

FSR Workshop, 20.1.2023

A Renewable-CfD-Pool for affordable green energy

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1 Tenders for contracts for differences for wind and solar projects

- Clearing of tenders includes bonus/malus for system friendly options, reference yield for quality of site if multiple sites jointly tendered*
- Reference market – local spot price (day head, potentially shift to real time)
- Reference period – corresponds to market clearing (hourly/quarter hourly)
- Contractual volume – all available energy
- Volume risk hedged separately by project developers (and consumers) using weather derivatives

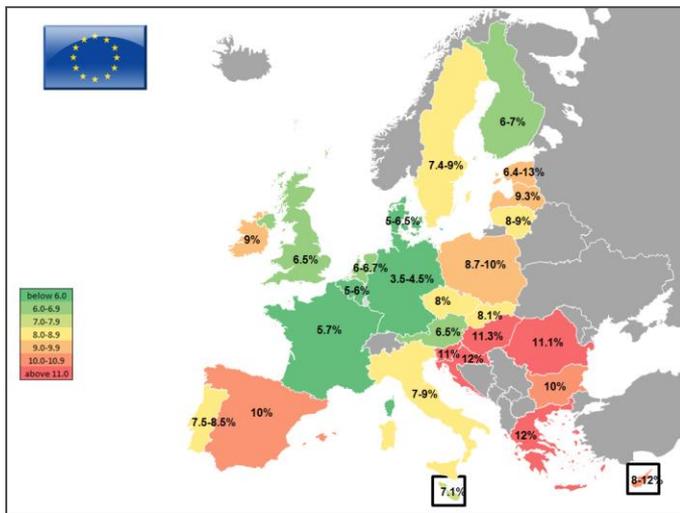
* Richstein et al. (2022) Contracts for Difference Support the Expansion of Renewable Energy Sources while Reducing Electricity Price Risks, [DIW Berlin Weekly Report](#). and Workshop Summary: “The Role of Contracts for Differences (CfDs)”, [Econstor](#).

- Production profile of all wind- and solar projects covered by the RE-CfD-Pool
- Pricing at average of all CfDs in the pool and statistics for wind- and solar generation for an average weather year

- Prioritizing access to the RE-CfD-Pool
 - Neighbors to wind-project
 - Energy-intensive industries, especially those investing in clean processes
 - All users
- Payment stream – directly to large consumers from pool, through retailers for small consumers
- Exit option only in case of closure of production process
- Green attribute - will also be passed on to the consumers

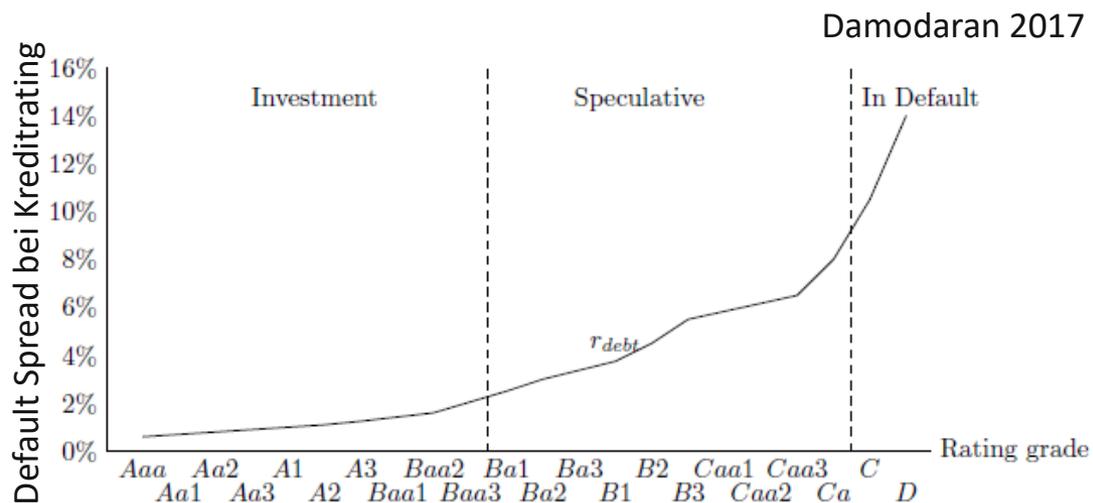
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Benefit 1: Reducing financing costs



1. Counter Party risk increases LCoE by approx. 10%

2. Higher financing costs for demand side imply increased LCoE of 20%

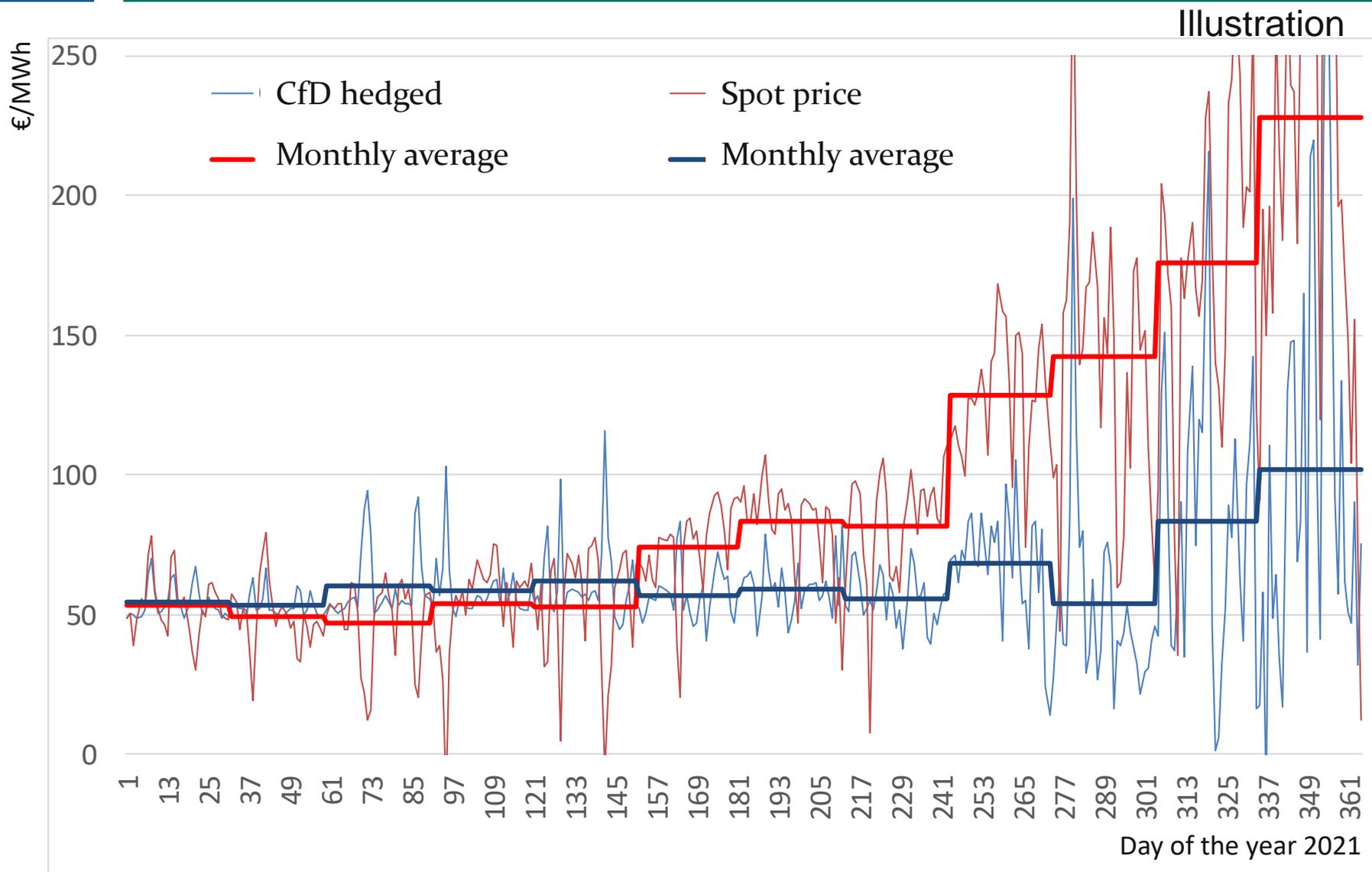


3. Total effect of higher financing costs and risks on balance sheet

29% (DIW 2018/May 2021))

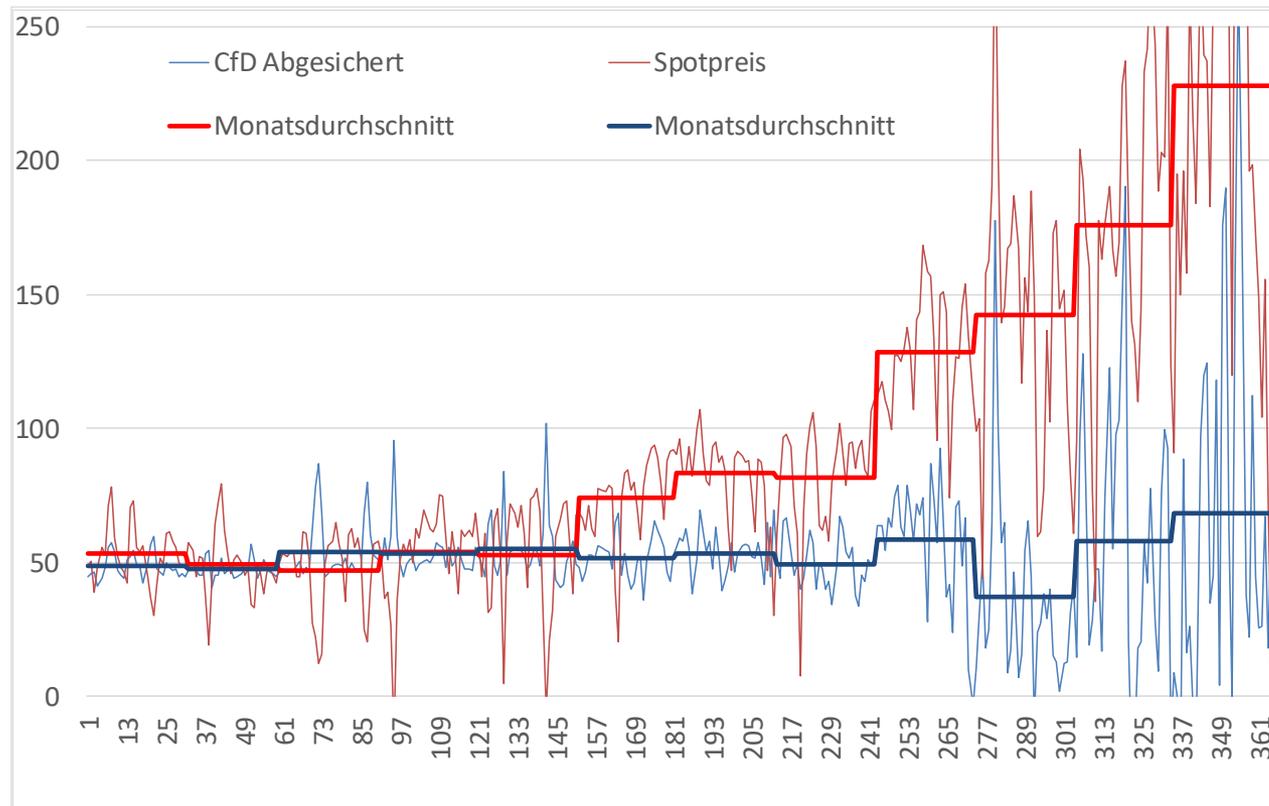
28% (Aurora Energy Research, 2018)

25% (Enertrag, 2019)



Illustration

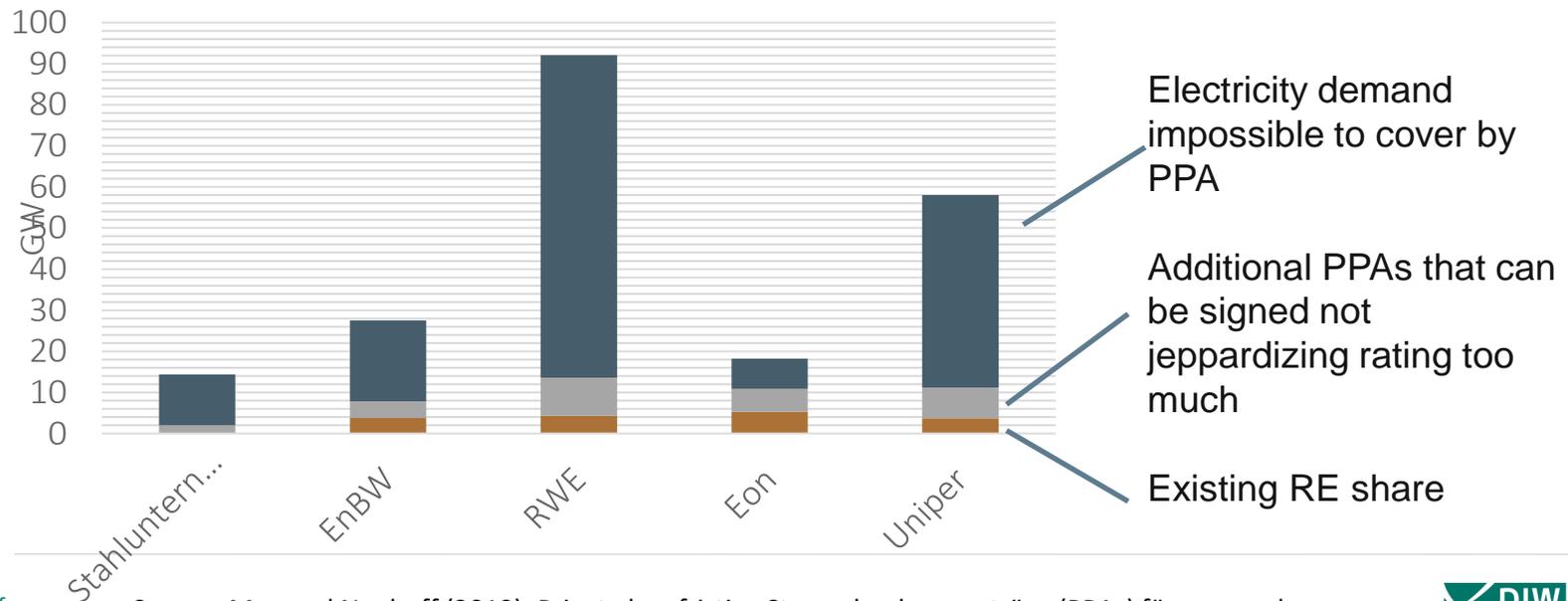
- Large risks on price levels are addressed, unlocking capacity for flexibility focus
- Required to hedge the gap between RE generation and load profile
- Will trigger flexibility contracts to support investments in flexibility

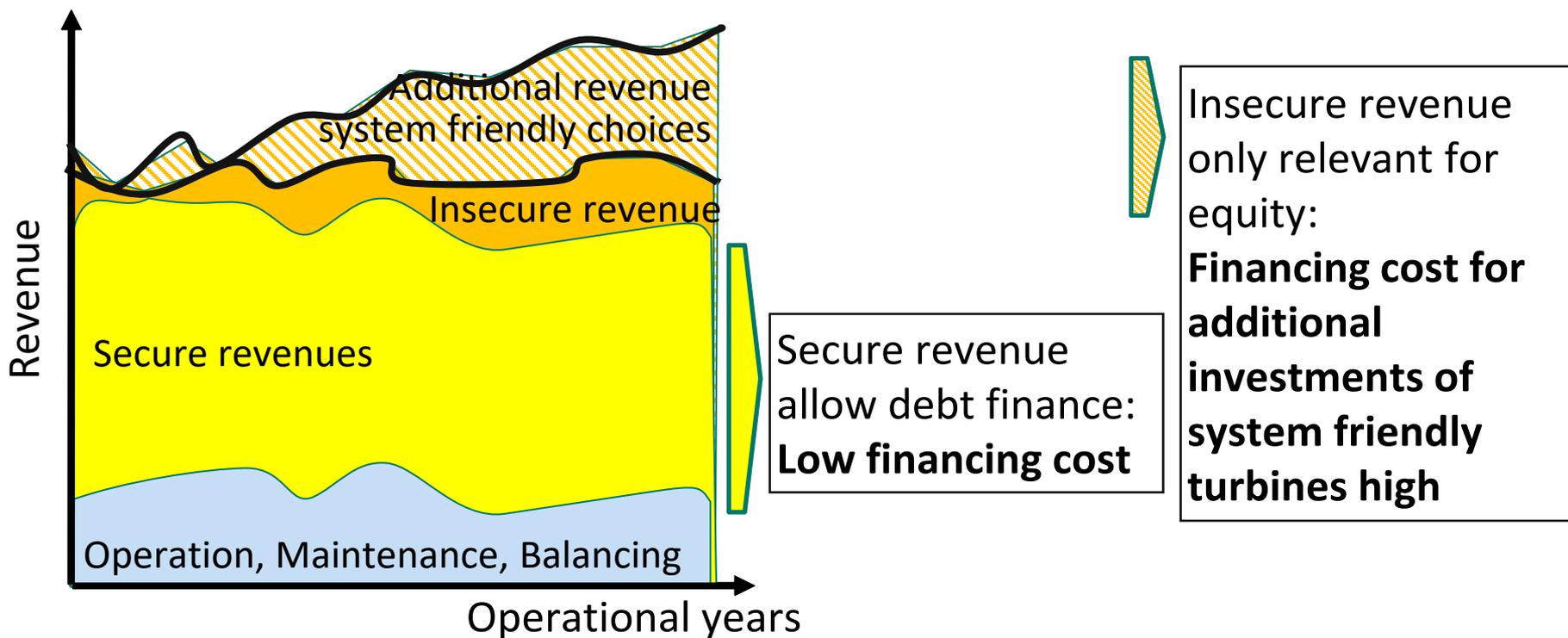


Assumption: Hedge (i) of yearly energy demand for a CfD with a strike price 50 €/MWh, and (ii) with intraday spread (top versus bottom 3h) for 20% of demand.

Benefit 4: Strengthen project pipeline for rapid deployment

- Eliminating exposure to policy risks that could induce projects to be abandoned if, for example, expected wholesale revenues decline
- Simplifying financial arrangements and thus re-focusing project development on ensuring acceptance and reducing entry barriers for project development
- Reduce equity requirements to allow project developers to scale up
- Avoid risk that limited financing capacity undermines investment





Implied discounting of revenue:

1,7%

10%

Weight on revenue in years 11-30:

61%

35%

See also Nils May (2017) The impact of wind power support schemes on technology choices, Energy Economics, <https://doi.org/10.1016/j.eneco.2017.05.017>

Kröger, Neuhoff, Richstein (2022) Contracts for Difference Support the Expansion of Renewable Energy Sources while Reducing Electricity Price Risks, [DIW Berlin Report](#)

Key elements

- Tenders for contracts for differences for wind and solar projects
- Aggregating of contracts into a RE-CfD-Pool
- Allocating shares of CfD-Pool to final consumers

Benefits

- Reduce financing costs – reducing cost of energy by 30%
- Hedge price risks and ensure low RE generation costs are passed to consumers
- Facilitate hedging for flexibility products
- Strengthen project pipeline for necessary scale of deployment
- Ensure necessary incentives for system friendly technology choices

Thank you for your attention!



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