

Finlaison House, 15-17 Furnival Street, London, EC4A 1AB

Darren Jones MP
Chair, Business, Energy and Industrial Strategy Committee
House of Commons
London
SW1A 0AA

20 December 2021

Dear Darren,

Thank you for your letter of 9 December about the resilience of the electricity system and for the opportunity for the Commission to provide further evidence on this.

The thoughts in this letter pick up some of the key points you will have heard me make in giving evidence to the Joint Committee on the National Security Strategy on 13 December.

As a starting point, it is important not to lose sight of the fact that our electricity system is generally reliable and resilient. Since Ofgem introduced incentives for companies to improve reliability in 2002, there has been an almost 50 per cent reduction in the frequency of power cuts, and an almost 60 per cent reduction in the length of power cuts. Social research undertaken for the Commission has also shown that the public see energy as the most reliable of the regulated utilities, with only a small number of respondents having experienced major disruptions.

However, major events do happen and Storm Arwen is not the first significant power cut we have seen in recent years. When these events do happen the system needs to be prepared for them and to respond as it is expected to do.

Given that both Ofgem and the Energy Emergencies Executive Committee are reporting on the response to Storm Arwen I will not focus on the events themselves. And detailed analysis will need to be done to dig into specific issues. However, there are a few strategic observations worth making.

Firstly, we are once again looking at resilience after the system has experienced a shock. We need to be more proactive in thinking about resilience – anticipating the system requirements so that we plan and operate systems to resist, absorb and recover from shocks and stresses. Adapting once we've learned lessons from particular events is important, but we need greater emphasis on resilience in advance of shocks. This framework for thinking about resilience was set out in the final report of the Commission's Resilience Study, [Anticipate, React, Recover: Resilience Infrastructure Systems](#).

Regular reviews of standards would ensure that changes in the frequency or magnitude of adverse events are fed into the standards expected on a timely basis. For example, the

‘guaranteed standards’ for restoration of supply in the electricity system were last updated in 2015, following the December 2013 storms. It would be much better to review standards sufficiently regularly that they can proactively be planned for across the system, including supporting Ofgem make its decisions on the level of investment needed to ensure system resilience.

As well as thinking about resilience standards and objectives at the strategic level, we also need to ensure that regular, rigorous stress testing and planning by operators is in place. If these are not in place then standards will not be met. Clearly this is something that Ofgem and the Energy Emergencies Executive Committee will be looking at in detail in their reviews.

In terms of investment, draft business plans suggest that all network operators are planning to increase their investment in resilience during the next price control period. In RII0-ED1 distribution network operators have been provided with £3.9 billion to maintain asset health and £1.5 billion specifically for resilience.

However, it is worth noting that Ofgem’s published data shows that distribution network operators have consistently underspent their collective allowance for expenditure on resilience throughout the current price control period.¹ This includes a consistent underspend on tree cutting across the network.² There may be sensible explanations for this – such as increased efficiency – and we understand from Ofgem that the latest data suggests a more positive trend when a wider range of resilience activities (such as quality of supply) are also included. Nevertheless, we need to ensure resilience remains an investment priority.

I understand you have also written to Ofgem and the Energy Networks Association on this topic who will be best placed to provide further details.

More broadly, the Commission has made a number of recommendations about how the regulatory model for utilities could be updated and strengthened to meet future challenges, including climate risks and maintaining the right level of investment across regulated sectors. The whole system does not need to be redesigned, but it needs to be updated to achieve a well-regulated market economy which can respond to the coming challenges. The Commission’s report [Strategic Investment and Public Confidence](#) set out four key tweaks needed to facilitate long-term strategic investment through an updated and strengthened regulatory system that:

- provides a strategic framework to deliver the UK’s long-term investment needs
- makes investment decisions reflecting the priorities of the whole of the UK
- is based on statutory duties that support long-term investment – including the need for Ofgem to be given a resilience duty; and
- uses competition to drive innovation.

Resilience needs to be considered in conjunction with broader investment priorities, especially as we transition our energy systems to meet net zero. Along with broader technological opportunities, this transition may also provide opportunities to enhance resilience. For example, the availability of vehicle-to-grid connections in people’s homes may help absorb and recover from shocks if they allow electric vehicles to function as a

¹ Ofgem (2021) [RIIO-1 Electricity Distribution Annual Report 2019-20](#). Previous annual reports for RII0-1 show underspending of allowances on resilience has been the case each year

² Expenditure classified as resilience covers black start, flood mitigation, physical security and tree cutting.

supply of backup power. This could provide temporary power even for households without their own vehicle, provided the property had a suitable connection, as long as the roads were open in affected areas.

The Commission will continue to prioritise resilience in its work and will be looking at asset management as one of our nine challenges for the next National Infrastructure Assessment.

I hope that these further thoughts are helpful. Please let me know if you would find it helpful to receive further evidence from the Commission on this topic.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'John Armitt', written in a cursive style.

Sir John Armitt