ETCSEE Conference Prague

Panel Discussion:
The Practice of Using Corporate Renewable PPAs

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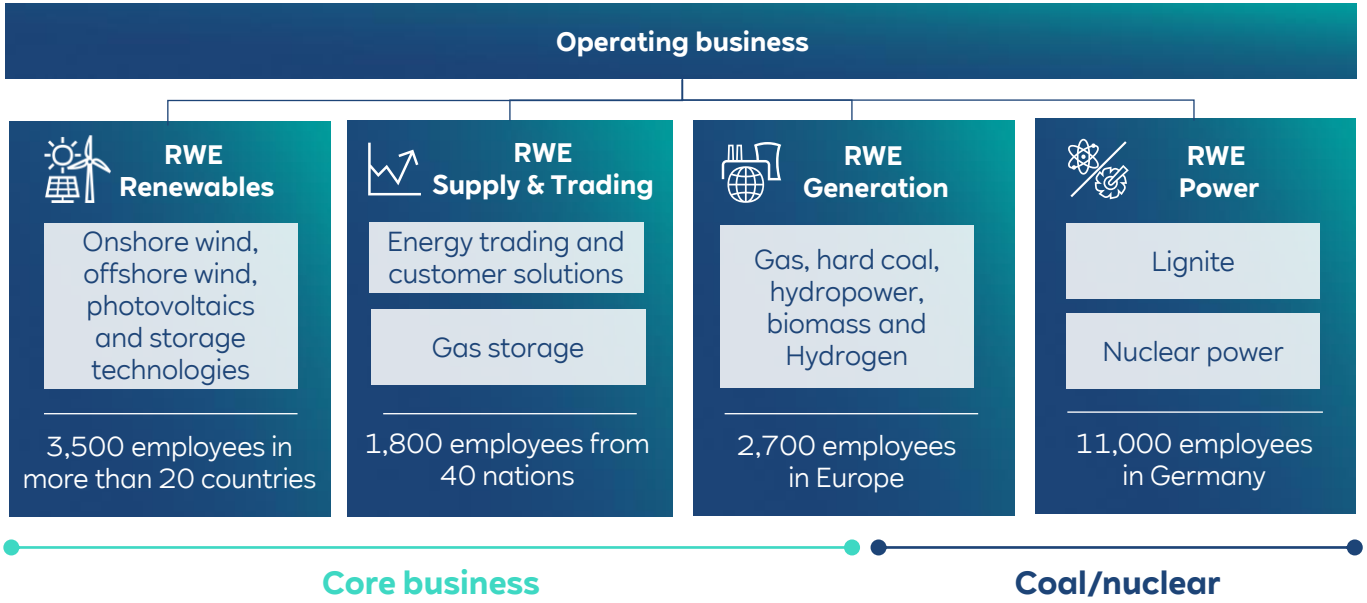
Briefly about RWE Renewables

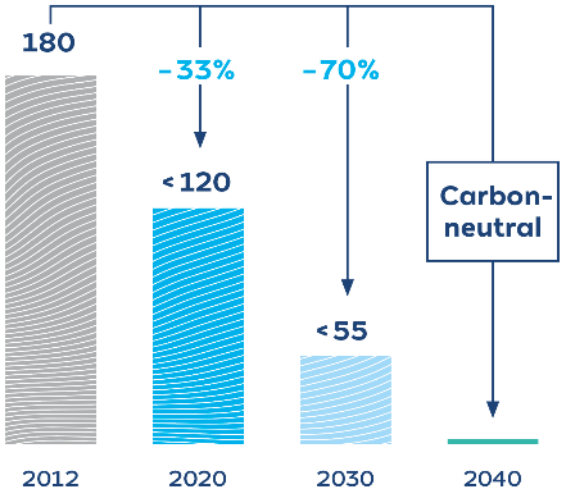
Driving force behind the energy transition – with a powerful position

RWE



Ambitious, responsible, resolute.
With a clear goal: to be carbon-neutral by 2040.

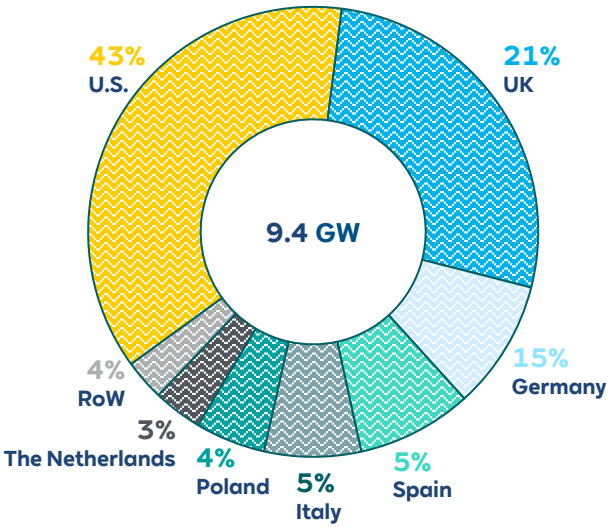
CO_2 reduction at RWE: achieving carbon neutrality in three stages[1] ...



[1] Breakdown of estimated figures in million tonnes: after completion of the transaction with E.ON.

... with a global presence

Renewable capacity by country

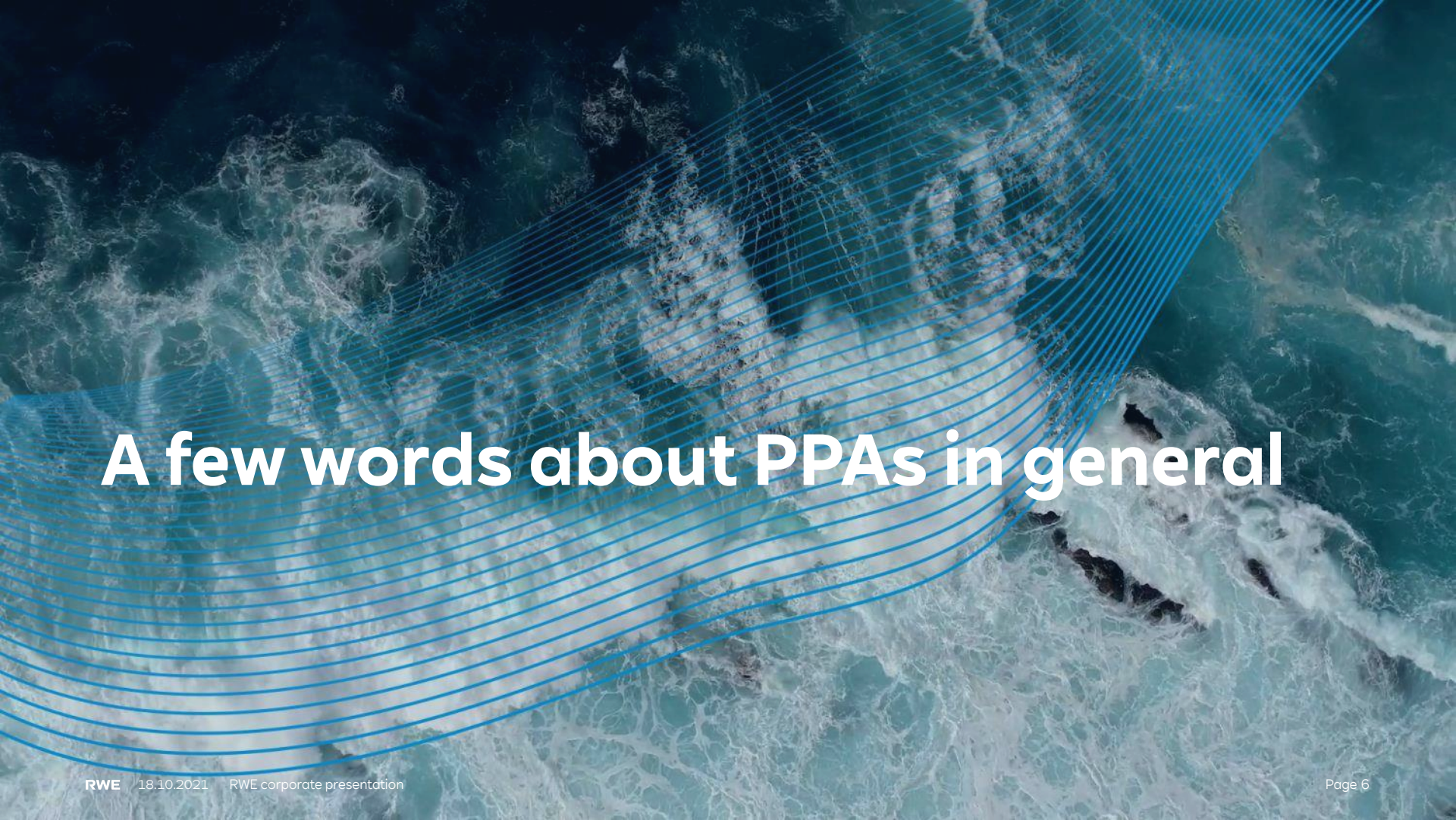


RWE is growing in a way that is targeted and creates value with renewables.

Example – solar:
We enter **Greece** via a joint venture with PPC Renewables, developing **2 GW of solar PV projects.**

Australia's largest solar power station (349 MWp) is currently being built with Limondale.

Examples – wind:
The Cranell onshore wind farm, which will have a capacity of 220 MW, the 151-MW **Peyton Creek** project and **Big Raymond** with 440 MW are currently being installed in **Texas**. The **Triton Knoll** offshore wind farm (860 MW) is being constructed off the east coast of England.



A few words about PPAs in general

What are PPAs and what can they be used for?

- PPAs stand for **power purchase agreements** – a.k.a. long-term agreements and have been used for a long time already, earlier mostly related to conventional power generation.
- **For** the sake of **hedging energy production / consumption / trading positions** both **OTC instruments and futures** via power exchanges are available.
- **Instruments on the far end of the curve are often illiquid or even non-existent** (see table on the right); trading can involve extensive credit lines or daily margining.
- **(Corporate) PPAs are used to mitigate energy price risks exactly in such situations** – tenors of 20 years and more can be covered.

15-10-2021 ‹ Previous session Next session ›

Forward Contracts | Auctions

BASE PEAKS OFFPEAK

TGE Futures as of 15th Oct 2021

(source: TGE)

Contracts BASE

Columns

Contract	First trade price (PLN/MWh)	Daily settlement price (PLN/MWh)	Minimum price on session (PLN/MWh)	Maximum price on session (PLN/MWh)	Total volume (MWh)	Lots (MW)	Total value of trading (PLN)	Number of transactions	Total number of open interests (MWh)
BASE_W-42-21	477.00	470.25	466.50	477.00	17,472	104	8,210,344.80	60	20,664
BASE_W-43-21	-	492.75	-	-	-	0	-	0	676
BASE_W-44-21	-	482.50	-	-	-	0	-	0	504
BASE_W-45-21	-	-	-	-	-	0	-	0	0
BASE_W-46-21	-	-	-	-	-	0	-	0	0
BASE_M-11-21	476.06	472.68	468.00	476.06	23,040	32	10,907,582.40	20	351,360
BASE_M-12-21	441.00	440.75	440.25	441.00	4,464	6	1,967,136.00	5	446,400
BASE_M-01-22	-	-	-	-	-	0	-	0	0
BASE_M-02-22	-	-	-	-	-	0	-	0	0
BASE_M-03-22	-	-	-	-	-	0	-	0	0
BASE_M-04-22	-	-	-	-	-	0	-	0	0
BASE_Q-1-22	444.00	442.80	438.00	445.00	36,703	17	16,244,316.00	12	2,580,005
BASE_Q-2-22	433.00	428.17	426.00	433.00	15,288	7	6,541,080.00	6	170,352
BASE_Q-3-22	461.25	463.31	461.25	464.00	13,248	6	6,141,000.00	4	59,616
BASE_Q-4-22									
BASE_Q-1-23									
BASE_Q-2-23	-	-	-	-	-	0	-	0	0
BASE_Y-22	452.00	442.70	442.50	452.00	499,320	57	222,927,546.00	55	57,378,000
BASE_Y-23	448.10	448.05	448.00	448.10	17,520	2	7,849,836.00	2	10,117,800
BASE_Y-24	-	435.50	-	-	-	0	-	0	1,809,504
BASE_Y-25	-	417.38	-	-	-	0	-	0	26,280
SUM					631,473	233	282,763,687.20		

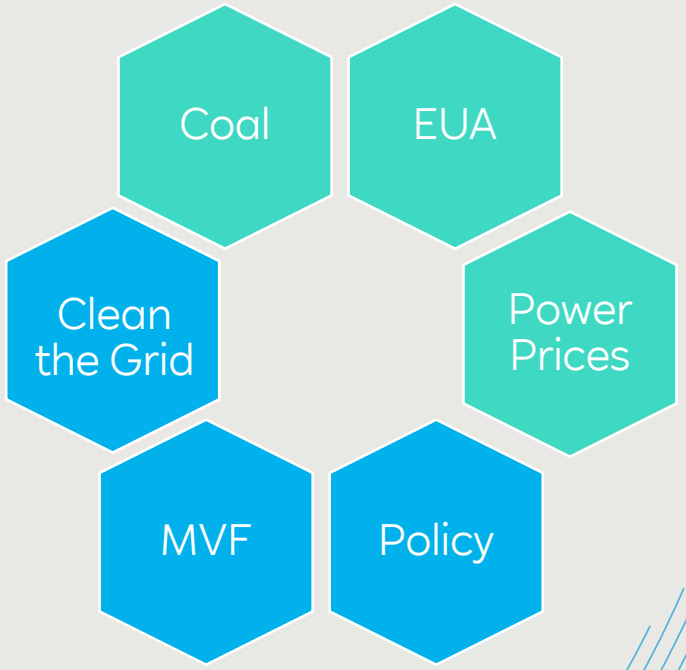
CAL22 BL 6.550 MW

CAL25 BL 3 MW

Why are corporate off-takers and utilities seeking PPAs?

…recognise the sustainability element in the equation

- A way to make a big EU impact on the carbon emissions side



Future option

- Hedge against rising prices
- Hedge to ensure costs stability for objective business planning
- Virtual PPAs can make it easy
- Diversifying their risks while lowering exposure

PPAs can be tailored to meet specific needs of the parties involved

Energy delivery	virtual	physical (sleeved)	as generated	onsite		
Contract durations	4 y	5 y	8 y	10 y	15 y	20 y
Volume	< 1TWh	> 1TWh	fixed	variable	70 %	100 %
Price	fixed	floating	cap	floor		
Marketing features	branding rights	regionality	*etc.*			
“Sustainability” levels	certificates	existing assets	repowering	additionality		
Investment	joint venture	full ownership				

Early November, innogy (now part of RWE Renewables) signed a 10 year PPA with Asahi Europe / Kompania Piwowarska

And we are very proud of this deal!

Asahi / Kompania Piwowarska was supported by:

ECOHZ
ORIGIN MATTERS

Deal characteristics:

Virtual PPA 10 years

2020: 30 GWh

2021-2029: ~80 GWh

~80 GWh is the full consumption of power forecasted by Asahi's / Kompania Piwowarska's breweries in Poland

Solution backed by Nowy Staw wind farm, including the unsubsidized extension Nowy Staw 3!

The specific deal is a financial PPA (a.k.a. synthetic or virtual)

- The buyer agrees to purchase a project's output and associated GoOs at a set fixed price
- The offtaker does not receive, or take legal title to, the electricity and in this way, it is a "virtual" PPA (VPPA)
- When the floating market price exceeds the fixed VPPA price, the developer passes the positive difference to the buyer. In an opposite situation, the buyer must pay the developer the difference
- That way, a VPPA creates a hedge that fixes the power price both parties will receive irrespective of the floating market price.

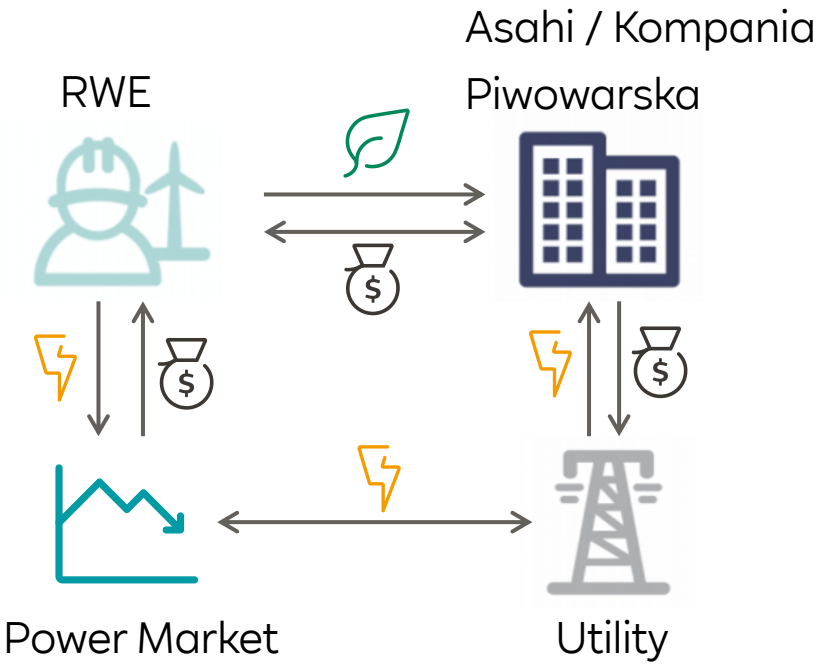


Illustration of a financial PPA with CfD mechanism

Energy from the wind!

What worked well

Good working relationship and mutual trust, greatly supported by consultancy firm with objective sustainability knowledge

Fast and lean internal alignment (deal teams) both sides

Standard EFET CPPA template used (time and cost efficient legal execution)

Credit / Collateral / PCG conversations from the onset

Activation of Marketing Value (see on the right)

Lessons Learnt

Holding PPA prices (partly backed by existing assets) over long period during negotiations challenging

Liquid horizon prices (and price swings during negotiation) could impact long term procurement strategy

Accounting (IFRS) implications during implementation

PPAs in CEE & SEE

Whereas the Polish market is red hot with PPAs…

…it seems PPAs are rather scarce in other CEE and SEE countries

Deals found in the SEE-Region:

- AXPO – CEZ deal in Romania, 600 MW onshore wind (source: Renewables Now, Aug 2021)
- Mytilineos in Greece, 200 MW solar PV (source: Renewables Now, Feb 2021)

Deals in the CEE-Region:

- Interenergo in Hungary, 10 MW onshore wind (source: Interenergo Annual Report; deal published October 2020)

Data not comprehensive as using only publicly available information (2018 – YtD 2021)

But why…?

- PPAs need trust and long-term commitment of the parties involved
- New assets benefit from state subsidies (Feed-in Tariffs, Feed-in Premiums, CfD auctions, etc.), which raise the bar for PPAs, serving as a benchmark
- Existing assets can be left merchant after the subsidy period expires
- Credit is crucial: long-term stability of all parties involved and their willingness and ability to provide the necessary credit support is key

Thank you for your attention!

Questions?

RWE Renewables has more than >800 GWh/y of wind power generation directly available for PPA solutions in Poland and a development pipeline >400 MW of wind and >300 MW of large-scale Solar PV capacity to support PPAs.

Due to the high share of coal in the Polish power mix, EU ETS prices have a high impact on power prices in Poland

So basically, when ETS goes up, power prices go up in Poland