

# Insights from Supporting Renewables

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# A cap & floor regime



# Presentation outline

Bird's eye view on supporting RES

3 key insights from supporting renewables

- 1) Strike a balance between revenue stability for investors and protecting consumers
- 2) Future proof policies
- 3) Provide efficient incentives

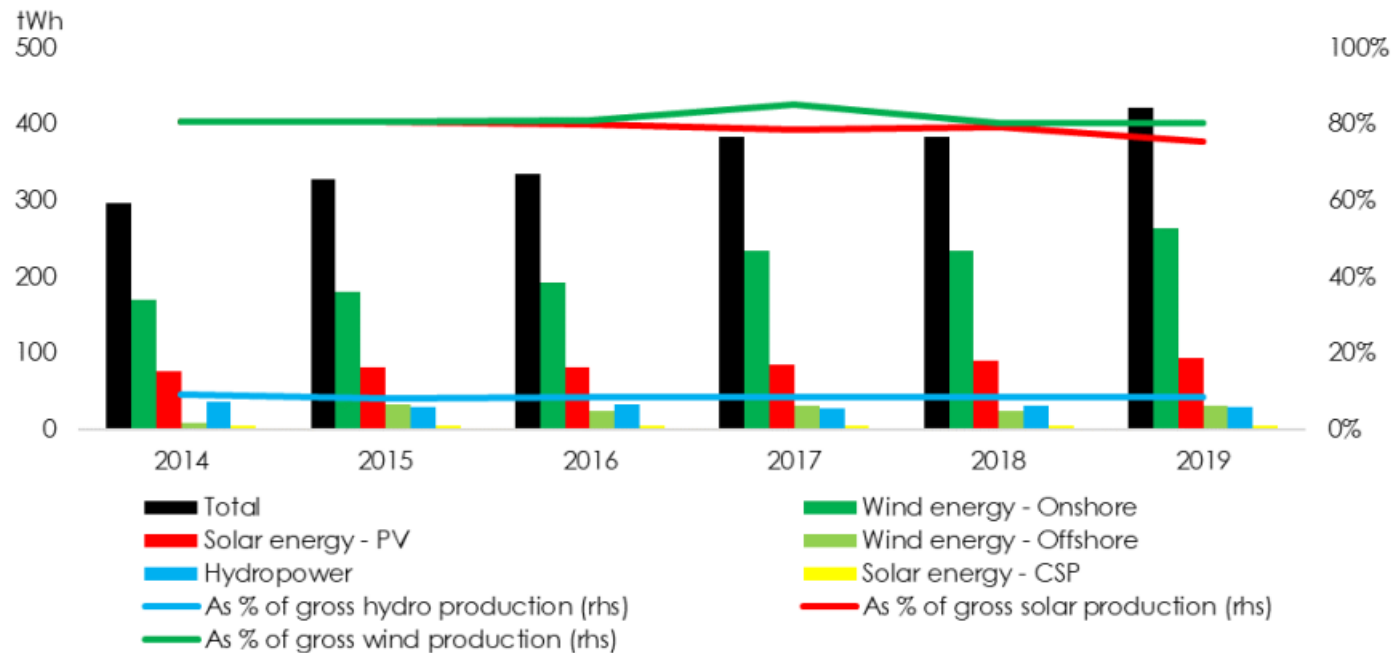
Conclusions

Volatility CfD – proposal of EASE member

Presenting EASE and Q&A

# Bird's eye view on supporting RES

Graph 3.1 Volume of renewable electricity receiving support in the EU



Source: CEER 2021 Status Review of Renewable Support Schemes reports.

- Guidelines on State aid
  - 2014–2020: Feed-in tariffs (FiT) → Feed-in premiums (FiP)
  - 2022: Contracts for difference (CfD) promoted as a good model



# Feed-in tariffs (FiT)

## Insight 1: Strike a balance between revenue certainty for investors and protecting consumers

- Incorporate cost containment measures

## Insight 2: Future-proof policies

- Conduct “stress tests” to examine how the policy would perform in various extreme scenarios outside of business-as-usual expectations, like significant technology cost reductions

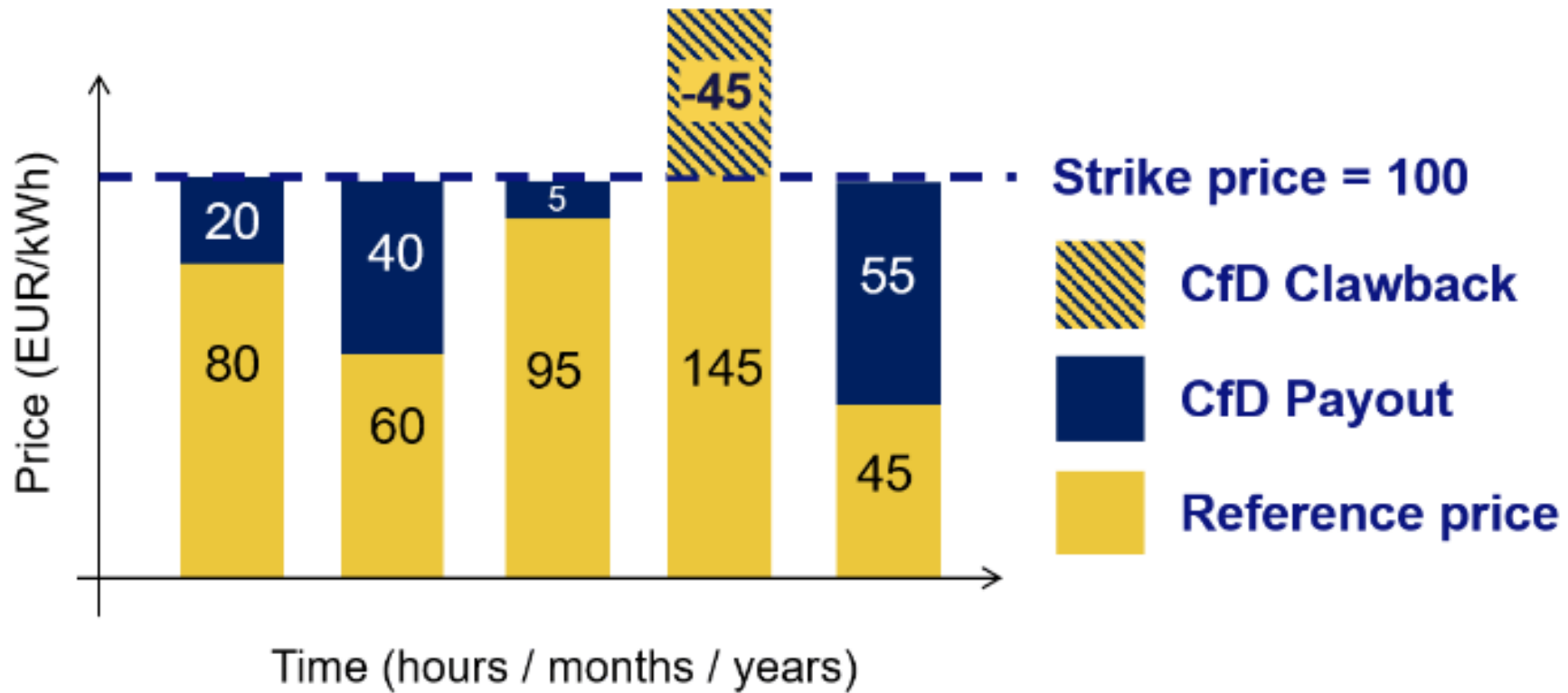
## Insight 3: Provide efficient incentives

- Without exposure to electricity prices, siting decisions of renewable generators might imply highly correlated and less valuable electricity generation. (Meus et al. 2021)



Renewable electricity support in perfect markets: Economic incentives under diverse subsidy instruments

# Contract for differences (CfD)



# Contract for differences (CfD)

## Insight 1: Strike a balance between revenue certainty for investors and protecting consumers

- CfDs provide stable prices to RES generators and protect consumers against high electricity prices
- RES producers still exposed to volume risk

## Insight 2: Future-proof policies

- UK offshore wind case, “the £44 per megawatt hour price floor set for the latest auction failed to take account of higher costs.”

## Insight 3: Provide efficient incentives

- Under a conventional CfD (strike price fixed),
  - The generator maximises the amount of electricity produced instead of the value of the electricity produced
  - System-friendly decisions are disincentivized
- Under a financial CfD (payments are decoupled from production by using an independent reference generator)

## Energies renouvelables : le jackpot de l'Etat atteint 31 milliards d'euros 🇫🇷

Les gains pour l'Etat liés aux énergies renouvelables et surtout aux éoliennes implantées en France s'envolent. Ils doivent atteindre 31 milliards d'euros en 2022 et 2023, contre 8,9 milliards d'euros anticipés jusqu'à présent par le régulateur de l'énergie.

## No bids for offshore wind in government auction

8 September 2023 · Comments



Energy Policy  
Volume 186, March 2024, 113981



Financial contracts for differences: The problems with conventional CfDs in electricity markets and how forward contracts can help solve them

# Relevance of insights for supporting energy storage

## Spanish tender example

### Recent energy storage PERTE tender procured competitively

- Carries **€150m in subsidies** under the Spanish Recovery and Resilience Facility
- Awarded 34 projects across Spain, with an accumulative size of 1.9 GWh
- Multi-criteria selection (economic viability, **technical features**, project viability, **externalities**)
- **Support independent of production** (only capex aid); average support level is around €86.000 per MWh



# Relevance of insights for cap & floor proposal

## Energia salv proposal

### Insight 1: Strike a balance between revenue certainty for investors and protecting consumers

- Energy procurement target (MWh) and the limit on the floor level that can be awarded to projects (EUR/MWh) are defined
- Cap & floor ensures revenue risk (price and volume risk) of asset is hedged
- **Soft cap** on market revenues **protects consumers** (via gainshare)

### Insight 2: Future-proof policies

- Reopener to allow for an adjustment of the allowed capex included in the cap and floor levels
- Analysis on potential interactions between policies, the cap & floor, energy storage, and RES subsidies

### Insight 3: Provide efficient incentives

- Energy storage asset **remains profit driven** so it will act flexibly in response to price signals across markets

# Conclusions

- **New support mechanisms for energy storage can apply (and do apply) key insights from supporting RES**
  - Balance de-risking investments and protecting consumers
  - Provide efficient incentives for assets to operate flexibly and pursue opportunities with highest system and market value
  - In hindsight everything looks obvious, there is always a need to future-proof policies.
- **Some open questions:**
  - How can we avoid picking winners
    - between established and novel technologies?
    - between (non-fossil) flexibility sources?
    - between energy storage technologies?

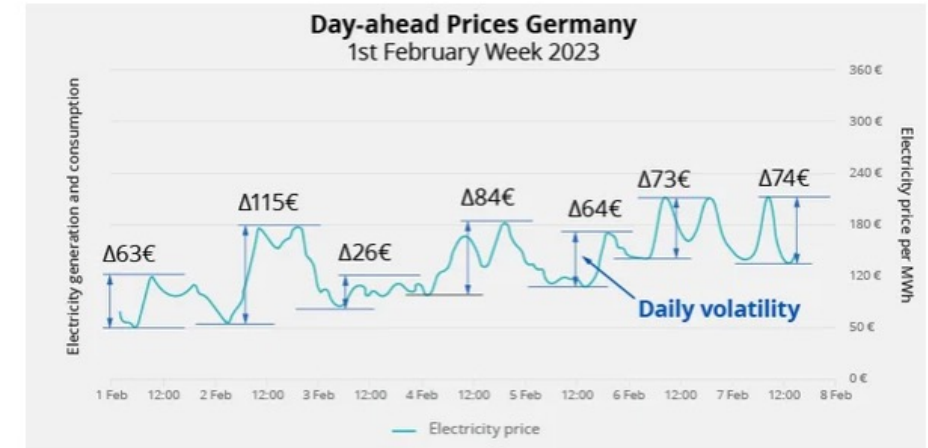
# Volatility CfD – proposal by EASE member Fluence presented at EASE global conference



European Association  
for Storage of Energy

- **Design principles**

- Volatility CfD as a financial contract (swap) that provides a **long-term revenue guarantee** via a hedge against price volatility on Day-Ahead markets
- Hedge only covers part of assets revenue streams. It does not secure project profitability, but builds a revenue floor required for project finance
- Projects are incentivised to continuously operate in all available market segments to increase project return
- Volatility CfDs to be awarded in annual auctions, based on a CfD strike price (daily volatility), ensuring the lowest cost assets are awarded



# Who We Are

## EASE Members



European Association  
for Storage of Energy



# Who We Are

## EASE Members



### Our Mission

- To promote a **fair, future oriented, sustainable energy market design** that recognises storage as an indispensable element of the energy system to build a bridge between EU policymakers and the energy storage stakeholders.



### Our Vision

- To have a **renewable-based carbon-neutral Europe by 2050**, enabled through energy storage.

