

**Consultation on National Infrastructure Commission call for Evidence.  
Section 4, Electricity Interconnection and Storage.**

**Response from Friends of the Earth England, Wales and Northern Ireland.**

**Introduction**

Friends of the Earth England, Wales and Northern Ireland (EWNI) represents more than 100,000 members in the UK, and is part of a Europe-wide network representing 30 national organisations. Worldwide we have more than 2 million members. We welcome the opportunity to submit views on the National Infrastructure Commission.

While there are others who will make more technical comments, we are happy to be able to submit thoughts on the general scope and direction of the Committee's investigations into electricity interconnection and storage.

**General comments**

In 2015 the Prime Minister David Cameron, speaking at the International Climate talks in Paris said: "instead of making excuses tomorrow to our children and grandchildren, we should be taking action against climate change today". Friends of the Earth agrees.

In light of this, and the UK's commitment to keeping global temperature rises to 'well below 2 degrees' it is **crucial that the National Infrastructure Commission places decarbonisation and environmental protection at the very core of its function and purpose.**

This is not only environmentally necessary, but economically logical.

The UK is in the midst of a transition to a low carbon economy. This will require large scale deployment of low carbon technologies, particularly renewable energy.

Two of the oft-cited options for tackling decarbonisation and security of supply in the UK – a large scale shift to natural gas (potentially 'fracked gas') as a 'bridge', and new nuclear – can be discounted in the medium term.

By 2030 the [Committee on Climate Change estimates that the carbon intensity of the UK electricity supply should be reduced to around 50gCo2/kWh](#) to avert dangerous climate change. The carbon intensity of natural gas, while significantly less than coal, is still around 350-400gCo2/kWh, meaning that unabated natural gas cannot form a large proportion of the electricity supply if we are to decarbonize by 2030.

It is unlikely too that there will be any new nuclear in the UK before 2025, or that there will be large amounts available in the time frame required before 2030. Given the falling costs of renewable energy (most already require less support than new nuclear ten years early) nuclear power is also unlikely to be the cheapest option.

For similar reasons, new nuclear and fracked gas, which will not be [available at scale for perhaps 15 years](#), cannot play a significant role in any medium term security of supply issues.

Friends of the Earth believes that to decarbonize to the level recommended by the CCC, renewable

electricity will need to account for around 80% of electricity generation in the UK by 2030.

Alongside larger systems such as offshore wind farms or large solar installations, decentralised renewables like rooftop solar, small wind, hydro and other micro-renewables technologies can play a vital role in generating low carbon electricity, promoting community engagement or efficient onsite generation and the fostering of innovation and invention in low carbon products and services.

**For these reasons it is vital to have grid infrastructure which prioritises decarbonisation through renewable energy. This will mean an energy storage and management system which works to facilitate and incentivise the large amounts of variable but predictable renewable energy onto the grid, as well as looking to match demand more closely to supply through enhanced use of demand side management systems. This should be the focus of any future changes to the grid operation and structure – to facilitate decarbonisation through interconnectors, small and large scale energy storage and demand side measures.**

### **Capacity market**

While they are eligible to apply for support, energy storage and demand side management are disincentivised through the capacity market. The majority of payments through the capacity markets are being made to *existing* coal, nuclear and gas power stations, and to new but very cheap and polluting diesel power.

In 2019 alone, the UK will [spend at least £942 million](#) through the Capacity Market, of which £851 million will be used to support existing generation. Just £8 million will be spent on demand response, compared £139 million on old coal power and £136 million on existing nuclear, which cannot provide flexible back up.

Subsidy of existing coal power stations, and non-flexible nuclear power stations, places emerging technologies such as energy storage using batteries or flywheels, or demand side response, at a significant disadvantage. Similarly the fact that new generation may bid for 15 year contracts in the capacity market but storage and demand side measures appear unable to do so is a clear barrier to new energy storage.

Finally, failure to account for the environmental costs of technologies incentivised by the Capacity Market is at odds with the UK's commitments to tackle climate change, and is something which should be rectified.

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