

ECC priorities for holding Government to account

Royal Academy of Engineering response to the Energy and Climate Change Committee

August 2015



1. The Royal Academy of Engineering is pleased to respond to the Energy and Climate Change Committee's inquiry on priorities for holding government to account. The Academy has strong interest in energy policy with a large number of Fellows with expertise and experience in the field. We have published a series of reports covering all aspects of energy policy and are soon to publish a report on critical issues facing UK energy policy that will be very relevant to this current inquiry and which we will be pleased to share in due course.

Which DECC policy areas do you think require particular scrutiny over the next five years?

2. The main point to emphasise is that all policies should consider the whole energy system and the interrelations between the various elements. In order to achieve the goals set in the Climate Change Act (2008) electricity, heat and transport will all need to decarbonise. This will require action in domestic, business and industrial sectors and consideration will need to be given to all three pillars of the 'trilemma' – cost, security and decarbonisation. With this in mind, the following specific issues are seen as important:
3. **Electricity generation** – decarbonising the electricity grid is a core requisite of the future energy system but this will require huge increases in low carbon generation mainly through nuclear, carbon capture and storage and offshore wind with other technologies also playing a part. This must be achieved while upgrading the transmission and distribution systems and incorporating increasing amounts of distributed energy such as solar PV. Ensuring this occurs while maintaining system security and stability is a major engineering challenge.
4. **Market** – the mechanisms brought in through the Electricity Market Reform (EMR) are still very new and time is required to determine their effectiveness. The performance of EMR mechanisms needs to be monitored as well as the ability of the whole raft of energy market policies to cope with a system that will undergo even more significant changes in the medium to long term. Consideration should also be given to how UK national policies will interact with both regional and EU policy and on UK productivity and competitiveness.
5. **Heat** – policies relating to energy usage in the built environment are vitally important and currently under review by Dr Peter Bonfield OBE FREng. This review will need to address technologies such as CHP, heat networks and waste heat as well as building regulations, data usage and energy efficiency. It will take time to deliver recommendations but any policies adopted will require wholesale buy-in from all stakeholders in order to succeed where previous policies have not.

What should be the Committee's scrutiny priorities over the next twelve months?

6. **Nuclear and CCS** – both these low carbon generating technologies are crucial but neither are progressing as quickly as they ought to be.
7. **Smart meters** – will the planned roll-out programme be successful and deliver the required results?
8. **The future of the gas grid** – natural gas supplies around 80% of domestic heating demand but it is not clear whether the gas grid will be incompatible with carbon targets or able to be utilised as part of the future system.
9. It is also worth noting that energy policy is a well-worn area with many interested parties. It is therefore critical to frame any inquiries to ensure they add value to past reviews.