Unite the Union Response to the Department for Energy Security and Net Zero Consultation on the Smart Metering Policy Framework Post 2025

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 60,000 Energy and Utilities workers including engineers installing smart meters across the UK and Ireland. Unite has been involved in the rollout of smart meters since its conception, when water meters were meant to be part of the programme. The union suggested the Just Transition of the army of meter readers, to undergo the in-house training, to become smart meter installers, making this the first example of a true Just Transition in the modern era. Therefore, the union has followed the progress from a series of meter designs that only worked for the one energy provider out of the big six, up to the current situation, where meters must work with multiple energy billing companies and have to be provided by any energy company on request.

2. Initial Comments

2.1. The roll out of smart meters has been a comedy of errors, from a situation where the meters did not work accurately, worked only if you stayed with the one provider, could cause hours of labour to install only to discover that they did not have a signal so could not report back to base or alter the billing dependant on the supply availability from the grid. Additionally, the extremely intense and condensed in-house training was in some cases reduced to three months, instead of the three-year apprenticeship required by the construction industry. As some energy providers did not reduce the workload on mentors it meant in many cases that errors were missed including a number of gas leaks and cross polarity incidents where the items were connected incorrectly which could have led to some major health and safety concerns.

2.2. The roll out of the Smart Meter programme was very unpopular with energy companies as it threatened to reduce their income dramatically. A high number of consumers faced estimated billing with not unsubstantial sums sitting in energy company bank accounts earning the energy companies interest which were not paid back to the customer. Given the aim of the smart meter was to alert the consumer to the volume of electricity being used and to provide the consumer with the tools needed to reduce their consumption, this meant that it would be a scheme that the energy companies would need to pay for to reduce their income. Unite believes that, as such, these companies have done everything in their power to sabotage the roll out and they were prepared to be fined for not hitting targets. These fines are currently lower than the amount of income they would continue to enjoy if they could discredit smart meters in the eye of the public. Unite believes that up to that point in 2012, the public would have welcomed a way to reduce bills.

2.3. Unite called on the then Tory government to roll these meters out on a street-by-street basis to avoid the engineers spending a large proportion of their day on the road, only to turn up at a customer who was out. Once the engineer reached the property, because

many relied on either a radio signal or a 2G/3G mobile phone signal, (which was not universally available), many engineers would spend over an hour, replacing both gas and electric meters only to spend the next hour discovering that they could not get a signal. If so the engineer would then have no choice but to remove the new meters and put the old ones back, which ate into the time they had with the last call of the day.

2.4. Because meters in some properties were the originals, the gas meters, in particular, were frequently backed with a sheet of asbestos, that had to be professionally removed. At some locations, (generally factories) engineers would discover substandard mains wiring which required resolving by the property owner before the meter could be put in. Each of the six providers had their own solutions to these issues including some who trained their engineers to remove asbestos and dispose of it properly. All these technical issues meant that engineers could rarely predict when they could see customers, often leading to appointments being missed repeatedly, made worse by the energy companies who would schedule in more customers than an engineer could possibly achieve in a day and schedules for the week. Given engineers would also have other tasks to do, such as dealing with electricity theft and the use of rented properties to grow crops of Cannabis, at the beck and call of police, it gave the engineering teams a reputation for not turning up to appointments.

2.5. From the customer perspective, as they wished to be on the lowest tariff, they wanted to shop around but historically, as soon as they switched, their meters would stop working in smart mode. Customers would then discover that given the lowest price was offered by a small provider, the supplier did not support smart meters. This then meant that the consumer needed to swap and find they again needed to wait in for yet another meter to be swapped out. From a design perspective they served the needs of the supplier so are not customer friendly. The new meters contained so much information that many customers found it difficult to submit meter readings. Designers had decided not to transmit the meter readings to the portable desktop gauges. As a result, the number of false reporting rocketed causing incorrect billing. Should the customer slip up in paying their bill on time, perhaps due to a billing error, the energy company could move them onto prepayment, remotely causing self-disconnection power cuts and a move onto a far more expensive tariff. Understandably as this led to more than one freezer full of food going to waste. Each of the above cases in turn led to customers rejecting the idea of switching to a smart meter. Much of that bad publicity remains to this day.

2.6. The government did not help by setting deadline, after deadline which were unachievable. Each time the deadline was looming the energy company would take the news that they would not have any hope of achieving the target and the news that the roll out would be over, as a good excuse to dilute their smart metering teams by making thousands redundant. If not some energy companies have instructed teams to work on other programmes without providing the correct training or salary for the role. This has hampered the ongoing smart programme roll out. The fines were far less than the amount of income the energy company could realise from the capital raised from overcharging via estimated billing, and in turn this led to some energy providers deciding against dedicated smart metering engineering teams.

2.7. Today an engineer could be called out to a property where they wanted a heat pump installed or an EV charging port, than resolve an issue with a smart meter[1]. While these

[1] Heat Pumps and Electric Vehicle charging result in a substantial increase in the amount of electricity supplied to a property even if it reduces the volume or natural gas required. This increase in electrical power consumption is advantageous to the company bottom line. Smart meters only add to the burden on the energy supplier and can cause the amount consumed and billed to be reduced. It is therefore natural that energy providers are keen to see install one over the other.

projects are also an important part of the route to net zero, they considerably eat into the smart metering roll out capacity. Both EV ports and heat pumps require a lot more electricity to be consumed, so suppliers will prioritise them over smart meters.

2.8. Many smart meters today are destined to fail due to the switch off the radio signal and 2/ 3G phone network. With the birth of 5G via low earth orbit satellites, and with modern designs improving connections between meters access to a signal should not be an issue. Even if when the 5G network is replaced by 8G or 9G networks with insane connectivity speeds, modern meters should come equipped with a communication module that can be replaced and upgraded to swap out in minutes from any outside meter cabinet, meaning that this could happen without disturbing the customer.

2.9. Unite hopes that one day that all of the larger electronic devices in a home or business could be networked to automatically switch on, when the supply is plentiful and the tariff is low resulting in lower bills. Unite has called for meters that display their current tariff and usage in an easily understandable format or via a mobile phone app to end the task of diving down the back of cupboards to take and submit readings. Energy companies have not gone out of their way to even flag that mobile phone apps are available leaving the less technology savvy customer with an in-home display (IHD) that ends up unplugged at the back of a draw.

2.10. Government statistics shows that after 13 years around 69% of properties now have a smart or advanced meter but for many these have reverted to traditional mode. Unite believes that for the 2030 target to be achievable there needs to be a far greater increase in engineering teams and a rolling programme to move from house to house, street by street, commercial or industrial property by commercial or industrial property, to install the remaining meters and ensure existing meters work correctly. Fines to energy companies need to be at a scale where they are felt and cannot be passed on to consumers as increased bills. Unite believes that the timescale is not sufficient to complete the work in time with the workforce currently employed, so believes that direct parliamentary oversight with regular updates would be critical to apply enough pressure and bring to the public's attention the amount of money that energy companies make from overpaid bills.

3. Consultation Questions

Section 1: Ensuring consumers benefit from operating smart meters

Q1) What evidence can you provide on both the cost savings and energy consumption savings to consumers of non-IHD feedback tools in comparison to IHDs? Are these realised for all groups of consumers?

3.1. Unite cannot provide those details because as stated, most in home displays are unplugged in the back of a draw after they stopped working, with many reported but unresolved for weeks on end.

3.2. There are three main types of domestic Peak and Off-Peak Rate tariffs: -

- Higher Unit Cost, when the grid is highly reliant on expensive imported energy (most of the time currently),
- Higher Demand, when the majority of domestic consumers cook their evening meal, make a cup of tea after their favourite show on TV or notable event
- Higher Grid Strain, when power is at peak demand, from industry and the power is being moved around the network to meet the demand

And three Off-Peak Rate tariffs

- Lower unit cost, when the majority of the power is coming from nuclear and renewables.
- Lower Demand, such as in the middle of the night when most of the population is sleeping
- Grid Smoothing, where there is potentially more generation capacity than is needed or to encourage customers to use electricity at times to help the grid so that there is not a big surge in demand later. In some instances, some suppliers use this as a customer loyalty and retention scheme offering free electricity for an hour[2].

3.3. Despite the six tariff options, energy retailers like e.On offer just three tariffs, Peak, Off-Peak and Super Off-Peak. Unite argues, therefore, that if the customer was alerted to the possibility of free energy with enough notice, and if these occurred frequently that the customer with a IHD could save considerable sums, (especially if the batch cooked and conducted their weekly wash at this time). The problem is that IHD provide zero warning, and it would only be those customers expecting the tariff to drop that will benefit.

3.4. While energy providers have limits set by Ofgem these apply to the standard variable tariff (SVT), but energy providers encourage customers to go on fixed tariffs which are very similar to the old, estimated bills. The energy provider would take a fixed amount out each and every month so that “it is easier to budget” for the consumer, building up a surplus in the summer months and eating into this reservoir in the winter months. Given the provider is receiving interest on the money in their account they can offer these tariffs at a rate that are often a couple of pounds more than a variable rate tariff but means that the customer is lead to the belief that they need not worry about changing their behaviour to save money.

Q2) Thinking about the current role of IHDs and how this could evolve; is there evidence of the role that additional functionality may play in supporting a more flexible and dynamic Clean Power system?

3.5. Unite believes that IHD and more importantly mobile apps should work more readily with smart home networked devices and smart home networks such as Google Home and Alexa[3],[4] to alert or even automate devices like water heating systems etc. when there is a lower tariff in operation.

3.6. To make this a reality, however, each high energy use device in the home or company would need to be capable of being remotely operated by a smart device and potentially other forms of artificial intelligence (AI) which normally comes at a premium price to the consumer.

3.7. Unite would stress, that the first task is to get customers to retrieve the IHD from the back of the draw and get them to work is the first battle to be won.

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[2] See Octopus energy for example

[3] In March 2019 Octopus Energy announced that it had partnered with the Alexa system to display the energy use on their Agile time of use Tariff to manage energy usage and access real-time price information. OVO Energy have followed suit to develop an Alexa skill called "Power Nap" to provide users with real-time National Grid data, advising them on the best times to use appliances.

[4] The only issue with smart homes of course is that everything is consuming power 24/7, using power to maintain a signal. An Amazon Echo Dot (3rd Generation) consumes 2.04 W when in Network Standby with microphones off but 1.40 W is in the default Network Standby with Microphones on, a mode which it enters after 6 seconds of inactivity, a Google Nest Hub according to the Goggle nest community consumes around 5.75W or so and something like a smart dimmable bulb will each consume around a 1 W each when in standby simply to maintain its network connection. In addition, of course the network requires a home wifi system to operate. As one old style bulb (when in use) required between 40W and 100W, it could be said that an entire Smart Home set up, could require less energy per day, consumed, than one old style filament bulb burning constantly.

3.8. With more customers installing EV charging and battery storage for their solar panels, IHD's and mobile applications should already alert customers to trigger off-peak charging so that consumers, top up their in-home supply so they are protected from higher tariffs entirely.

3.9. The problem with the IHD is that you need to be looking at the display. Perhaps an audible notification or visual alert system option could make the drop or increase in tariff charges more noticeable.

Q3) ***What evidence can you provide on additional, broader benefits to consumers of non-IHD feedback tools in comparison to IHDs? Please make reference to specific functionality and features of non-IHD feedback tools in your response, where appropriate.***

3.10. Unite would stress that the difference between IHD's and non-IHD feedback tools is that an IHD will only ever provide the power consumption currently and a degree of historical data on usage from within the home. Non-IHD applications on mobile phones and potentially via Smart Home systems, could receive notifications automatically alerting consumers that from a set time the tariff will be cheaper or free to use items like their washing machine or batch cook food for later consumption over time.

3.11. Some energy providers already provide smart devices like heat pumps and EV chargers to automate the tasks of turning on devices when it is at a lower tariff.

3.12. What is not provided is the reverse, however, to inform customers to try and avoid using their high wattage devices if there is a shortage and the tariff is going to be high. The Metrological Office already sends alerts to customers to warn of amber and red weather warnings via their Smart Home devices, so why not the National grid in order to more easily balance the grid.

Q4) What evidence can you provide on the specific needs of vulnerable and low-income consumers in relation to feedback tools, including IHDs?

3.13. Unite is not an energy provider and hence does not have details of who is using and who is not using IHD's to budget their financial needs, and who is not. However, from members on low incomes the priorities are unsurprisingly food, heat, clothing and washing/cleaning so the main sources of power consumption are, microwaves, ovens, hobs, home heating and the use of washing machines and for the more affluent, tumble driers/ electric airers. Sadly, however, in a significant number of situations the choice has had to be made between heating the home or providing a warm meal for their family. It is generally these individuals who are forced into the use of prepayment meters and their tariffs. Therefore, the use of devices like smart home systems could be considered luxuries unless the property has its own solar power generation capabilities.

Q5) Do you agree that we should introduce an obligation on energy suppliers to take all reasonable steps to recover smart meters operating in traditional mode, in both domestic and non-domestic sectors, as soon as possible and no later than 90 days, building on the existing obligation on suppliers requiring they maintain all smart meters in smart mode? We welcome views from all stakeholders. Please provide rationale and evidence to support your answer.

3.14. Unite agrees and would suggest that a maximum percentage of traditional mode households and businesses should be established and this percentage reduced annually. Unite would, however, highlight that the energy companies do not have the trained engineers to currently achieve this goal given they have either been tasked with additional

obligations, such as EV port installation or Heat Pump installation, or they have been made redundant.

3.15. The provision of a smart meter costs the energy company money to maintain in an operable state, but its presence reduces the amount of money the energy company can extract from the consumer. The stated purpose of smart meters was to eradicate the practice of providing estimated bills while the energy provider sat on additional customer capital in their accounts, upon which the customer received no interest. The second purpose was to provide the customer with information that helped them reduce consumption and hence their bills. Both activities act against the company interest to make a profit for their shareholders. It is Unites belief that this is why over the past 13 years this programme has faced so many issues. The only beneficial element for energy companies is that they can now easily swap the meters in properties where there is an issue with collection from Direct Debit payment to prepayment mode, remotely. Often this happens without the customer realising. That is until their energy is disconnected, or they return home to a freezer full of defrosted food.

3.16. In Unites view the roll out of smart meters for both electricity and gas should be rectified and new meters installed on a street-by-street basis, ideally with a single design meter that provides the meter readings needed to update the provider on a IHD or monitoring device. At the moment a lot of the engineers' time is spent driving between jobs and waiting on customers to be at their address.

3.17. In addition to the engineer's workload of replacing traditional meters there were according to the published statistics[5] an estimated 7 million meters using the 2G/3G mobile phone network to communicate. Just replacing the 2G/3G signal would take **2 years 5.5 months** of remedial work at the rate established in Q2 2025 of 712,000 installs in a quarter. While the 2G/3G signal is due to be finally turned off in 2033, several regions have already lost that signal as the switch off happens by region. If a large conurbation loses its 2G/3G signal there may be zero hope of reestablishing the connection for all their meters within the 90-day deadline, so Unite would hope that such reasons for the loss are not included within the target. Unite believes that soon after the mid 2030's the 4G signal will be retired to make way for ever faster mobile connectivity. If so some 4G meters will require their communication module replacing with one that can operate on a 6G signal etc. Unite is saddened to understand that meters installed as recently as 2020 will need to be replaced and scrapped when their only fault is the choice of communication method deployed. Unite would have hoped that a short range 3G converter from 4G or 5G could be developed. If so then the roll out of replacements could be achieved at a more rapid pace.

Q6) Do you agree that we should amend the Operational Licence Condition to require suppliers pre-emptively replace communication hubs (and any associated smart metering equipment) by prescribed dates, supported by a new obligation on DCC under their Licence to issue a statement of dates setting out when DCC will no longer be able to provide specific communication services, so it is clear by when suppliers need to have completed replacements in order to avoid any impact on consumers? We welcome views from all stakeholders. Please provide rationale and evidence to support your answer.

3.18. Unite agrees and would highlight that by moving from street to street any black spots can more easily be mapped and addressed. Communication channels should not be based on a technology that will eventually disappear over time, like the 2G and 3G mobile phone

[5] Taken from National Audit Committee official statistics as reported in New Scientist

networks that were used in the past. Unite suggests either the use of low earth orbit satellites or some of the underutilised, existing, copper wire telephone cables.

Q7) Do you agree with proposals to clarify that the existing smart metering Operational Licence Condition (SLC 49 electricity and SLC 33 gas) applies to all SMETS meters in designated premises moving forward? We welcome views from all stakeholders. Please provide rationale and evidence to support your answer.

3.19. Unite believes that in an ideal world that there was just one basic design of smart meter going forward that had the capabilities as set out above. Unite would note however that if the government presses ahead with the use of the existing natural gas network to deliver an ever-increasing quantity of hydrogen, then all existing meters will need to be replaced as they will contain components that will allow the gas to leak. Additionally, hydrogen has a lower volumetric energy density than natural gas, requiring higher flow rates to deliver the same amount of energy. Indeed, to deliver the same volume of energy within a boiler the hydrogen will either need to be pumped up to a delivery pressure, four times that currently used or all pipes will need to be twice their current diameter.

3.20. Furthermore, the smaller molecular size of hydrogen and its different chemical properties mean existing meters may not accurately measure it, and materials within the meter could be susceptible to degradation over time due to hydrogen's reactivity making the metal surfaces in particular brittle due to the formation of metal hydrides. Clearly the combination of a higher delivery pressure and far more brittle pipes is far from ideal, as this could cause leaks to appear without warning. As hydrogen has the largest range of any gas / oxygen mix where the gas will burn[6], or explode[7] if it is allowed to pool, this creates a major potential hazard in homes and industry.

Q8) Do you have views on any nuances specific to the non-domestic sector which interact with the proposals to introduce an obligation on energy suppliers to take all reasonable steps to recover smart meters operating in traditional mode within 90 days and to amend the Operational Licence Condition, supported by a new obligation on DCC under their Licence to issue dates, so it is clear by when suppliers need to pre-emptively replace smart metering systems before relevant communication services terminate? We welcome views from all stakeholders. Please provide rationale and evidence to support your answer

3.21. Unite does believes that the 90-day time limit could be achieved when dealing with non-domestic customers, but the achievement of the target, or not, would heavily depend on how many non-domestic customers that the supplier has on their books and how many engineers they have access too. In Q2 2025 there were 23,000 non-domestic meters operating in traditional mode but the average number of installs per quarter in the preceding 12 months worked out as an average of just 22,361 new smart meters. In the 12 months till the end of Q4 2024 however the average number of installs of smart meters

[6] Natural gas will burn if the mix of oxygen to gas is between a 5% to 15% mix. Beyond this range there is either to little oxygen or too little gas to sustain a flame. Hydrogen by contrast will burn if the mix is anywhere between a 4% to 94% mix with oxygen which in air limits the range to 4% to 75% by volume.

[7] The speed of a natural gas flame front is between 0.35 to 0.37 m/s while the speed of a hydrogen flame front can be as much as 2.0 m/s. While the magnitude of any explosion always depends on the amount of confinement a hydrogen explosion has considerably greater potential for a far larger and more powerful explosion see https://www.sciencedirect.com/topics/engineering/hydrogen-explosion this highlights that accidental hydrogen explosions thus often lead to severe consequences. For instance, an accidental hydrogen explosion damaged 60 houses in Catawba County in 2020, during which the associated ground shock was felt at nearly 10 miles away!!

in non-domestic settings went up to 26,478[8]. This was down from an average of 31,295 new installs per quarter in a non-domestic setting. Therefore, if resources were removed from the task of installing meters into non-domestic settings, and the same team of engineers were not called upon to resolve any domestic setting installs or rectification work then achieving the 90-day target looks theoretically possible if every engineer could be called upon by any supplier to resolve the issue.

3.22. Sadly the smart engineers do not all work for the same company and will have to also resolve the issues of domestic consumers and be part of the domestic customer roll out programme. In these circumstances only after the back catalogue of non-domestic customer issues are resolved, could a supplier even hope to reach that 90-day target goal with the current compliment of engineers. Therefore, either far more smart engineers would be required or the deadline for the installation of smart meters would need to be extended.

Section 2: 2030 domestic rollout obligation

Q9) Do you agree with the proposed all reasonable steps obligation for energy suppliers to complete the domestic rollout by 2030 set out in Section 2. We welcome views from all stakeholders. Please provide rationale and evidence to support your answer.

3.23. Unite believes that it has taken this long to reach a 63% coverage of smart meters operating in smart mode[9] and these were rolled out to customers who a/ wanted a smart meter and b/ resided in a location where the connection back to base enjoyed a strong signal strength to allow installation. Therefore, the remaining 37% are going to be harder to install and undoubtedly be more problematic. It is therefore very unlikely that with the current compliment of Smart Meter Engineers, that this target will be achieved, especially when the engineers have so many other additional tasks to perform.

3.24. According to the Q2 225 statistics there were 711,785 installations[10] that quarter. If this information is correct, it may take 4 years 10 months, 6 days to convert the remaining electrical meters and 7 years 4 months and 6 days to convert the remaining domestic gas meters, if every installation went perfectly. In addition to remaining traditional meters, there are 1.3 million electricity meters and 2 million gas meters that are operating in traditional mode. Which could mean it would take 5 years, 7 months and 7 days for the remaining electricity meters and 9 years, 1 month and 20 days to replace the gas meters.

3.25. Unite would stress that the implementation of a deadline and the education of enough engineers to perform the installations in time will have to be supported with a team following up on installations and correcting any potential errors. British Gas may have believed that the training of a gas and electricity meter technician can be achieved within three months. Initially the task of installing a meter, benefits from the full attention of adequate 1 to 1 mentor but if that mentor also has a full programme of work to perform as happened in a number of cases, then this mentoring is impossible. Another company booked even their installers to introduce five or six new meters into properties, within a

[8] See table 4,

[9] See the latest statistics – till end June 2025 According to the official statistics published in August 2025 there are currently 8.4 million Electricity and 8.2 million gas meters left to convert. In quarter 2 of 2025 there were 711,785 installed meters (432,981 electricity and 278,804 gas).

[10] See Figure 4

day[11], where no smart meter has previously been installed, knowing that this goal would be extremely stressful especially and potentially impossible to achieve. These issues set up the smart meter engineering programme up to fail from the outset.

3.26. Today the typical smart meter engineer is now in his (the vast majority are male) mid to late 50's or early 60's and so a high number will be looking to retire before 2030. If it is in the power of Ofgem to demand, Unite strongly suggests that before any new engineer is allowed to work on a smart meter that they shadow a retiring engineer to pick up his tricks of the trade.

3.27. It should also be noted, that if the government approved the use of hydrogen for home heating, every existing gas meter would need to be replaced again, with one that will work with the various blends of hydrogen and natural gas up to 100% hydrogen. Because of this all the good work installing smart meters over the past 13 years would have been a waste of time. If the government propose that all homes need to be on a heat pump the same will be true although it will be a situation where the gas supply will be phased out.

3.28. Post the deadline, rather than utilising the engineers as teams after providing them with the full apprenticeship to help with the roll out of heat pumps and EV points, many energy suppliers will simply make these skilled workers redundant. This has happened several times in the past as deadline after deadline past. Unite believes therefore that provision would need to be put in place to set a series of follow on targets that requires so many heating engineers and electricians trained so they may resolve issues like out-of-date wiring, asbestos removal, communication engineers etc. so that the support network is there to convert all homes to a zero carbon heating and cooking as soon as is practicable, ideally prior to 2050.

3.29. In order to hit the target using the current number of engineers the 2030 target would not be possible as it would require at least a doubling of the workforce, assuming current practices of engineers calling on request are maintained. If a street-by-street deployment were adopted to mop up issues and replace meters and engineers only focus on the electrical meters, then the replacement of all the electrical meters might be possible by the deadline (as it would eliminate the huge amount of time on the road and resolving conductivity issues between meters). But, if there are issues gaining access or problems with reluctant homeowners or connecting the smart meters to the internet, however, then the target becomes impossible without more qualified staff and an increase in the volume of available supplies.

3.30. Due to the lack of gas meter engineers, on the other hand, the target date can only happen if there is a major recruitment of more than double the current contingent of gas safe engineers to install the remaining meters. The government is asking for over 9 years work to be achieved in a little over four years and that would be a miracle. And for what? Before 2050 all homes and businesses are meant to be carbon neutral and this would preclude the use of a combustion boiler, given any open flame produces Nitrogen dioxide (N_2O)[12] – a very potent greenhouse gas, even if the amount per boiler is miniscule.

[11] If the engineer does not have the driving to do between properties it may be possible to install five meters in a day, if on the other hand the schedulers have booked the engineer to travel large distances at seemingly at random, to meet the diary of the customer, then this number may drop to no more than two or possibly three in more rural locations.

[12] Nitrogen dioxide (N_2O) is a highly potent greenhouse gas, with a Global Warming Potential (GWP) that is about 265 to 300 times greater than that of carbon dioxide (CO_2) over a 100-year period according to the United Nations Framework Committee on Climate Change. Link to the BBC regarding "The World's Forgotten Greenhouse Gas"

Q10) What are your views on the benefits and risks of the approaches, outlined under 'Alternative approaches considered'? Please provide evidence and rationale to support your answer.

3.31. Unite feels that a more hands off approach where no new legislation is introduced is fundamentally flawed. In order to comply with the Ofgem directive of an installation appointment within 6 weeks, suppliers only need to provide an end of day appointment knowing that if an issue arose with an installation earlier in the day that there would be a reasonable excuse for the engineer's non-attendance. The assessment is correct that inequality risks are more likely to occur especially where low-income homes fear the possibility of having high unit cost tariff, pre-payment meters installed or meters that can be converted to pre-payment meters at the flick of a switch. These families are hardly likely to request a smart meter unless significant energy bill savings could be demonstrated to them to overcome this fear.

3.32. Unite believes that the availability of non-smart meter tariffs should be reduced over time increasing the desire for a smart meter. Unite remains concerned however, over the number of available skilled personnel.

3.33. With respect to the idea of fixed percentage targets would result in the slowing of smart meter instalments as the number of traditional meters reduces but equally this would also require a high number of installations in properties initially. The problem is that there may not be enough trained engineers to complete the targeted number of installs in time.

3.34. Unite would suggest that a rolling programme is deployed to move from street to street to install smart meters in all remaining properties in a set geographical area. In that way engineers could maximise their time on installations rather than driving. By dividing the map by a set area, strategic decisions can also be made depending on how remote the location is and therefore how difficult it is to establish a connection between the meters and then to the supplier servers. Unite members inform us that it is more often the distant location customers meters that can take the longest to resolve.

3.35. Unite would strongly recommend that if this approach is adopted the nation should be subdivided into areas that will be 100% smart by a set date. This would provide the consumer with the knowledge that they will have no access to a traditional meter tariff in that area by a set date. This may require all energy providers to join forces, however, especially given a customer's ability to swap providers. If energy providers provided a consistent high traditional meter tariff and acted in a concerted effort to have 100% smart coverage in an area, then the smart roll out will at least be achieved in highly populated areas where the bulk of the populous reside

3.36. The problem the roll out has faced is one of successive volumes of bad publicity. Stories of cross polarities and electrocutions, of gas leaks and the need for meters being swapped repeatedly due to the desire of customers to obtain the cheapest tariff. While most of these issues are things of the past some consumer will need something before they allow engineers across the threshold. If the customer has not been swapped the threat should be framed along the lines, that they are placed on the tariff with the highest overall cost as it has to be assumed they are using excessive amounts and using a meter that has become far less accurate over time due to the lack of maintenance and calibration. By installing a smart meter therefore these issues will be resolved, and the customer will be able to access a more accurate bill, which should save them money. At the same time by installing a meter they will be doing their part in helping the grid deliver the right amount of energy from the right sources over time to reduce its carbon footprint.

Q11) Do you agree with the proposal to extend the Data Request powers to five years after 31 December 2030? Please provide rationale and evidence to support your answer.

3.37. Unite feels that the data is required in order to ensure that the smart meters are properly monitored and meters that start to operate in traditional mode are repaired swiftly. Failure to request this information will only give the energy companies the excuse not to invest in maintenance and to allow meters to fall back into traditional mode. Once in traditional mode unscrupulous suppliers could revert back to practice of estimated billing once again.

3.38. At the end of 2024 there were an estimated 14 million SMETS 1 meters and approximately 7 million 2G or 3G meters which would generate around 7 years 4.5 months' work at current rates[13] the entire army of Smart engineers did nothing by rectify these meters. Therefore, as remedial work to resolve these issues will not complete until well after 2030, Unite would recommend these reports continue beyond 2033, possibly into the 2040's. Unite is particularly concerned that there will be enough time and trained personnel to resolve the 2G/3G meter problem given the final 3G signal tower will be disconnected in 2033.

Section 3: Monitoring progress and ensuring accountability

Q12) Do you agree that we should require energy suppliers to provide Ofgem with annual deployment plans and report progress against those deployment plans, with annual milestones setting out what activities they will undertake each year for the domestic sector, to meet their smart meter installation, pre-emptive replacement, and operational obligations? If you disagree, please suggest alternative approaches that would enable monitoring and achieve accountability to ensure energy suppliers take sufficient action each year to meet the obligations set out in Sections 1 and 2 of the consultation. We welcome views from all stakeholders. Please provide rationale and evidence to support your answer.

3.39. Unite agrees that having interim target to achieve allows the regulator to more effectively tackle any delays in implementing the goal of 100% smart meters installed in domestic properties before 2030 and enable early encouragement and enforcement.

Q13) Do you agree that (a) the annual milestones for new installations and pre-emptive replacements should be binding and without tolerances, and (b) the annual milestone for smart meters operating in traditional mode should be nonbinding? We welcome views from all stakeholders. Please provide rationale and evidence to support your answer.

3.40. Unite believes that the annual milestones for new installations and pre-emptive replacements, should be binding in all cases, but that there should be tolerance, only if it can be shown, that the issues faced by the engineers are impossible to achieve in the allotted timescale. While the obvious solution to delays may be more qualified staff and equipment, these cannot be simply plucked from thin air. Engineers need to be trained to an appropriate level of competency in every role they perform and, in some cases, if starting from scratch this means a three-year apprenticeship not the 13-week apprenticeships that were used by some providers[14] that simply exposed the workers to a task for which they were not ready to perform.

[13] According to the Q2 2025 Smart Metering statistics 712,000 meters were installed in the quarter.

[14] British Gas had a 3-month training program to turn someone who read meters into an engineer who fitted them, with the support of a mentor IF one was available and then wondered why there were so many cross-polarity issues and gas leaks in the new engineer's initial weeks on the job.

3.41. Additionally, if issues arise like the discovery of poor or substandard wiring or asbestos then the installations may need to be postponed until the matter is resolved. Reliance on an outside contractor to attend and remove the asbestos (typically behind old gas meters) could delay the installation of the smart gas meter by weeks. At one company, however, they issued courses in asbestos removal and provided all the health and safety equipment to all engineers. At another company the trailing wires from the meter were connected to a connection box which then allowed the electrician that rewired the property, to connect their mains supply wires to the meter without the need for the smart engineer to attend and reconnect. These are just two solutions to issues that have arisen, developed at some companies but not applied at others. Unite believes that there should be a clear list of competencies that need to be reached by energy company engineers which deploy the safest and most time efficient elements to all. In this way excuses over things like the discovery of asbestos and poor/dangerous wiring delays can be overcome.

Q14) Do you agree that energy suppliers should (a) be required to submit updated deployment plans annually, and (b) be able to request re-submission to Ofgem in year, in response to exceptional events that have a significant and negative impact on their ability to meet their annual milestones? We welcome views from all stakeholders. Please provide rationale and evidence to support your answer.

3.42. Unite would strongly suggest that if Ofgem is to set targets that these targets be reasonable after discussion with the trade unions and energy suppliers. Unite would stress that the last thing that the Government or Ofgem would want is a team of highly fatigued engineers working long hours to install and resolve the issues with the installation of the remaining domestic properties. Fatigue leads to mistakes and mistakes creates both danger to the public, the property and time to diagnose and rectify the issue. This is definitely a case of more haste less speed.

3.43. As highlighted to achieve the goal of 100% operational domestic smart meter coverage by 2030, Unite strongly believes there would need to be a major recruitment programme that either enticed back qualified engineers who had left or train new engineers from scratch. Clearly it is highly unlikely that a person coming from outside the industry would have the required qualifications and even if they had the skills, they would not be familiar with the task and equipment to be installed. Therefore, allowances would need to be made for recruitment and training of new engineers at least during the first three years.

3.44. After that point issues like industrial unrest because of the actions of the energy company, should not be seen as issues beyond their power to resolve, before it impacts on the achievement of the targets. Unite believes that the only exceptional events to be allowed after this initial recruitment and training period should be issues like another pandemic which places medical barriers and exclusion issues.

Q15) Do you agree that the date from which the annual milestones for new installations and pre-emptive replacements should be binding is 1 January 2027? If you disagree, please provide an alternative earliest date, including rationale for how this would be achieved?

3.45. Unite agrees that the date should be binding save for currently unforeseen issues, such as a second pandemic or similar act of God. Unite believes that the 1st January 2027 is not that far away and the work that needs to be completed is considerable. Unite feels that a supplier would not be able to tell if they can or cannot recruit the engineers in time to meet the 2030 deadline. It is important to note, however, that the rollout would always have to be contingent on a safe work environment, where engineers are not pressured to achieve targets and then rush and forget to do something important. Therefore, there

would need to be enough bodies to perform the task. In the time allotted Unite believes, every provider should have the evidence and will have a reasonable chance of recruiting enough people. The only question is one of workforce availability and time to train and qualify.

Q16) Do you agree with the following measures to ensure deployment plans are of high quality and provide confidence that suppliers will meet their obligations:

a) Ofgem should be given the option to reject the plan and the option to provide guidance to suppliers on when it might reject the plan? We welcome views from all stakeholders. Please provide rationale and evidence to support your answer.

3.46. Unite agrees that plans should always be subject to oversight and approval. Unite would argue that Ofgem needs more resources and teeth to ensure there is large enough of an incentive to complete the work in time. Previous plans suffered from a lack of oversight and repercussions for missing targets.

b) That suppliers should be required to provide evidence to support justification of the annual milestones, including justification for any numerical difference between the milestones provided for new installations and pre-emptive replacements, and a straight-line path to the relevant end-date, and supporting information on workforce and consumer engagement? Are there additional quantitative or qualitative information requirements that should be included in the deployment plan to support the assessment and justification of milestones? We welcome views from all stakeholders. Please provide rationale and evidence to support your answer.

3.47. Unite agrees that suppliers should provide this information. Unite would also suggest that details of the levels of mentoring for apprentices should be provided including information on the additional workload required and achieved by the mentor and apprentice on average over a set period to be determined. In that way Ofgem will be able to ensure that the mentor is overseeing the work of the apprentice rather than simply giving the work a quick look before it is approved or carrying out a box ticking exercise. Unite would also suggest that details of common and not so common errors[15] be logged and provided to Ofgem inspectors.

c) Do you agree that each supplier's deployment plan should be (a) approved by the supplier's Board and (b) milestones and progress against those milestones published on the supplier's website? We welcome views from all stakeholders. Please provide rationale and evidence to support your answer.

3.48. Unite agrees that such deployment plans should always be subject to approval but Unite would not suggest that the company board should be the party approving the plans given how rarely boards convene meetings. Unite would suggest that approval needs to rest with the company CEO, or an individual approved by Ofgem as being of such a senior level within the organization to determine the fate of the company and any financial penalties which could be imposed for non-compliance with the ultimate aims, to convert all private residences to smart meters on or before the 31st December 2030.

[15] Issues like the number of subsequently discovered leaks and dangerous issues like cross polarity connectivity rewiring of meters. This should provide details as to the quality of the training and ongoing refresher courses provided to returning engineers who may have spent an excessive amount of time away from the tools for the job.

3.49. Unite agrees that it may be advantageous to publish the progress to date in order to name and shame those suppliers who are deliberately dragging their heels. If as Unite would suggest areas are cleared of any remaining traditional meters on a street-by-street basis, a map of the regions where the outstanding properties lie should be available. In that way regions where more help is needed could be more closely identified and resources redeployed to provide assistance. So, for example, if there are a plethora of properties with traditional meters in a major city like Manchester, that need replacing but all but a handful of properties in the Leeds area converted, then engineers could be asked to work remotely to reduce commuting time to Manchester to reduce the backlog[16].

3.50. Similarly, if one supplier is ahead of the curve and if their smart meters and processes are almost identical, then one supplier's team could be temporarily transferred to assist in an area where there are too many customers for that supplier to service in the time. Of course, in such a situation the arrangement would need to be mutually beneficial where the supplier receiving help pays for all the costs associated with the installation plus a fee to the supplier providing the services of their engineering teams and the guarantee that the work will be up to the highest standards. Unite believes that without this cross-supplier collaboration, the goals will be unachievable, with the workforce that is currently available.

d) If you disagree, with Q16. a), b) or c), are there alternative or additional design approaches that would reduce the risk of activities concentrated towards the end-dates within the plan and/or to subsequent revisions to that plan? We welcome views from all stakeholders. Please provide rationale and evidence to support your answer.

3.51. As stated above Unite agrees with the above points in question 16 a), b) and c).

Q17) Do you agree that all energy suppliers, except those that supply gas or electricity, or both, to domestic sector customers via, in each case, fewer than 20,000 energy meter points, should be required to submit deployment plans? We welcome views from all stakeholders. Please provide rationale and evidence to support your answer.

3.52. Unite believes that the requirement to provide deployment plans should eventually ensure there are no outstanding traditional meters in operation. If there is a lower limit it means that there will be at least 20,000 times the number of suppliers left outstanding by 2030.

3.53. If there has to be a limit to help small suppliers Unite believes that the limit should be based on a percentage of the outstanding number of non-smart meters in operation. According to the official statistics published in August 2025 there are currently 8.4 million Electricity and 8.2 million gas meters left to convert. The 20,000 number is 0.0012% of the outstanding number of meters so should impact all providers but if it doesn't have a proportional target requirement would at least ensure that there are not properties left behind. Unite therefore suggests that a deployment plan limit (if one is to be set) should be at 0.00125% of the outstanding number of meters total.

i.e. 0.00125% x 16.6 million = 20,750.

But then if the engineers have clear 3.3 million outstanding installs in the next 12 months, then the limit would be 16,625.

[16] It should be noted that Unite does not know how many properties in Leeds or Manchester, have or have not been converted to Smart Meters. These city areas were only chosen as examples of large conurbations.

i.e. 0.00125% x 13.3 million = 16,625
0.00125% x 10.0 million = 12,500 etc.

3.54. Given engineers manage to install 712,000 meters in a Quarter in Q2 2025, setting a lower limit at 0.00125% will provide these smaller companies with time to put in place arrangements with engineers with, normally rival suppliers, to start their Smart meter roll out.

3.55. Unite does not believe that there should be a fixed lower numerical limit as over time the number of installations that need to be completed will reduce over time. Additionally, if there is a lower limit as high as 20,000 energy points, it is not beyond the realms of possibility that a chain of small suppliers applies for a series of licences to service the needs of number of energy points never goes higher than 19,999 energy points, simply to avoid the need to submit deployment plans.

3.56. If the smart meter obligation does not apply to all, then the roll out will never be completed and the smaller provider would be given a commercial advantage. If the limit is set at 0.00125% and if all other providers install 712,000 meters in the quarter, it would mean that the smaller company would only need to install 3 meters a month. That cannot be too much to ask.

Section 4: Legal drafting

Q18) Do you agree that the legal drafting (in Annex B) implements the policy intentions proposed in Section 1, Section 2 and Section 3 of this document? We welcome views from all stakeholders. Please provide rationale and evidence to support your answer.

3.57. Unite believes that the drafting[17] is flawed in the following regards:-

Domestic Premises Only - roll-out duty from 2025

39.2 The licensee must take all reasonable steps to ensure that a Relevant Smart Metering System is installed on or before the Domestic Roll-out Date at each Domestic Premises in respect of which it is the Relevant Electricity Supplier.

Exceptions

~~39.2~~39.2A The requirement in paragraph 39.1 is subject to the exceptions in paragraphs 39.3, 39.4, 39.5 and 39.6. The requirement in paragraph 39.2 is subject to the exception in paragraph 39.3.

3.58. Unite would strongly suggest amending the word reasonable so it now reads practicable. Being reasonable or not is determined in a court of law by the definition determined by reference to what the court believes the common man in the street may believe to be reasonable. This test is very subjective as what one may or may not believe is reasonable comes down to the judge's individual personality and interpretation of the facts. The test for what is and is not practicable is far more determinative. Either a situation is practical or not and there can be a clear line drawn, while the determination over reasonableness comes more down to what the individual believes is within the realms of reason or not.

[17] Available by clicking here.

3.59. If the provider seeks to ensure that they comply with the requirements but could not attract an engineer at the price they are willing to pay, to install 3 meters a month, they may argue that they took all reasonable steps to employ the engineer but for that low number employing an engineer was not reasonable, and so avoid doing anything to clear the number of meters. However, if the supplier took the practical step and spoke to their larger rival, then for a fee, the rival may be willing to install the smaller company meters for them. Equally, it may be financially practical for a number of small providers to work together and set up a small meter engineering company, with its own small team of dedicated qualified engineers.

Domestic Premises Only - roll-out duty from 2025

39.2 The licensee must take all **practicable** steps to ensure that a Relevant Smart Metering System is installed on or before the Domestic Roll-out Date at each Domestic Premises in respect of which it is the Relevant Electricity Supplier.

Exceptions

~~39.2~~39.2A The requirement in paragraph 39.1 is subject to the exceptions in paragraphs 39.3, 39.4, 39.5 and 39.6. The requirement in paragraph 39.2 is subject to the exception in paragraph 39.3.

…

39.10 (c) that Current Transformer Electricity Meter is an Advanced Meter ~~meets any requirements which apply to it by virtue of paragraph 12.24 or 12.26 of standard condition 12 (Matters relating to Electricity Meters).~~

3.60. Unite approves as the definition of Advanced Meter as set out elsewhere in the proposals.

3.61. Later, under definitions it states:-

Domestic Roll-out Date	means 31 December 2030, or such later date as may be specified in a direction issued by the Secretary of State

3.62. As highlighted above Unite believes that the 31 December 2030 is not possible in the time allotted unless there is a major change in working practices, policy and a major recruitment drive the likes of which may not have been seen for almost 90 years. IF so then it would pay to set a later date at the outset so that adequate budgets and planning could be determined. Unite feels that in a realistic scenario the electrical meters may be rolled out by the end of 2031, given the current rates of installations, but the gas meters may take considerably longer. Therefore, there needs to be at least a 25% increase in the number of resources available to install the electrical meters. Given that in the last 24 months only 1.5 million gas meters have been installed, it will currently take 7 years 4 months to clear the number of outstanding traditional and gas meters in traditional mode conversions. Therefore, similarly the amount of resources provided to gas meter conversions has to increase by at least 84% to reduce the time scale from 7 years 4 months, to a completion date at the end of 2030.

3.63. The above assumes, however, that the number of issues with each installation remains constant. In reality, Unite suspects that a considerable number of properties are going to be ones that have experienced issues in the past with signal acquisition or where the homeowner is very reluctant to allow entry. If so, then these hurdles will seriously reduce the number which could be completed each quarter.

3.64. If the targets are unrealistic the energy companies will simply ignore the changes to the legislation and pay the penalty as this would be considerably cheaper than putting in the effort only to fail and be punished anyway.

3.65. Unite agrees with the changes to Condition 39A: Qualifying Metering Systems – ~~Post-2020~~ Roll-out and Installation 2022-2025 as this is merely a change of name, and Condition 43.1 only adds the line *"and applies in respect of Domestic Premises and Non-Domestic Premises".*

3.66. Still later the following clause is inserted:-

43.6A An Information Request may in particular, where standard condition 44 applies to the licensee, require the licensee to provide:

(a) on an annual basis (and at such other times as may be specified in the Information Request) Information in respect of:

(i) its proposals, plans and projections for meeting its duties in relation to the provision, installation, operation, and maintenance of Smart Metering Systems and In-Home Displays at Domestic Premises; and

(ii) its progress against the proposals, plans and projections included in a previous deployment report,
(together the **deployment report**); and

(b) for such periods and at such frequency as may be specified in the Information Request, Information which sets out the licensee's progress against the proposals, plans and projections included in its latest deployment report

(the **deployment monitoring report**).

3.67. Unite would strongly suggest that given the very tight window to achieve the goal of all domestic customers with the smart meters, that a more frequent monitoring period be established to better determine the trajectory. The Smart Meter statistics are produced by the Government on a quarterly basis so why wait 12 months to determine if action needs to follow from poor returns. If left as drafted, where the reporting period is once every 12 months, this would restrict the number of reports to just three possibly four reports at most before the deadline. If the government is determined to achieve their goal in the timescale far more scrutiny is required.

3.68. Clause 43.7 redrafting is only to add the requirement to provide the deployment report and the deployment monitoring report. So is approved.

3.69. The Cessation clause at 43.11 provides for an end date to the requirement to provide the Domestic Roll-out date of smart meters by the date as defined in standard condition 39 as it appears at the bottom of page 14 of this response. While it is recognised that the programme will eventually be brought to a close, Unite would question, what then for the engineers.

3.70. Unite and other unions have been promoting the idea of a just transition of staff from a programme which is closing to one that will require very high levels of engineering numbers and engineers with hands on experience. Unite would therefore suggest that a licence condition be inserted along the line that prior to the Cessation of the programme, that engineers be offered the opportunity to study and obtain the qualifications needed to

become a heat pump, solar heating, solar power or battery storage engineer so they can transition into a new roll within the company, serving the public in a way that will be in very high demand. If the goal of the government is to achieve Net Zero Domestic heating and a more sustainable domestic grid, that these measures be incorporated into the licencing conditions rather than face the mass redundancies that have happened every time a licencing deadline has been exceeded.

3.71. Under Condition 44.1 Unite would replace 20,000 Energy Meter Points with **0.00125%** of the total number of traditional meters yet to be replaced as reported on a quarterly basis by the Department for Energy Security and Net Zero in their official smart meter quarterly updates. for the reasons specified earlier in this response.

3.72. In Clause 44.3 Unite would strongly support the idea of Quarterly rather than ***Annual Milestones*** and Quarterly rather than ***Annual Roll-out Milestones***, and equally Quarterly rather than ***Annual SMETS1 Milestones***, and Quarterly rather than ***Annual CH Milestones*** set out in its Deployment Plan; If these milestones are altered to quarterly then Clause 44.4 and subsequent clauses will also need to be altered.

3.73. In clause *44.3 (c)* the draft legislation states that these changes *"enables the Authority to obtain from the licensee information in respect of matters relating to the provision, installation, operation, maintenance and use of Smart Metering Systems and In-Home Displays and the licensee's achievement of the Annual Milestones*". With respect to in home displays, as the majority reside in draws or have lost connectivity, it would be very difficult to make much of a determination as to the value of these devices. Unite understands that the system does not report back that there is a problem with the connection to the smart meter so determining if these displays are or are not of value would be very hard to determine. Given the displays only provide an idea of the cost of energy at that point in time and cannot be used to provide the supplier with the meter readings needed, Unite would question the volume of effort employed to reconnect these devices. Unite believes that no pensioners or disabled people were consulted on the design of these displays. A better solution would be an app that would provide the information and meter readings to the customer so they may more easily report this information to the energy company.

3.74. Unite would note that there does not appear to be a penalty for non-compliance with these changes to the licencing rules as defined under licence *condition 39* (Smart Metering System – Roll-out, Installation and Maintenance) and *49* (Smart Metering Systems and In-Home Displays – Operational Requirements). Other than being in breach of the operators licencing conditions and being unable to operate as an energy supplier company. Unite believes that if an energy provider is deliberately in breach of their licence they should be punished using actions short of the loss of their licence removal as the nuclear option.

3.75. Unite believes that there are some less scrupulous employers who have consistently undermined this programme and the time has long since passed when excuses for them should be made. Unite believes that this punishment should be restricted to the board room and the loss of directorship capability by senior executives, rather than something that punishes the entire staff of a supplier.

3.76. Given the licencing conditions are under review, Unite would suggest that the licencing be strengthened in its licencing provisions by replacing reasonable with practicable in clause 49.4 so that it would now read

"49.4 In respect of each relevant premises, the licensee must take all ~~reasonable~~ practicable steps to ensure that:"

3.77. Unite would challenge the provision of *Clause 49.6* where it permits the use of equipment other than Alt HAN equipment which is of equivalent purpose and effect for the purposes of paragraph 49.4(c) which according to clause 49.6 (c) may not work if they change electrical supplier. Whilst it is understood that some properties present challenges, Unite is of the belief that the majority of situations can be resolved using Alt HAN equipment that will work with all suppliers, regardless of whether they change supplier or not. Consequently, Unite would question why supplier specific equipment is still being deployed.

3.78. As previously stressed Unite would urge a change to the In-Home Display requirements with respect to *clause 49.24* with the addition of a provision of a clause (c) to display the current meter readings needed by the energy supplier, thus alleviating the life of the customer from the chore of entering and reading from a device in a cupboard to their supplier. Unite recognises that this information may not be included in the software within the meters and would suggest that this software update be built and downloaded as part of a software update and replacement home displays dispatched, if and when the current display needs replacing.

3.79. Unite believes that it would be also useful if an app was developed to assist the customer by accessing the information sent to the In-Home Display to allow the app to alert the customer when a higher tariff will apply and when the customer might best put on devices like washing machines and dishwashers during the day. Unite is aware that some providers do inform customers of periods when, in the words of Octopus Energy, customers can "fill their boots" and enjoy a period when the electricity is supplied for free. There is no alert, however, to inform customers that they should avoid using high wattage equipment as the tariff will be higher than normal. If the use of home electrical devices is to be used by consumers, to help manage demand and balance the grid, such communication is going to be required.

3.80. Unites notes that within *clause 49.27* and *49.28* it sets the reconnection duration to 90 days from the time they become aware, through measure not limited to being informed by the customer or, through its internal monitoring and reporting processes and procedures, that a Smart Connection has either not been established; or (b) that had previously been established is no longer being maintained.

3.81. Whilst, the 90-day period can easily be established following a contact from a customer, the internal clock running from a date when the supplier notices would be highly subjective and would require the supplier to check this internal monitoring on a regular basis. Despite this 90-day deadline and desire to ensure connections there does not appear to be a clause that requires the supplier to check that a connection is not established or maintained on a weekly, monthly or even annual basis. Unite would note therefore that unless the customer raises this lack of connectivity, the 90-day period could in theory be postponed indefinitely.

3.82. Unite would suggest therefore that there is a requirement to check these internal systems on no longer than a monthly basis and that this provision should be written into clause 49.27. In this way no more than 121 days would pass from the signal dropping or not being established and it being repaired.

4. Conclusion

4.1. The roll-out of smart meters has been hampered by deadlines that were not deadlines and energy companies desires to place their interests ahead of the government desires to save and manage the deployment of new energy supply sources. Time and time again engineers were trained only to end up on the scrap heap or moved laterally so they have so many other tasks to perform that their targets are being missed.

4.2. Unite strongly believes that these deadlines are unachievable without a major recruitment and training drive only for the same engineers to face the prospect of redundancy in 2030. Given the typical electrical or gas apprentice is three years the short deadline is not even enough time for the smart engineer to take on an engineering or construction apprenticeship part time while working to clear the smart meter rollout that should have been resolved by 2019. This then was moved to 2020 then 2024 and up to this point the end of 2025 and yet we are currently only 2/3rds of the way there. This new deadline of the end of 2030 will face similar challenges, more so as the easy installations have been cleared leaving those where the customer may not want a smart meter.

4.3. Unite confidently predicts that the programme will be not that much further forward by 2030 given the suppliers lack of interest in investing the resources needed to comply. There have been too many empty threats, too many technical issues and too much bad publicity with the roll out. Due to the number of SMETS 1 and 2G/ 3G meters that need replacing, it may be the case that the percentage of homes connected on a smart basis could decrease before any increase in roll out penetration.

4.4. This consultation goals are laudable but there is a clear need for some teeth that will unlock the resources and funding needed to complete the roll-out. As things stand, reducing energy consumption and providing customers with greater levels of information will impact each suppliers bottom line profitability and so the roll out of smart meters continues to be something energy companies privately do not want to see succeed. If the government truly wants the roll out of smart meters to happen, then real and powerful consequences for non-compliance with targets are needed.

4.5. Unite is concerned about what is to happen to all these engineers after the deadline has passed. History has simply seen mass redundancies after the deadline and many of the much-required skilled staff lost to alternative employment, even though the task was not complete. If there is at least some pressure to resolve issues in a timely manner, then there will be at least some smart engineering teams retained. Unite hopes that the no longer requires smart engineering skills and experience are put to good use in some other part of the transition toward Net Zero. Given the need to install heat pumps and to move all properties away from natural gas by 2050, Unite, hopes that there will be a Just Transition[18] arrangement put in place. If there is to be a Just Transition, past involvement[19] has shown that work on such arrangements require a lot of time. Just Transition schemes need to discover what skills are available, what skills are required and then those who need training need to identify what they need and importantly enable training courses to be completed while working toward the completion of the Smart rollout. Therefore, Unite believes that Just Transition schemes should be starting now rather than wait till the end of 2030.

[18] The International Labour Organisation arm of the United Nations describes the basic premise of a Just Transition as "Promoting environmentally sustainable economies in a way that is fair and inclusive to everyone concerned – workers, enterprises and communities – by creating decent work opportunities and leaving no one behind".

[19] Please see this link which chronicles the result of a true Just Transition in action at the Radcliffe-on-Sour power station closure.

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