

Unite the union response to the Public Accounts Committee inquiry entitled Clean Power by 2030: Upgrading the Grid



1. Introduction

- 1.1. This submission is made by Unite, the UK's largest trade union with over one million members across all sectors of the economy, including manufacturing, financial services, transport, food, agriculture, construction, energy, utilities, information technology, service industries, health, local government and the not-for-profit sector. Unite also organises in the community, enabling those who are not in employment to be part of our union.
- 1.2. Of particular interest to this inquiry Unite represents almost 40,000 Energy and Utilities workers including engineers working to maintain the power distribution network throughout Great Britain and Ireland.
- 1.3. As highlighted by the inquiry in its outline the grid is in dire need of investment to enable the connection of a myriad of energy projects. These include much needed energy storage to generation and transformation projects that would enable the faster development away from one forever chained to fossil fuels. A glance at the 2025/26 accounts of National Grid itself reveals that it is burdened by a **£47,705 million** debt mountain¹, which is more than double the amount owed by Thames Water, thankfully a position that is not replicated by other network distribution providers. This debt is not helped by the **£27,097.4 million** in dividends paid out to shareholders over the past 30 years. While, unlike Thames Water, the National Grid has substantial assets, so the debt to asset ratio is more manageable this still means that a sizable chunk is paid in interest alone every year. The vast majority of these assets were inherited when the network was privatised and merely maintained and upgraded, eventually, as needed.
- 1.4. Funds are needed to replace most of the grid infrastructure and provide additional transmission capacity, given it is to provide the distribution network central to the efforts to reach Net Zero and the changing nature of its required design. At the moment due to lack of investment in people and equipment, this is not fit for purpose and is why Unite is calling for it to be renationalised.
- 1.5. The grid was originally designed on the premise that each domestic property would require a relatively small volume of power per day, and the bulk of the heating and cooking, would be provided by gas or coal. Therefore, homes could be supplied with a simple two-phase supply with no provision for electricity to flow from the domestic properties to the grid. The grid was designed and built at a time when coal was king, and the first motorways were being opened, and it therefore never envisaged a world where we would need to be net zero and power our heating/cooling systems or have home charging points for electrical vehicles. Every home and business in the country now needs to have the capacity to generate power and help supply the grid, as well as draw from it and that means a total redesign of the network.
- 1.6. Due to privatisation and the actions of investors to drain the utility of funds to pay dividends instead of reinvesting profits into the network to make it more resilient and keep

¹ growing from £1,042 million in 1997 according to the accounts of National Grid plc.

pace with demand for connectivity. It has been estimated that with current resources, to complete this list for connections, would take over 15 years. This assumes that the workers can maintain their level of productivity and Unite suggests that is highly doubtful. Renewable energy projects in the North Sea have given up waiting for connections to the UK grid and connected to neighbouring European national networks instead, so they might more quickly realise a return on their investment.

- 1.7. The problem is the severe lack of workers with the skills to perform the work. Currently electrical distribution workers are working up to 16 hour days on a regular basis and longer in emergency situations, to maintain, upgrade and expand the network. This is totally unsustainable in the long term as it is creating a fatigue time bomb that is killing off the numbers of skilled workers we have, due to fatigue related accidents. Unite does not have exact numbers on these incidents given a number of these happened on the road, driving to or from site and therefore, are not included in HSE statistics. One electrical distribution company attempted to tackle this by issuing a notice that suggested taking a 20-minute power nap in their vans after completing 12 hours at work, if they felt fatigued and then drinking a Red Bull energy drink (or similar) before returning to work. This advice was swiftly retracted once Unite had sight of this guidance note. Unite needs to see this inherently dangerous culture be stopped, as the lives of these workers are far more valuable to the nation while they are alive. This may not be popular with the members who value the copious amount of available overtime, but this is more about saving lives.
- 1.8. Unite believes that there needs to be an urgent national recruitment and training programme, to generate the workforce that is needed to achieve the goals of an energy system that is Net Zero by 2035 or sooner and the transformation of the rest of the societal and industrial infrastructure so that the goal of Net Zero by 2050 remains a possibility. The workforce is now depleted to a stage where plans to enhance the grid may be put on hold and not just the Net Zero target will be missed.
- 1.9. A major hurdle to this being achieved upgrades is the climate. The Met Office has recorded an increasing trend in the number of severe storms driven by manmade climate change. So far there have been seven major storms to hit since 1st October 2025. And we are currently facing yet another heatwave. In order to reconnect homes, hospitals and businesses swiftly, teams of workers are regularly shipped around the UK to impacted areas, to reconnect supplies which obviously takes time. As the network is operated on a shoestring of core workers, there is a desperate need for more workers to be trained to perform the role.
- 1.10. The demand is not going to go away. Since 2022 the UK has been dependant on its neighbours for electrical supplies. While the UK finally authorises and commences two new nuclear power plants France has plans to increase its capacity by six to eight, approximately **63GW** that will enter service between 2038 and 2044² so it can benefit from supplying UK customers at a price that Unite suspects will reduce bills domestically to French consumers³. For context, current average grid demand in Great Britain typically hovers between **25 GW and 35 GW**⁴. The Climate Change Committee (CCC) predicts a

² France's nuclear expansion centres on building six new-generation EPR2 reactors, with an option for eight more, at an estimated cost of €72.8 billion, for 63GW of additional capacity to provide baseload foundational supply to match its increases in renewables.

³ Great Britain currently relies on three operational electricity interconnectors directly linking it to France, providing a combined capacity of 4 GW. Regulators are assessing four additional projects that could add substantial new cables, including the **Aquind project** (2 GW), **GridLink** (1.25 GW), **FAB** (1.25 GW), and a **Getlink** channel project (1 GW).

⁴ The UK generating capacity if the wind was blowing at the optimum speed, and the weather was not too hot but it was a cloudless day then the installed capacity of the UK is approximately **107.5GW** but a

50% increase in UK electricity demand by 2035 and a **doubling of demand by 2050** but to provide that supply to consumers requires a grid with the capacity to transmit that amount of energy⁵.

- 1.11. In the CCC's "*Progress in reducing emissions 2026 report to Parliament*"⁶ they call for, amongst other things, increased EV charging access, low-carbon heating systems, plans to help industry electrify its energy requirements, additional renewable energy and storage infrastructure. None of this will be of any use without the connections to link generation with consumption.
- 1.12. Currently, the UK needs to regain its energy security, but that will not be possible without investment into the people that keep the grid alive and our lights on.
- 1.13. Unite firmly believes there needs to be a balance of generational supply methods rather than basing decision on just one source of generation. Too much of a reliance on renewables, as has happened in Spain, results in a situation where prices fluctuate between some of the highest in Europe to a the cheapest⁷. If the weather is too hot, solar panels overheat and stop working. If the wind drops or speeds up either side of the wind turbines ideal speed, the generational capacity is not realised. But if there is more capacity than is required, the grid pays wind farms to feather their turbines and not generate.
- 1.14. According to the National Energy System Operator (NESO) there are currently there are 738 GW of connection demands in the queue far exceeding the 200–225 GW of clean generation capacity required by 2030⁸, if only we could connect these projects to the grid. This includes 283 GW of prioritised energy storage capacity, so that if we do obtain too much power that can be stored for a time when it is needed.
- 1.15. With demands from EV hubs, AI data Centres and industrial sites, such as the arc furnaces needed at steel works, the demands are only going to grow rapidly. In March the Government reported that the demand for connections grew by 460% in just 6 months!⁹
- 1.16. During heatwaves the overhead cables expand and droop, creating scenarios where they could short out. While these situations require engineers to work on live powerlines in thick electrically non-conductive suits this Personal Protective Equipment (PPE) becomes extremely uncomfortable too dangerous to work in, during the day leaving workers no option but to work in the relative cool of the evenings, restricting the number of safe working hours.
- 1.17. Unite is very concerned that safety is being placed in second place to the ever-increasing demand for more connectivity and Unite is extremely concerned over the welfare of the workers in power distribution, especially when they are being offered virtually unlimited overtime just to get the job done when what is needed is more hands to lighten the load.

considerable percentage of that is natural gas fired generation that will need to be replaced or adapted so it does not release any greenhouse gasses before 2035.

⁵ <https://www.theccc.org.uk/wp-content/uploads/2023/03/Delivering-a-reliable-decarbonised-power-system.pdf>

⁶ <https://www.theccc.org.uk/publication/progress-in-reducing-emissions-2026-report-to-parliament/>

⁷ [Link to live reports on the industrial spot price of electricity in Spain during 2025 and the live reports of prices today](#) In 2025 the average wholesale day-ahead electricity price in Spain jumped from only €18.3/MWh to as high as €108.9, at the time of writing the price is €148.1/MWh given the grid is so reliant on solar farms that do not produce power when they are too hot.

⁸ [Link to the NESO page on connections reform](#)

⁹ <https://www.gov.uk/government/news/government-to-tackle-speculative-demand-grid-connection-requests>

- 1.18. This should not be taken as criticism of NESO's efforts to induce action from the electrical distribution operators into action, but it is a criticism of the privatised network that has extracted value out of the UK grid to the extent that it is in danger of collapse in the name of profits and dividends and Unite believes this is a situation which is worse than the water industry, in its efforts to survive on skeleton staffing levels and a network that is now several years behind one that is fit for purpose.

2. Conclusion

- 2.1. Unite calls for urgent action to address the actions of a handful of operators which has brought the network to its knees. Unite genuinely believes that much needed critical workers will die if something does not happen to address the situation.
- 2.2. The industry needs to invest in more skilled workers and that means investing in educational facilities to ensure they are competent to work on cables carrying up to 400,000 Volts. The existing staff are not getting any younger and are predominantly in the latter half of their careers. If there is not the investment into staff soon there will not be the workers to make the connections that keep the economy afloat. Already it is doubtful that there will be enough experienced engineers to provide mentors to the new entrants, to guide them and pass on their knowledge from those who have done the role for years.

**Simon Coop
National Officer for Energy & Utilities
Unite the Union
Transport House
128 Theobalds Road
Holborn
London WC1X 8TN**

For further information please contact Colin Potter, Research Officer in the Unite the Union, Research Department.