

Nuclear Energy in Central Europe – A UK Perspective

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The Context for Electricity Market Reform (EMR)

The UK's electricity market faces big challenges



Fifth of plant closing by 2020



Long run electricity demand could double

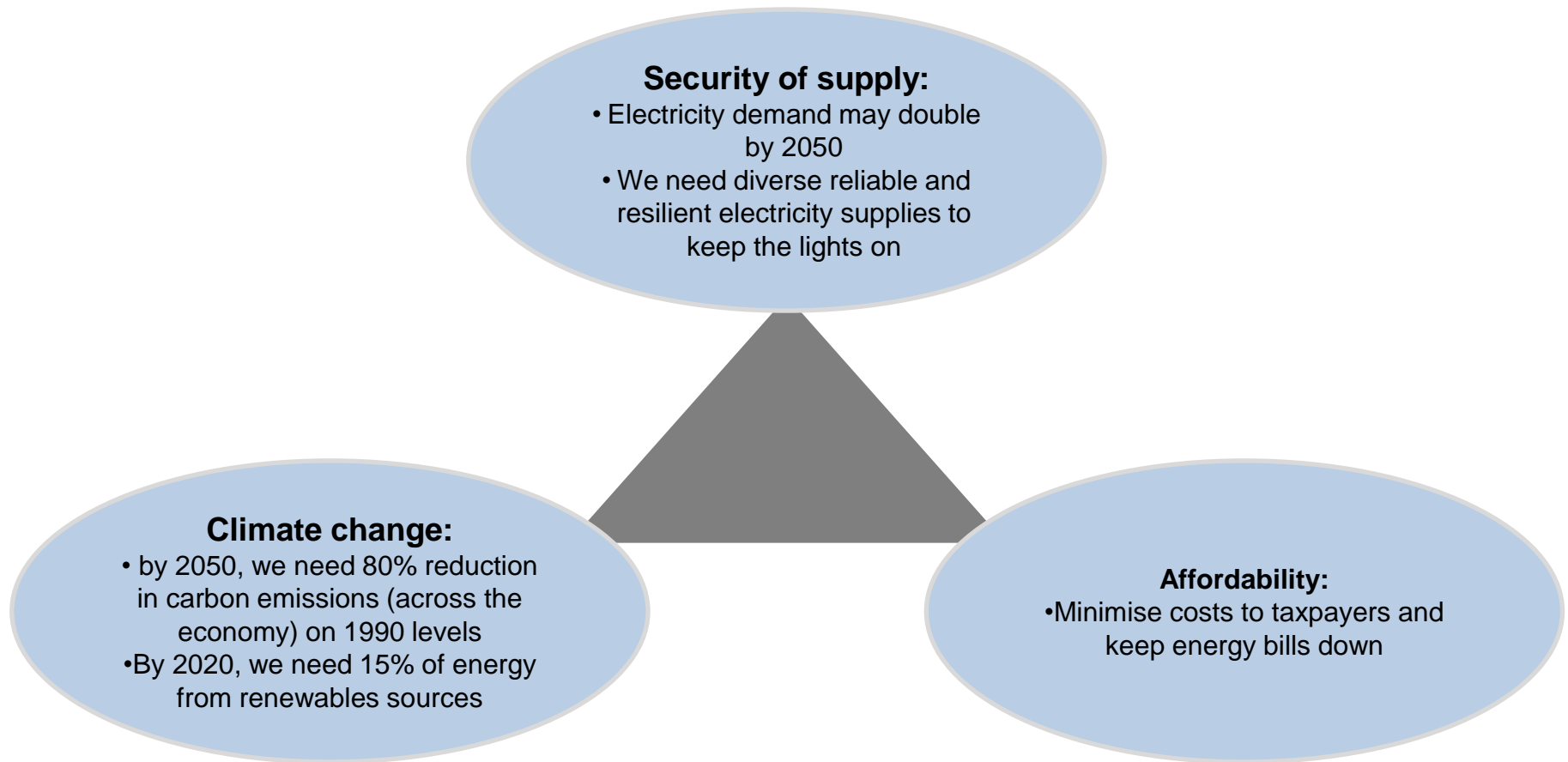


Weak signals in the market for low carbon generation

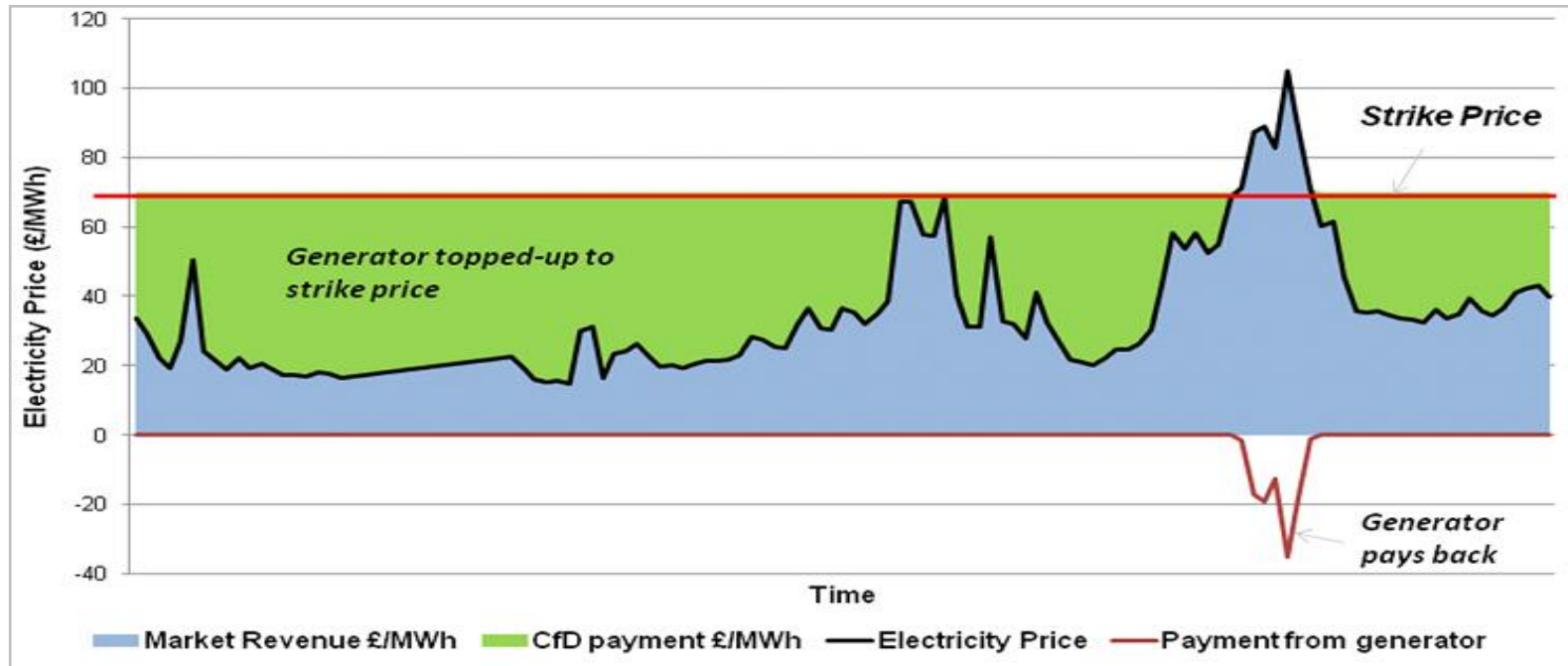


Current market suits gas, but harder to build low-carbon plant

Our objectives for the electricity market mirror those of the wider energy system

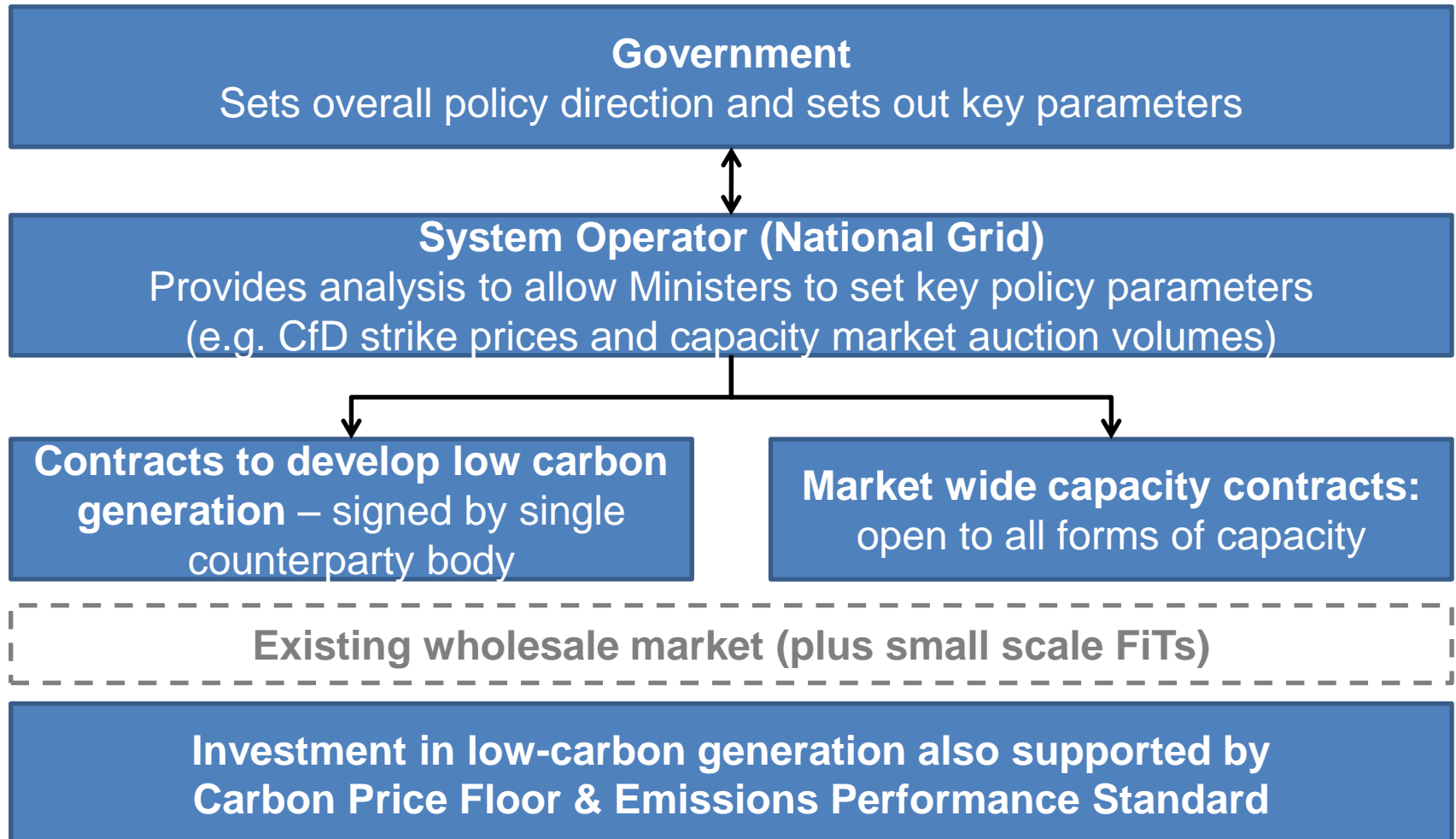


Strike Prices – how does it work?



- CfD provides long-term revenue stability, lowering risk to investors and costs to consumers
- Generator sells power as normal, but receives variable top-up to the “strike price”
- If market reference price goes above the strike price – generator must pay back the difference

The market reform framework that will deliver our vision



New Nuclear Plans for UK



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NNB GenCo (EDF) intends to build four new EPR reactors (amounting to 6.4GW) at Hinkley Point and Sizewell. Currently under negotiation for CFD.

Horizon Nuclear Power, a wholly owned subsidiary of Hitachi Ltd, plans to develop up to 7.8GW of new nuclear capacity at sites in Wylfa and Oldbury. FID expected by 2018

NuGen, (GDF and Iberdrola) have begun site characterisation work on land which will be developed as part of plans to build up to 3.6GW of new nuclear capacity at Moorside near Sellafield.

Hinkley CFD Agreement on Head of Terms



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- The duration of the payments under the Contract for Difference for Hinkley Point C would be for 35 years
- Agreed a 'strike price' of £89.50 per megawatt hour, fully indexed to CPI.
- Strike price benefits from an upfront reduction of £3 per megawatt hour on the basis that EDF's subsidiary NNB Generation Company Limited (NNBG) would share 'first of kind' costs of the EPR reactors across the Hinkley Point C and Sizewell C sites.
- If a final investment decision on Sizewell C is not taken, the Strike Price for Hinkley would be £92.50.

Hinkley CFD Agreement of heads of Terms



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- Hinkley Point C would be competitive with other low-carbon technologies, including onshore wind, the cheapest large scale renewable.
- Gain share arrangements where, if the developer achieves savings during construction or through refinancing or equity sales, the strike price would be reduced.
- Operational cost review arrangements, including at 15 and 25 years to reassess operating costs and adjust the strike price if necessary.

Hinkley CFD Agreement of Heads of Terms



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- Change in Law arrangements
- Compensation arrangements in the event that Hinkley Point C were to be shut down as a result of a political decision, rather than one – for instance – on safety grounds.
- Separately, and for the first time ever, to deal with clean-up costs of new nuclear, developers will be required to put money aside in a protected clean-up fund to pay for eventual decommissioning and share the waste management costs.
- This is anticipated to account for around £2 of the strike price.

Challenges for new nuclear in the UK



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- Third party financing needed for all consortia
- EU State Aid approval needed for Hinkley CFD
- Maximising UK economic benefit (localisation)
- Building to time and budget (cost reduction)
- Wider global and EU policy drivers : role of shale gas, post 2020 renewables target