



# UK Power Market and Electricity Market Reform

## *London Power Forum*

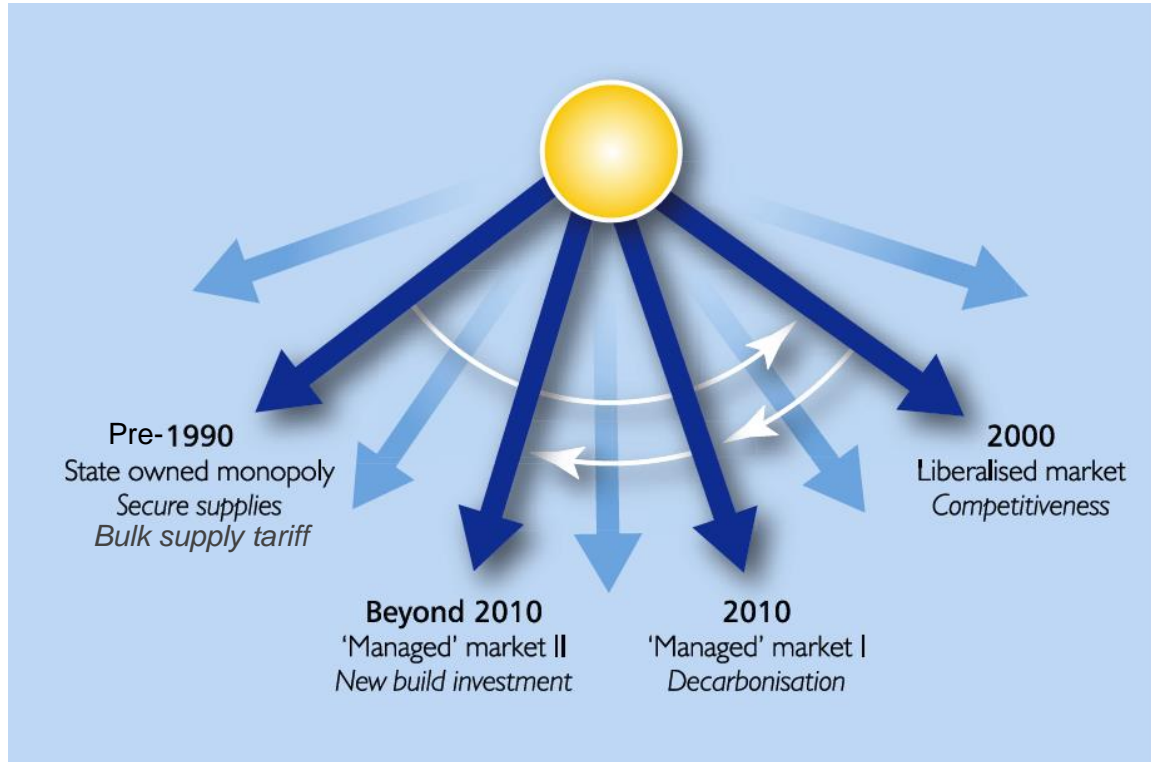
5<sup>th</sup> November 2015

Kevin Dibble

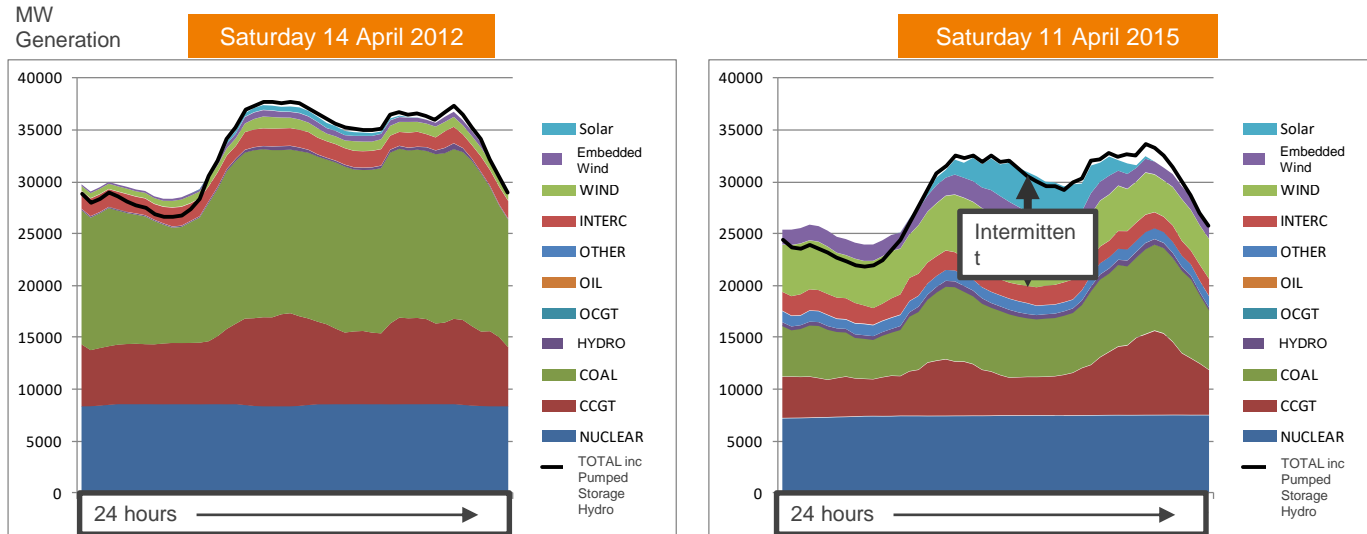
*Head of Valuation & Analysis*



# Changing priorities in the UK electricity sector



# Growth of renewables and emergence of PV



- Peak PV output now 5+ GW; Wind 10+ GW.
- Thermal generation now competes for 11-17 GW of day time generation (25 GW in 2012)
- These modest renewable capacities are already creating major system flexibility issues

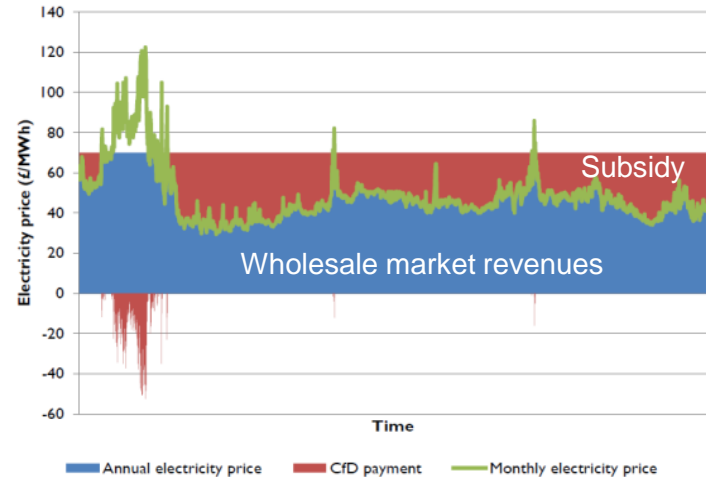
# Electricity Market Reform: Contracts for Difference Feed-in-tariffs (CfD FiTs)

## Design

- Support mechanism for low carbon generation (nuclear and renewables)
- Technology specific auctions and bilateral negotiations
- Overall cost of subsidy managed through the Levy Control Framework
- 15 year contracts

## Outcomes

- Encourages decarbonisation and market integration
- Reduces risk for developers and consumers
- 6.5 GW of capacity now falls under this mechanism
  - 2.1GW in tenders, 3.2GW in offshore wind 'fast track', 1.3GW biomass conversion (subject to State Aid approval)
- Plus new nuclear plant
- Recent concerns over rising projected subsidy



### Example operation:

- Contracted Strike Price = £70/MWh
- Top-up subsidy calculated based on the difference between Strike Price and the prevailing wholesale price
- If wholesale prices spike above the Strike Price, then the project will pay back the difference

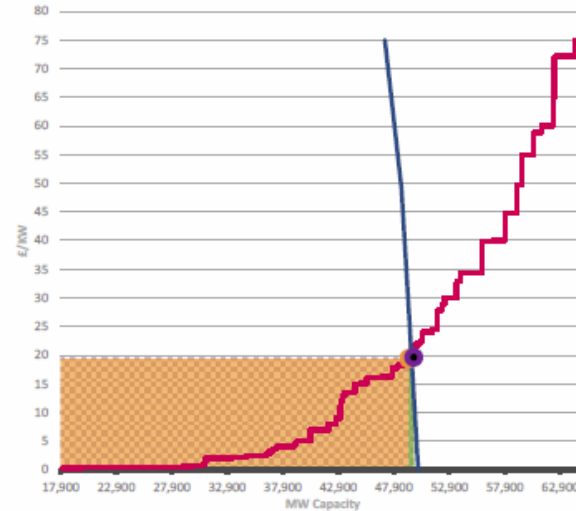
# Electricity Market Reform: Capacity Market

## Design

- Measure directed towards maintaining security of supply
- Target reliability standard defined by DECC (@3 hours Loss of Load Expectation)
- Procured through 4 year ahead (main) and one year ahead (top-up) auctions
- Potential 15 year contracts for new plant
- Renewables and new nuclear not eligible

## Outcomes

- Procured 49GW for 2018/19 delivery year (at £19.40/kW)
- Limited encouragement of new build plant
  - One new CCGT plus small OCGTs / reciprocating engines
- Reduces economic viability for those plant without Capacity Market contracts
  - Impact on shorter term markets and encourages further regulatory intervention (e.g. Supplemental Balancing Reserve)



### First Auction experience:

- Chart represents outturn demand and supply curves from the first auction held in December 2014
- Clearing Price lower than expected
- 8.5 GW of existing plant missed out on contracts

# ENGIE in the UK

19,000 employees in the UK  
9th largest foreign employer

- The country's largest independent power producer by capacity with interests in 5,015 MW of plant in operation in the UK market made up of a mixed portfolio of assets – coal, gas, CHP, wind, OCGT distillate, and the UK's foremost pumped storage facility.
- Energy Retail business supplying electricity and gas to the Industrial and Commercial sector.
- Gas Exploration & Production; interests in 50 North Sea licenses and part owns & operates largest North Sea gas field
- Storengy; developing the largest onshore gas storage facility in the UK
- NuGen; one of three new nuclear consortia in the UK
- Integrated Facilities Management services, specializing in energy, including the UK's largest district heating business
- Part of the ENGIE Group – a global energy player and expert operator in electricity, gas and energy services

