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Sent by email to: industrycodes@ofgem.gov.uk

Dear Lisa and Code Governance Reform Team,

RE: Consultation on the implementation of energy code reform

SSEN Transmission are the regulated transmission owner for the North of Scotland. We are responsible for maintaining and investing in the transmission network from 132 kV to 400 kV, as well as ensuring a safe and reliable supply of electricity. We work closely with the System Operator to enable developers to connect to the transmission system whilst still maintaining a secure, stable supply of electricity. Two-thirds of the power generated in our network area is exported to meet demand across GB and we have an obligation on us, through our licence, to meet standards that will ensure the security and reliable supply of electricity.

The two primary standard/ codes that we are obligated to meet from our licence¹ and which relate to the safe, secure and reliable design and operation of the network are the 'STC' and the 'SQSS':

STC [System Operator Transmission Owner Code]: This is the code that defines the relationship between the System Operator and the TOs [Transmission Owners] and OFTOs [Offshore Transmission Owners] and covers all network activity from operation to connections.

The STC code includes information related to, for example: the sharing of data and the confidentiality of data; parameters and levels used in planning the network; outages; restoration of service after a fault/outage; collaboration on reporting, such as, in the Network Options Assessment Report; safety; planning assumptions; and connections. The 'STCP' are the Code Procedures that provide guidance on how the STC will apply in an operational context.

¹ *Transmission Licence (D3):*

*"...the licensee shall at all times plan and develop the licensee's transmission system in accordance with the National Electricity Transmission System **Security and Quality of Supply Standard** version 2.5, together with the **STC**..."*

The STC is unique in that it covers a wide range of topics, both technical (for example, operational limits) and commercial (for example, connections offers). The Code is an obligation under the transmission licence agreement and it provides for the operational standards and reliability on our network.

SQSS [System Security and Quality of Supply Standard]: The SQSS defines the design standards that we use to plan and operate our network. The stability of our system is related to keeping the supply and demand in balance. Deviations caused by, for example, a large generator disconnecting causes an unbalance that will affect the frequency of our system. The system has to be designed in a robust manner to ensure that it can respond to these situations and restore frequency and maintain voltage levels. The SQSS therefore is a key standard in setting out technical limits which protect our system and ensure a secure, stable, reliable network. The TO licence places an obligation on us to satisfy the SQSS requirements when designing the network and planning generator / demand connections.

Although we agree that the energy landscape is changing and that code governance and processes need to reflect the need for speedier review and implementation of issues related to moving us to Net Zero, we have concerns around the introduction of code consolidation frameworks that are being proposed in the Energy Code Reform.

We accept that there could be benefit in consolidating and streamlining processes across the Grid Code and Distribution Code, as well as examining the consolidation of the CUSC and DCUSA. However, as we have shown, the STC and SQSS, form part of our obligation under our transmission licence and, by definition, relate to the secure and safe design and operation of the network. **We are therefore opposed to any consolidation that allows for the safety and security of the transmission network to be influenced by those with commercial interests who would not have the same obligations as us in terms of network reliability. In summary:**

- The SQSS sets out the security and safety standards on which we plan and build our network. The STC outlines the safe and reliable operation on the network : a close liaison between the system operator and the TOs.
- Both SQSS and STC are part of our obligation under the Transmission Operator Licence.
- The STC and SQSS panels work well. 'Efficiency improvements' may not consider the risk of having the small number of mods (related to the safe operation of the network) outnumbered and de-prioritised, or having less time committed to discussion by their inclusion in a wider pool.
- At present the TOs form the majority of the SQSS and STC code panels: indeed there are no developers on the STC and one legacy generator position on the SQSS.
- The proposed consolidation of codes would open the decision-making process to a wider audience with commercial interests which could have serious consequences on the security, safety and reliability of the network.
- Developers, who have no obligatory requirement for the safe operation of the network, could advocate for code changes in their own commercial/financial interests.

- Examples of instances where commercial influence might impact network safety and operation are given in **Annex A**.

We have met with Ofgem on these issues and whilst we understand their viewpoint that good governance combined with their regulatory decision-making powers would mitigate issues, we are still concerned that enhanced governance would not be in place to ensure that: SQSS was protected; necessary mods would get the priority required; and, that mods impacting the safety of the network would not be raised by those with commercial interests. We emphasise the importance of meeting the obligations under our TO licence and the requirement to protect those codes referenced within. We have seen issues that can occur, for example through the Retail Energy Code (REC), when processes or governance are not adequately designed at the outset, leading to later amendments to achieve the correct balance of governance and industry input. We would urge that lessons from this experience are learnt and considered when reviewing the current code consolidation framework.

We strongly recommend that

- (i) the SQSS remains outside of the qualifying documents presented to the Secretary of State due to it providing the criteria for the design of a safe transmission system.
- (ii) that the STC remains as a standalone code with its own Code manager and Stakeholder Advisory Forum (SAF) due to its unique position in covering both technical and commercial aspects of network planning and operation.

The Energy Code Reform consultation also highlighted several other areas of concern. We are aligned with the SSE Group response in these matters and note that SSE Group is supportive of our position related to the STC and SQSS.

Strategic Direction Statement

It is imperative that the TOs have a voice on the strategic direction and the subsequent prioritisation process. We are aware that if the process for developing such an overarching direction includes wider participation then the voice of the TOs (3 of) might be lost along with their technical knowledge and experience in planning and operating a safe, secure network.

Governance

Good governance will be key for the updated code modification process and much hinges on the Code Manager to put in place a transparent, democratic process. The liaison between the Stakeholder Advisory Forums (SAFs) and the Code Manager with their working practices has not yet been defined. We would recommend that the Code Manager be independent, that the SAFs have a fixed industry membership with knowledge related to the particular codes, and that voting be enshrined in the SAFs terms of reference. These would ensure that our concerns on partiality, technical expertise and transparency in decision making would be addressed to some extent.

We look forward to working with Ofgem throughout the Code process and would be happy to discuss any items in this response in more detail.

Yours sincerely

Andrew Urquhart

Head of Whole Systems
SSEN Transmission

Inc:

ANNEX A: Concerns related to wider participation in STC/SQSS code modification processes

ANNEX B: SSEN Transmission Response to Certain Consultation Questions

ANNEX A: Concerns related to wider participation in STC/SQSS code modification processes

Concerns: Developer Connections

- A. **Context:** System planners design/plan the network related to the criteria outlined in the SQSS. There are sections in the SQSS related to the generation and demand connections, as well as the consideration of 'whole system' stability.

One of the requirements on the design is the limit on the maximum power loss on a circuit due to generation disconnecting. The network is operated to keep the demand and supply in balance: if the supply (generation) drops, that affects the 50 Hz frequency which can have corresponding impact on the network stability.

Commercial incentives: Generators may be limited in their output on sections of the network by this risk limit, even if the thermal capacity (related to the amount of current that can be transmitted) of the lines could withstand greater power output. Therefore generators may wish to increase this limit.

Consequences: If generators wished to influence the limit level, it would cause softening of the network security with possible stability implications if a supply was disconnected on the network.

- B. **Context:** System planners currently plan the network using assumptions on, for example, the maximum (100%) output from a wind farm. By designing for the maximum output, the connected generator does not have restrictions, due to thermal capacity of the circuits, as the network is planned to allow for this level.

Commercial incentives: Developers of battery storage systems may argue against these operational assumptions as they may intend to operate in a 20%-80% range. Reduction in the maximum level may reduce additional works required to connect the storage system to the network.

Consequences: If the system were designed for less than maximum operation, then an exceedance of this limit could occur if the developer were to operate outside its stated range. This could overload the network with subsequent voltage / stability issues.

- C. **Context:** Applications for connections for a development, such as a wind farm, may require additional works to connect the facility to the network. These additional works are required to satisfy the SQSS limits and can impact on the connection and cost.

Commercial incentives: Developers may wish to relax security requirements on the additional works in order to reduce costs.

Consequences : A relaxation of SQSS standards results in a less secure network which affects the ability of the network to respond to faults and voltage/frequency changes.

- D. **Context:** Usually a plant, such as a wind farm, with a single point of connection to the main network would need two circuits for security of supply, in the event that one circuit fails. However, under the current SQSS, there is the option for individual customers to request 'variations' on their individual generation or demand connections.

Commercial incentives: Customers can ask for 'variations' to request a single circuit instead of the double circuit requirement. This would reduce their cost and, as they are an individual connection, would lower their own security.

Consequences: Widening participation in the code reform process could provide the opportunity for greater influence on the variation rules on network design/operation criteria which could result in a relaxation of network security.

Concerns: Data Transfer

- E. **Context:** Routine maintenance is required on the network and plans for this are submitted in advance to the ESO. The affected developers are notified of the timescales for this work. In addition, there may be requests for more urgent work which is required to maintain the safety or reliability of the network.

Commercial incentives: Developers, for their own interests, may request changes to timescales or greater notification of works.

Consequences: Influence on the maintenance and update schedules can affect the safety and reliability of the network as well as adversely affecting timely maintenance and possibly impacting on asset life.

- F. **Context:** Transmission are required by the STC to provide specific information on our network, such as costs, assets and operations (e.g. outages) to the ESO.

Commercial incentives: Developers may wish more information on the network that is currently provided. For example, they may request greater detail on sensitive information relating to planning consents.

Consequences: In this example, the release of additional, possibly sensitive, data could impact on land purchases and have knock-on consequences for the design and planning of the network, along with possible extensions to timescales.

- G. **Context:** The ESO put out a ten year prediction on transmission network charges this year, updated from its usual five year forecast. Transmission are only required to provide five years of financial information (as stated in the STC) and therefore the forecast was questionable in providing a basis for an investment decision.

Commercial incentives: Developers would like certainty of transmission charges at the point of investment and therefore would like to see longer more accurate predictions of charges. They could may request changes to the level of data provided in the STC.

Consequences: Additional financial data provided beyond the price control period can be commercially sensitive and knowledge of this could cause developers to make decisions which could impact on future network plans and decisions.

Concerns: Procedures/Process

- H. **Context:** It is recognised that SQSS has not been updated in recent years and is deficient in dealing with newer technologies such as battery storage and hydrogen electrolyzers. At present, any changes to the SQSS are decided by those responsible for the secure and reliable operation of the network.

Commercial incentives: Developers of new technologies could influence the standards, limits and operational criteria by which the network connections are assessed or the network operated. New standards may be written to the commercial advantage of the developer.

Consequences: The development of future standards could be influenced by those with no responsibility for network operation and those with commercial agendas. This could compromise network safety and security.

- I. **Context:** The STC Procedures sets out the connection processes and data exchange with the ESO.

Commercial incentives: Given the current issues with connections, developers may have a wish to change the requirement on information provided or impact on the process in order to expediate connections or reduce costs in providing particular information.

Consequences: Access to the STC modification process may give the developers the opportunity to influence the scope of the information, the detail and the timeliness affecting the connections processes. This could have an impact on network planning with insufficient levels of information providing a less robust network design.

ANNEX B: SSEN Transmission Response to Certain Consultation Questions

SSEN Transmission are aligned with SSE Group's response to the Energy Code Reform Consultation but are responding to Q1, Q5 and Q6 as they directly relate to the points in the main section of our letter.

DESIGNATION OF CODES AND CENTRAL SYSTEMS

Q1. Do you agree that we should recommend to the Secretary of State that the 11 industry codes listed (including the SQSS) should be designated as “qualifying documents” for the purposes of using our transitional powers in the Energy Act 2023 to deliver energy code reform?

No. As a Transmission Owner, we are obligated by our licence to plan, maintain and operate a safe, secure and reliable network. Developers, who are party to this code reform, have no such obligation on them and can act in their own financial and commercial interests. It is therefore essential that the SQSS, which defines the requirements for the design and planning of a secure and safe network, is kept out of the current code reform process.

The existing SQSS process works well. The TOs form the most significant party to the Code Panel and the relatively few number of complex technical modifications have discussion by technical experts. Any thoughts of 'inefficiency' from a 'whole codes' perspective, should be viewed against the detrimental effect of impacting a well organised existing process with additional non-related codes.

'Good Governance' is quoted as being the solution to this. However, there is no guarantee at the outset that this will be achieved: the Code Manager remit is not in place; there is no decision as yet on the prioritisation process; there are no governance rules for the SAFs to ensure commercial interests are not considered in technical matters. Removing the SQSS from the qualifying documents ensures the safety and security of the network remains whilst codes reform progresses.

An example from Annex A on the possibility of relaxation of network stability :

- A. **Context:** System planners design/plan the network related to the criteria outlined in the SQSS. There are sections in the SQSS related to the generation and demand connections, as well as the consideration of 'whole system' stability.

One of the requirements on the design is the limit on the maximum power loss on a circuit due to generation disconnecting. The network is operated to keep the demand and supply in balance: if the supply (generation) drops, that affects the 50 Hz frequency which can have corresponding impact on the network stability.

Commercial incentives: Generators may be limited in their output on sections of the network by this risk limit, even if the thermal capacity (related to the amount of current that can be transmitted) of the lines could withstand greater power output. Therefore generators may wish to increase this limit.

Consequences: If generators wished to influence the limit level, it would cause softening of the network security with possible stability implications if a large supply was disconnected on the network.

We believe that the remaining codes (excepting the SQSS) should be included in the qualifying documents presented to the Secretary of State.

Although we have similar reservations regarding the impact of commercial interests on the STC (addressed in the response to Q6) we believe that it **should** be included in the reform process but managed separately due to its unique nature in being both a commercial and technical code.

CODE CONSOLIDATION

Q5. Do you agree with our preferred option to consolidate the CUSC and DCUSA to form a unified electricity commercial code?

Yes, we agree with Ofgem's preferred option to consolidate the CUSC and DCUSA to form a single, unified, electricity commercial code.

Q6. Do you agree with our preferred option to consolidate the Grid Code, STC, SQSS and Distribution Code to form a unified electricity technical code?

No, we disagree with Ofgem's preferred option to consolidate these four codes into a single, unified, electricity technical code.

As stated in the response to Q1, as a TO we believe that the SQSS should remain outwith the Energy Code Reform process in order that the safe, secure and reliable operation of the network are intact whilst code reform progresses.

We agree that the consolidation of the Grid Code and Distribution Code may streamline processes and make it easier for developers connecting at differing voltage levels to find information in one place. There is also merit in examining how the commercial codes (CUSC and DCUSA) can be consolidated. However, we believe that due to its unique nature of being both a technical and commercial code, the inclusion of the STC within the 'technical' or 'commercial' codes is the wrong move.

The STC is the code that details the relationship between the transmission owners and system operator and their interaction to provide and operate a safe secure network. The Code is an obligation under the transmission licence agreement and it provides for the operational standards and reliability on our network. It covers both technical aspects such as system planning requirements, outage planning, construction and operational criteria as well as commercial areas such as commercial terms and conditions that go into offers, charging, securities and liabilities provisions. The STC is unique in this aspect in that it sits between both technical and commercial codes and we believe that it would be best managed as an independent code with its own Code manager and SAF.

The STC operates well under its own governance. The Code Panel is formed from the TOs, OFTOs and the ESO and has no representatives from the commercial arena. Therefore, the panel members have a vested interest in the safe and reliable operation of the network. Opening out this process to wider participation would lead to commercial interested impacting on the reliability of the network.

Examples from Annex A on commercial interests which could impact STC processes

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- E. **Context:** Routine maintenance is required on the network and plans for this are submitted in advance to the ESO. The affected developers are notified of the timescales for this work. In addition, there may be requests for more urgent work which is required to maintain the safety or reliability of the network.

Commercial incentives: Developers, for their own interests, may request changes to timescales or greater notification of works.

Consequences: Influence on the maintenance and update schedules can affect the safety and reliability of the network as well as adversely affecting timely maintenance and possibly impacting on asset life.

- G. **Context:** The ESO put out a ten year prediction on transmission network charges this year, updated from its usual five year forecast. Transmission are only required to provide five years of financial information (as stated in the STC) and therefore the forecast was questionable in providing a basis for an investment decision.

Commercial incentives: Developers would like certainty of transmission charges at the point of investment and therefore would like to see longer more accurate predictions of charges. They could may request changes to the level of data provided in the STC.

Consequences: Additional financial data provided beyond the price control period can be commercially sensitive and knowledge of this could cause developers to make decisions which could impact on future network plans and decisions.

Without visibility of the governance that would **ensure** the SSQS/STC remain independent of commercial considerations, there is a risk to the safe and secure operation of the network.

We therefore recommend, in line with our executive summary, that: the SQSS is removed from the scope of reform given its unique role in ensuring network safety and security and, that the STC remains as a standalone code with an independent SAF supporting the code manager due to the unique technical and commercial nature of the code.