Unite the Union response to the Ofgem Consultation on their Minded-to Decisions on the initial findings of our Electricity Transmission Network Planning Review

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 energy and utilities, manufacturing, financial services, transport, food and agriculture, construction, 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 relevance to this submission, Unite represents over 35,000 energy and utility workers; who will be impacted by these decisions together with the businesses and member's household budgets will be impacted. In this response we aim to respond to the detail of Ofgem's minded-to decisions.

Network planning

1.3. Unite applauds the decision to press ahead with the idea of delivering a Centralised Strategic Network Plan (CSNP) so that the electricity transmission network is planned holistically and coherently. Unite is concerned, however, that planning related to non-load drivers, is remain entirely within the remit of the transmission owners (TOs). Staffing levels and training could be argued to fall within non-load drivers, especially given the age profile and numbers leaving the industry due to retirement or to find a better paid career. In a crisis caused by extreme weather, the number of workers called in and working to restore supplies could be critical to the supply or a reliable load across the network.

1.4. Non-load related network planning needs to focus not just on the physical infrastructure asset base re generation and distribution but consider the numbers of workers needed with what skills to operate, make repairs and enhance the asset base to achieve the stated aims. TO's will always attempt to provide a minimum compliment which it believes is adequate but if these workers are overworked and underpaid for their roles the workers can simply vote with their feet and find alternative employment. In a climate where there are more vacancies than unemployed people and where the skill set available cannot be swiftly replaced, Unite believes that Ofgem should at the very least understand the terms and conditions workers need face especially when faced with the impacts of the climate.

1.5. Where there is a clustering of large projects Unite agrees that it is simpler to cluster projects but would caution that such clustering requires that the local populous has such a ready supply of staff or ideally the technical training facilities to enable the steady flow of employees through the system of continuous personal development. Unite would further stress that if the utilisation of waste heat to power or use in Direct Air Capture (DAC) / Carbon Capture and Storage (CCS) facilities, the physical proximity to the source of the heat would necessitate clustering. Given the IPCC has given such a high priority to Greenhouse Gas (GHG) removals to stay below 1.5°C of global warming, such clusters of generation and carbon capture are critical.

1.6. Sadly when making decisions on strategic environmental planning, the body in question supposes an unlimited supply of electricity that is zero carbon at point of use. The creation of new renewable sources of power in the midst of nowhere, planners assume there will be grid connectivity. Similarly when converting fleets to all electric vehicles, planners presuppose you can simply build a series of charging stations without considering the network capabilities in that area. In infrastructure

projects, planners imagine there will be enough skilled staff. Such conjectures can led to plans being undermined entirely and therefore Unite provides this word of caution and suggests that assumptions are revisited and regularly reviewed.

1.7. The demands on the domestic in house supply from the local transformer are going to need upgrading. 85% of the nation's domestic properties are gas fired which will need to be replaced if we are to reach net zero, which will no doubt add to property electrical supply demands. The transition to electric plug in vehicles will also require a major overhaul of all domestic and some industrial supply networks as the simultaneous charging of more than 3 electric vehicles may be enough to trip the local transformers. Therefore, there will be a potential shortage of individuals with the skills to fill the roles the industry requires to simply upgrade supplies to housing. These need to be upgraded to three phase supplies. Additionally, the replacement of the network to the transformers to ensure the grid can provide the additional demand. Of course the grid supply from generators of electricity to that location will equally require upgrading. Early stage intervention is therefore recommended to ensure that pupils leave education with the skill set, at the required quality and in the volume required to begin apprenticeships. Without such intervention, Unite fears the grid will not be ready in time to achieve the goal of net zero.

1.8. Unite also cautions that such apprentices receive the correct duration of mentoring and on the job training. Sadly Unite has seen too many companies in the privately owned part of this sector supply woefully short change apprenticeships only for the individual to make mistakes in the real world, be disciplined and leave the business wasting the resources that have been ploughed into them simply because *"there is always another person to replace them".* Had the resources been used in the first place there would be the greater level of competency moving forward. Unite therefore suggests that Ofgem monitors the number of mistakes and addresses this issue, determining if the training and fatigue levels of works are to blame, caused by short cuts being employed by the company.

1.9. Unite believes that a number of workers who should, by now, have finished the installation of smart meters, had their employers put in the investment and the government not made so many mistakes. Instead we have just crossed the 51% line if you include smart and advanced meters installed, with 25.2 million operating in smart mode[1]. These workers could easily transition to grid enhancement, with just a little more training. Such availability is being delayed due to predictable, yet not planned for, issues in the transition to smart meters. Unite believe that the such work cannot be rushed and the replacement of 7 smart meters in a day is an unrealistic target that we know at least one energy company is calling for each of their team of engineers to complete in a day, while lone working. The engineers were not asked what is possible, these targets were just imposed. Such demands add stress, cause the jobs to be rushed, safety checks not performed etc. as the engineer is forced to cut corners. Smart Engineers are driving miles between customers adding time to their day. If there was better coordination or them sorted to be in one housing estate then the 7 a day target might be possible, however, it is rarely the case that more than three are in the same town.

1.10. Unite believe it would also help if all properties were mandated to have a smart meter. The energy crisis and price rises have focused the public's mind on just how much energy they use given that post October, the majority will be in fuel poverty. If mandated engineers could then simply work street by street, estate by estate, converting meters in a coordinated fashion rather than driving for more than 20 miles between jobs. If such jobs are in central London or other built up areas, this could mean a journey of well over an hour, taken out of the day due to the lower speed limits. By mandating the change the industry can demand better mobile coverage to enable commissioning and it will spur on the creation of range extenders to allow meters to talk to one another in a property. Especially on industrial sites the distance between the gas meter and electricity meter can be significantly more than 100 meters and in older properties the thickness of the walls can prevent the signal from getting through.

[1] According to the Governments Smart Meter Official Statistics in Great Britain : Quarterly Report till end March 2022. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1077592/Q1_2022_Smart_Meters_Report.pdf

1.11. Smart meter installers have now exceeded the 50% mark so are now dealing with the more resistant or difficult to install domestic and industrial customers. As highlighted one major reason is the lack of a mobile phone signal or the gas and electricity boxes being more out of range of one another, prohibiting the commissioning of meters. The ability to use more than one mobile network or type of signal from a range of companies would also help. Unite fears that the shutting down of the 3G network in some areas in favour of 5G will mean that a number of smart meters will stop working, undoing the work already completed as they are not designed to use 5G.

1.12. As the delivery of the Centralised Strategic Network Plan (CSNP) would be dependent on there being the engineers available to help deliver the plan to its conclusion, Unite believes that Ofgem should take a closer look at what is happening and has happened with smart meters to hopefully learn from the mistakes, but also see where these workers are being still used. Had the smart programme been completed as envisioned, there would be a large team available to help with the role out of the grid enhancements. As warned at the time, however, if you leave solutions to the market to resolve, each operator will look after number one and put their customers second and the good of the country not at all. The challenge therefore is to free up these engineers from the roll out of Smart now that they are starting on the difficult to install customers, so that they can help upgrade the grid. Please do not fall into the trap of believing there is an inexhaustible supply of workers.

1.13. Equally when it comes to the transition of customers from natural gas central heating please note that some customers are being converted to air source heat pumps by retrained smart meter engineers and yet these smart engineers are not being paid the rate for the job by their companies undermining heating engineers that have been doing the role for years. Unite believes that if Smart Engineers are being retrained to upgrade household electronics, install Electric Vehicle charging points and fitting Heat Pumps, that they are paid the rate for the job by suppliers.

2. Conclusion

2.1. Unite believes that more of a focus should be given to the supply of the one resource that enhancement work cannot do without, the worker. Unite believes that Ofgem should take more of an interest into their welfare, training and the demands made of them by the various companies in the energy industry. Ofgem could at least see if engineers are given targets which are realistic and not incentivising corners being cut.

2.2. Unite agrees that a mixed bag approach is the only realistic option to grid supply design including nuclear and renewables. A field full of solar panels, remains just that unless it can be seamlessly incorporated into a national grid design. Therefore Unite asks that Ofgem ensures that workers are at the heart of the CSNP.

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