

## Ofgem Electricity Connections Team

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### Greater London Authority (GLA) response to Ofgem's consultation: Connections end-to end review

This consultation is timely and welcome, particularly given our shared ambition to improve the connections process for customers while enabling the infrastructure investment needed to achieve net zero and better energy affordability. In London, the Mayor's key priorities remain the provision of affordable housing, achieving net zero by 2030 and unlocking sustainable economic growth, while strengthening climate resilience. As we prepare for the significant increase in electricity demand that is expected in the 2030s, it is imperative that action is taken to resolve the challenges that customers experience throughout the connections process, including long connections queues.

Much of our response is informed by our experiences with the following –

- **west London capacity constraints:** The rapid influx of large demand customers that created capacity constraints on both the distribution and transmission networks in three west London boroughs, absorbing the remaining capacity in the area for the remainder of the decade and impacting housing delivery.
- **The development of the Local Area Energy Plans (LAEPs):** Subregional plans undertaken by the GLA, with subsequent more detailed LAEPs taken forward by some London Boroughs, have offered a robust evidence base on the projected electricity demand and long-term investments needed to support decarbonisation.
- **On-going engagement with the development industry:** The GLA frequently engages with development partners active in London and across the GLA group supporting the Mayor's priorities on achieving net zero and in the delivery of affordable housing. This includes support to strategic developments facing connections issues, as well as industry-wide engagement activities to understand barriers and opportunities within the connections process.
- **Our 2024 survey of the development industry:** In summer 2024, the GLA undertook an online survey of developers seeking their views on the connections experience to utility networks. 83 responses were received from a range of different sized developers. Over two thirds (67%) of developers responding had experienced disruption or unforeseen adverse impacts because of the process of connecting to utilities networks in the last 5 years. Of these, 93% of respondents experienced unforeseen costs (direct and indirect) and 88% experienced delays (across delivery, lead-in and response times). Among respondents whose investments had been impacted by the process of connecting to utilities networks, the average length of delay was most likely to be 3 – 6 months. Concerningly, almost a quarter of respondents face an uncertain delay on average to their projects.

Our response to this consultation provides a high-level characterisation of issues and the opportunities for improvement in the connection process that we have been made aware of through the engagements described above. Issues presented are therefore the views of our stakeholders and consultees, and not necessarily those of the GLA.

Our response is accompanied by a representation from TfL, included as an appendix, detailing their more specific experience as a connection customer in relation to their Electric Vehicles Infrastructure Delivery (EVID) project.

## **1. Visibility and accuracy of connections data and network capacity**

Connections data from the energy sector is critical in supporting the Mayor's priorities in delivering affordable housing, supporting economic growth, and achieving net zero. Over the last decade, the GLA has worked with key infrastructure stakeholders to facilitate data sharing across the sector – including gathering and mapping data on asset location, asset capacity, and future investment. This is then used to identify opportunities to drive collaborative working across the sector to reduce streetworks disruption and to support net zero initiatives.

In the experience of the GLA and with our key stakeholders and consultees, connection data is often hard to obtain from Distribution Network Operators (DNOs), Independent Distribution Network Operators (IDNOs) and Independent Connection Providers (ICPs). This is often due to:

- **Data quality and availability:** Where we have obtained connections data from DNOs, it is not granular, such as containing information related to routing or connection dates. This has limited the usability of the data and prevented opportunities to inform strategic decision-making. It should be acknowledged that there have been improvements from the DNOs in sharing capacity data. However, the data does always not indicate important details such as the state of the demand connections queue or available capacity.
  - In the GLA's experience of resolving connection issues between developers, boroughs and DNOs, we have observed that data regarding the status of substation constraints and reinforcement available via the DNOs online network mapping tools do not always correlate to the information given in the DNOs customer quotation offers. Having accurate data in the early stages may affect how a developer designs their scheme.
  - There is also a lack of clarity on Distribution Future Energy Scenarios (DFES) inclusion processes from DNOs, including how LAEPs feed into their DFES outputs, and how Local Authorities can best engage the DFES process to ensure strategic schemes are incorporated. This risks Local Authorities and customer confidence in the DNO's ability to support future growth and transition to net zero. In addition, Local Authorities have flagged that they struggle to reconcile how targets for growth, set under their Local Plans and government targets, are subsequently adjusted under the DFES to reflect the NESO targets.

- While we acknowledge the need to maintain commercial sensitivities around connection offers, we believe there are opportunities to improve transparency, particularly around demand connections, while maintaining appropriate data protection. For example, whereas the generation queue is publicly listed in the Transmission Entry Capacity register for the TO and within Appendix G of the Statement of Works for DNOs, the demand queue is not available.
- **Legal and commercial concerns:** As ICPs and IDNOs deliver contestable works and operate within a competitive sector, DNOs are unable to share quotation data or routing details from developers or other parties. Often developers sign an NDA with the ICP/IDNO, and so quotation data remains confidential. This makes it difficult to know which connections are going ahead and which party is delivering the project, making it difficult for the GLA to identify opportunities for collaborative streetworks. In addition, some ICPs / IDNOs and developers cite GDPR concerns as reasons not to share the data, although it cannot always be validated whether the connections data contains sensitive information.
  - The GLA is aware of interest from Local Authorities and the development industry to pursue collaborative connection solutions, especially for 'stretch connections' (described in further detail under our response to Theme 5). When explored at an early stage (prior to the highways permitting stage), collaborative streetworks have the potential to provide participating works promoters cost savings, including TfL Lane Rental waivers, as well as reducing disruption to Londoners. A dig-once approach is best practice, causing minimal disruption to road-networks as well as carbon savings. There are missed opportunities for DNOs to enable collaboration in trench sharing where they become aware of projects seeking similar connections. Better data sharing between DNOs and a more cohesive cross-DNO area approach to planning could facilitate this.
- **Diverse connections landscape:** While the GLA has established relationships with DNOs, approximately half of connection quotations are delivered by ICPs. It is not feasible to manage communications and relationships with the many individual ICPs. As a result, the GLA accesses routing options from developers rather than directly from the DNOs, which is a lengthy and convoluted process.
- **Uncertainty around Major Energy Users:** Accessing capacity constraints data is necessary to understand the behaviour and demand of high energy use developments (such as data centres). For major energy users, where securing power is critical to project viability, these tend to secure connection agreements prior to the Local Planning Authority becoming aware of the project. This limits visibility of the pipeline of development to help inform the development of Local Area Energy Plans or relevant planning approaches. This is an issue given recent changes to the National Planning Policy Framework which requires Local Planning Authorities planning policies to pay regard to facilitating the development of data centres and other major energy users. Access to better connection data around major energy users from utilities is critical to helping local authorities to develop the evidence base to adequately plan for the potential impact of these users in planning terms.

The GLA agrees with Ofgem’s proposal for greater alignment and standardisation of connections data, as well as transparency around network capacity. Up to date data on the connections queue, both generation and demand, would allow customers to make informed decisions by knowing how long their connection would take. Access to this information would also support the GLA’s infrastructure team’s works by:

- **Informing decisions on where growth can happen:** Both demand and generation data in the connections queue would give stakeholders a clearer idea on where capacity is available and where constraints exist. This insight would help inform customer decisions on where growth can happen and could accelerate the effective delivery of energy and decarbonisation projects across London, including affordable housing, and more suitable location for major energy users such as data centres.
- **Influencing routing options:** Data on approved applications would help the GLA to influence routing decisions to minimise streetwork disruption. Delayed access to this data leads to routing decisions that are often fixed and haven’t considered collaborative opportunities.
- **Better manage risks in LAEPs:** Transparency on available capacity would help manage risks better and lead to better decision making. It would also allow for local authorities to anticipate areas with higher energy demands. This would help improve the ability of Local Planning Authorities to appropriately plan for growth in their areas, as well as support the robustness of their DFES submission to DNOs.

#### *“Single digital view” of connections data*

We welcome Ofgem’s proposal to introduce a regulatory requirement to ensure the continuous development and improvement of data visualisation tools. A key lesson from the GLA around developing data tools like the IMA Toolbox is that there are many ways (platforms, coding, etc.) to build data visualisation tools.<sup>1</sup> This has a direct impact on how the data is ingested, processed, and visualised. In the case of multiple stakeholders developing their own data visualisation tools, we recommend that any regulatory requirement put forward by Ofgem includes a section on interoperability, ensuring that all developed platforms have embedded functionality which allows for cross-platform and organisational data sharing. Given the number of stakeholders involved, we agree that it would be difficult to create a single digital tool. We suggest a federated approach, where networks and developers can have their own individual portals, if they work together to ensure system interoperability. This would mean that National Energy System Operator (NESO), DNOs, IDNOs, and connection providers are able to communicate and share data following a clear process, with minimal need for additional data processing. Users

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<sup>1</sup> The London Infrastructure Mapping Application (IMA) Toolbox is a central register for data and analytical tools on future infrastructure investment and growth in London. It supports infrastructure providers, local authorities, and the GLA’s Infrastructure Coordination Service (ICS) to work together to coordinate infrastructure provision, whether by undertaking collaborative streetworks to minimise disruption, or investing in infrastructure ahead of demand. It was built and maintained by the GLA’s Infrastructure Coordination Service, and through this we have learnt many lessons about gathering infrastructure data, hosting it and using it for delivery.

could pull data (ideally in an automated format) into their own portal for analysis and layering against their own datasets.

### *Standards for connections and data visualisation tools*

The GLA has brought together data from across the energy sector in London and found variability in format, terminology, and data schemas, which takes considerable time and effort to map centrally. A unified set of open data tools requires standardisation across DNOs, IDNOs, and the NESO, to ensure that all network's tools transparently present accurate data in real time. Ofgem should encourage energy providers to mutually agree standardised language and data schematisation as much as possible, making their data more accessible to external audiences. This also reduces the risk of data being misinterpreted by external parties. The GLA would be open to collaborating with Ofgem to share our learnings on what improved standards could look like, given our experience gathering across the utilities sector in London. We also recommend that Ofgem encourages the relevant stakeholders to allocate funding towards operational resources to maintain the data, comply with standards, and follow data governance.

### *Single view vs multiple tools*

We support Ofgem's proposal of a single portal covering all network areas across transmission and distribution. A single-view platform will allow stakeholders to have greater visibility of energy flows and the status of network infrastructure. We recommend that Ofgem consider that a regulatory requirement be introduced for networks to provide connections data on a regular, granular, and standardised basis for these purposes, including for external publication. We consider this regulatory requirement to be key for the successful implementation of a single view data visualisation tool. Based on our experience in bringing together data from across the infrastructure sector, our recommendation is for Ofgem to consider a data schema for the single view tool to help create a minimum quality standard across all relevant partners.

As Ofgem considers how to design and implement its proposals, the following additional opportunities need to be considered to address potential roadblocks:

- To resolve data sharing challenges with ICPs and IDNOs, a central governing body could liaise with all those involved in connections and house this data centrally, which would reduce the need to engage with multiple parties. Given that nearly 50 percent of the works are delivered by ICPs, access to data on contested work done by ICPs would increase our ability to deliver collaborative streetworks.
- The GLA has worked with other competitive sectors to resolve commercially sensitive concerns in data sharing, by redacting data from competitive partners, so that only those with a 'public interest' have access to commercially sensitive data. We recommend Ofgem adopt this approach for connections data.

## **2. Improved standards of service across the customer journey**

The GLA recognises many of the issues identified by Ofgem under this theme. We would support in principle changes to the regulatory framework to ensure connection customers receive a high standard of service.

We have been made aware of the following issues through our engagement with stakeholders, which support the proposals to improve standards of service across the customer journey, while highlighting the risks of not doing so:

- To understand available capacity for their schemes, development customers often wish to engage with DNOs at early stages (e.g., pre-planning permission secured), and the GLA has been made aware of several instances by our stakeholders in which DNOs can be unresponsive to engagement at this early stage in the process. Instances have been raised with us where the DNOs lack of response to what the customer considers to be a pro-active approach to reduce risk, can result in the customer perceiving the DNO negatively.
- Unresponsiveness from DNOs throughout the connection process has been a common complaint raised to us by stakeholders. This includes examples of unresponsiveness to customers during the connection offer acceptance process as well as after the offer has been formally accepted. The GLA also has knowledge of instances where DNOs have been unresponsive during the novation of power, a process that enables more efficient use of the network.
- The GLA has been made aware by several stakeholders of reasonably high DNO staff turnover (either leaving the company or changing departments), with limited handover from old to new personnel. Poor handover of information during staff transitions risks delayed resolution to connection offers leading in turn to scheme delivery delays. We have also been made aware of situations where lack of continuity results in customers receiving different advice or a need to re-agree more complex approaches to connections. Lack of a consistent DNO contact can also lead to customer dissatisfaction and distrust, particularly where developments are facing connection issues.
- Inconsistency in the implementation by DNOs of internal policies on the connections has also been a common issue raised to us. This is particularly true where newer connection products or new regulatory changes have come into force. It has been raised to us that often customer receive strong steers on the implementation of new products and changes at the DNO's senior leadership level, but then inconsistency as to how these are taken on board at the DNO's project management and network planning levels.
- The GLA can report successful instances in which convening DNOs to support shared issues across multiple customers has led to effective resolution. Our on-going work to support resolution of the west London capacity constraints is an example of the benefit of more strategic collaborative working with the DNOs and TO on connection issues. This includes supporting a batched review and escalation of affected schemes, which to date has supported the successful unlocking of over 11,000 homes

experiencing significant delays due to long connection queues. This method of joint working helped minimised duplication whilst delivering our shared goal to connect schemes affected by the capacity constraints in timeframes that are viable to the developers. It should be considered that the voice of the customer was strengthened by bringing together multiple customers with connection issues in the same area through this batch review. This illustrates the positive role that the GLA and London Boroughs can have in supporting the connection process when there is clear guidance on how they can get involved.

- A general theme from our engagement with developers and boroughs is a frustration at a lack of transparency from DNOs, particularly when seeking to understand the broader connection queue and options for collaboration with other customers. Several stakeholders have noted to use that they would appreciate DNOs to be less guarded and more transparent during calls to find solutions for sites experiencing connection issues. It was expressed that it would have been helpful if the DNO shared lessons learnt from other sites that were able to move forward despite the constraints, including sites owned by the same developer, in the hope that solutions could be replicated. We believe that a finer balance between customer confidentiality and transparency can be reached for demand customers, similar to the manner in which generation customers are already treated, which would be of benefit to both customers, the DNOs, and broader stakeholders.

The GLA supports the proposal to improve the consistency of standards of service, including at the Transmission/Distribution interface, and increase Transmission Impact Assessment thresholds for demand connections where possible. In one instance, a customer incorrectly understood that only applications for less than 1MVA would avoid transmission level upgrade timelines in west London. As a result, the customer put in applications lower than their scheme requirements for multiple EV charging sites.

### **3. Requirement on networks to meet connection dates in connection agreements**

The GLA recognises many of the issues identified by Ofgem under this theme. We would support in principle changes to the regulatory framework to provide proportionate requirements on network companies to meet agreed customer connection dates, commensurate with those on developers to meet development milestones.

We are aware of the following issues that the GLA has directly observed or been made aware of through our engagement with stakeholders which support the proposal on networks to meet connection dates, while highlighting the risks of not doing so:

- Customers have poor visibility of constrained areas of capacity prior to advancing their development projects. For instance, the GLA has received several asks from developers for support in constrained areas across London, beyond the known constrained areas of west London. This is notably the case

where developers have sought to increase their energy asks during development, given changes in requirements (particularly as a result of decarbonisation) occurring over a long-time frame for development. This has resulted in small requests for capacity increases leading to significant connection delays. Lessons can be learnt from the GLA supported solutions used to unlock close to the full pipeline of schemes in the affected west London area that we are aware of and that are application-ready. We would welcome further engagement with Ofgem to share our learning and approach.

- A lack of guidance as to how developers should best approach projects within constrained areas has also led to unhelpful behaviours on the part of customers. For instance, the GLA has witnessed development customers put in multiple quotations for the same site, sometimes using different postcodes from the same site, to see if the results give timelier connection offers. This process congests the distribution queue with applications that will not be taken forward and leads to a false depiction of the network for planning purposes. In addition, multiple applications for a single scheme creates excess fees for the customer and abortive work for the DNO.
- Uncertainty around connection offers is a frequent concern from stakeholders. The GLA received information on a DNO quotation that was formally issued and then revoked, with the dates for a connection initially set back by 5 years. This resulted in the customer raising a formal complaint to the DNO. In another incident, the GLA has been made aware of a DNO unwilling to provide a customer with offer certainty for the full capacity requested by any date, with no clarity to the customer as to why a full connections offer could not be provided. These are just two examples that illustrate how ambiguous commitments to connections may increase costs and burden for customers.
- To further illustrate the risks of delayed connection dates, the GLA has learnt of investors asking for evidence of a secure electrical point of connection for west London developments due to the capacity constraints. This meant that the housing scheme may have potentially been unable to secure financing due to a caveat in the connection offer allowing the Transmission Operator (TO) to withdraw the connection product at their discretion. The GLA supported this scheme to resolution and removal of the caveat, but this is an issue for Ofgem to be aware of in facilitating the adoption of new connection products.

While we would support Ofgem's proposals under this theme, we would advise caution to ensure new requirements do not encourage TO or DNO behaviour that may create longer-term undesirable impacts. For instance, we would want to ensure additional requirements would not lead to an excessive dependency on short-term flexibility to deliver on connection date agreements at the cost of necessary network investment. Additionally, we would caution against the implementation of requirements that may incentivise disruptive 'stretch connections' (described in further detail under our response to Theme 5) to more quickly counteract delays to agreed connection dates.



#### **4. Quality of connection offers and associated documentation**

The GLA recognises many of the issues identified by Ofgem under this theme. We would support in principle changes to the regulatory framework to ensure network companies are required to issue high-quality offers to connecting customers.

We have been made aware of several issues through our engagement with stakeholders which support the proposals to improve the quality of connection offers, while highlighting the risks of not doing so:

- Customers have experienced uncertainty around the scope, quality and approach of budget estimates and feasibility studies. Developers are often unclear in their understanding that a budget is not a formal application offer they are able to accept, and that a budget is not a reservation of capacity for the customer. Development teams are also unclear that a feasibility study is not a prerequisite to a connection offer, potentially saving the customer time and money if they chose to proceed straight to a connection offer.
- The Access and Forward-Looking Charges Significant Code Review implementation has significantly altered the burden of reinforcement costs. However, multiple stakeholders have raised with us a significant confusion around the implementation and relevance of this to their connection offer. This includes instances in which developers face delays and unexpected costs to projects through a lack of clear and consistent approach in the implementation of these reforms. Further clarification on the varying impacts of proposed regulatory changes could help address the risk of overemphasising cost reduction which can jeopardise the necessary pace and scale of investment programmes.
- The GLA has found that a key factor in finding solutions to customers facing connection issues is in agreeing shared and simple templates for additional information exchange between the customer and DNO. Developers are often providing extensive and unnecessary detail in their additional information requests to DNOs in a format that is not legible and relevant to progressing their connection. Confirming the nature of additional information requirements would be of benefit to facilitating more effective customer-DNO communication. For example, in supporting affected developers, the GLA often mediates through requiring the customer to fill a very simple table showing the year-on-year power requirements, including Temporary Builders Supply (TBS) installation and removal, in a legible format. The provision of this information should be prioritised during early-stage communications as it allows the DNO to best assess the customers scheme requirements against network forecasts to find viable solutions.

#### **5. Ambition of connection offers**

The GLA recognises many of the issues identified by Ofgem under this theme. We would support in principle changes to the regulatory framework to ensure connecting customers are offered ambitious connection dates.

We have been made aware of the following issues through our engagement with stakeholders, which support the proposals to expedite connections, while highlighting the risks of not doing so:

- We are aware of instances of developers in west London affected by capacity constraints considering increasing the use of temporary generators to cover delays to their long-term electricity connections. This has the potential to cause unnecessary and negative impacts to local air quality given the emissions associated with temporary generators. The GLA has been able to help unlock two developments that had intended to rely on an increased use of temporary generation to cover their connection delay. Helping to eliminate this increased reliance on temporary generators, has avoided the emission of at least 1.62 tonnes of particulate matter, 22.63 tonnes of nitrogen oxide and 7,070.94 tonnes of carbon dioxide<sup>1</sup>. Accelerating permanent electricity connections has the potential to prevent unnecessary and negative impacts to local air quality given the emissions associated with temporary generators.
- The GLA is increasingly seeing projects requiring large power connection requests, including data centres, undertaking 'stretch connections.' These are longer than expected connection routes to electricity supply points much further away from the development site. In some scenarios this involves connections that extend across multiple London boroughs, or across DNO area boundaries. These connections are often pursued by customers seeking to achieve a connection earlier than waiting for network update timelines to increase the available electricity capacity at their nearest relevant substation. Stretch connections have the potential to generate significant and avoidable additional disruption to Londoners in terms of increased street works, congestion, and contribution to air pollution. The knock-on effect of these connections can result in broader network congestion affecting reliability and resilience, as well as further stretch connections as local electricity capacity is impacted by development occurring elsewhere. It should be noted that there is currently no mechanism that allows Local Planning Authorities or Highway Authorities to limit or prevent this behaviour, given the works comprise permitted development.
- It is likely that the on-going pressure on grid capacity because of growing energy demand will generate an increase in stretch connections, with resultant network management implications. It is clear from recent experience that the cost of undertaking stretch connection is not proving to be a suitable mechanism to deter disruptive connection routes, or signal that major energy user developments should locate in areas with better energy availability. For data centres, this is often linked to their spatial requirements to be located within an availability zone. The GLA believes that further analysis could lead to a better understanding of ways to mitigate impact such as trench sharing, requiring consideration of a development's stretch connection within their Environmental Impact Assessment, future proofing, and opportunities for

healthy streets improvements along stretch connection routings.

### **RIIO T3 – Electricity Transmission Network Incentivisation**

The GLA supports Ofgem's preferred option to incentivise each Transmission Operator to increase their Supergrid Transformer Capacity (SGT) based on projected capacity within a regional breakdown. As we electrify our energy system, it is expected that demand on the electricity network will increase significantly across Great Britain, especially into the 2030s. However, our experience in west London illustrates that regional needs will vary and that local contexts should be considered by TOs to ensure that the necessary investments in the electricity network are made at the right time and in the right areas. In west London, there has been a sudden increase in the number of major energy users such as data centres who, due to their large energy demand, are seeking a connection to the transmission network. However, the subsequent capacity constraints have primarily impacted developments seeking a demand connection to the distribution network. We would therefore seek reassurance that whichever incentive structure is pursued will generate meaningful and timely benefits to demand connection customers in west London who are held up by constraints on the transmission network.

We acknowledge Ofgem's identified risks with this proposed approach, namely that of the lack of historical data on the relationship between connections activity and SGT capacity. As part of the collaborative efforts that the GLA has led with London Boroughs in developing LAEPs, this process has generated a robust evidence base for long-term investment in the electricity network based on local needs. We are committed to working with Ofgem, NGET, and Distribution Network Operators in sharing data that can help inform the requirements for SGT capacity.

Please note that the GLA is concurrently responding to Ofgem's consultation on the RIIO-ET3 in which we also outline our perspectives on the options considered as part of the new incentives structure.

## **Appendix: Transport for London contribution - Ofgem consultation: Connections end-to-end review of the regulatory framework – Contribution from EVID**

### Background

In December 2021, Transport for London (TfL) published the EV infrastructure Strategy (EVIS). The vision within the strategy is to support a net zero carbon target for London by 2030, and better air quality for all. The strategy seeks to accelerate the transition to zero emission vehicles by setting out the requirements for the provision of infrastructure, focusing on essential trips.

By 2030, it is estimated that London will have between 1 million to 1.4 million electric vehicles, 34-49% of the light vehicle fleet (currently c.6.7%) and that London will require between 40,000 to 60,000 public charge points, including 3,000 to 4,000 rapid.

The Mayor made a pledge to unlock land owned by TfL and other members of the Greater London Authority for EV charging. TfL's Electric Vehicles Infrastructure Delivery (EVID) project aims to meet this pledge and is a keystone commitment of EVIS, delivering rapid/ultra-rapid EV chargers (generally in on-street locations) aimed at those making high mileage, essential trips who need on-the-go charging.

Since November 2022, four contracts have been awarded across two charge point operators to deliver rapid/ultra-rapid (50-150kW) chargers on the TfL Road Network. 100 sites have been awarded to Charge Point Operators (CPOs) to deliver across the four contracts however, we are seeing a number of issues which can result in sites being dropped, often due to power availability or cost of power connections / upgrade. The contracts we have with the CPOs are supplier-led therefore the CPO is responsible for funding, design, delivery, operation, and maintenance of chargers.

TfL has managed to work closely with UKPN to carry out some feasibility work prior to issuing the sites out to the market as part of a tender, at zero cost to TfL, however, there is still a large fall out rate at the point at which the CPO seeks to get power to the charging location.

### Response to consultation:

1. **Visibility and accuracy of connections data** - All useful data must be made available transparently to connecting customers and other interested parties in order to inform customer's connection applications.

In order to understand what power is available at proposed locations for rapid/ultra rapid chargers, TfL has had to work with UKPN to develop a process where the proposed locations for installing either 50kW or 100kW chargers are shared with UKPN and they provide an assessment of whether enough power is available at the location, cost of accessing that power or cost of upgrading the power to enable the

charger to be delivered. This has been essential at getting information on power availability and cost at the feasibility stage (prior to issuing out to the market for design / delivery) however, there are some issues TfL has encountered that have meant a large number of sites are not deliverable by the CPO:

- Information is given at one point in time, and due to the feasibility nature of the work TfL is doing at this stage, despite knowing that if the sites fall within the acceptable cost range for progressing to the market, this information can be out of data by the time these sites have been released to the market via a tender and the CPO is requesting formal quotes from the DNO. It can be anywhere from 6 – 12/18 months from this initial discussion to CPOs requesting a formal quote and TfL assumes other customers requiring power in the same area are not told of TfL's desire to install chargers in these locations.
- The information provided does not give any indication of whether there are any other applications for power in the same locations so given that it is provided at one point in time, this power may not be available by the time CPOs come to request formal quotations from the DNO.
- Over the past 12 months, it has become clear that cost of power upgrade is a barrier to some CPOs to provide higher power chargers and there are instances where the cost provided at feasibility stage to TfL differs greatly from the cost provided at formal quotation stage to the CPO. TfL does not want to ask for a formal quotation to secure power at the stage of feasibility as this is an additional cost when sites may not be taken forward for other reasons however, more information or a more accurate cost estimate at this time would provide more certainty that sites being offered in a tender are deliverable.
- Over the last 12 months, TfL has also found that the distance the electrical connection is from the location of the EV charger can hugely affect the cost of installation. In some situations, power is available but distance away from the charger makes delivery economically unviable for CPOs. Better visibility/certainty around this distance at a formal feasibility stage would provide more certainty around cost of delivering that connection would inform better decisions around what sites are feasible for delivery. TfL has requested this information in addition rather than been provided this upfront.
- TfL has only managed to carry out this process with UKPN due to building a close stakeholder relationship with them however, TfL does not have anything like this with other DNOs in London meaning that for some areas, information on power availability and cost is limited, leaving a lot of risk in delivery.

## **2. Improved standards of service across the customer journey**

- Connecting customers must receive a high standard of service at all stages of the customer journey, from pre-application to energisation.
- In reference to the above points, it would be useful to have accurate information available to TfL and Local Authorities on power availability, cost and distance connection is from location provided pre-application from all DNO's to enable TfL to make decisions at feasibility stage rather than offering sites out to the market that are not feasible to deliver.

Additionally, accessing the power required to decarbonise London's bus fleet not only has a positive impact on contributing to regional and national net zero ambitions but also improves customer experience of travelling by bus. In the Department for Transport's National Travel Attitudes Survey 2024, when asked about bus travel, 37% of respondents said they would be more likely to travel by bus if a zero-emission bus was available. Of those who use the bus at least once per week, 84% agreed with that improving the air quality and reducing pollution in their local area through the use of zero emission buses is important to them.

#### **4. Quality of connection offers and associated documentation**

- Accessing a connection to the National Grid via a DNO is not a barrier unique to extending TfL's network of electric vehicle charging points. The challenges faced when looking to achieve the ambitions set out in TfL's EV infrastructure Strategy (EVIS) are also experienced during work to decarbonise London's bus fleet.
- TfL uses a bus franchising model whereby, through a competitive tender process, TfL contracts private companies to operate its bus services, a fleet of c9,000 buses. These bus operators apply to DNOs for the power required to charge electric buses from garages located across London. They report the DNO application process as being time and resource intensive, with applications often having to be restarted as they have expired which could result in higher costs quoted or the amount of power requested no longer being available.
- Before a bus operator places an order for new zero-emission buses with a manufacturer, the operator needs certainty that they have both been awarded a zero-emission bus route which requires confirmation that the DNO will provide the necessary power connection to the nominated bus garage. A complex DNO application process, therefore, has a negative impact not only on the transport authority and the operators but on the manufacturers who cannot plan for future production.
- Inflexible DNO application processes, like those seen in London, do little to foster a strong supply chain, provide operators with the certainty they need to operate electric buses, and allow transport authorities to be ambitious in their contribution towards meeting regional and national net zero targets.

#### *An example:*

Reliable access to the National Grid is an issue faced by bus operators in London and across the country. How this barrier can impact the industry is exemplified by Stagecoach London's access to power at their West Ham bus garage.

Stagecoach London currently operates five electric buses from West Ham bus garage. In principle, the garage could operate over 100 electric buses, but the current power supply only gives the garage a maximum capacity of 15 electric buses. When Stagecoach London enquired about additional power supply being provided to the site from the local primary sub-station located within 200 metres of

the garage, UK Power Networks (the DNO), confirmed there was no further power available.

A large housing development neighbours West Ham bus garage, which has secured the majority of power available from the DNO. The first-come-first-served basis by which DNOs provide power means that West Ham bus garage will not be able to access any additional power until an alternative primary sub-station comes on-stream. This is expected to take four years to complete. The cost and resources associated with upgrading the local primary sub-station means this option is not viable in the short or mid-term.

Even when an alternative primary sub-station is made available, routing power from it will prove to be difficult as West Ham bus garage is bounded by rail track, road, waterway, and an industrial estate. Routing power requires agreement from all stakeholders which further risks the feasibility of this option. As a result, the long-term feasibility of West Ham bus garage has been placed under review.

Unfortunately, TfL and the bus operators are finding this is a common occurrence across many parts of London.