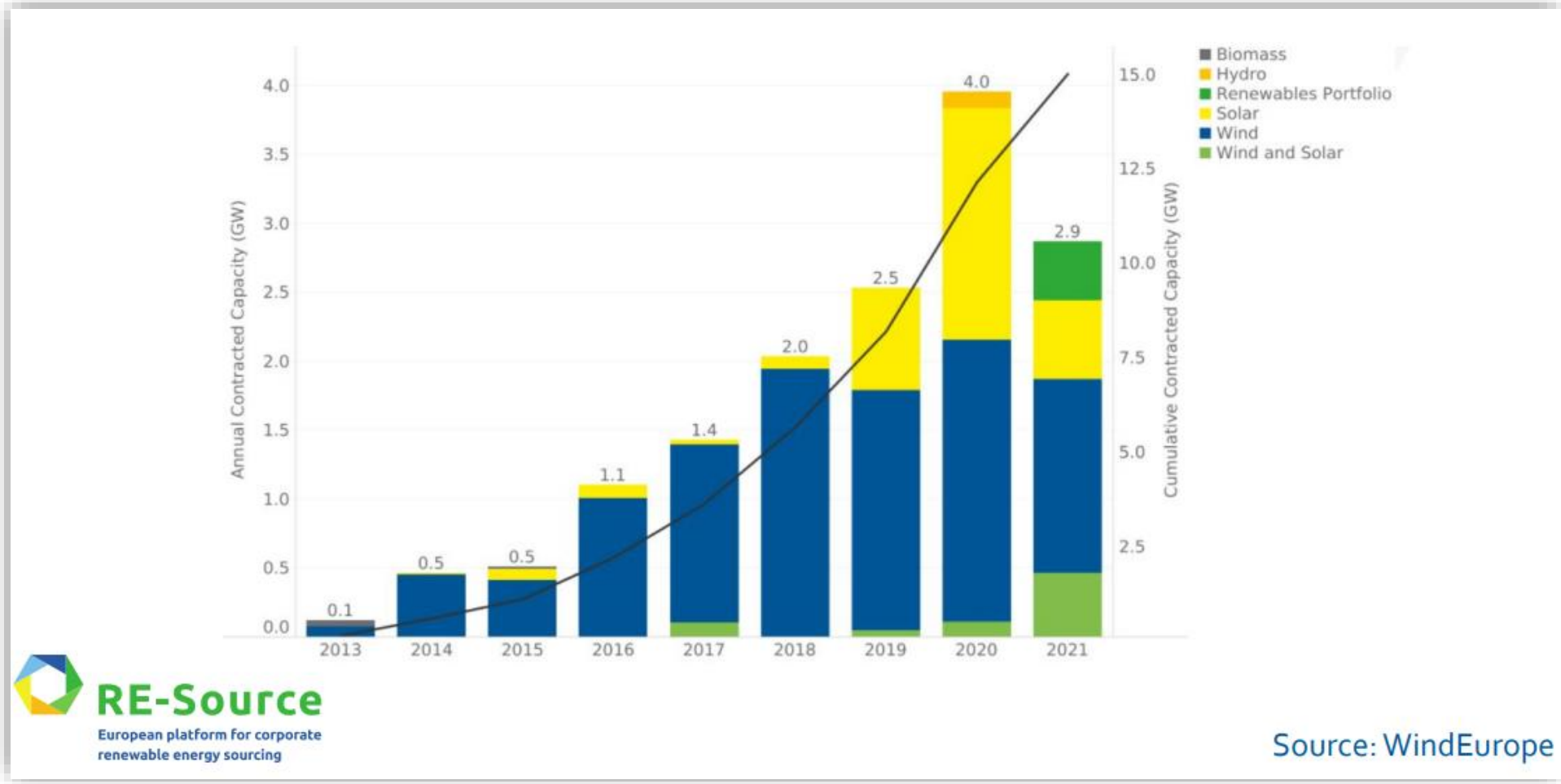
Through the existing, growing portfolio of renewable assets under management across Europe, CET can assist in providing green corporate off-take from day 1 in our power supply agreements

Green power from specific locations and renewable technologies are also possible



The European market of CPPAs

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Green energy is good for business

A green Power Purchase Agreement will also ensure long term stable energy costs. We provide various solutions tailored the needs of our clients:

- ✓ Baseload supply at a fixed price shaped to your consumption profile
- ✓ Pay-as-produced profile
- ✓ Cancellation of Guarantees of Origin



From your preferred origin supported by our market analytics, structuring and pricing proficiency and trading and operational expertise

Thank you for your attention

About us

Centrica Energy Trading (CET) is part of Centrica's Energy Marketing & Trading (EM&T) business unit. **CET trades gas, power and energy attributes and connects producers, suppliers and off takers in the wholesale energy markets.**

CET provides our clients with the best route-to-market services available to the market today, through integrating sophisticated software, structuring and optimising exposures from long term risk management down to physical trading seconds before delivery

"We move and trade energy to satisfy the changing needs of customers world-wide"



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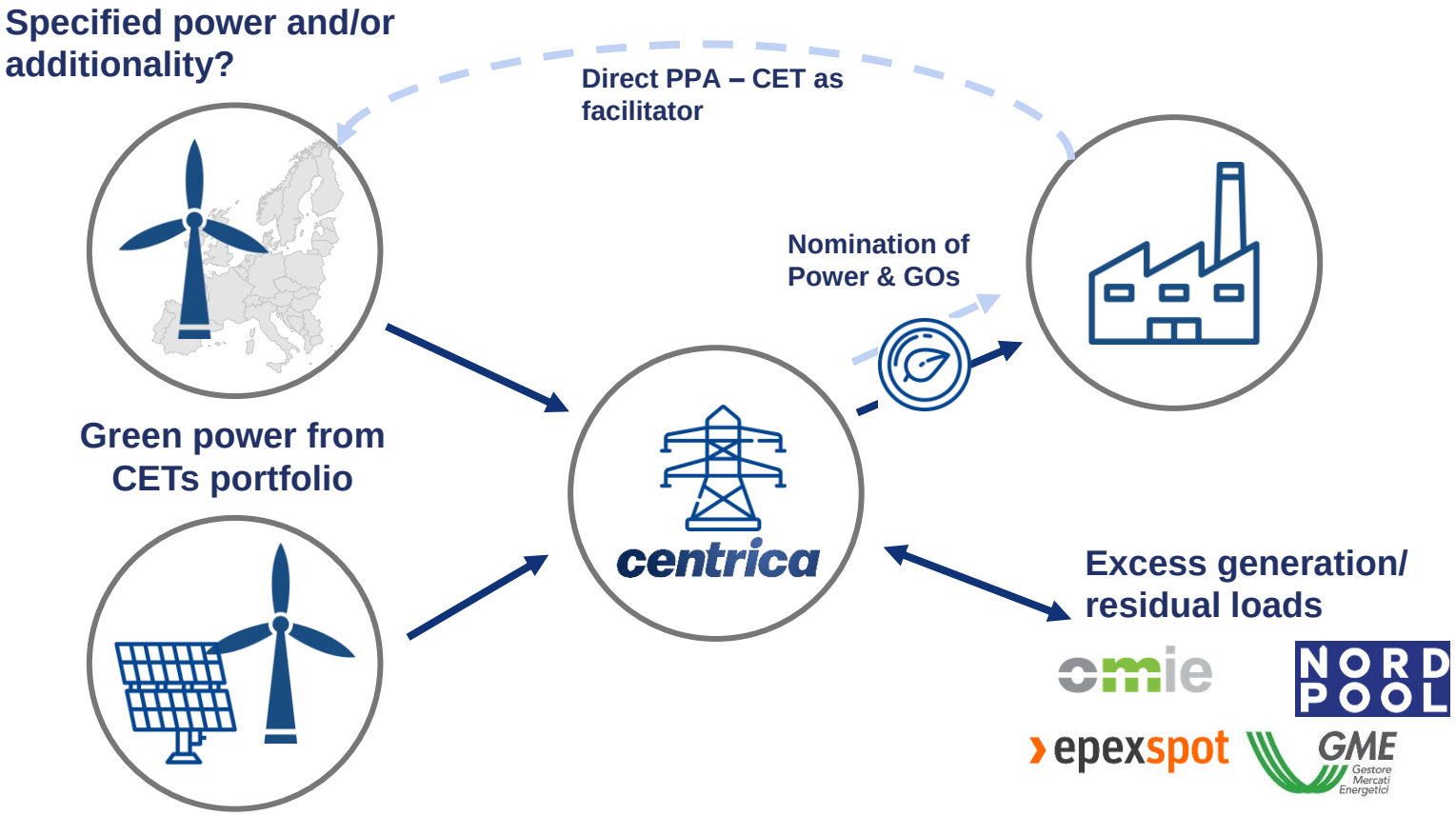
Standard Corporate PPA variations

Multiple CPPA variants exist, but they all trace back to **2 principal solutions; direct or indirect. With or without specified green power**

Direct CPPA

CPPA through Centrica/ Corporate off-take agreement

- Off-take can be on the basis of a **baseload contract** or a **"pay as produced"** contract
- **Management of GOs** on fixed terms can be part of the contract *or be the contract*
- Every Centrica CPPA can be combined with a RtM/Merchant PPA between the generator and Centrica

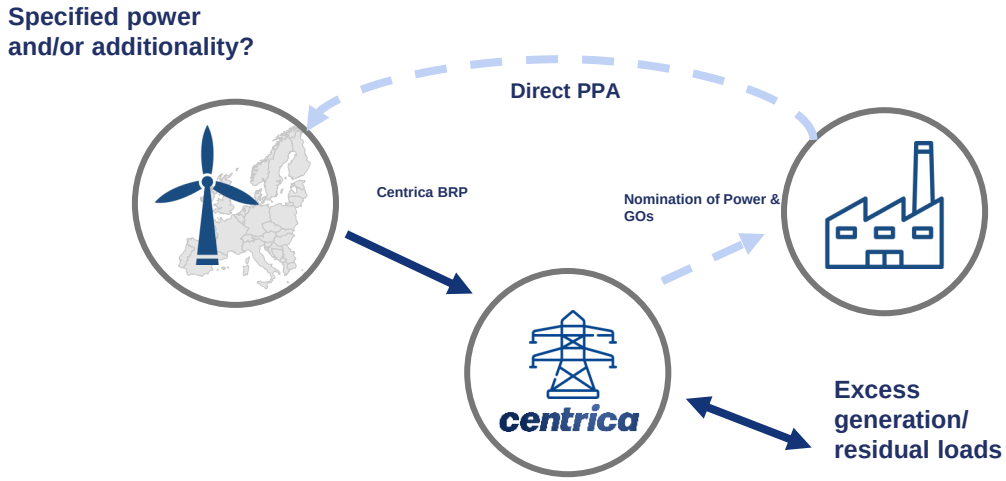


Our Corporate PPA solutions

Direct PPA *(Producer & Off-taker)* with Centrica as market facilitator

All benefits from the Direct PPA plus:

- Centrica can help to secure the match through our existing portfolio and market relations
- Centrica can shape the production from the renewable asset to a profile that matches the demand and risk profile by the off-taker
- Centrica manages the market risks (e.g. balancing risk and profile risk) related to the wind or solar farm production and secures bankability for the producer – and indirectly budget security for the off taker
- Centrica off-sets residual loads into the wholesale markets
- Centrica offers power nomination and cancellation of GOs across borders in all the relevant markets in Europe



Our Corporate PPA solutions

The standard Centrica CPPA/ Corporate off-take agreement

All benefits from the Direct PPA plus:

- Centrica can match with renewable projects at specific locations, while able to supply green power from our existing portfolio from day 1
- Centrica offers Power and GO offtake structures up to 10 years (market dependent) – i.e., behind the liquid window based on extensive market expertise and analytics
- Centrica offers green power from across borders at favourable market prices securing budget stability
- Centrica ensures a standardised or all-inclusive and transparent PPA process from green source to delivery at the off-takers convenience with investment-grade credit backing

