

Ofgem RIIO-3 Team

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GLA response to Ofgem consultation: ED3 Framework

This consultation is timely and welcome, particularly given our shared ambition to ensure the infrastructure is in place to support the transformation of our energy system, while concurrently delivering sustainable economic growth and keeping the costs of infrastructure development as low as possible.

In London, our key priorities are provision of safe and affordable housing, and achieving net zero by 2030 while strengthening climate resilience. We also acknowledge and agree with the key contextual drivers for change in the upcoming price control period, namely the significant increase in electricity demand that is expected in the 2030s, decentralisation of the energy system, the evolving role of strategic planning, and the impacts of climate change. It is imperative that stakeholders' efforts are aligned to facilitate a coherent approach to planning for and meeting these demands. This should include consideration of how the key driving objectives are interconnected, such as the shift in the balance of risk in favour of more proactive investment to ensure capacity is available at the critical time when it is needed.

Below, we raise our strategic points within each of the key themes of the proposed changes to the framework.

To provide a brief overview of the London context, which informs the rest of our response:

- London's energy consumption in 2022 was 123.5 TWh, making up nearly 10 per cent of the UK total demand.
- London is targeting delivery of nearly 88,000 new homes per year, in line with government targets.
- It is estimated that there are over 1.8 million buildings with the potential for Solar P.V. roof installations in London, and the Mayor has a target of having 1GW of solar capacity by 2030.
- London Government is developing requests for government to commit a significant portion of GB Energy and other decarbonization funding to London. Distribution network operators (DNOs) will need to be prepared for this forthcoming activity.

Regulatory Framework

We welcome the proposal to coordinate and align the ED3 framework with the various changes that are happening in parallel – the introduction of the National Electricity System Operator (NESO) as well as Regional Energy Strategic Plans (RESP), the

recommendations from the National Infrastructure Commission study on distribution networks, and more broadly the Government's Clean Power 2030 mission. This will help ensure that any framework adjustments in ED3 are complimentary to concurrent changes pursued across the energy system.

We support and acknowledge that the key driver in ED3 is to meet the significant increase in electricity demand expected in the 2030s. As a result, we recognise that the balance of risks when it comes to investment is changing – the focus is now shifting in favour of proactive network investment prior to demand materialising, and we support this. Ofgem's proposal to pursue a Plan and Deliver regulatory framework archetype therefore makes sense. The introduction of the RESP role will help create greater clarity of system need, which allows for a more input-based planning approach, ensuring DNOs' investments are consistent with longer term needs of the network.

While the GLA appreciates that the introduction of this new role requires some reconsideration of the incentives on DNOs, it is important to acknowledge that many of the incentives in RIIO-ED2 have been effective. For example, the re-opener mechanism can continue to be effective within the new regulatory framework to allow for flexibility within investment, as well as to support timely responses to unexpected network constraints where new investment needs emerge in between price-control periods. This could be in response to emerging government decisions such as: devolved funding settlements for city regions or local authorities to invest in decarbonisation projects such as retrofit, transport, and local renewable generation; or changes in land use planning policy that facilitate an uptick in development and therefore new demand connections. We believe that there is a role for both the RESP and the Distribution System Operators (DSOs) to develop local-led forecasts, and use this insight to inform business plan re-openers and facilitate greater levels of anticipatory investment, with input from local actors.

Networks for net zero

Anticipatory Investment:

The GLA agrees it is essential that in ED3, DNOs take a more proactive approach to providing network capacity through asset investment. Strategic investment in infrastructure capacity is crucial to delivering on ambitions for decarbonisation and clean energy. This requires strategic planning to ensure that the network is designed with long-term regional needs in mind. Providing DNOs with a mix of mechanisms and incentives to act at the right time and in the right circumstances will support investments in a low-carbon future, and deliver whole-system led solutions, rather than piecemeal approaches which are often disruptive. The electricity constraints being faced in West London demonstrated the risk of what happens when networks wait for demand to materialise, rather than plan and deliver through anticipatory investment; and, alongside our work on Local Area Energy Planning (see below), demonstrated the valuable role

that an organisation like the GLA can play in helping DNOs to understand likely future demand.

West London Capacity Constraints – case study

In Summer 2022 the GLA was made aware of electricity capacity constraints being faced in three West London boroughs – Ealing, Hillingdon and Hounslow. Developers reported receiving quotes from Scottish and Southern Electricity Networks (SSEN) with connection dates in 2037. A rapid influx of development proposals from large demand customers (e.g., data centres) had created capacity constraints on both the distribution and transmission networks in the region, absorbing most of the remaining electricity capacity in the West London area for the remainder of the decade. Beyond physical infrastructure constraints, the delays were also due to contractual queues and the regulatory requirement for connections to be prioritised based on their place in the queue on a first-come, first-serve basis. While SSEN and National Grid Electricity Transmission (NGET) committed to upgrading their networks to support the increased electricity demand in the region, upgrades will take many years to complete (for example, up to 2037 for transmission upgrades).

Since the issue arose in 2022, the GLA has worked with SSEN, NGET, NESO, UK Power Networks, affected developers and boroughs to pursue a suite of solutions to mitigate this issue. While these solutions have helped to free up capacity in the area in the short term and allowed many housing developments to move forward, it remains the GLA's view that proactive investment ahead of demand is needed. This should be undertaken through an ongoing, sustainable and planned approach to grid reinforcements that considers not just investment but also relevant factors such as supply chain requirements, resourcing and skills, etc.

However, it is equally important to protect against adverse consequences from this proposed shift toward investing in assets ahead of materialised demand. To protect the interest of customers, there should be robust and clear requirements for the evidence that Ofgem will accept to fund investments. This can help costs remain low for customers. The GLA agrees that Ofgem should consider additional controls to incentivise that investment from DNOs are based on evidence and completed in a timely manner.

Flexibility:

The GLA acknowledges that this push toward anticipatory investment means a shift away from a flexibility-first approach to avoid a scenario in which networks are deferring strategic investment to subsequent price control periods. However, we heard from DNOs the importance of recognising the unique opportunities presented by flexibility in balancing the grid at distribution level, whilst providing wider system benefits. For

example, at the local level with lower voltage substations, it will continue to be plausible to prioritise flexibility to make sure networks are making the most efficient use of existing capacity, and maximising the potential of local renewable generation.

Future heat networks in London also stand to provide additional system flexibility that will benefit the wider GB energy system; however, there is currently a disconnect between the system benefits such assets provide and the rewards those asset owners receive. Currently, it is worth noting that in West London, local flexibility tenders were used to unlock additional network capacity to allow connections to continue ahead of distribution network reinforcement scheduled in the coming years (see case study above). However, the initial rounds of flexibility tenders did not have as much uptake as anticipated from customers, which suggests the need to improve engagement and ensure markets are operating effectively.

Given that flexibility will continue to play an important role in energy system planning and operation, further consideration is needed to address the data gap and understanding in the market around the opportunities and use of flexibility. Removing the barriers to the adoption of flexibility can ensure it can be effectively mobilised in the interest of consumers.

Regional Energy Strategic Plans:

We agree that a decarbonised energy system requires strategic, cross-vector and localised, data-led planning to identify system need and enable proactive investment in the network. The vision for RESPs to be whole-system focused, and to reflect the regional context while being coherent with national energy planning, is welcomed and would resolve many of the issues faced in the current energy planning process. For example, in the previous price control, DNOs' net zero forecasts reflected lower levels of ambition relative to the high local ambitions of cities such as London, presenting risks to achieving local net zero targets.

Better coordination of strategic planning leads to greater confidence in planning future network investment to meet local demand. This can be achieved by ensuring that decisions are supported by robust data, developed through collaboration across key stakeholders. As such, the GLA will continue to engage with its partners such as Ofgem, boroughs, and DSOs/DNOs to support the development of a unified view of upcoming demand across London, and investigate innovative, area-based solutions. To date, this has primarily been done through the delivery of [Subregional Local Area Energy Plans \(LAEPs\)](#). The LAEP process provides a robust evidence base for longer-term investment in distribution networks, informed by local projections of housing need, economic growth and investments required to support decarbonisation. Existing LAEP work in London provides a rationale and evidence base for investing ahead of demand and should be a key building block in the work of the RESPs. In our engagement with

Ofgem via the recent consultation on the RESPs, we have highlighted our view that a new energy plan-led approach to investment should build on the work already under way, with a particular focus on avoiding duplicative conversations with stakeholders and use of common data. We also commented in that consultation on the need for London Government to have appropriate representation in governance processes overseeing the RESP (please see that consultation response for further detail).

Further, we heard from DNOs that there remains some confusion with the rollout and implementation of the RESPs. More information is needed to address the following concerns:

- How the RESP position will sit within existing roles to ensure effort is not duplicated
- How the timelines for the ED3 plans will align with the rollout of the RESPs, including the transitional RESP (tRESP) that will be required in the interim as the governance of the new function becomes established
- Lack of clarity on how RESPs will inform inputs within a DNO delivery plan, as well as the sources of evidence that will be required from network companies
- Lack of clarity on how RESPs will integrate with existing local land use planning processes to ensure that spatial and land use planning processes consider the physical needs associated with new infrastructure, so as to better enable delivery—specifically in regard to the new requirements under the National Planning Policy Framework for Local Plans to more actively plan for major energy users (including data centres).

Smarter Networks

The GLA welcomed Ofgem’s requirement in ED2 that network companies must produce Digitalisation Strategy and Action Plans (DSAPs) and comply with Data Best Practice Guidance. This has had real impact: Over the last few years, we have seen an increase in the amount of data being published through network companies’ Open Data Portals. This has facilitated quicker sharing of infrastructure data – we can obtain it directly from a public portal rather than engaging in individual conversations with network providers to sign bespoke data sharing agreements. In some cases, we have been able to establish automated connections to Open Data Portals, ensuring our platforms have access to the latest data and reducing the data sharing resource required for both parties.

While these are good foundations, there is still potential to go further: ensuring a consistent and standardised approach across all network companies, publishing more granular and regular data; producing higher quality data; and sharing high-value data that may be difficult to obtain. We encourage Ofgem to build on this progress for ED3, and push network companies to invest further in data and digitalisation.

We agree with Ofgem that digitalisation and better use of data is central to decarbonisation, enabling greater visibility of energy flows and the status of network infrastructure. We recognise the critical role that data (and enhanced data sharing practices) must play in accelerating London's net zero energy transition. One of the primary ways network data can be used is in LAEPs. The GLA is delivering sub-regional LAEPs across London's four sub-regions, recognising that network requirements often span borough boundaries and supporting a whole-system approach. The GLA has also developed a LAEP DataHub which provides a common evidence base and data framework for local authorities to then take forward into detailed Phase 2 LAEPs (stages 5-7 of the ESC methodology) at the borough level. We are sharing our learning from this with NESO and RESP teams as they consider replicating this across the country.

As the LAEP modelling becomes more detailed, the granularity, currency and accuracy of data becomes more important – as this will be used to plan infrastructure requirements and develop net zero project connection pipelines. To support this, we encourage Ofgem to incentivise network companies in ED3 to do the following:

- Publish data on headroom at medium and low voltages. While data on primary substation capacity is often readily available, it is not always available at secondary substation level, which is a shortfall in our ability to identify short-term bottlenecks at the street level. This data would assist in the future stages of energy systems planning and technology deployment at the borough level, for example better understanding the trigger points for upgrade based on heat pump deployment or an EV chargepoint installation, and enable more effective use of government funding for such projects, which is often timebound. In addition, constraint-based data linked to substation assets does not often provide the full picture of constraint – e.g. physical space for upgrade, which has implications for land use planning.
- While DNOs have progressed with publishing open data, it is not always displayed in a non-technical manner with information that would be of most interest to customers. For instance, customers looking to understand local electricity capacity to plan for a future development would be interested in understanding the timeframe to connect rather than simply headroom capacity, especially given that headroom projections do not always reflect connections queues.
- There is a lack of data around demand connections that would be useful to both customers and Local Authorities in being able to better plan for growth in a sustainable way. Appendix G in the Statement of Works provides a public and open view of the connections queue in relation to generation, and it would be useful if a similar broad demand dataset could be required. This would be especially useful in allowing areas to have better visibility of major energy user proposals, particularly as they often seek a connection before signalling development intentions via the local planning process.

- Publish the identification of flexibility opportunities in a centralised portal and potentially linking these to aggregated flexibility offerings from boroughs or the GLA. This could be linked to smart meter and low carbon technology deployment data.
- Publish data with as much granularity as possible. The higher level of detail allows for aggregation, creating commonalities.
- Standardise data formats. This will allow repeatable, and ideally automated, modelling. The current approach to updating LAEPs is resource intensive and costly for local authorities.
- Take a 'presumed open' approach to data sharing if security is fully addressed. Where data cannot be shared publicly due to security or commercial concerns, Ofgem should encourage network companies to consider sharing that data in secure formats (for example, redacting sensitive attributes or publishing at an aggregated scale) with selected and trusted stakeholders.
- Publish data in strategic areas, such as network planning, flexibility and connections. While good progress has been made in some areas, some high-value data is still hard to come by or is poor quality. For example, while connections data would be valuable for the GLA to influence routing decisions to reduce disruption and drive collaboration, this data is often not shared due to commercial concerns. We believe many of these concerns could be mitigated or addressed, and will provide detailed recommendations for data improvements in Ofgem's separate consultation on the connections process, due in February 2025.
- Support local authorities to share accurate and regular growth data. While this data is owned and produced by local authorities, understanding where and when growth will happen is crucial for network companies to plan for investment (e.g. to know when a new development or data centre gets approval). There is potentially a role for network companies to support local authorities to build their data capability through grants or support.

Outside of working with network companies, we think there is a role for Ofgem to facilitate the sharing of consumer level energy data in a secure and standardised way. It is currently hard to obtain regular smart meter data, but this data would be very helpful to size infrastructure requirements. Smart meter data also allows the impacts of retrofit measures to be tracked in terms of energy consumption, allowing progress to be measured. Smart meter data also provides a better indication of current performance of a property than an EPC, where there will often be a lag between low carbon measures (such as retrofit) and an EPC. The smart meter data will also give an indication of occupancy, which is often a major uncertainty in boroughs.

We agree with Ofgem's statement that the best way to prepare for new technologies, opportunities, and challenges is in developing internal skills on data and digitalisation. A key lesson from the GLA's extensive engagement on data sharing with DSOs/DNOs

and utilities in other sectors is that the operational resource, including staffing, required to maintain high quality data and to coordinate requests for data from other organisations should not be overlooked. Without adequate digital capability in place there will be delays sharing and using critical data. We recommend that Ofgem continues to encourage networks to allocate funding towards operational resource (building data literacy and data governance).

Regarding leveraging Artificial Intelligence (AI) to enhance modernization and innovation across networks, the GLA appreciates Ofgem's consideration in both the benefits of AI growth with risk of constraints on the grid if AI data centres proliferate. London is a European leader in data centre development, providing world-leading infrastructure that hosts our growing digital sectors. However, as explained earlier in this document, the West London capacity constraints were partially driven by the sudden growth of major energy users such as data centres. Given the expectation that the UK's energy needs will continue to grow as a result of decarbonisation, as well as growth in innovative and energy-intensive sectors such as data centre development, it will be important to ensure that regulation and system planning takes a holistic approach to forecasting and balancing data centre growth in a way that mitigates their intensive energy and water requirements.

Responsible business

The GLA welcome Ofgem's proposal to introduce regulatory changes to ensure DNOs deliver high-quality services and value-for money through actions such as strengthening the voice of the consumer and strengthening DNO accountability.

Through liaising on issues between the boroughs, developers, and DNOs, the GLA has observed variability in the service experienced by customers. The following overarching changes can help to achieve the objectives within the consumer outcome of responsible business:

- Improvements to the quality of connection offers and ambition of commitments. This includes the quality of communication and responsiveness of the DNOs to the customers at all stages of the connection process—for example, providing a key point of contact to manage customer inquiries.
- Providing timely and sufficient support to manage unexpected issues that may impact the scope of service to the customer, including enhanced transparency as to why the change has occurred with clear communication and a more proactive stance on the potential solutions that are being considered.
- Further transparency on Distribution Future Energy Scenario (DFES) planning, including how Local Area Energy Plans and Local Plans feed into the evidence base used to develop DNO investment programmes. Additionally, improved

visibility to customers of local capacity and the live connections context to help better inform their decisions.

We are aware that some DSOs/DNOs already have the above processes in place, so these suggestions are intended to bring all DSOs/DNOs up to a unified, high level of service.

Further details on these recommendations will be included in the GLA's submission to Ofgem's consultation on the Connections End-to-End Reform.

Resilient and Sustainable network

The GLA acknowledges and supports Ofgem's proposals to incentivise network companies to deliver a safe, secure and resilient network that is prepared for a surge in demand as well as the unexpected consequences of climate change. The goal of a network fit for net zero and climate adaptation are intertwined. To meet the challenges of climate change there is a case for both strong mitigation and adaptation, planned and delivered as part of a combined strategy.

The impacts of climate change are expected to vary depending on the geographic area, depending on the scale of existing mitigation measures and the level of risk to communities and infrastructure from climate change-induced overheating, flooding and water scarcity. Actions to reduce those risks and increase resilience will need to occur at the local level and will need to involve local communities. Network companies should work with regional and local authorities through tools such as LAEPs to understand regional contexts to anticipate network investment needs.

In particular, through the Mayor's London Climate Resilience Review, a number of actions have been identified as priorities for London. The GLA will continue to work with DSOs/DNOs as part of implementing these recommendations.