



Department for
Energy Security
& Net Zero

End User Challenge Panel

Marginal pricing and market
splitting

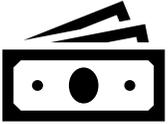
5 September 2023

Housekeeping

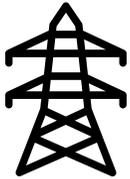
- Please observe Chatham House rules. All views are equally valid and welcomed.
- The session **will not** be recorded. Notes **will** be taken by DESNZ colleagues to ensure we have captured key intel, views and outputs from the session.
- The format is presentations from DESNZ policy team and Citizen's Advice, followed by open discussion facilitated by Citizen's Advice.

Time	Item
14.00 - 14.05	Welcome and housekeeping
14:05 - 14:25	Presentation from REMA Policy Team
14:25 – 14:30	Clarification questions
14:30 – 14:45	Presentation by Citizen's Advice
14:45 – 14:50	Clarification questions
14:50 – 15:27	Open discussion framed around questions
15:27 - 15:30	Wrap-up and meeting close

Challenge-based structure of 2nd Public Consultation



Challenge 1: Passing through the value of a renewables-based system



Challenge 2: Investing to create a renewables-based system at pace



Challenge 3: Transitioning from an unabated gas-based system to a flexible, resilient decarbonised system

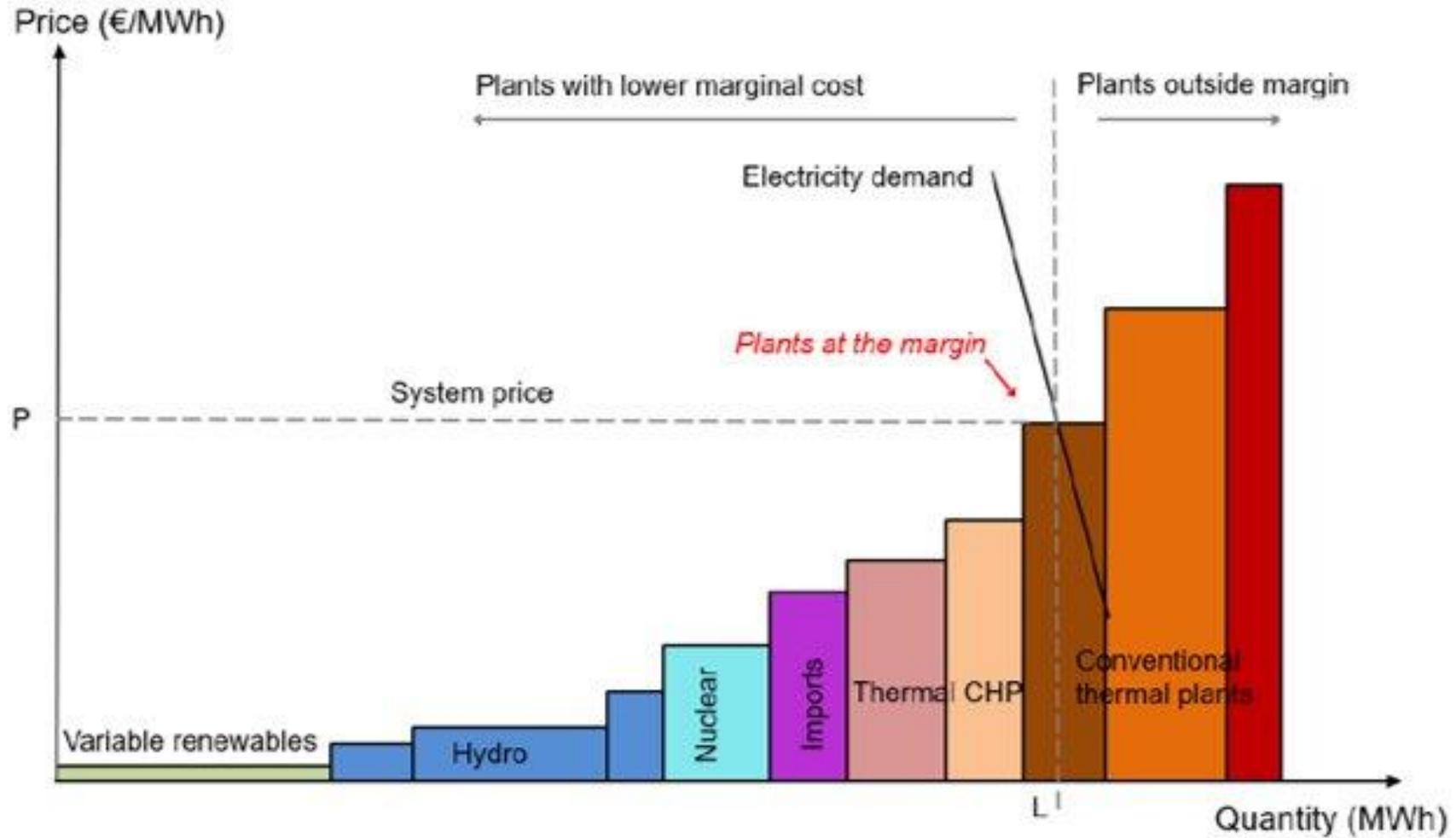


Challenge 4: Operating and optimising a renewable-based system cost effectively

Marginal pricing at present

- The wholesale electricity market (like other commodity markets) is based on **‘marginal pricing’**. The most expensive generator needed to meet demand sets the price for all generators.
- Currently, **gas-fired** generators set the clearing price the vast majority of the time.
- Marginal pricing is **not directly imposed by regulation**. It is the structure that a decentralised market will take. When market participants are allowed to trade freely, the price will be set at the market’s expectation of the marginal cost.
- This drives efficiency, and is **needed for flexible technologies** to provide operational and investment signals.
- An increase in gas prices led to increased “inframarginal rent” and profits for nuclear and renewable generators not on fixed-price contracts (e.g. Renewables Obligation). The Electricity Generator Levy (EGL) was introduced to mitigate this.

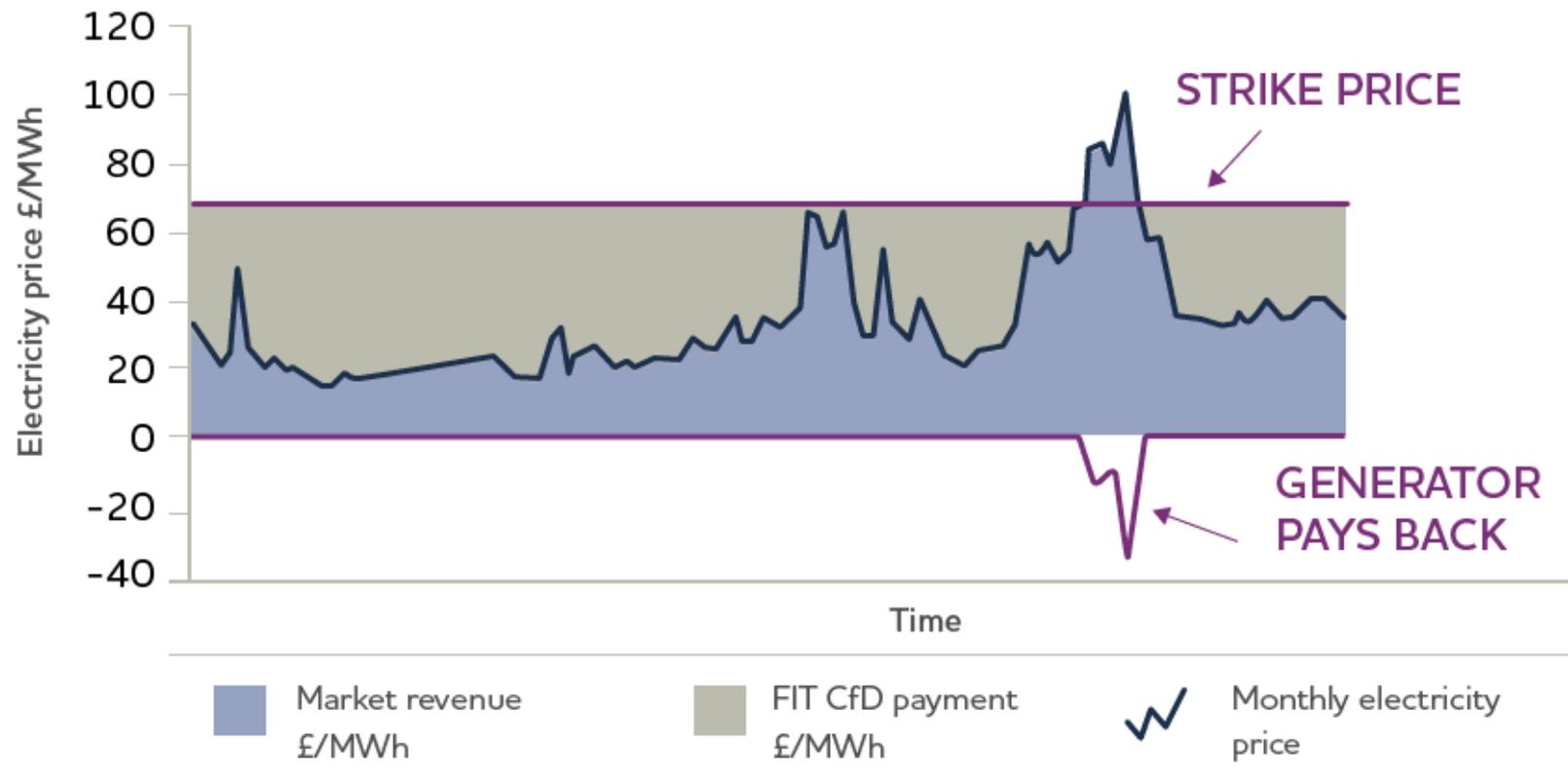
Marginal pricing at present



How will this evolve over time?

- The marginal plant will be gas-fired less often in future, meaning any potential future gas price spikes would be likely to have smaller impacts.
- Contracts for Difference (CfDs) decouple gas and electricity prices under the status quo for a small proportion of generators.
- An increasing proportion of generators will be on CfDs, or other mechanisms that limit inframarginal rent, in the future.
- As a result, a decreasing proportion of generation will be paid a price determined by that of gas.

How will this evolve over time?



Source: UK Government White Paper, July 2011, licensed under the Open Government License v1.0

Transformative options considered by REMA

- We included theoretical options in the first consultation – **Green Power Pool (GPP)** and a **Split Market**.
- Given the novelty of these options, there was uncertainty among stakeholders about their risks and benefits compared to an acceleration of the current approach, and so some interest in them being explored further. More detail will be provided in the 2nd consultation.
- We have considered a wide range of possible design choices, so that different levels of intervention could be more fully understood.



Transformative options considered by REMA

- **Split market:**

One market for all capital-intensive, non-dispatchable techs - prices at long run marginal cost (i.e. incorporating all costs of asset) – replace CfD, integrate renewable investment into wholesale market.

Residual market for all flexible, dispatchable techs, operate according to short run marginal pricing as at present.

- **Green Power Pool:**

Generators sign government-backed fixed price contracts with the Pool to sell at their long run marginal cost.



Green Power Pool

= a centrally co-ordinated and dispatched renewable pool



Suppliers and large consumers contract with the pool to buy agreed volumes at the weighted average price of the available generation in each period, receiving proportionally less power when there is insufficient generation.

Transformative options considered by REMA

- Similarities:

- **Separate market for renewables** with prices at long run marginal cost (incorporating capital costs), either as one section of split wholesale market, or as pool existing alongside wholesale market.
- **Short-run marginal cost market structure for flexible, dispatchable generation**, either in one section of a split wholesale market or in an existing wholesale market alongside the GPP.
- **Changing how demand-side flexible assets are exposed to marginal price signals**, given the change in pricing of renewable assets.

- Differences:

- **Degree of change** - the GPP would operate alongside an (otherwise relatively unchanged) wholesale market, and excess power from the GPP would be 'spilled' into the wholesale market; in a split market, there would be no such direct interaction between the markets.
- **Voluntary/compulsory participation** - participation in the GPP would be voluntary in the same way that participation in today's CfD is voluntary, whereas in a split market participation in the relevant sections of the market would be compulsory.

Benefits and risks

Potential benefits	Potential risks
<ul style="list-style-type: none">• Mitigate price risk for renewables (CfDs can also do this)	<ul style="list-style-type: none">• Transformative, uncertain and untested
<ul style="list-style-type: none">• Limit “inframarginal rent” (CfDs can also do this)	<ul style="list-style-type: none">• If relatively low prices – challenges to prevent price difference being “traded away”• If relatively high prices - challenges to ensure sufficient demand
<ul style="list-style-type: none">• Theoretical potential to pass through cost of renewables	<ul style="list-style-type: none">• How to ensure efficient incorporation of certain technologies e.g. interconnectors
<ul style="list-style-type: none">• Theoretical opportunity for "targeting" of renewable generation at certain users	<ul style="list-style-type: none">• How to ensure effective consumer interaction
	<ul style="list-style-type: none">• How to allocate pool contracts, risks for those without access

Discussion questions

1. What are the **potential benefits** of the split market models?
2. What are the **potential risks** of the split market models?
3. How could the potential benefits of split market models be **delivered by other reforms**, either within REMA, or otherwise?





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Close and End

REMAMailbox@energysecurity.gov.uk