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Dear Akshay,

Re: Open letter on future reform to the electricity connections process

The SSE Group welcomes Ofgem's open letter on Connections Reform published on 16 May 2023 and the opportunity to respond to the issues raised therein. Getting electricity connections reform right will be critical to meeting the 2035 target for a net zero electricity system and the 2045 and 2050 net zero targets set by the Scottish and UK Governments.

Therefore, in our response to this open letter, we set out the following key asks:

- Ofgem must recognise and respond swiftly to deliver the proactive and supportive regulatory framework that will enable the step change in network investment necessary at both Transmission and Distribution to be consistent with the net zero pathway.
- We are supportive of the work and early reforms being progressed to address the current challenges. However, it is key that customer impact as a result of these reforms and any further reform measures are kept under review to ensure that their impact remains appropriate.
- Notwithstanding the need for urgency, reforms in this area must follow due and proper process to ensure changes are in the interests of all stakeholders and stakeholders' expectations must be managed in accordance with this. Ofgem's role in both this and leading and driving the necessary reforms is paramount.

For the avoidance of doubt, this response to Ofgem's May open letter does not capture our views or position on the National Grid Electricity System Operator (NGESO) consultation on Connections Reform published earlier this week. We will respond and engage on that consultation as appropriate over the coming weeks.

About SSE

SSE is a leading electricity company, developing, building and operating low carbon electricity infrastructure and assets across GB that are consistent with delivering a strategy focused on net zero. Unlike any other GB stakeholder, we have interests in on- and offshore generation and storage, both new and existing technologies, and own and operate the north of Scotland Transmission network, as well as two regional Distribution networks – one in the north of Scotland and one in southern England.

In May 2023, the Group announced plans that could see it investing up to £40 billion over the next decade to 2031/32 to further its deployment of renewable energy and the flexible power sources necessary to support it, as well as the vital network infrastructure to connect and transport this low carbon generation around the UK.

Therefore, connections reform is of utmost importance to the SSE Group and, given our widespread involvement, we see ourselves as a key stakeholder. We are well positioned to consider the multi-faceted issues at play and the important trade-offs that will inevitably need to be made as the industry and policy makers seek to improve the ability and experience of customers connecting to the electricity network. We have been and remain a committed and key stakeholder in the NGESO and ENA workstreams and groups that have so far been driving the short-term, tactical changes to the connections process. We note that these changes, by their very nature, will not resolve the more systemic problems. To this end, SSE supports the vision set out in the open letter for developing longer-term, enduring connections arrangements.

Addressing the current challenge

We recognise and agree with many of the challenges set out in Ofgem's open letter. In particular, the significant increase in connection volumes and the pressure this puts on the systems and processes, and the long wait times for projects to be connected.

Fundamentally, this is caused by the lack of sufficient capacity across the network and requires a step change in network investment, underpinned by a proactive and supportive regulatory framework to ensure network companies at both Transmission and Distribution can **invest at pace and volume in network capacity**. As a minimum, we believe this investment must align with the capacity needs and delivery timescales set out in the Future Energy Scenarios (FES) and Distribution FES, and must be informed by local stakeholder needs. As stated above, we believe this requires an evolution of the regulatory framework to proactively drive the efficient investment required.

Our networks businesses will play a pivotal role in delivering this investment and we recognise the promise shown by the Accelerated Strategic Transmission Investment (ASTI) framework in providing this much-needed certainty. We believe it is vital that Ofgem builds on the success of this and acts swiftly to roll out the merits of this framework further, to recognise the longer-term economic and societal benefits of proactive (and indeed anticipatory) network investment at all voltage levels, including distribution.

Although there is a lot that can be done to expedite network investment, we recognise that investment in network capacity is not a 'quick win' and that Ofgem and others, including ourselves, are seeking urgent reform to the connections process. Therefore, in addition, we have given our **broad support to initiatives that seek to, for example, better manage the connections queue and improve network**

modelling. The impact of these changes is expected to be significant. Indeed, NGESO is anticipating that these steps will enable projects to connect up to ten years earlier, which is clearly welcomed.

However, despite the focus on bringing forward connection dates, in much of the reform work to date it is not always apparent that customers connecting to the network are at the heart of the proposed reforms, nor whether the impact of these reforms on them have been fully understood or considered. **It is crucial that these reforms do not lose sight of the customer impact at all levels**, but particularly on those project developers that are bringing low carbon generation and storage projects to market, which will be key to delivering net zero.

The lack of network capacity and long lead times absolutely needs to be addressed. We expect the latter to be addressed by better queue management, noting the current CUSC Modification Proposal 376 (CMP376). As we move forward, it is key that **the effectiveness of queue management and other reforms is kept under review to ensure that 'good' projects do not fall away**, either because the connection process is too rigid or because it does not recognise the complexities of the projects that it is trying to support.

It is less clear how the current lack of **transparency** around customer connections and tendency for change (even at the formal Connection Offer stage) is being addressed. Notwithstanding that these changes to the delivery of customers' connections is for the wider good, from a customer perspective, this uncertainty is, at best, hugely frustrating and, at worst, can result in projects being exposed to significant additional costs.

Further, the process of reform, i.e. bringing in changes to customers' contractual arrangements or changes to the way in which they can get a connection, has a significant impact on project developers and their investor confidence, none of which must be over-looked or underestimated and should be a key consideration in this reform work, including any measures necessary to properly account for this.

Ofgem's role

Given the above, it is key that **Ofgem takes a central role** and acts in the interests of all stakeholders in assessing and taking forward any further reforms to the connections process. Importantly, this reform must consider not only the industry processes that may need to change, but – as highlighted above - also those changes necessary to the regulatory frameworks to expedite the network investment and ensure the right allocation of risk across all stakeholders.

In all cases, we urge Ofgem to lead by example to ensure that **the outputs of any reform follow due and proper process** so that all stakeholders have the opportunity and time to engage and reflect on what these reforms mean for them.

Finally, it is important that any reform measures taken are given sufficient time to take effect and Ofgem does not confuse urgency with 'rapid-fire' measures that simply address the symptoms and create headlines, but do not provide ***all-important certainty*** in the underlying connections process.

We hope this response to Ofgem's open letter is useful and can be reflected in Ofgem's future work and thinking on Connections Reform. Should you or your team wish to discuss any aspect of this response, please do not hesitate to get in touch.

Yours sincerely,

Katherine Marshall

Director of Markets Regulation and Group Compliance

1. The challenge

We agree with many of the challenges set out in Ofgem's open letter. In particular, the significant increase in connection volumes and the pressure this puts on the systems and processes currently in play and the long wait times for projects to be connected.

Fundamentally, these challenges are the product of a lack of spare network capacity to enable firm connections, which, we believe, is driven by a number of key factors, including:

1. The clear growth across GB in demand for electricity and therefore connections necessary to meet this demand; and
2. The drive to use all available network capacity ahead of further investment, or indeed anticipatory investment.

Until recently, the regulatory framework has viewed (strategic) investment in network capacity as a last resort; only to be triggered once all other possible ways of managing connections have been exhausted. Further, the regulatory processes to release funding for this incremental investment has been lengthy and, in many cases, this has meant capacity not being delivered until years after it is first needed.

This is a result of pursuing efficiencies in the system and specific initiatives including Connect and Manage and, more recently, network licence conditions that mandate the procurement of flexibility services ahead of network investment. The flip side of this approach is now being felt and, as noted in the open letter, we believe there is now *"an urgent need for rapid progress"* if we are to catch up and deliver on net zero commitments and respond to fast-moving changes in energy use.

In addition, we believe it is important to call out and consider the specific challenges in the current process from a project developer's perspective. Although Ofgem rightly identifies the issue of long connection dates, Ofgem's open letter is silent on the importance of certainty to project developers with regards to their Connection Offers and the impact that changes to the dates and / or works required to deliver their network connection (through no fault of their own) can have. If we are to deliver improvements for all stakeholders, we believe this is an important consideration that should be part of this reform.

2. The solution / response

(i) Promoting investment in new network capacity

Key to solving the current connection challenges is to invest at pace and volume in network capacity (at both Transmission and Distribution) and for this investment, as a minimum, to align with the capacity needs and delivery timescales set out in the Future Energy Scenarios (FES) and Distribution FES, and with local stakeholder needs.

With this in mind, we welcome the work that Government is already taking forward on important enablers in relation to planning and land rights. Processes for securing network project consents are currently one of the main contributors to delays in the delivery of nationally important network projects. If we are to deliver the network investment that is needed, we need a system that is supportive of what is trying to be achieved.

We are therefore seeking to amend the Electricity Act to remove the automatic triggering of Public Local Inquiries, which can add years to network delivery timelines and need to be avoided to meet 2030 targets. We are also calling for the need for coordination in planning regimes across devolved areas and, as such, the Scottish planning and consenting regime must be modernised alongside planning in England. We would encourage Ofgem to support the industry on this work, as well as more rapid regulatory approval of investments.

We recognise that short-term initiatives and reform that promote better management of the connections queue and improved (and transparent) network modelling are a key and necessary response to the current challenges and should put us in good stead for the longer-term. However, we need to make sure that the measures we take now are not simply a reaction to the current symptoms but address the core problem. It is failure to deliver the network capacity to match demand projections that will ultimately put at risk net zero and it is key that any short-term initiatives do not mask the underlying response that is required.

At Transmission

Our north of Scotland Transmission network has a pivotal role to play in supporting delivery of the UK and Scotland's net zero targets. To be consistent with the net zero pathway and FES, it needs to almost double the capacity of its Transmission system by the middle of the decade and triple it by 2030.

Ofgem's Accelerated Strategic Transmission Investment (ASTI) framework, which recognises the need to respond to the accelerated increase in offshore wind capacity, and the importance of providing early certainty to Transmission Owners (TOs) and their (global) supply chain if this is to be delivered, is incredibly welcome. It is through this mechanism that our Transmission business is now able to target £10 billion of investment to deliver 11 GWs of Transmission capacity by (or close to) 2030.

Having developed this ASTI framework, we believe it is key that Ofgem builds on this initial success and rolls it out not only to future strategic investments but also to regional grid infrastructure, removing the need for piecemeal approval of load investments through potentially lengthy uncertainty mechanisms.

Notwithstanding the need for urgent network investment and the regulatory frameworks commensurate with facilitating this, we believe further action could and should be taken now to address the uncertainty inherent in current formal Connection Offers made to project developers connecting at Transmission. This is in part caused by the regulatory requirement on network operators to meet and demonstrate the need for the necessary network investment prior to funding certainty, but after making its formal Connection Offer to the project developer.

This is, at best, extremely frustrating to all affected parties and particularly to project developers that have invested considerably in getting their projects to this stage. We have already engaged with NGESO on one possible way of front-ending this uncertainty so that project developers are less inclined to progress projects until the needs case for the required network investment is closer to securing regulatory sign-off. Whilst we recognise this is not a panacea, we believe this is a key issue that needs to be addressed in the short-term.

At Distribution

Similarly, facilitating new connections is at the heart of our RIIO-ED2 Powering Communities to Net Zero plan. Our RIIO-ED2 plans for our Distribution businesses include a baseline spend of over £200 m for new connections-related reinforcement in addition to c.£300 m of baseline load-related investment. However, for this investment to be delivered at pace, Government, Ofgem, and industry must work together to build on the transmission approach at Distribution level. This would also be in line with the draft Strategic Policy Statement, which calls for “a regulatory environment that delivers investment ahead of need in the electricity, gas and future hydrogen networks”.

(ii) Complementary measures to bring forward connection dates

Notwithstanding the step-change in the approach to the regulatory framework for network investment set out above, we agree that other steps should be taken in addition to deliver much-needed tangible improvements in dates being awarded to customers applying for connection to the network today. These include:

- Transparency of information to ensure all stakeholders are better informed and able to make better decisions about the projects they choose to develop (both in terms of size and location of connection). For example, this could include better visibility of information prior to capacity becoming contracted, and greater transparency on the needs case for reinforcements on which customers' connections are dependent on;
- Improved background modelling assumptions that apply more realistic assumptions to the assessment of reinforcement requirements, taking into account the dispatch of different technologies and likely attrition rates;

and, at least in the short- to near-term,

- Robust steps to remove projects from the queue that are not progressing to unblock projects that are able to progress.

There are a number of reasons why a more robust approach to queue management is needed now and why we have given our support to the current CUSC modification proposal (CMP376)¹. However, if implemented, we believe the longer-term effect of this modification needs to be kept under review to ensure that project developers are not subject to undue risk. This comes down to differentiating between action needed now to address the symptoms of the current challenge, versus actions necessary to put in place a more enduring and sustainable framework that drives the right behaviours and diversity of projects for the long-term security of the GB system.

The urgent need to clear the contracted queue is ultimately caused by the scarcity of network capacity and developers being reluctant to give up their place in that queue, even if they are unlikely to progress the development themselves. Arguably, this should become less of an issue as, collectively, we address the network capacity shortage and the certainty of the capacity to project developers becomes clearer.

However, we are also mindful of the real challenges that a more robust approach to queue management creates for genuine and committed project developers. In bringing projects to market, project developers

¹ We have supported the ESO's Original CUSC modification proposal along with many of the Workgroup's Alternative CUSC Modifications.

rely considerably on having a firm network connection that they can depend upon. This is becoming increasingly pertinent in GB as the complexity of projects increases and technologies advance at pace. For example, non-renewable generation projects no longer 'simply' require access to the electricity network and a single fuel source to support their project (as historically has tended to be the case), but will, going forward, also require access to CO₂ and / or H₂ networks. This in itself is dependent on the development of significant infrastructure, which is not within the developer's control. Moreover, the necessary project funding and Government support mechanisms to bring these projects to market is contingent on having a connection to the Grid. Therefore, if GB is to stay on the critical path to net zero, it cannot afford for 'good' projects to fall away because the connection process is too rigid and does not recognise the complexities of the projects that it is trying to support.

As such, whilst we agree that robust queue management is a necessary intervention at this juncture, measures that have the potential to discriminate against more complex projects irrespective of their wider system value or need (for example, a move away from the current First-Come First-Served approach to managing the contracted queue without clear provisions to ensure more complex projects are not unduly and adversely impacted) are unlikely to be an appropriate feature of an enduring framework in GB.

(iii) Coordination across system boundaries

We welcome Ofgem's inclusion as one of the overarching principles of this reform work the need to support improved coordination across the onshore and offshore networks on the Transmission and Distribution networks.

Having direct experience of projects seeking to connect at Distribution as well as Transmission and projects subject to the current offshore regime as well as onshore regimes, we are acutely aware of the challenges that come about as a result of the different arrangements and the potential to introduce unnecessary delay and complexity where projects are impacted by more than one of these arrangements.

In particular, as part of this reform, we are keen to find a pragmatic solution that enables parties to connect at Distribution (where there is capacity) without adversely impacting constraints at Transmission or being contingent on Transmission processes and timescales that are disproportionate to the size of the customer's connection. We believe this could be achieved by setting clear technical limits for DNOs that allow them to plan and run their networks, whilst ensuring that the network remains safe and compliant. These improvements should accelerate connection of small 'shovel-ready' schemes to the distribution network.

We are also mindful of the significant amount of work and time that all parties have invested into the Offshore Transmission Network Review and the Pathway to 2030 Holistic Network Design and, therefore, believe it is key that the outcome of this work should be honoured irrespective of the outcome of the connections reform.

3. What we need from Ofgem

(i) Clear and transparent process

We agree that Ofgem has a central role in driving, monitoring and indeed coordinating progress on the reform of connections in GB. We trust that Ofgem will lead by example, engaging with all stakeholders, and ensuring that the key objective and outcomes set out within the open letter are delivered. We look forward to working with Ofgem in a collaborative, solution-centric way as reforms are progressed,

ensuring that any individual issues (for example, those issues specific to different regions of the network) can be resolved with the pace required. To this end, we ask that Ofgem implements a defined communication and escalation route whereby network operators can work with Ofgem to resolve individual issues, reduce customer frustration and deliver timely connections.

Up until now, it is our understanding that NGESO has been driving the connection reform developments – both the work to put in place the interim measures as well as the work to develop options for a more enduring connections process. Given the pressures that it and National Grid Electricity Transmission (NGET) are now under in England and Wales, this work has happened at pace and has not always followed due process or been preceded with the level of scrutiny or detail that wider stakeholders would expect.

For example, some three months after it was first implemented, we still lack clarity on how NGESO's two-stage connection process² is being applied to projects in England and Wales and the assumptions (and the extent of these) that will drive the revisions to Connection Offers that are now anticipated. In Scotland, the assumptions methodology is still under discussion and our TO business is actively working with the ESO to agree a methodology that recognises the regional differences and the different composition of the connection queue in the north of Scotland compared to England and Wales.

Therefore, we welcome Ofgem taking a more central role in this reform work. This includes clear and transparent decision-making. Further, in response to any change, it is important that outputs are taken forward and implemented by all parties in accordance with the relevant codes, regulatory and legislative frameworks. It is these recognised industry processes that will ensure that any changes are subject to the necessary rigour and brought in in appropriate timescales for all stakeholders to respond to.

Building on this, we note and look forward to the joint Ofgem and Government action plan later this summer and commend to Ofgem that, despite its intended timing, i.e. after NGESO's current consultation, this demonstrates clear and independent thought and decision-making.

(ii) Willing to take key steps

Given the importance of this work and the recognised need to take action, it is key that Ofgem is able to take the steps that will ensure the reforms deliver the necessary change.

Post implementation evaluation

In order to demonstrate learning and develop the evidence necessary to support and drive the step change in network investment that we now consider necessary, we believe there would be value (at least at Transmission level) in commissioning an independent review into where we are today as a result of the regulatory framework that exists to control network investment *vis à vis* where we would have been had the network investments / improvements proposed by the TOs in the past been approved and delivered in the timescales set out by those companies at the time. In this regard, we are mindful of the recommendation³, regarding post-implementation evaluation by economic regulators, as set out by the

² Along with its legal vires.

³ At paragraph 4.76 [House of Lords - Regulators - First Report \(parliament.uk\)](https://www.parliament.uk/publications/54202/1/Regulators-First-Report)

House of Lords Select Committee⁴⁵. We believe an independent review at this time could be hugely helpful in supporting the case to drive a step change in the regulatory framework for network investment whilst also providing valuable insight to support future decision-making (for example on the appropriateness of anticipatory investment).

Appropriate allocation of risk and cost transparency

We note that NGESO is (as we currently understand it) minded as part of its Connection Reform work to defer to Ofgem the issue of financial compensation for project developers where, due to late delivery of the network (notwithstanding that this is for the wider good), project developers are left exposed to not insignificant costs. We recognise that the price control incentive framework is designed to ensure network owners and operators account for this in their decision making. Understandably, this is a significant issue for project developers and one that we believe Ofgem should consider as part of this reform to ensure that the regulatory framework more appropriately recognises how these costs land.

Separately, we believe specific reforms are needed to address the current levels of securities and liabilities that customers are required to put up that can act as a barrier due to the high cost. For example, where distribution demand customers trigger Transmission works the level of these securities can stretch into tens of millions which for smaller (Distribution) customers is clearly disproportionate and acting as a barrier to demand connection on the Distribution network. Similar issues with high securities are also seen at Transmission level. We believe a remedy to these issues should be considered as part of reforming the current connections process to save on development costs and facilitate earlier connection of renewable generation,

The importance of measured and considered action

Notwithstanding the above and the need to take real and appropriate action, we believe care is needed to avoid the need for urgency being confused with rapid progress through Ofgem's proposed 'stages' of reform. Reforms under Stage 1 (incremental improvements) and Stage 2 (improving interfaces) are foundational and must therefore be allowed to play out before more radical options are explored.

Further, the complexity of the industry rightly dictates that any changes will take time to implement. Whilst there are processes in place that allow these processes to be expedited where necessary and these should be used where appropriate, it is key that we do not introduce layers of rapid change unnecessarily. A large part of this is about being confident in the measures that are being taken and ensuring that these are appropriately communicated to manage expectations in terms of when changes will start to take effect, along with the timescales for any subsequent review in which decisions on the need for future reform will be taken should this be necessary.

(iii) Clarity on links with other relevant workstreams

We welcome Ofgem's recognition that any reform of the connections process will interact with other ongoing strategic industry reforms. Ultimately reform in one area of industry will have a bearing on other parts, and reforms must be considered holistically to ensure there are no unintended consequences.

⁴ [House of Lords - Regulators - First Report \(parliament.uk\)](https://www.parliament.uk/publications/54204)

⁵ As per point 2 in paragraph 4.76 "Such evaluation and monitoring should generally be carried out by the regulators themselves, but on occasion an independent body should monitor the quality of evaluation exercises and the objectivity shown by regulators in completing them".

We expect that Connections Reform will interact with a number of key policy areas, including but not limited to the evolving role of the Future System Operator (FSO), the development of the Centralised Strategic Network Plan (CSNP), the Review of the Electricity Market Arrangements (REMA), and the Future Systems Regulatory Framework. It is challenging to make longer-term decisions on connections policy without a clear vision of how the various policy strands will fit together to deliver net zero. We would therefore welcome an overarching vision from Ofgem and DESNZ on how these key workstreams will ultimately work together to ensure that a truly enduring solution to Connections Reform can be developed in the longer term.