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SWISS ENERGY LAW ASSOCIATION

Corporate PPAs: physical vs virtual models: contractual prevailing practice, trends and opportunities

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Contents

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PPA: setting the scene

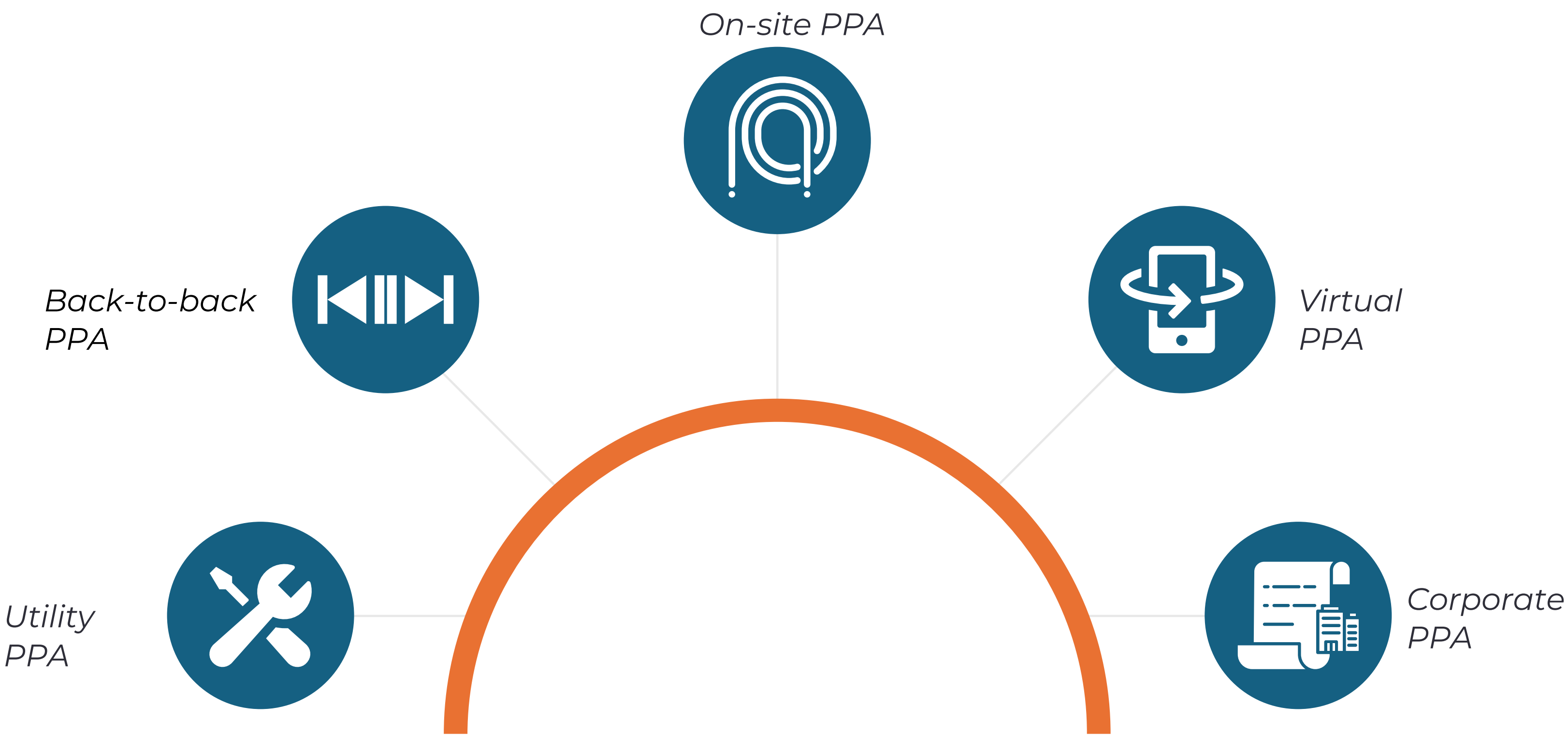
- Long-term agreement for the sale of power (and guarantees of origin or other marketable rights) from a (renewable) energy plant (or portfolio - VPP) entered into between a generator (or a developer) and an ''off-taker'' (final customer, utility, trader), possibly, but not necessarily, in the context of (i) absence of public subsidies and (ii) non-recourse project financing

- So-called "virtual" PPAs differ from physical PPAs being derivative instruments which have as a "legal cause" an exchange of cash flows. Nevertheless, virtual PPAs often present various forms of physical "hybridization" (e.g. physical delivery of GOs and relevance of the operations of the relevant facility)

Risks PPA

- **Volume Risk**
  - Profile
  - Capacity reduction
  - Excessproduction
  - Curtailment (commercial or technical)
- **Market Risk**
  - Scenario analysis
  - Price volatility
  - Negative pricing
  - Imbalance costs
- **Counterparty Risk**
  - Late/missing payments
  - Insolvency
  - Other contractual breaches
- **Legal Risk**
  - «What you see is what you get»
  - Changes in law
  - Litigation

Type of PPA


On-site PPA
Back-to-back
PPA
Virtual
PPA
Utility
PPA
Corporate
PPA

Standardisation

- PPAs in Europe are currently bespoke and based on in-house templates
- In 2017 EFET (European Federation of Energy Traders) embarked on a new venture, driving the first standardisation effort for European Corporate Power Purchase Agreement (CPPA)
- The CPPA project entailed extensive coordination with representatives of renewable energy producers, notably respective stakeholder groups: Solar Europe and Wind Europe as well as regional and national renewable energy organisations
- The EFET CPPA was published in early June 2019 and became the first standard CPPA available in Europe
- You may find the EFET standard CPPA on EFET website following the link below:

https://efet.org/standardisation/cppa/

EFET
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in cooperation with
RE-Source
European platform for corporate renewable energy sourcing

EFET

European Federation of Energy Traders

PART II (General Provisions) of the Individual Power Purchase Agreement

§ 1.
Subject of Agreement

1. **Type of Settlement:** This power purchase agreement (**"Agreement"**) governs:

(a) if Physical Settlement is specified as applying in Section A of Part I (*Individual Terms*), the purchase, sale, delivery and acceptance of the Contract Quantity of electricity from the Seller to the Buyer; or

(b) if Financial Settlement is specified as applying in Section A of Part I (*Individual Terms*), this Agreement governs the obligation of each Party to reimburse the other Party, as applicable, for the Price Differential (if any), and

both in the case of Physical Settlement or Financial Settlement, the purchase, sale, the Delivery and acceptance of the Contract Quantity of Certificates from the Seller to the Buyer.

2. **Balancing Services:** If specified as applying in Section B of Part I (*Individual Terms*), this Agreement additionally governs the provision of Balancing Services by the Buyer to the Seller.

§ 2.
Definitions and Construction

1. **Definitions:** Terms used in this Agreement shall have the meanings set out in the Annex (*Defined Terms*) or the EECS Rules.

2. **Inconsistencies:** In the event of any inconsistency between the provisions of Part I (*Individual Terms*) and the provisions of Part II (*General Provisions*) of this Agreement, the provisions in Part I (*Individual Terms*) shall prevail. In the event of any inconsistency between the definitions of the EECS Rules and the definitions of this Agreement, the definitions in this Agreement shall prevail. Subject to the preceding, in the event of any inconsistency between the provisions of this Agreement and the provisions of a Support Agreement and/or a Direct Agreement concluded between the Parties or between the Parties and a third party, the provisions of the Support Agreement and the Direct Agreement shall prevail.

3. **Interpretation:** Headings and titles are for convenience only and do not affect the interpretation of this Agreement.

4. **References to Time:** Unless otherwise specified in Section B of Part I (*Individual Terms*), all references to time shall be to Central European Time.

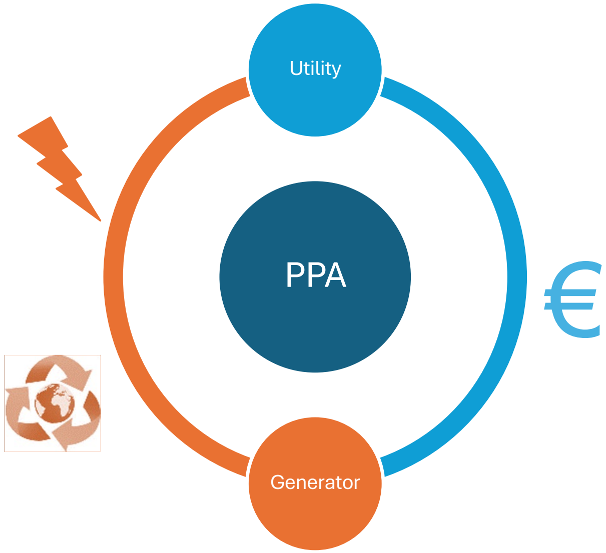
Part II - 1

Power offtake solutions
Standard utility PPA

Key Features

- Generator builds, connects to the grid and contracts with offtaker for the sale of electricity and “environmental certificates” (i.e. GOs) from the facility
- Physical delivery of electricity and GOs
- Fixed price aimed at mirroring LCOE

Advantages	Disadvantages
Counterparties often large, creditworthy utilities	Pricing generally at a discount to market prices.
Depending on maturity of the local market, documentation can be fairly standardised; less mature markets tend to be more complex	Less flexibility to take advantage of prices (in index priced deals) or better opportunities (if longer deals)
	New market entrants in competitive markets may lack the same creditworthiness as more established players
Bankable	



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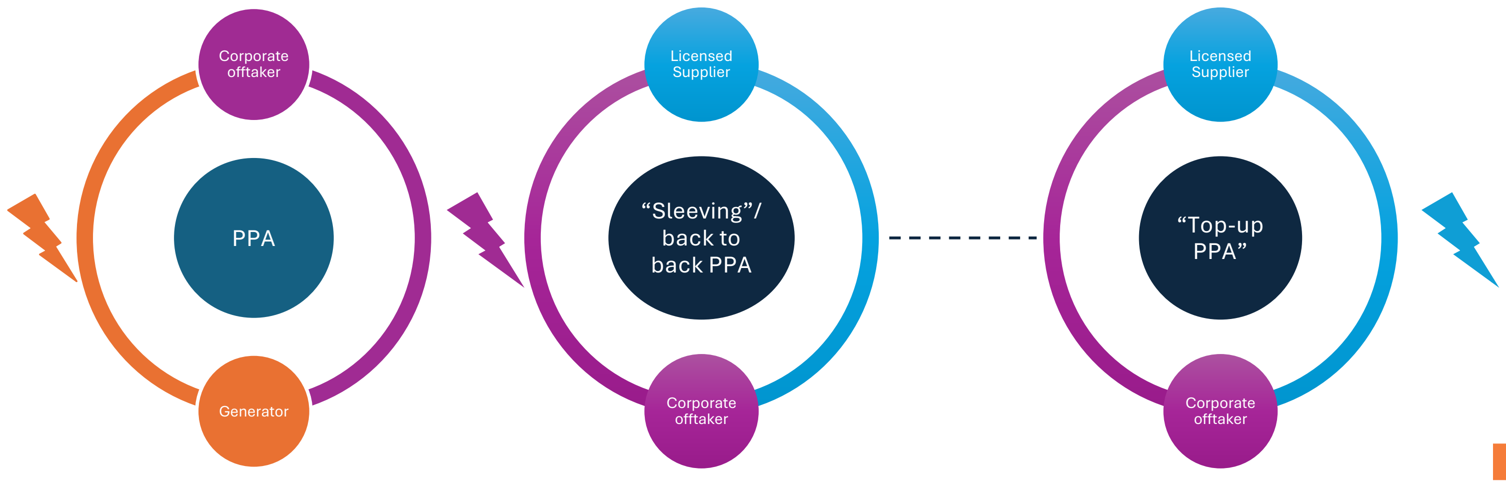
Power offtake solutions
Corporate PPA

Key Features

- Offtaker contracts directly with the generator
- Physical delivery of electricity and GOs
- At times, the corporate offtaker may enter into a "sleeving" PPA with a utility also to "top-up" the profile

Advantages	Disadvantages
Long term price certainty	Additional complexities due to requirement for a wrap from a utility
Wider market available to generator and corporate offtaker	Offtaker may resist taking on "logistic" risks under the PPA
Green credentials for corporate offtaker	Less standardisation



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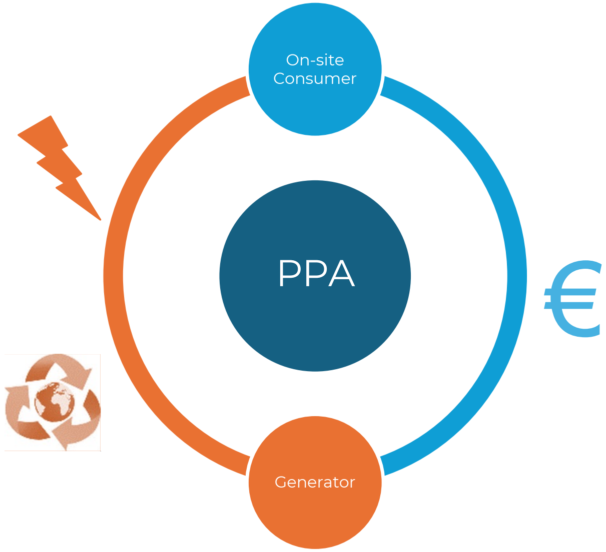
Power offtake solutions
On-site PPA

Key Features

- Generator connects to a consumer in close proximity over a "private wire" (eg large industrial with large energy demand)
- Generator contracts with consumer for the sale of electricity
- The on-site PPA is often coupled with utility PPA where consumer demand is lower than capacity. Also, generator retains title overthe excess power
- Pricing is bespoke, but it is targeted at capturing (and sharing) the on-site benefits: for the consumer this means paying less than a grid supply
- Key risk is in consumer falling over or demand being less than anticipated



Advantages	Disadvantages
"On-site" benefits (avoidance of use of system and grid losses, costs and taxes)	Complex documentation (contractual linking)
	Counterparty risk (insolvency, relocation and reduction in demand)
	Private wire risk

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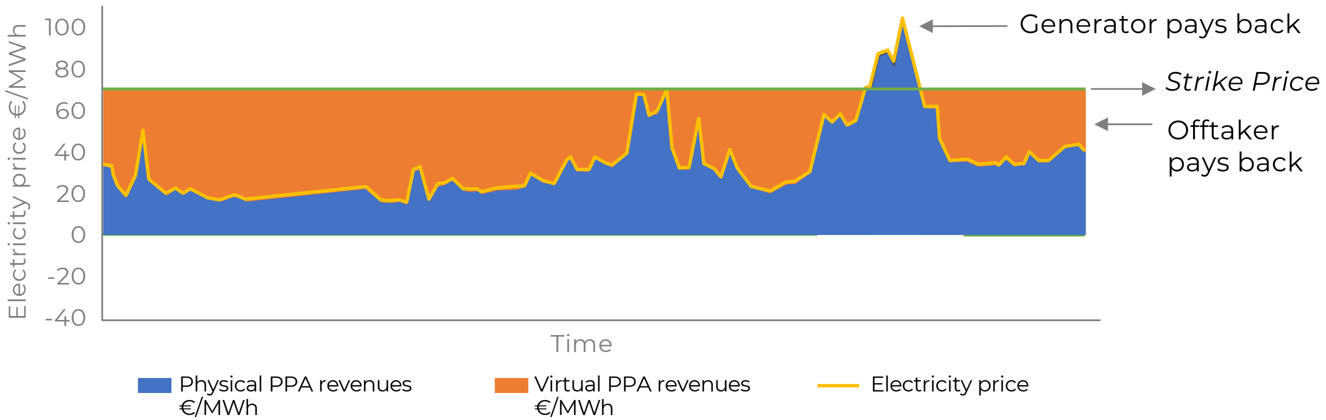
Power offtake solutions
Virtual

Key Features

- Usually operates like a contract for difference (although could operate as a floor or a financial option)
- No physical delivery of power but physical delivery of GOs
- Underpins investment case or financing of project
- There may be a separate PPA for delivery of the physical power

Advantages	Disadvantages
Long-term price certainty	More complex documentation
No requirement for geographical proximity	As a financial instrument, regulatory, tax and accounting treatment will need to be considered carefully
Lower credit exposure, only exposed to price differences	
Easier logistics	

Virtual PPA payments = Strike price – Reference price



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Key points

COD – Delay LDs	Replacement right	Guaranteed capacity – Performance LDs	Term
Delivery Point	Quantity and profile	GOs and future value components	BSR/BRP
Scheduling, imbalances and negative pricing	Price, measurement, invoicing and payment	Maintenance, permits, insurances	Guarantees
Force majeure and change in law	Termination – termination amount	Limitations of liability	Direct Agreement, bankability clause

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Term and tenor

Market standard

The term is usually aligned with the tenor of the debt

Utility PPAs

7-10 years

Corporate PPAs

Usually longer term (up to 20 years)

Term and early termination

Effective date must take into account financial close and commercial operation date

- Financial close as a condition precedent (condition subsequent after a long-stop date)
- COD as initial supply date with delay liquidated damages and possible offtaker termination right after a long-stop date

Reliability of final term

- Waiver to statutory hardship clauses
- Termination for prolonged (non-partial) FM and specifically agreed material events of default
- Cure period and step-in

Early termination consequences

Remedies at law (i.e. damages) vs. termination amount (i.e. liquidated damages)

Termination amount calculation

- Aimed at covering mark-to-market (i.e. difference between market price and contractual price)
- Generally due only if positive
- Additional damages (e.g. legal fees)
- Alternatively, pre-defined monetary amount

Volume and performance

- **Two main alternatives**: “pay as produced” and, possibly, minimum guaranteed annual production vs. fixed volume commitments. This mainly depends on the source (portfolio vs single plant)
- **Performance incentives and/or liquidated damages:** guarantees of: capacity, availability, minimum guaranteed production
- **Tecnical and commercial curtailment**
- **Forecasting and allocation of imbalance risk**
- **Outages / FM**

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Pricing

- **Relation between the term and the pricing structure**: reference for generator is LCOE, for offtaker is forward curves
- **Wholesale/merchant exposure:** mainly fixed price vs. floating price (cap & collar, floor)
- **Other pricing components**: GOs, future value components, balancing costs

Force Majeure

- *An event of* force majeure *means any unforeseeable event, act or circumstance not attributable to the Party invoking it (the« Affected Party ») that could not be prevented by a Reasonable and Prudent Operator using due diligence, adopting all the reasonable measures, and such as to make impossible, in whole or in part, in an objective and absolute manner, the fulfillment of the Affected Party obligations (the Force Majeure Event). Upon the occurrence of the aforementioned conditions, Force Majeure events include for example* (…)

Different categories

- ❑ Exhaustive list vs. examples
- ❑ Pandemic, meteorological events, theft or sabotage, cyberattacks
- ❑ Unexpected outages
- ❑ Delay in connection and grid failures

Obligations

- ❑ Mitigation
- ❑ Information

Termination for prolonged FM

- ❑ Trigger to be defined both in terms of materiality and duration

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Change in law

Change in law

- Affects ability to perform or economic balance?
- Anticipate specific changes
- List of excluded regulatory changes
- Materiality threshold
- Duty to renegotiate in good faith
- Protection to terminate?
- Expert

Future value components

- Who owns new benefits?
- Who bears the relevant costs?

Credit support

Offtaker

- Secure both mark-to-market and termination amount
- PCG or letter of credit

Generator

- Secure delay liquidated damages, possibly under performance and/or mark-to-market
- Interface with project financing

Disputes resolution

Expert

- Independence
- Power to amend and supplement the contract
- Binding decision

Arbitration vs. exclusive jurisdiction

- Costs and time
- Specialization, confidentiality, and preservation of commercial relationship
- Binding decision save for limited reasons
- Rules and place of arbitration

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Bankability

Allocation of risks

- No merchant risks
- No uncapped liabilities
- No statutory hardship provisions
- Production from counterparty risk

Key terms

- Direct agreement/step-in
- Assignment of credits by way of security
- Restrictions on assignment and changes in control
- No set-off

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