

## **Power Purchase Agreements** in Belgium and The Netherlands

As renewable energy markets evolve, Power Purchase Agreements (PPAs) in Belgium and The Netherlands face challenges. This presentation explores the complexities and opportunities in this dynamic landscape.

"I see the bad moon a-risin' I see trouble on the way I see earthquakes and lightnin' I see bad times today

Don't go around tonight Well it's bound to take your life There's a bad moon on the rise "

- Creedance Clearwater Revival

by Axel Baudson



### A few word about me: Axel Baudson

Education

Electrical Engineer by education, trained in Belgium.

Career

2

3

15 years of passion in the energy market, focusing on renewable energy.

### **Current Roles**

Consulting Originator at Trailstone, Director at European Commodities, Board Member at Ventis.

[ ab.



## The Need for PPAs in Renewable Energy

### Capital Intensive

Renewable projects require huge CAPEX with significant leverage. Lenders demand certainty.

### Specialized Operations

Market operations need specific setups, distinct from renewable energy source (RES) operations.

**Risk Allocation** 

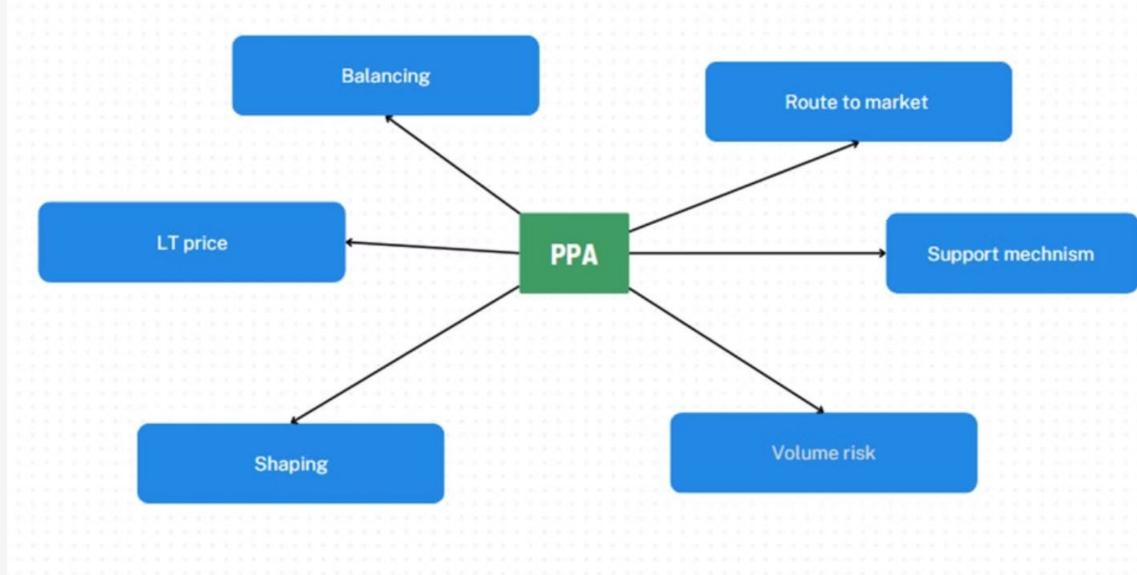
PPAs distribute risks from RES asset owners to other market players.

"The concept of trading is to provide a service" (Mark Rich)

The concept of PPA is to allocate some risks from RES asset owner to other players... Which ones ?



### Services Provided by PPAs







## Volume Risk in Renewable Energy



2

3

### Wind/Solar

Wind parks can experience +/-20% production variations year-to-year.

Solar is more stable

Lacking liquidity

Even standard product can be tricky

### Solvability

We are still very quiet in BeNeLux



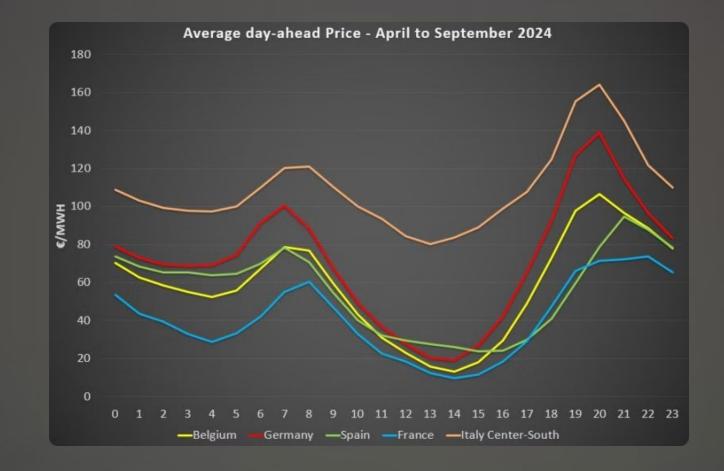
# The Challenge of Shaping

high for wind, extreme for solar, everywhere in Europe

Cannibalization is prone to increase

Support mechanism are aggravating the phenomenon

!!! Negative prices are a market design/ policy issue: don't try solve with with a technical solution !!!





### Balancing: a boiling frog issue



### Impact

Extremely high balancing challenges for solar energy.

High for Wind

Worse in Belgium, Netherlands than in Europe: small countries, high penetration, steep merit order

#### 000 000 000

### Picasso and regulation

Already an issue with aFRR pay-as-clear... could become worse

Support mechanism is aggravating

RFNBO will not help



## Partial conclusions: what can we do

### Flexibilize Everything

Prioritize flexibility in energy systems for first-mover advantages and overall benefits.

### Support Mechanism Review

Revise support mechanisms with retroactivity while maintaining average support levels.

Beware not to reproduce bad scheme in Corporate PPA!

### Market Design Adaptation

Consider adjusting market design to address balancing cost challenges.



## **Conclusions:**

"You must never confuse faith that you will prevail in the end—which you can never afford to lose—with the discipline to confront the most brutal facts of your current reality, whatever they might be."—

Admiral James Stockdale

