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Dear Andrew and Ian,

### Some comments on Project Discovery

First a few quotations and comments:-

3.11. Although investor confidence appears to be recovering from the global financial crisis, there is still a question as to whether the high levels of investment needed in the GB energy sector over the next decade will be available at a reasonable cost given the riskiness of the investment environment.

*Solution - de-risk the investment.*

3.12. The scale and relative riskiness of the investment required within such a short timescale may push up the cost of capital to the industry. For this not to lead to a reduction in security of supply, prices will need to rise.

*De-risk the investment to keep down the cost of capital.*

3.20. Uncertainty surrounding the future price of carbon is a significant impediment to investment in low carbon technologies. Current European Union Allowances (EUA) prices are low, in part the result of recessionary effects on demand, and the absence of a globally binding deal emerging from Copenhagen has lowered expectations of higher prices in the future.

*The Commons Environmental Audit Committee has just published a report pointing out that the carbon price has been “too low to encourage the necessary investment in low carbon processes” and recommending both a carbon floor price and consideration of a carbon tax.*

3.55. An alternative outcome is that CCGT investment may not be forthcoming because investors become concerned about the risk of future government intervention to address these issues (e.g. promotion of CCS and nuclear) and thus of stranding assets in the future. The result could be large variations in the electricity capacity margin with resulting swings in prices. This may in turn lead to some short term interventions to boost security of supply such as expensive contingency contracts with generating units

that might otherwise be closing, investment in short lead-time peaking plant (such as Open Cycle Gas Turbines (OCGTs)), or otherwise avoidable demand reduction.

*With the uncertainties over the government's target for renewables and hopes for nuclear, there must be a significant risk of an investment strike (as in Ontario 1995-2001).*

The report considers 5 packages A to E, see Annex.

A. Targeted reforms

4.16. The key objectives of this package would be to promote low carbon investment by reducing carbon price uncertainty with a **minimum carbon price**, and to strengthen investment signals through improving short term price signals in both the gas and electricity markets.

The proposals also envisage:-

- Improved price signals
- Improved demand response

B. Enhanced obligations

Package A + an obligation on suppliers to demonstrate that they had contracted or owned sufficient capacity to meet demand for between 3 and 5 years ahead.

*This would lock out new entrant suppliers for good.*

+ an obligation on NG as SO to purchase forward sufficient back-up and flexible generation to meet future requirements.

+ a centralized renewables market that would dispatch renewables (separate from the main market), which would avoid the cash-out risk than is a flaw of BETTA.

C. Enhanced obligations with renewables tenders

As package B but replace the Renewables Obligation with capacity tenders for future renewables investment to increase the likelihood of meeting the 2020 renewables target whilst providing better value for money for consumers.

D. Capacity tenders

4.70. If the above packages are deemed insufficient to address the challenges identified in bringing forward adequate low carbon and renewables investment whilst maintaining security of supply, the introduction of tenders for all generation capacity, new gas storage and other gas infrastructure could be considered. There would have to be an agency set up as counterparty to the offers, or National Grid might be invited to assume the role.

4.71. The objectives of this package would be to target prescribed outcomes for security of supply and decarbonisation by specifying the generation mix and tendering for capacity.

4.76. This package would include a combination of long term tenders for low carbon generation plant, including renewables, CCS and nuclear, and shorter term tenders for generation capacity more generally (and demand side response).

4.78. Making the tenders locational has the advantage of allowing co-ordinated expansion of the transmission network, and in the case of CCS facilitating the development of carbon transport and storage infrastructure, but again increases the risks of market power.

4.79. The 'commitment' period of the tenders may vary depending on the technology. For example, the typical economic lifetime of a nuclear investment may be double that of an onshore wind plant.

#### E. Central Energy Buyer

Although the Central Energy Buyer is presented as “the most radical departure from the current arrangements”, in fact the crucial part of tendering for new capacity is also part of D.

The Buyer concept described is similar - but not identical - to the approach I advocate. It is similar in the sense that (i) the Central Buyer indicates the quantum and type of capacity it wants, and (ii) there is a dispatch market. But different in that it:-

- Proposes to buy both capacity and energy - in my approach only the capacity is tendered; the energy is sold into the real time pool and bought from it
- Seems to imply the Central Buyer is a monopsonist - in my approach parties can contract independently if they so wish

4.92. In practice there is a significant risk with this package that the Central Energy Buyer makes the wrong choices and over-contracts with consumers bearing the costs. On the converse side, the reduced risk to investors (lowering the cost of capital) and competition between them could drive down the cost of delivering certain types of investment.

*I think the risks of wrong choices and over-contracting are no more than for packages C and D - and let us not forget how much over-contracting of CCGTs there was in the late 1990s.*

5.3. Inevitably there are trade-offs among the packages. Those that target specific volumes and types of investment, such as the Central Energy Buyer and Capacity Tenders, would in theory be expected to increase the probability of delivering security of supply and environmental objectives. However, there are risks associated with leaving a central entity to make all the key decisions, which could turn out to be wrong.

*As they were with over-contracting CCGTs in the late 1990s.*

The report ranks the options in terms of 7 criteria:-

- i. Confidence of achieving supply security
- ii. Confidence of achieving 2020 carbon targets through domestic reductions
- iii. Confidence of achieving 2020 renewables targets
- iv. Risk of prices being greater than necessary
- v. Risk of dampening of innovation
- vi. Implementation issues
- vii. Legal issues

The three “confidences” increase from A to E; the analyses of price risk and innovation are speculative; the complexity of implementation and legal issues increase from A to E, with a query about EU legislation over E.

*Since Italy has a de facto single buyer (Aquirente Unico) for purchasing for customers who do not switch, I query how significant a block this is. Also my variant allows for notional competition.*

The first four packages A to D are in my view fiddling around to fix a market that is broken. They are based on the specious argument that they would “retain market contestability with associated competitive benefits for consumers” (4.18), when there is no evidence that there have been such benefits. They are a continuation of the “naïve marketism” that has flawed Ofgem’s/Offer’s approach since 1990. Furthermore none of the approaches propose:-

- How to reduce the cost of constraints
- How to structure support for windmills to avoid negative prices, which increases the riskiness of the market (and which is the equivalent of creating butter mountains and wine lakes)
- How to deal with mass market retailing so that the current very high costs are reduced. (Note that Electricity Retailing in Norway, Von der Ferr and Hansen, The Energy Journal, Vol 31, No. 1 gives the gross margin for retailing in Norway of 4.8-10.9% compared with 25-30% in Britain according to Ofgem)

As the main favoured decarbonising technologies going forward - wind, nuclear, and CCS - are not market viable, there is no point in having a market other than for short term dispatch.

Yours sincerely,

A handwritten signature in cursive script that reads "Alex R Henney".

ALEX HENNEY

Annex Characteristics of packages A to D

	A - Targeted Reforms	B - Enhanced Obligation	C - Enhanced obligation w. Renewables tender	D - Capacity tenders
Minimum carbon price	✓	✓	✓	
Improve price signals	✓	✓	✓	✓
Improve demand response	✓	✓	✓	✓
Obligations on:				
- suppliers to own/contract forward 3-5 years		✓	✓	
- SO to contract forward		✓	✓	
- Separate centralized renewables market		✓	✓	✓
Tender for renewables			✓	✓
Tender for non-renewables				✓