



OXFORD INSTITUTE FOR ENERGY STUDIES Natural Gas Research Programme



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A RECOGNISED INDEPENDENT CENTRE OF THE UNIVERSITY OF OXFORD







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A Short Tale from a Small Windy Island

Howard V Rogers

Centre for Energy Economics 2011 Annual Meeting & Forum

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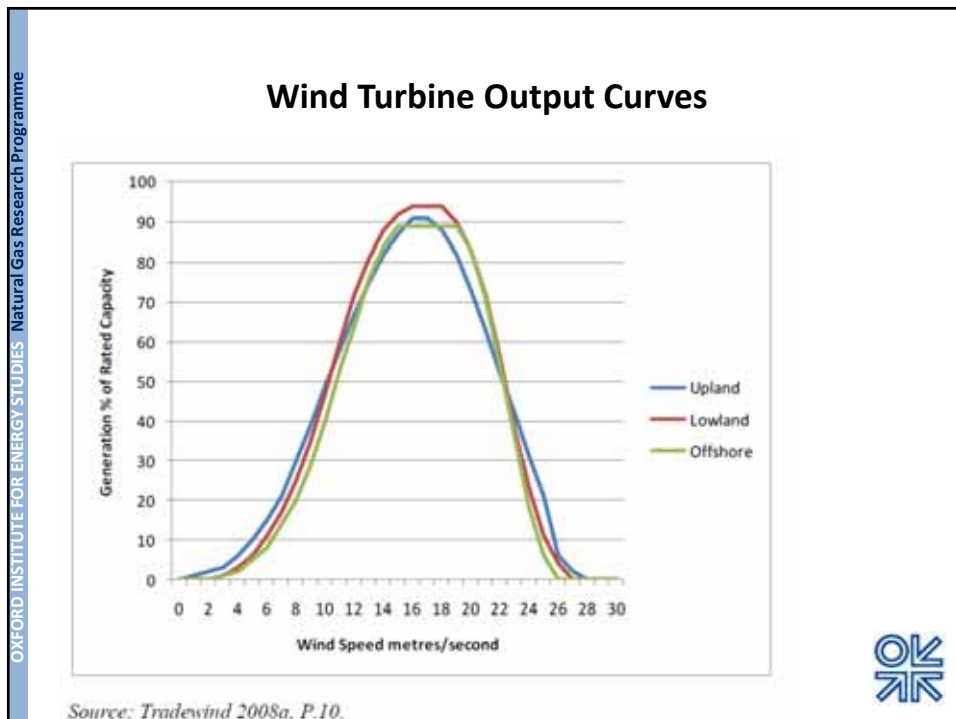
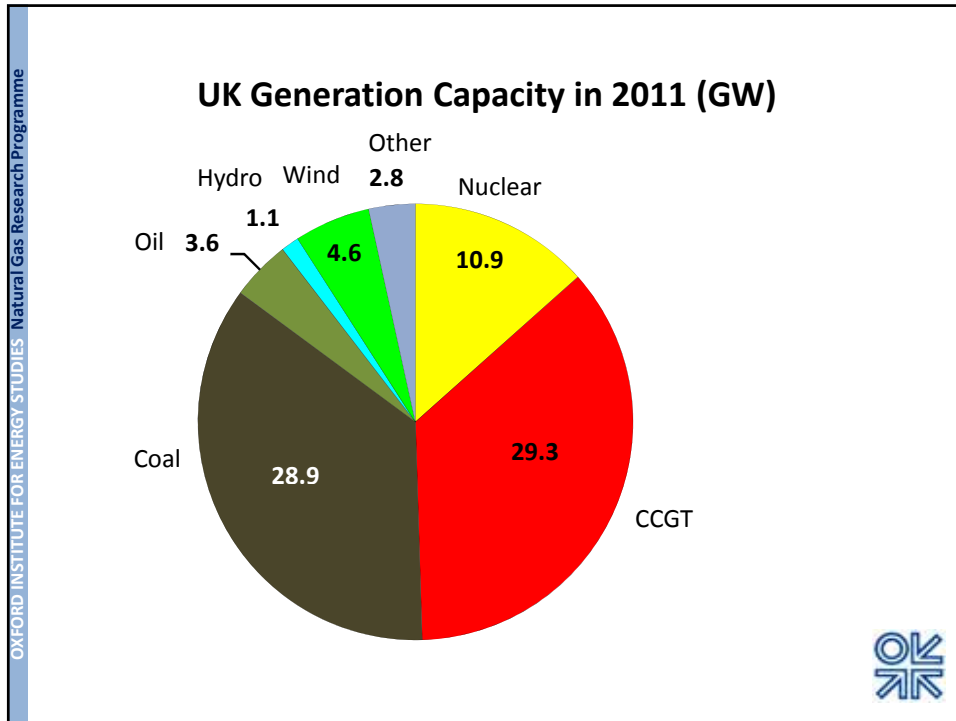
Themes

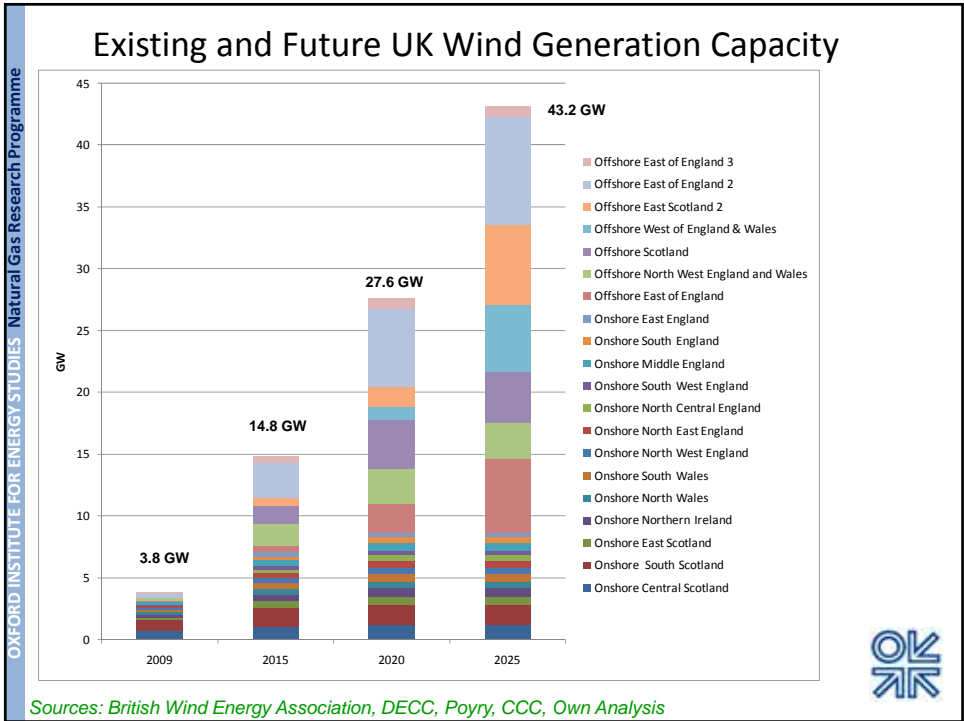
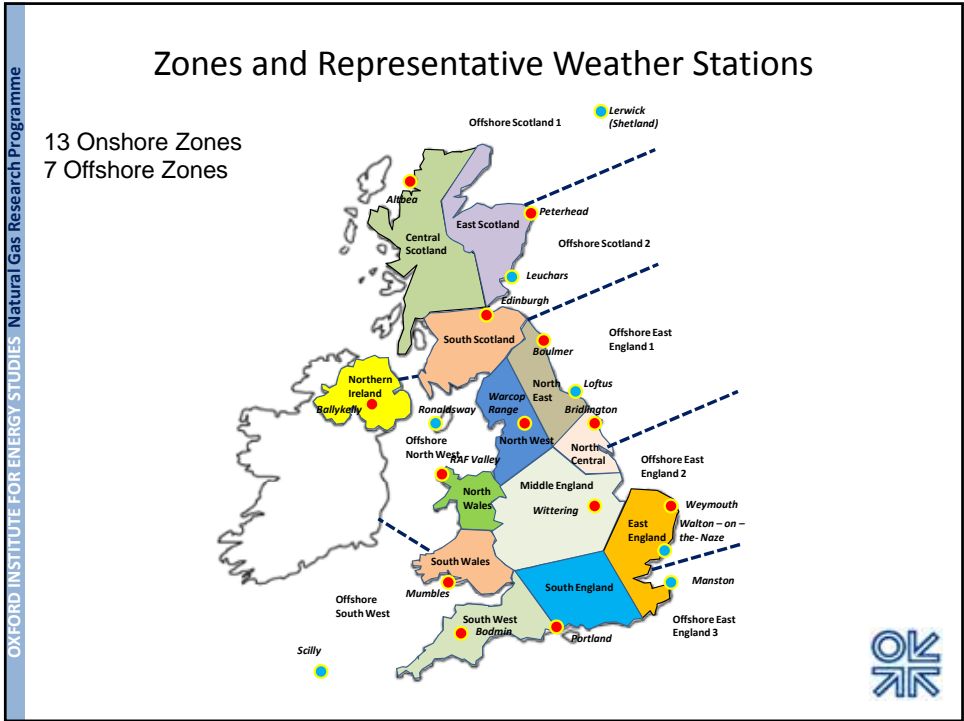
- Wind Modelling Methodology
- The impact of Wind on Gas
- Implications for UK

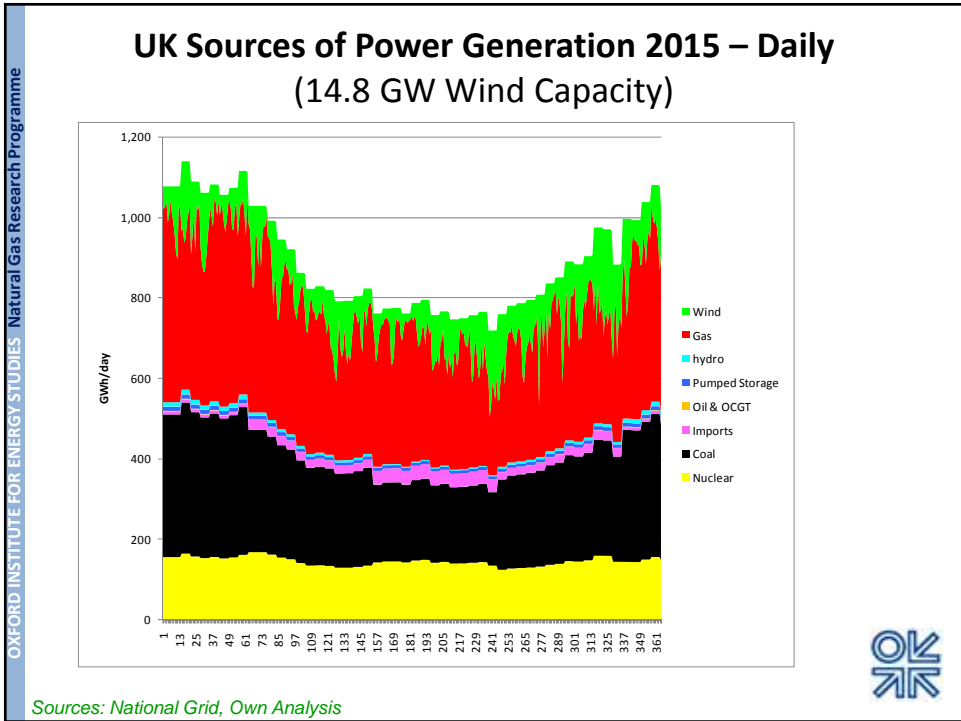
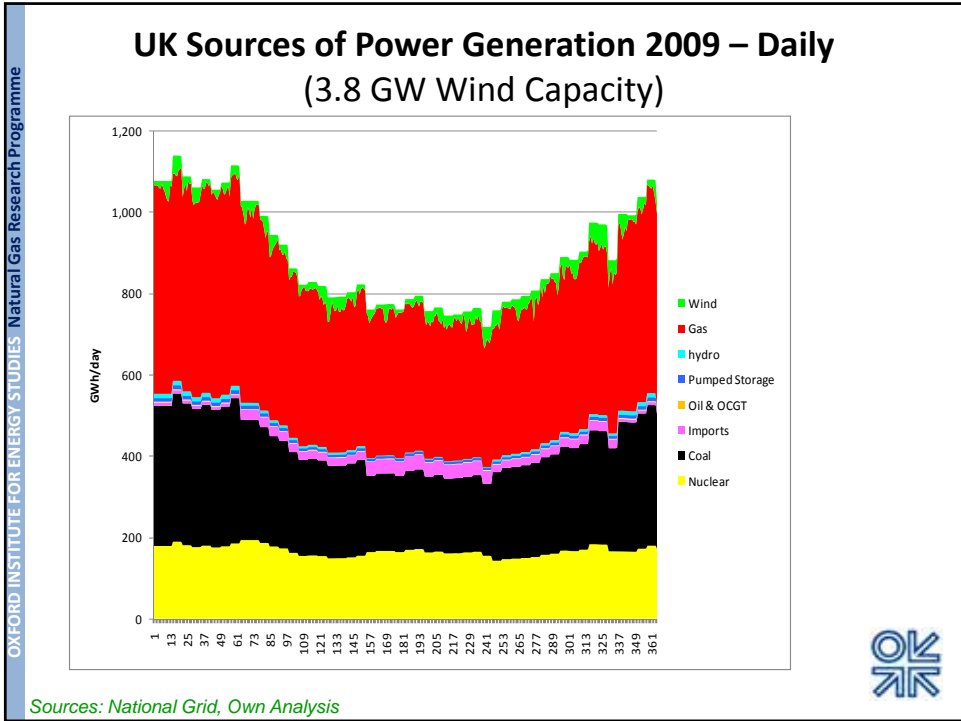
Based on the Following Research:

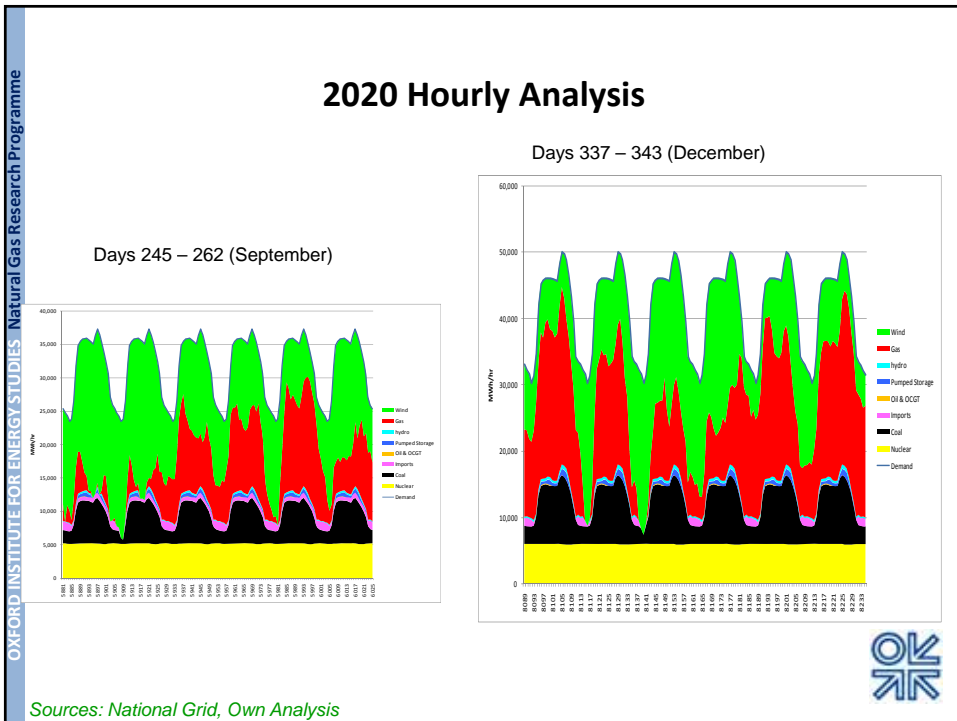
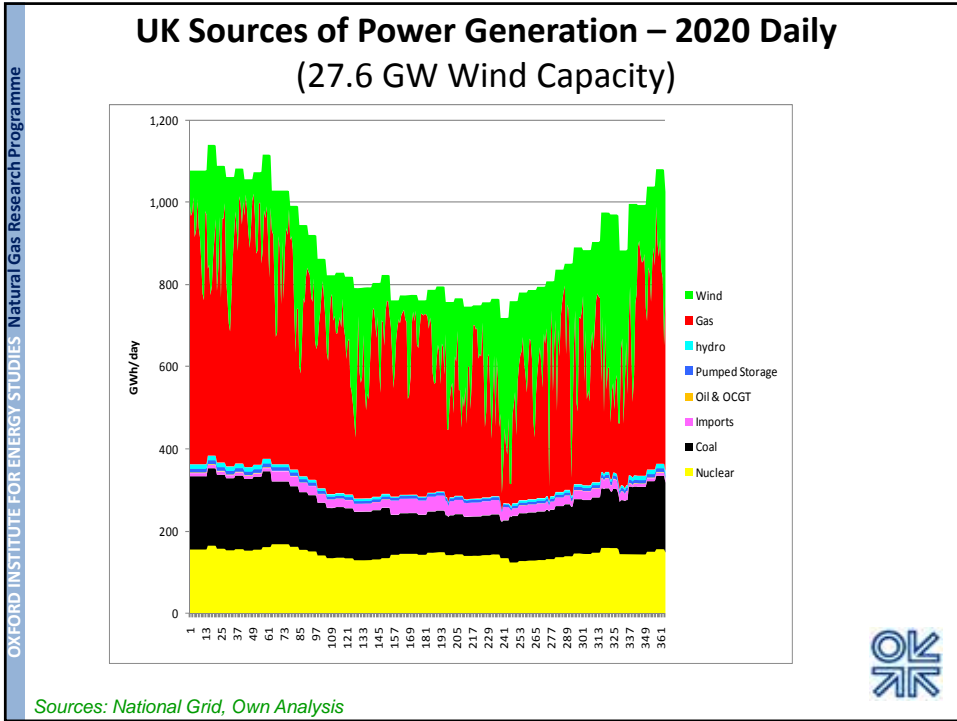
'The Impact of Import Dependency and Wind Generation on UK Gas Demand and Security of Supply to 2025, Howard Rogers, August 2011, <http://www.oxfordenergy.org/odfs/NG54.pdf>

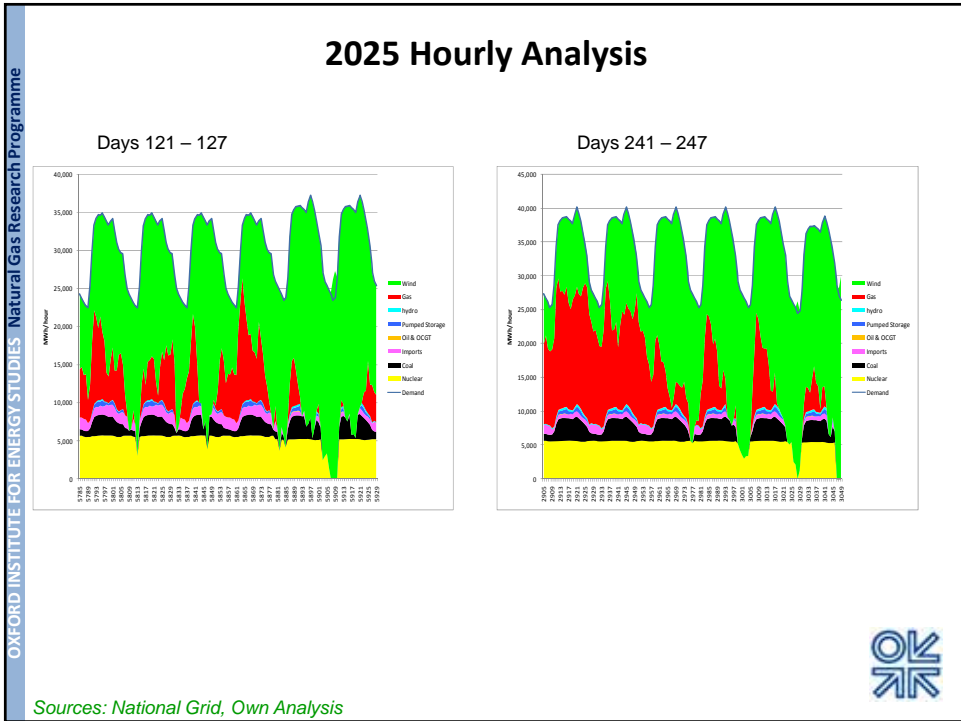
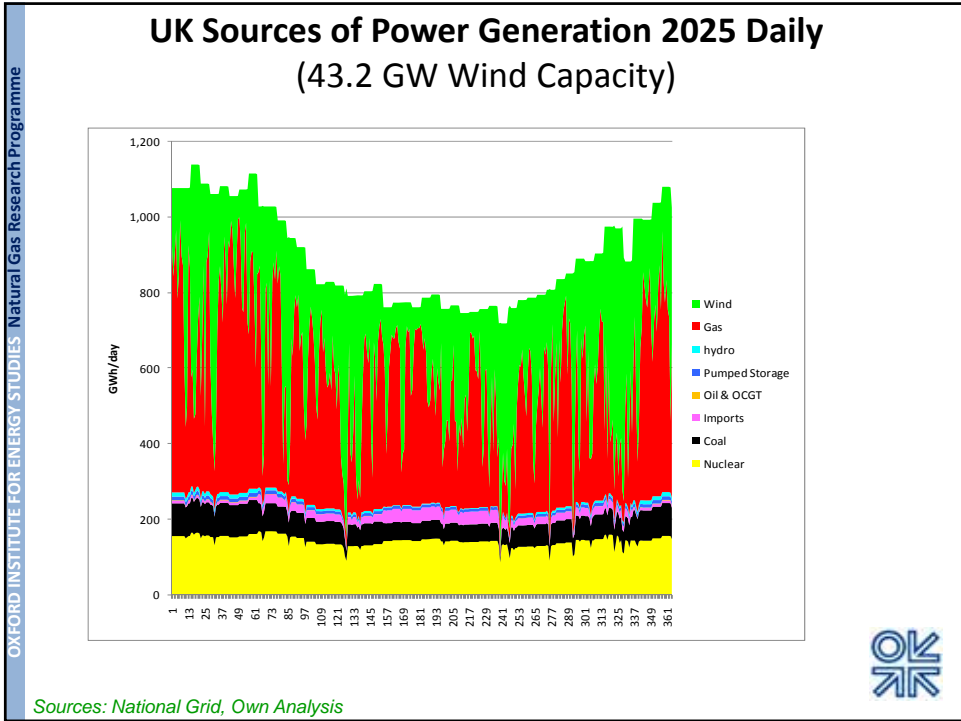


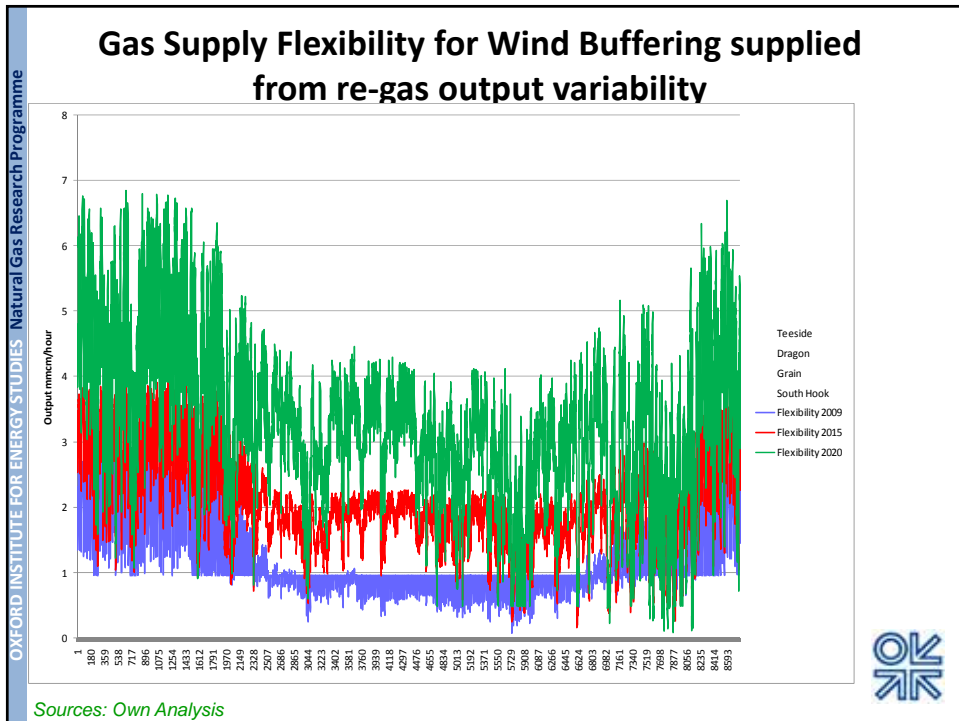
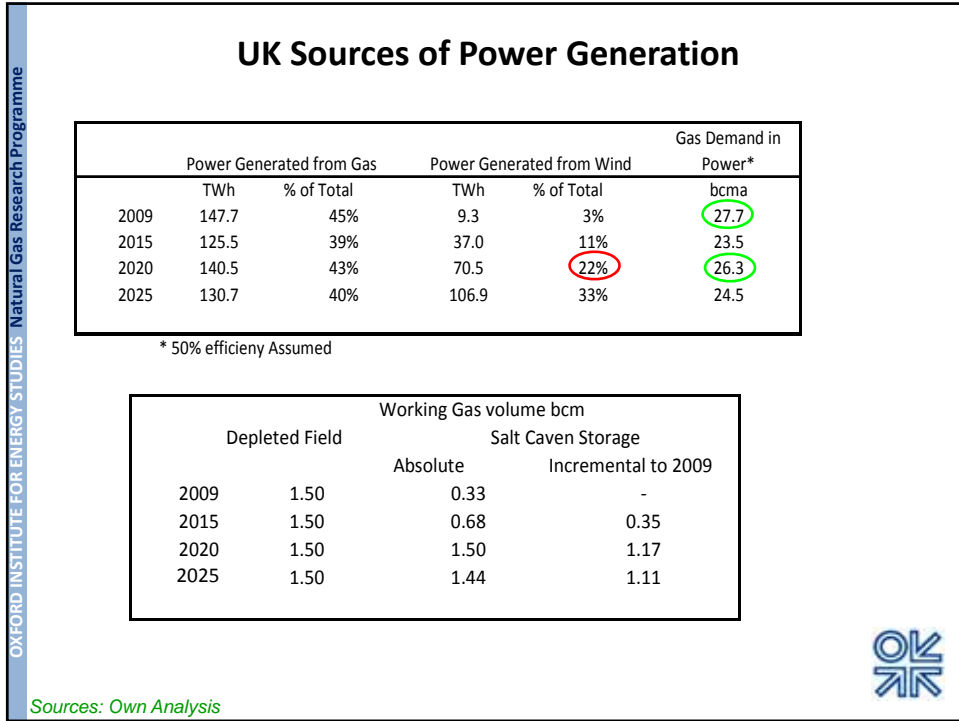












Conclusions

- The growth of wind capacity requires gas fired generation as a buffer, with gas consumption broadly at current levels to 2020.
 - (Incentives to invest in additional CCGT capacity need resolving)
- Wind becomes challenging to manage above 28 GW of installed capacity; short notice turn-down required at a reasonable cost to consumer.
- Given crucial ongoing role of gas it would appear prudent to take UK storage levels to 10% of consumption*. (Cost circa £2 - 3bn versus {UK Regulator} Ofgem estimate of investment in Green Scenarios of £200bn)

* Cf US level of 18%



Thank You
for your attention.

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