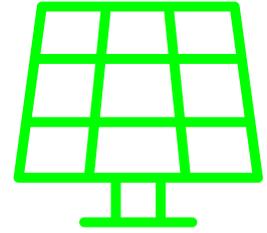
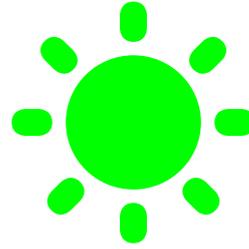


# VIRTUAL POWER PURCHASE AGREEMENTS



## WHAT IS A VPPA?

Virtual Power Purchase Agreements (VPPAs) are a type of contract structure for renewable energy projects. Alongside **Physical Power Purchase Agreements (PPPs)**, they are the dominant transaction mechanism in **corporate renewable energy procurement** markets. Virtual PPAs and Physical PPAs are the two types of PPA dominating this sector. Combined, they greatly outweigh any of the other transaction mechanisms.

## PHYSICAL PPA VS. VIRTUAL PPA

### Physical

- The corporate buyer is **responsible** for the electrons produced and the monetization/sale of those electrons.
- Depending on the contract involved, the buyer may also have to pay transmission charges.

### Virtual

- The corporate buyer is **not** responsible for the electrons produced.
- A VPPA is a **purely financial** transaction.
- A fixed-price cash flow is exchanged for a variable-priced cash flow and renewable energy certificates (RECs).
- Owing to the purely financial nature, a buyer's relationship with the utility, at retail level, remains **unchanged**.

## VPPA BENEFITS

- Simplifies and opens up the process for smaller buyers.
- Easily scalable, allowing buyers to meet a **large portion of sustainability goals** with fewer deals.
- Gives buyers a highly-distributed electricity load, allowing buyers to easier meet renewable energy goals.
- The procurement of bundled RECs is, arguably, the **best way** for a corporation to meet renewable energy goals.
- The purchase of a VPPA is a clearly demonstrable long-term commitment which has a **clear impact** on new renewable energy projects.
- A VPPA makes it possible to generate a **positive cash flow** right from the outset.
- A Virtual Power Purchase Agreement is a way to **safeguard oneself against the increase of conventional energy costs**.
- For corporate buyers, a VPPA **reduces carbon footprint** and, at the same time, offers marketing and financial opportunities.

## HOW VPPAS WORK

- A buyer agrees to purchase a project's renewable energy at a VPPA Price agreed in the contract.
- The project receives Market Price at the time the energy is sold.
- If Market Price > Agreed VPPA Price, the buyer **receives** the difference
- If Market Price < Agreed VPPA Price, the buyer **pays** the difference.
- The buyer generally receives the project's **Renewable Energy Certificates (RECs)**.
- It is a purely financial transaction, there is **no physical delivery of power**.
- The buyer continues their retail relationship with the utility, unchanged.

