

Octopus Energy is the largest supplier of electricity in GB, as well as a leading installer of low carbon technologies (LCTs) and investor in renewable energy projects. We recognise that securing timely and low cost grid connections is critical to delivering the projects and technologies required for clean power and reducing customer bills. As such, we welcome this consultation and Ofgem's intent to ensure the regulatory framework supports this in practice.

The list of issues identified in the consultation is accurate and comprehensive, although the majority of connection delays reduce down to two main problems:

1. **Limited capacity on the transmission network.** This is recognised as a major infrastructure problem with several policy reforms underway to address it.
2. **Outdated processes and methodologies used by the network companies for new connections.** These processes have failed to respond to the rapid growth in volume of applications and new customer demands created by the energy transition. This problem includes both the queuing process and the wider customer pre-app/app/post-app journey. Analytical methodologies used by the networks can also contribute to the lack of capacity problem, particularly through use of highly conservative engineering assumptions on asset operation. The transmission/distribution interface has also created significant delays for distribution connections, despite there often being more physical capacity and more scope for local balancing on the distribution level.

Live policy interventions to address problem 1 are welcome but may take several years to have an impact. Meanwhile there is huge scope to unlock efficiencies and innovation in the connections process with a focus on cause 2. Ofgem has the opportunity to use regulations to help deliver a connections process that is truly fit for a net zero future. From our perspective, this new process needs to be:

1. **Open source:** Data transparency and self-serve connection tools have massive potential to drive efficiency in the connection process. Visibility over where projects/LCTs can connect, expected timelines, cost and options in connection design will help customers make better informed applications, reducing time to process and ensuring better use of scarce network capacity. One reason that connection queues have grown and

network connections teams are overwhelmed is the high volume of speculative applications. However, making an application is often the only way by which a customer can get reliable information on network capacity and connection costs.

- 2. Collaborative and customer centric:** Network operators are generally passive and even refuse to offer advice/guidance on customer connection needs. This is counterproductive as there are often major efficiencies to be found in pooling infrastructure costs between projects, co-locating projects through a shared connection, using new types of flexible access product or changing project configurations to better meet network needs. Without visibility or advice, connecting customers generally cannot see these opportunities and the networks are best placed to advise. The new connections process should enable and incentivise network operators to proactively seek out and promote innovative solutions to getting more projects connected more quickly.
- 3. Laser focussed on delivery:** Too often we are concerned that the mindset of our network operator counterparties is to minimise risk at any cost, rather than seeking opportunities to create value for customers or accelerate the energy transition. At worst, networks can seem indifferent to the need to service customers, insulated by their monopoly status and a regulatory framework which has stronger incentives for cost minimisation than it does for outstanding delivery against customer needs. We welcome efforts from Ofgem to adjust this risk/reward balance by increasing minimum standards and providing more routes to redress to customers who have been failed against these standards.

Theme 1 - Visibility and accuracy of connections data and network capacity

Question 1a. Do you agree with the issues we have set out under Theme 1 - Visibility and accuracy of connections data and network capacity? Are there any other issues under this theme that we should consider or be aware of?

Yes we fully agree with the issues highlighted by Ofgem. Some specific issues we would highlight are:

- **Issues with data portals:** Data portals are inconsistent and fragmented, often with issues of data quality or integrity (more detail in Q1e). This makes it hard for developers to make informed decisions. The single digital view of T/D connections envisioned in the Connections Action Plan has not been delivered as expected and data remains fragmented.

- **Potential to self-serve:** There is huge potential in improving self-serve or automated digital tooling for connections design and optioneering. UKPN has made particular progress on this and other DNOs should copy this approach as soon as possible.
- **Limited customer tools:** The connections process would benefit massively from a simple customer portal which allows for the tracking of connection progress and consolidation of attachment and communications over time. Currently most communication is via email with higher risk of data loss, poor handovers, miscommunication and inconsistency.
- **Lack of KPI reporting:** Key quantitative metrics on connections performance are not routinely disclosed.

Question 1b. Do you agree with proposal 1a (new regulatory requirement on single digital view tools)? Do you have any views on how this should be implemented?

Yes, a single digital view of connections as originally proposed in the Connections Actions Plan will be very helpful for customers / project developers. This is made particularly important as transmission and distribution queues become increasingly integrated and NESO system plans have a more material impact on connections. Today it is highly resource intensive to compile a single digital view of connections and any efforts to do so face uncertainty arising from data quality issues on the underlying DNO/NESO data portals.

Given the coordination between networks required to deliver such a single digital view there is a case for Ofgem to set specific requirements via a licence condition and supporting guidance on specification and data quality (similar to how the licences are used in conjunction with the RIGs today). Clear requirements on how regularly the data is updated, minimum metadata to be included, and general accuracy/reliability levels required, would be helpful beyond the high-level licence condition.

In our view, selecting an approved third party to develop and maintain the single digital view may be the best route to quickly deliver a high quality user interface that works well for customers (this could be supported by obligations on the networks to provide the data required). We are aware of several innovators who have already compiled DNO data portal data with other open source data sets to create software-based connection products. Building on these efforts could yield a higher quality single digital view more quickly than starting from Connections 360 or pushing the networks to coordinate in building a new tool from scratch.

Question 1c. Do you agree with proposal 1b (new regulatory requirement on the creation of guidance / standards for data visualisation tools)? Do you have any views on how this should be implemented?

We agree there is a role for Ofgem to continue to drive up data quality and transparency standards for users. For example, it is unacceptable for connections data to be outdated, highly inaccurate and with weak metadata that limits the ability of users to assess how robust the data is. Efforts to roll out the CIM and standardise the LTDS are welcome and make good case studies on how Ofgem can drive consistency in data that enhances value to users.

However, Ofgem should be cautious of being overly prescriptive on the exact fields/formats/structures of data provided. Doing so risks promoting a 'compliance' culture on data rather than one driven by customer need and experimentation. In practice, some DSO data teams are highly proactive (e.g. UKPN, NPG) and routinely test new data products with stakeholders. Raw data provision should naturally develop into productization and software services - such as routing and connection design tools, quotation estimate engines, project management portals and more. Some DNOs are already building these services and this is a positive step towards a 'self serve' / 'open source' connections process that works in the interest of customers. Incentivising this type of innovation should be viewed as an upside/reward for DNOs, rather than an issue of enforcing consistent minimum standards.

This means minimum standards are very much welcome, but should (for example) be coupled with coverage in the DSO incentive so that customer use cases and specific feedback are also reflected in an upside incentive for the DNOs who perform well. Use of open source tools and data transparency could also be covered in specific questions in any customer survey driven incentive designed specifically for connections performance.

Question 1d. Do you agree with proposal 1c (new regulatory requirement to provide connections data)? Do you have any views on how this should be implemented?

Yes we fully agree that KPIs on connection performance should be routinely disclosed by network companies, e.g:

- GW connected by technology
- Average curtailment % for non-firm renewable connections
- Average time gap between requested and offered connection date
- Average time gap between application and offer

This could be implemented through any amendment of Ofgem guidelines which structure public data sharing by the licenced entities (e.g. RIGs) and could be regulated similar to a reputational ODI under RIIIO.

Question 1e. What are your views on the completeness and discoverability of connections data that would be useful to you? Are the existing resources clear and transparent?

Several DNOs have made real progress in improving transparency through their DSO data portals over the past 1-2 years. However, progress has varied significantly across the sector and several key issues remain:

1. There is generally a lack of real time / operational data on network conditions required for detailed analysis of curtailment expectations or of the potential role for distributed flexibility to balance energy generation at lower voltages
2. Limited visibility of network topography or capacity at lower voltages, which is crucial for assessing connection potential for smaller generators
3. Queue data is increasingly provided but related information on readiness of projects in the queue is not disclosed (largely on grounds of commercial sensitivity, mentioned in Q1f), making it difficult to make a risk based assessment of connection timescales
4. Collating datasets across DSOs can be resource intensive due to inconsistencies in format or structure
5. Data portals are generally structured as simple lists of disparate datasets rather than as an integrated data model with any type of user interface to enable querying (e.g. in a relational database different datasets will be joined by some keys/indexes which allows for queries to create a new table to meet user need). This current approach treats portals more as a 'data dump' and outsources processing to users who have less understanding of interactions between datasets than the DSO itself.
6. Where data is available there is limited assurance on data quality. We have had several instances where connection transparency portals have been inaccurate. Anecdotally we have heard some developers are not using data portals because of this, instead only relying on formal DNO responses connection applications to indicate network capacity. Accuracy issues have to be addressed for the market to make best use of these tools.
7. It is complex/impossible to fully understand how network development plans will impact capacity available for new connections (and corresponding impact on connection timescales), even though this could be valuable from a network perspective by nudging connection applications to areas with more capacity coming online
8. More work will be required to link current data resources with the outputs of centralised strategic plans / RESPs

Question 1f. Is there additional connections data that would be of use but legal barriers prevent it from being published? If so, do you consider that there are solutions that would enable this data to be made available, for example by aggregating it to appropriate levels / anonymising it etc.

Generally the status of projects in the queue is a highly important dataset on connections but is routinely not disclosed on the grounds of commercial sensitivity. Ofgem should clarify expectations in this area as projects that are not meeting milestones will/should be removed from the queue regardless and there is wider system value available to improving transparency for developers. Detail on planning status, a crucial readiness milestone, is also publicly available.

Question 1g. Is there anything else regarding Theme 1 – Visibility and accuracy of connections data and network capacity that you consider we have missed?

No further comments.

Theme 2 - Improved standards of service across the customer journey (not including “minor connections”)

Question 2a. Do you agree with the issues we have set out under Theme 2 - Improved standards of service across the customer journey (not including “minor connections”)? Are there any other issues under this theme that we should consider or be aware of?

We fully agree with the issues identified. Key issues we would highlight are:

1. Delay in sharing information at the T/D interface.

This is a critical issue and one that has led to severe detriment to multiple renewable projects in our development portfolio. Unexplained delays in submitting (or returning) transmission impact assessment (TIA) requests is a completely unmanageable risk for developers, who have low/no recourse despite potential for real financial losses. In many instances we have waited 6-12+ months for TIA/Project Progression (PP) to be submitted (we have one project with an offer accepted 2 years ago, about to enter planning in Q1 2025 but the DNO has still not confirmed whether a statement of works has been submit).

This has recently resulted in some of our projects potentially missing out on being considered for the ‘Gate 2 to whole queue’ exercise after the NESO pause in new

connection applications as a signed NESO offer is required to be included in that process, but applications were not made on our behalf by the DNOs. Ofgem must intervene in this given the severe impact on investor confidence this has created. We urge Ofgem to ensure projects who have applied to DNO but are not yet TO clock started can be considered in the queue for the 2025 gate 2 to whole queue process. If this is not possible, Ofgem must still enact and enforce a clear Service Level Agreement/GSOP for DNO/NESO interactions as this will remain an important part of the TMO4+ new connections process.

Linked to theme 1, in addition to stronger and reliable deadlines for information sharing, developers also require clearer information on how transmission impact assessments are conducted, with supporting data made available. Currently developers are fully exposed to significant changes in connection dates as a result of TIA/PP with limited means to understand or manage this ex ante. This increases the volume of pre-development work required to secure a connection agreement, as commercially viable connection agreements can be destroyed by TIA/PP outcomes and the resulting timeline modifications. Developers ultimately have to recover these costs from customers to retain a commercially viable business model.

2. Inaccurate connection cost estimates or works quotations, or basic errors in connection agreements

Developers often seek a second opinion / contract grid consultants to review quotes for inaccuracies, further increasing costs and reducing certainty throughout the process. Often supporting information is not provided as needed for developers to make a full assessment of the offer. In many cases DNO teams rely on developers having in-house grid engineers to respond to technical questions, resources that many smaller developers do not have available.

3. Slow and unresponsive customer service from network companies

This has included failure to inform our development team of works delivery issues that would significantly impact the energisation date of renewable project (discussed in Q3 below). Another example is where we have had multiple instances of connection managers leaving the DNOs and customers not being notified / having constantly changing personnel meaning that deadlines or information are missed.

4. Connection charging creating another unmanageable risk

Connecting projects that trigger a reinforcement generally then have to recover these costs through second comer charges due from projects that connect later. This leaves developers with another material financial risk that they are unable to

manage (as they have little/no influence over which other projects connect downstream of the same point of connection).

5. Limited efforts to advise on how to make best use of network capacity

DNOs/TOs maintain a passive, neutral position when working with customers and usually make limited efforts to influence towards a more effective/efficient connection solution, despite having lots of talented engineers and system planners who have insights on how connections can be delivered more effectively. This has resulted in, for example, lots of demand connections being over-provisioned and excessive use of point to point connections to individual projects when shared infrastructure could save cost. Network companies have rarely taken a portfolio view of connections delivery which has missed possibilities to co-optimize projects and make better use of network infrastructure (e.g. sharing export capacity between solar and BESS can be a win-win, but instead projects are connected separately, nearby, with network assessment studies modelling a cumulative, rather than complementary, network impact).

Question 2b. Do you have any views on proposal 2a (general principles-based licence condition and supporting guidance around standards of service throughout the entire customer journey)? Do you have any views on how this could be implemented?

Although a general principles-based licence condition may be useful to set expectations, we are concerned about the enforceability of such a condition. In the consultation wording, the obligation would 'allow the regulated party to meet the obligation as they see fit'. What developers need in the connections process is a higher level of certainty over timings to process applications, quality of offers provided and predictability of terms. These factors must also become more consistent across GB. It is not clear how Ofgem or any other party drives these outcomes under a principles based approach, without detailed accompanying guidance. This accompanying guidance should be developed and our preference is that it is codified into a prescriptive licence condition, as mentioned in 2b below.

For avoidance of doubt, we would support the introduction of both a principles based and more prescriptive licence condition on connections.

Question 2c. Do you have any views on proposal 2b (new prescriptive condition(s) around standards of service)? Do you have any proposals for any specific areas of the connections customer journey that should be subject to such a requirement?

We strongly support codified 'Service Level Agreements' or standards that DNOs and NESO should meet throughout the connection journey, namely:

1. Deadline for initial indicative offer following Gate 1 application
2. Deadline for Gate 2 readiness criteria initial checks
3. Deadline for submission of information to NESO (from DNOs)
4. Deadline for NESO/TO Gate 2 assessment (e.g. a fixed number of days after each application window)
5. Obligation to meet delivery milestones towards completion and energisation as set out in connection agreement (as discussed further in Q3 these should be set out in the connection agreement)

These should be viewed as minimum standards to provide a backstop on time taken for key milestones in the customer service journey, coupled with scope for financial redress when minimum standards are not met. This will allow developers to better plan their pipeline development and allocated development expenditure more efficiently.

In addition to these 5 timing based milestones, Ofgem should also consider:

6. minimum standard for accuracy of implementing the new Gate 2 methodology.

We are conscious that delivering the process outlined in CMP434 will be new for all of industry and the CNDM, Gate 2 criteria and supporting process is highly complex. If these methodologies are not exactly followed, developers could face significant detriment in not being able to connect pre-2030 or pre-2035. It is therefore crucial that Ofgem ensures these methodologies are followed transparently and decisions can be reviewed for accuracy by developers. A legal/regulatory obligation for connection offers to be re-adjusted if mistakes are found will also be important to ensure market confidence in the new connections process.

To incentivise high quality service and innovation beyond these minimum standards, Ofgem should combine these standards with a strengthened and extended connections customer service incentive to capture quality of offers and service (discussed below in Q2e).

Question 2d. Do you consider that any of the existing standards of service requirements set out in the regulatory framework for provision of specific products / services should be revised or removed? Do you consider that there is any duplication or overlap of regulatory requirements across the regulatory framework that needs addressed?

Redress available under GSOPs for connections are very small compared to potential damage suffered from missed connection dates for larger projects.

Question 2e. Is there anything else regarding Theme 2 – Improved standards of service across the customer journey (not including “minor connections”) that you consider we have missed?

We urge Ofgem to consider revisions that strengthen the Major Connections Incentive for RIIO-3. There appears to be a disconnect between high scores awarded to DNOs in the customer satisfaction survey and general sentiment across the development industry that the connections process is dysfunctional and failing.

Overall, we agree that a survey driven approach is a reasonable way to evaluate customer service. Good customer service is subjective and asking customers is a better way to assess performance vs overly prescriptive regulations on service quality.

However, to try and address the apparent disconnect here we propose Ofgem consider the following adjustments to the survey approach for ED3:

1. Streamline the ask on developers by requiring only one annual survey per market participant, covering all interactions with DNO/DSO. This is preferable to multiple survey requests and will help promote quality responses. There is a risk that feedback quality and response rates degrade the more that developers are approached for surveys.
2. Given the increasing overlap, consider combining surveys on customer service, DSO performance and connections performance. This is particularly important given how crucial data transparency /self-service tools are to effectively processing connections at scale.
3. Use a web-based survey rather than a telephone call.
4. Ask all market participants as standard, to help drive up sample sizes and strip out complexity currently built into the process based on market segmentation etc.

Given the need for an incentive for DNOs to strive for outstanding customer service and continued innovation, we also recommend Ofgem structure the new MCI as a symmetrical upside/downside financial incentive with a larger magnitude of both upside and downside than currently available.

Theme 3 - Requirement on networks to meet connection dates in connection agreements

Question 3a. Do you agree with the issues we have set out under Theme 3 - Requirement on networks to meet connection dates in connection

agreements? Are there any other issues under this theme that we should consider or be aware of?

Yes we agree with the issues identified.

In one case our on-site team have only identified that there will be delays to TO works being delivered by finding that physical infrastructure was not in place during site visits. Connection/energisation date was pushed back at the last minute. This is another example of poor communication, major financial detriment to the developer and limited recourse creating an unmanageable risk in the development business model.

In general, network companies and developers enter into a bilateral agreement to energise a connection on a certain date. Developers are obligated to meet milestones working towards this date (or else risk the agreement being terminated). Networks should have parallel delivery responsibilities with enforceability and redress if these are not met.

Question 3b. Do you have any views on proposal 3a (strengthened principles-based licence condition around meeting connections dates)? Do you have any views on specific wording that would achieve the intended outcome?

Strengthening the principles based licence conditions is reasonable but we are concerned about their enforceability in practice. Current licence conditions (e.g. on using 'best endeavours' at transmission) have a relatively high bar to enforcement and deadlines can be missed today. Clearly Ofgem cannot investigate all these cases to determine whether 'best endeavours' (or parallel wording for other conditions) have been met given the ambiguity of the wording.

Our preference would be to have enforceable terms introduced into connection agreements that impose clear milestones on the networks as well as on developers. This would give developers legal standing to challenge bad practice, rather than relying on Ofgem to intervene via the licence framework.

Question 3c. Do you have any views on proposal 3b (minimum standards / SLAs around meeting connections dates)? Do you have any views on specific standards that could be introduced and how they would work in practice?

As mentioned above, Ofgem should supervise the introduction of milestone terms into connection agreements for both developers and the networks. These should be set on a commercial basis with redress available if one party does not meet its obligations, as well as force majeure style clauses to protect against

unexpected circumstances.

Question 3d. Do you have any views on proposal 3c (a financial instrument designed to offer recourse to connecting customers who face detriment due to delays)? Do you have any views on how this should be implemented?

Yes, milestone terms for networks should have damages attached (e.g. lost revenue due to delays). These should be in line with commercial terms in other agreements used by market participants across the sector (e.g. with EPC, O&M or other delivery partners throughout the renewable project lifecycle).

Question 3e. Is there anything else regarding Theme 3 - Requirement on networks to meet connection dates in connection agreements that you consider we have missed?

No further comment.

Theme 4 - Quality of connection offers and associated documentation

Question 4a. Do you agree with the issues we have set out under Theme 4 - Quality of connection offers and associated documentation? Are there any other issues under this theme that we should consider or be aware of?

Yes, we have had mixed experience with the quality of DNO offers. We have previously had quotes with basic errors (e.g. wrong company name / wrong date), as well as offers with major information gaps that make it difficult to make commercial decisions.

Ultimately developers also need to understand the methodologies and assumptions underlying the final offer, not just the output. This is particularly important when outputs can be incorrect or poorly justified. Improved transparency of data and analytical approaches will play a key role in improving confidence in offer quality and we emphasise how critical Ofgem's decisions in relation to Q1 are in this context.

Question 4b. Do you have any views on proposal 4a (principles-based licence condition on the completeness / quality of the offer and supporting documentation)? Do you have any views on specific wording that would achieve the intended outcome?

We are not opposed to a principles based licence condition but the clarity of requirements on quality must match those around timing/speed to avoid creating

perverse incentives to compromise quality. We favour the use of SLAs to create a backstop standard discussed below.

Question 4c. Do you have any views on proposal 4b (minimum standards / SLAs on the completeness / quality of the offer and supporting documentation)? Do you have any views on specific standards that could be introduced and how they would work in practice?

We think it is appropriate that Ofgem creates a backstop standard on offer quality to minimise the risk of effective gaming of any speed of service related SLAs created in relation to Q2.

This should mandate the basic, key terms and supporting information that would be expected in an acceptable quality connection offer. If any offers are found to be inaccurate and need to be revised, this should be reflected in the 'clock stop' date used to assess compliance with SLAs on timing.

Key terms we would like to see covered in this minimum standard include:

1. Point of connection and high level connection design
2. Itemised costing, in line with industry methodologies
3. Timelines and milestones
4. Specification and scope for contestability
5. Detail on any constraints, with underlying methodologies and assumptions provided to reach these conclusions
6. Detail on any curtailment expected, with underlying methodologies and assumptions provided to reach these conclusions
7. Transparency of status with respect to access/planning rights to actually reach the point of connection, so developers understand if an additional planning survey or consents are required for the proposed connection design.

Question 4d. What do you consider would constitute a 'high quality offer'?

An offer which provides accurate information and transparent justifications for the points listed above in response to Q4c.

Question 4e. Is there anything else regarding Theme 4 - Quality of connection offers and associated documentation that you consider we have missed?

Nothing else to add.

Theme 5 – Ambition of connection offers

Question 5a. Do you agree with the issues we have set out under Theme 5 - Ambition of connection offers? Are there any other issues under this theme that we should consider or be aware of?

Yes we agree with Ofgem's view set out under Theme 5. We note that this issue may be mitigated in the near term by the role of the Clean Power 2030 plan and future SSEPs etc. which will determine volumes available for connections across different parts of the electricity grid (and therefore feed through into connection dates offered by NESO). As well as connection incentive reform, Ofgem should therefore also work to ensure that methodologies and frameworks governing development of these plans are ambitious in how network capacity is assessed and allocated to customers.

Question 5b. Do you have any views on proposal 5a (strengthened principles-based licence condition around offering earliest achievable connection dates)? Do you have any views on specific wording that would achieve the intended outcome?

We agree with Ofgem's approach overall.

We note that there is some customer discretion in setting connection dates that should be considered in the licence condition amendment. For example, some customers will prefer a later connection date to allow other stages of project development to progress. Customers may be given an opt out of an 'earliest achievable connection date' requirement and associated obligation for network companies to progress companies.

Question 5c. Is there anything else regarding Theme 5 - Ambition of connection offers that you consider we have missed?

We strongly support the use of innovative connection products or access rights to help get more capacity connected to the grid more quickly. We see several routes to crowding more generation onto a fixed network capacity, including:

- Co-location to share a physical grid connection (and increase utilisation of the connection vs when one asset is connected)
- Flexible or shaped access rights that limit export for assets with complementary offtake profiles, avoiding assets simultaneously exporting and creating a constraint
- Refining operational assumptions used by the networks when assessing network capacity or connection dates
- Setting project size thresholds by substation voltage level to avoid allocating bays to projects that are only using a small amount of technical capacity
- Using demand flexibility from other sources to consume power generated at distribution level and mitigate transmission level impacts

Ofgem should explore how to incentivise network companies to proactively explore and maximise use of these options. This will be increasingly important as network constraints continue out to 2030 and beyond.

New regulatory incentives could drive innovation by pushing network companies to explore the full suite of options available to connect volumes more quickly, beyond queue management or network build. Potential KPIs to incentivise could include:

- increasing network asset utilisation,
- connecting volumes in line with CP30 volume targets
- increasing volume of low carbon MWhs transported across the network

We recognise these are complex metrics to measure and new ODIs were not specifically being consulted on here.

Theme 6 – Minor connections

Question 6a – Do you agree with the issues we have identified? Are there any other issues under this theme that we should consider? Please provide data and evidence to support your views if possible.

We are delighted that Ofgem have taken on addressing this theme as part of the E2E connections review.

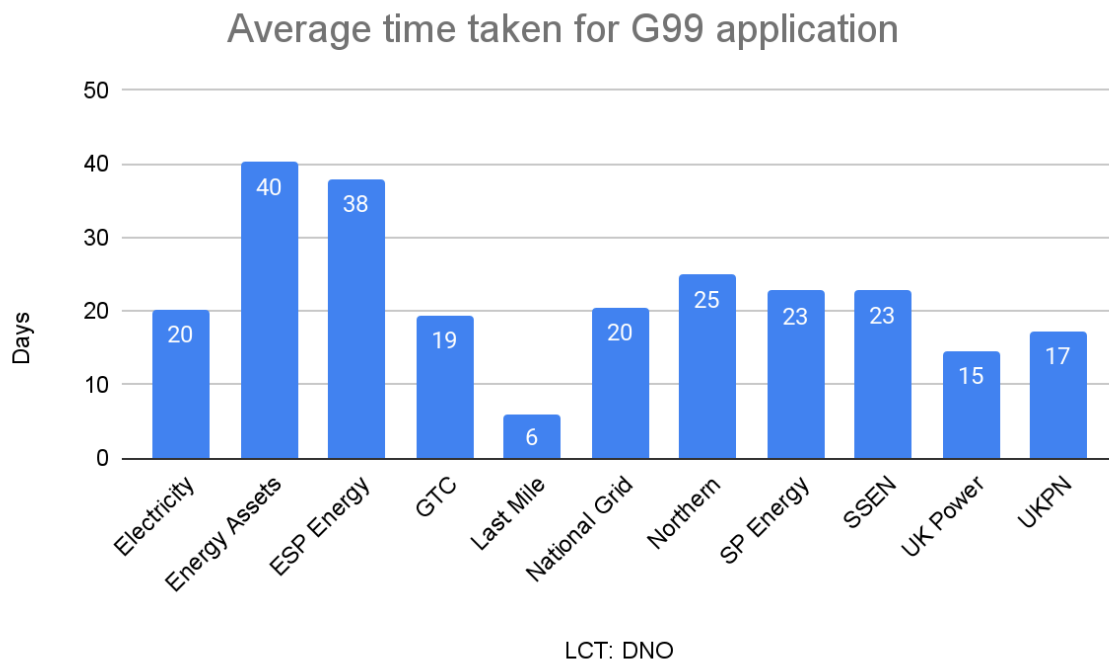
Quality and timeliness of minor connections is a growing concern as customer demand for LCTs continues to grow. If government Net Zero ambitions are to be met, customer demand will need to scale exponentially out to 2030. It is critical that Ofgem gets the regulatory framework for LCT connections right today to set industry up for success in this mission.

We have seen that getting an EV, solar or heat pump is one of the key ways that customers will interact with the Net Zero transition. If we are to maintain customer support for the transition it is therefore vital that industry can offer a speedy and high quality service for installation of this hardware. At present, the DNO process for LCT approvals is too often holding Octopus and other installers back from offering this service.

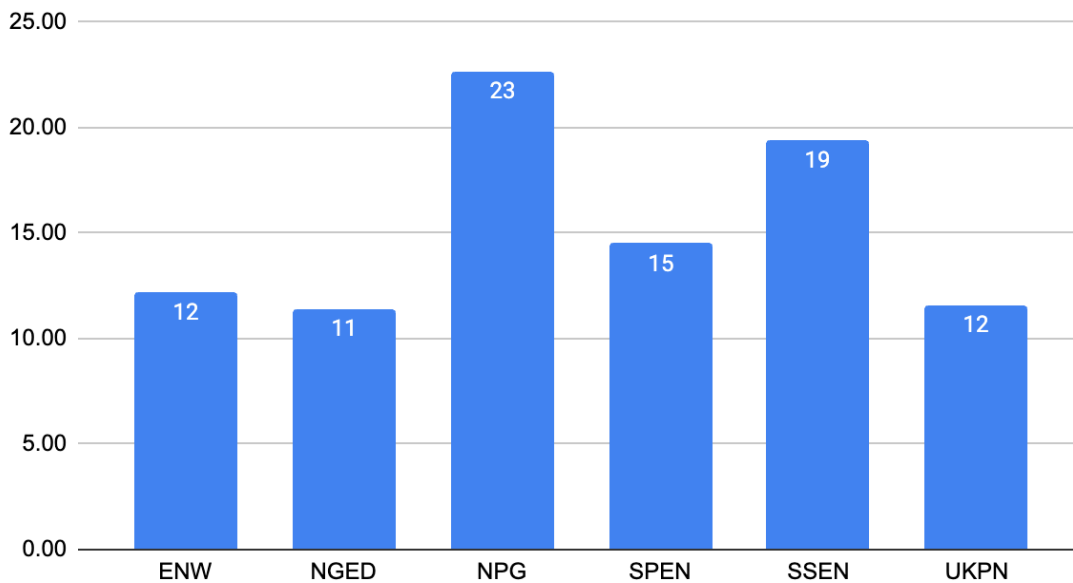
Many of our approvals from DNOs for LCT installations are delayed beyond timescales that would be acceptable for LV quotes to be issued for new connections under the ATTQ/C incentive (4 working days). Importantly, as LCTs are not new connections, they are not captured under this existing incentive.

As shown below, applications generally take 10+ days for a heat pump and 20+ days for a solar PV G99 application. This is especially problematic for heat pump installs where customers are making a distressed purchase (e.g. due to a boiler breakdown). To reach government targets, we need getting a heat pump to be as quick as getting a new boiler. Every time we collectively fail to deliver this for customers a household gets locked in to fossil fuel heating for another 10-15 years.

At time of writing we have **1693 tickets** awaiting approval/action from DNOs that are 45+ working days outstanding (across all LCT products).



Average days for heat pump application



We overall agree with Ofgem's list of issues. To add detail, key problems we've come across that are driving these delays for LCT installs with DNOs:

- 1. Inconsistency on criteria:** Whilst DNOs do have different network conditions, there is often weak/no rationale as to why criteria for approving LCT applications vary so significantly across networks. This adds complexity for installers, customers and risks leading to arbitrary rejections/added cost to installations just based on postcode. For example, UKPN uses a 5kW auto-approve export limit for residential solar whereas other networks use 3.86kW. Some DNOs accept export limitation devices for LCTs until physical upgrades (e.g. unlooping) are delivered, others do not. We also note that UKPN does not reject any low voltage connection under 28kW in generation capacity due to voltage rise yet other DNOs do. To our knowledge, UKPN's network has not suffered an increase in outages or security issues from helping customers in this way, suggesting other DNOs should follow suit. Failing applications based on voltage rise is a common issue and could also be addressed by updating statutory voltage requirements¹.
- 2. Lack of transparency on approval criteria:** DNOs generally do not publish, or share directly, the criteria they use to approve / reject / amend LCT applications. LV network transparency is generally poor and does not necessarily map well onto decisions from the DNOs (e.g. areas with a high degree of LV headroom can still have constraints on LCT approvals for various reasons). This makes it difficult for installers/suppliers to target

¹ <https://utilityweek.co.uk/voltage-management-takes-the-spotlight/>

customers who will easily be approved or explore the role of flexibility in mitigating the local network impact.

- 3. User interface issues:** DNOs have introduced a centralised Connect Direct platform but installers (and DNOs themselves) have reported facing challenges having issues promptly resolved in this system. For example, we have been unable to have some microinverter equipment registered in a way that allows our installers to input data in applications that reflects the actual installation design. This is possible in UKPNs parallel LCT application system, but not in Connect Direct. Attempts to raise this issue through multiple channels have not been successful in having a resolution.
- 4. Unnecessary steps added to the process:** Various DNOs have added steps such as requiring a GDPR Letter of Intent signed directly by the customer, having additional site visits, reaching out to customers directly, load checks etc. Reaching out to customers is not required in Connect Direct and this should be enforced across all DNOs. Communication is not streamlined and this can lead to a poor customer experience as well as delays.
- 5. Upgrade works required:** Up to 20% of service cables are looped between properties which require greater groundworks to 'unloop' for a customer to access more power capacity, extending installation timescales. Some properties will require their service cable to be upgraded from 1ph to 3ph. These services must be delivered by DNOs but they are unregulated and timescales can vary widely, often taking months. Looped services are one of our biggest contributors to DNO approval delay, and are often unable to be identified until arrival on site resulting in jobs being aborted - generating complaints and negative customer survey responses. Quotes for unlooping range from free to £1k+ dependent on DNO.
- 6. Delays in processing:** DNOs have flagged resourcing issues that are driving delays in approvals. These should be resolved with funding afforded to DNOs to hire the necessary teams or install systems required to issue approvals.
- 7. Reinforcement issues:** We are starting to see cases where customers are triggering a LV upgrade (e.g. a new pole mounted transformer) as their LCT would push a network asset beyond its safe loading. In these cases it is generally not possible to install the LCT as charges breach the high cost cap (set under the DUoS Access SCR) and are therefore unaffordable for the customer. However, these situations are hugely problematic in two ways: 1) all customers downstream of the relevant network asset are effectively barred from installing an LCT as any individual would trigger the upgrade and incur the unaffordable connection charges and 2) customers adding loads that are non-notifiable to the DNO (e.g. an induction hob) could theoretically push the network asset over the limit and cause a safety issue. Where LV upgrades are needed to enable LCTs the DNO must be funding

these upgrades under totex or load growth re-openers. We expect this issue will grow as customer load increases in coming years; Ofgem must set a clear expectation on how DNOs should address this issue ahead of ED3.

- 8. Voltage:** As mentioned above, voltage rise is one of the most common reasons that DNOs have to do lengthy network assessments. Statutory voltage ranges of the UK network could be extended (e.g. to align with EU standards) which could enable more distributed generation and LCT connections by expanding the operational envelope that DNOs can work within. This would cut significant amounts of time out of the application process for many new connections.

We are also concerned these pervasive issues raise the risk of bad practice from installers who try to game the process (e.g. withholding information or specifying designs to fit within approval thresholds).

Please note, more granular data on LCT install timescales or associated issues is available directly, on request.

Question 6b – What are your views on our proposals designed to address these issues? Are there other proposals you consider would achieve the intended outcomes?

We strongly agree with Ofgem's proposed interventions to:

- 1) **Set minimum standards / SLAs on customer installs:** Setting minimum standards on LCT installation timescales is particularly important given the higher volume of these jobs and the need to provide excellent customer service in Net Zero products or services. LCT installs are also typically more routine for DNOs in terms of network studies required. We completely agree with Ofgem's framing that SLAs should pull DNOs up to the highest standard achievable and cover transparency on criteria for auto-approvals. 45 working days is often used as a benchmark at the moment and this should be significantly lowered.
- 2) **Require DNOs to report publicly on performance:** We strongly support Ofgem's proposals to use a standardised leaderboard to drive consistency and ambition across DNOs.
- 3) **Mandate an install readiness standard for customers:** Customers and installers generally have little visibility of how an application will be treated ahead of time. Providing more information upfront will help focus installer efforts in network areas that can accept LCTs and allow for more proactive interventions (e.g. on unlooping or fuse upgrades) elsewhere. We recommend Ofgem work with DNOs/DESNZ to standardise a scheme like

the install readiness index being trialled by SSEN to improve information for customers across the market.

- 4) Promote use of flexibility/load-limiters/other solutions:** Some DNOs have taken proactive stances and found innovative solutions or workarounds to some of the problems set out above (e.g. UKPN has the option of addressing a looped supply where a new single phase service can't be fitted by installing a 3ph service to one property and looping it to the others). Introducing an incentive for leading performance on LCT installs, either driven by volumes connected or time to connect, could support this type of proactive approach.
- 5) Unlock competition in LV works:** Agreements with UKPN and NGED have enabled us to offer a faster service for some customers by upgrading fuses in the same install visit rather than requiring a separate visit from a DNO engineer. Ofgem should urge all DNOs to explore this and other approaches that can streamline work required for the customer.
- 6) Review the G98 limit:** We fully support Ofgem's proposal to have DNOs review the G98 export limit to allow more customer installs to be auto-approved.

We do not agree that a principles based approach alone will be enough to address the issues in this sector.

We agree with Ofgem's position that LCT installers need to make accurate and consistent notifications to DNOs. Reducing friction in the notification and approval process will support this. We look forward to engaging on Ofgem's future proposals on strengthening the notification obligation on LCT installers after the investigation on how to achieve this.

Question 6c – Do you have views on how poor performance could be addressed under these proposals to ensure the smallest scale customers are protected and LCT roll out is supported?

Where minimum standards defined in the SLA framework are not met, customers should have financial recourse available (as with the GSOP framework for new connections).

In our view, extending and strengthening the GSOP framework is likely to be the quickest and most effective way to address poor performance for LCT deployment. It is important that installers, suppliers and end customers can hold DNOs accountable to the standards that Ofgem sets.

Theme 7 - Provisions and guidance for determinations

Question 7a. Do you agree with the issues we have set out under Theme 7 - Provisions and guidance for determinations? Are there any other issues under this theme that we should consider or be aware of?

We agree with the issues set out. Having an efficient, transparent and well resourced dispute resolution process will be increasingly important as the new connections process increases in complexity and includes more ways that connection agreements can be cancelled/rejected (e.g. Gate 2 criteria, milestone management etc.).

Having clearer and better documented standards across the themes discussed above will also reduce discretion involved in interpreting how networks should be treating their connection customers. This will in turn reduce the burden on any dispute resolution process that Ofgem administers.

Question 7b. Do you have any views on proposal 7a (Ofgem to review the guidance for connection determinations)?

We agree that Ofgem reviews the current approach. We also note the (rarely used) dispute resolution procedure set out in 7.4 of the CUSC. The respective roles of each process should be clarified.

Question 7c. Is there anything else regarding Theme 7 - Provisions and guidance for determinations?

No further comments.