



Centralised Strategic Network Plan: Consultation on Stage 1
modelling future supply and demand:

SGN Response

23/06/2023



St Lawrence House
Station Approach
Horley
Surrey
RH6 9HJ

By email to: RIIOElectricityTransmission@ofgem.gov.uk

23 June 2023

Dear Joanna,

Centralised Strategic Network Plan: Consultation on Stage 1 modelling future supply and demand

Thank you for the opportunity to respond to your above consultation on modelling future supply and demand on Stage 1 of the Centralised Strategic Network Plan. This comes at a crucial time for energy system transition and should not be considered in isolation alongside other regulatory proposals and consultation. It is essential that networks support net zero and maintain all efforts towards decarbonisation of our energy system.

SGN is committed to supporting the drive toward net zero and decarbonisation of the energy system, having a gas distribution network that transports gas to 5.9 million customers in the Southern and Scotland licence areas. Our networks vary from the most densely populated regions of central London to the most sparsely populated areas of Scotland. As a distribution network, the transition to net zero will necessitate a transformation in how we operate, and how we will continue to operate in the future, with decarbonisation and decentralisation of generation and demand. It will be essential for a whole system approach to be recognised with clear roles and responsibilities to ensure the transition remains on track for delivery along with regulatory reform.

The balance between affordability, resilience, and decarbonisation is likely to continually change through the next decade. Any regulatory framework needs to support long-term planning aligned to a whole-system approach, deliver for customers, and maintain investment for networks with the capital needed, whilst being flexible enough to balance short and long-term consumer affordability.

We support the need for a change to a bottom-up assessment but have some concerns around the development of a pathway under the CSNP to meet government policy and how this aligns with other agencies such as the Climate Change Committee who provide comment on how likely government policy will deliver. Pathways to 2050 and beyond are useful to visualise the trajectory to meet net zero but need to be based on facts rather than assumptions. Whilst short term pathways

may be appropriate, they need to provide flexibility as policy from governments develop and have the potential to change the focus of investment in the energy system

We understand the focus of this consultation is the FES modelling which will support the FSO to develop the first CSNP, in particular the electricity transmission networks however, we would urge the need to incorporate the role gas networks play in the electricity system security of supply and in doing so challenge the assertion the FES are used across the industry for planning purposes and to inform investment decisions.

SGN do not use the FES in any way to inform our planning or investment decisions, we instead produce our own fully independent long term demand forecasts.

Our forecasts are a bottom-up assessment of potential demand change based on known inputs rather than top-down aspirational assumptions. Whilst we recognise recent changes to the FES may have gone some way to improve their outcomes, it remains a predominantly top-down process which in our view is not a suitable tool to inform network planning and investment.

In our opinion, the imposition of a FES based CSNP across the whole system would compromise our ability to meet our licence requirements both when maintaining security of supply on behalf of the customers connected to our existing natural gas networks and whilst playing our part in the UK's journey to net zero through the role of hydrogen.

It is also our view that the top-down approach risks under-representing the customer, the customer journey, and the challenges that this presents. In doing so it could risk supporting a pathway that is not evidenced by strong customer motivation and choice.

There are currently several projects led by networks and the ESO, such as the Common Planning Pathways and Project WEST, that look at investment pathways based on policy decisions or look to establish the principles of whole energy system planning. There needs to be a level of coordination across the networks, Ofgem and government on how studies such as these influence the delivery of the CSNP and align with other areas of regulatory and government policy development such as the role of the RSP and influence from government departments such as DfT on how infrastructure develops and for what purpose it is required.

Having reviewed this consultation, we have responded to questions where we feel we can add value and we will support further discussions as the detail around the CSNP development. Should you require any further information with regards to our response then please do not hesitate to contact me at David.Handley@SGN.co.uk

Yours faithfully,

A handwritten signature in dark ink, appearing to be 'D Handley', written over a light blue rectangular background.

David Handley
Director of Strategy and Regulation
SGN

Consultation questions and response

Q1. Do you agree that we should move towards pathways instead of scenarios, to provide greater clarity on the type of investments required under the CSNP?

It is our view that any pathway or scenario for use within the CSNP needs to be developed from a bottom-up assessment of actual demand and government policy aligned to a networks footprint, tracking actual performance of legislation rather than intended performance.

We also think it is important to be clear on the relationship between the Climate Change Committee (CCC) and the role of the FSO. It is our perspective that the CCC provides forecasts on how to deliver net zero and identifies the policy gaps necessary to close them to both UK and Scottish Governments. These policy gaps often focus on the role of domestic energy efficiency and domestic heat which will have critical implications on the level of investment required in the transmission network and how the customer journey impacts that investment.

In contrast we think it is important too for the FES to be highly evidential and based on the plausible outcomes of policy based on evidence of their impact. We are concerned that by aligning the CSNP and government policy this removes the independence of the scenarios, and the genuine consideration of how likely government policy is to deliver, particularly for the most challenging areas of policy effectiveness (domestic energy efficiency and domestic heating). By forcing alignment to government policy there is a risk that significant under/over investment will arise as that government policy is considered effective in delivery regardless of the actual evidence.

Any pathway should be developed on fact-based market indicators, and account for the ability of the supply chain to deliver, markets to finance, as well as mapping the consumer journey and needs, following appropriate engagement. The timing of investment is also critical whether derived from needs driven investment or an enabling investment decision or potentially other drivers across vectors.

Currently the objective is very narrowly defined to Onshore and Offshore electricity transmission networks, we need to have assurance that CSNP and its pathways include electricity distribution, gas transmission and gas distribution. We also believe with this narrow perspective we need to ensure that the CSNP is whole system in its approach and looks equally at distribution and the delivery of energy for transport and heat. The pathways should look across those different parts of the energy system to provide a whole system perspective, the interaction between the different sectors now and in the future will be critical in the delivery of a strong optimised energy system. In this context hydrogen can play a crucial role in providing energy security and allowing previously constrained assets to be utilised to their fullest.

There is also a requirement to have clarity surrounding the objectives of the documents set out in paragraph 2.4 and how they interrelate with other activities undertaken by the networks, such as the relationship with the gas winter outlook. It should also be clear on which take priority and should be used for planning purposes. This is important to understand, as stakeholders we should be focusing our attention to support the development of accurate, coordinated, and informed scenarios to deliver the best outcome for UK plc.

Caution is also required to avoid masking risk and poor assumptions by adherence to government policy positions that may be more aspirational and with little evidence of deliverability. We need to find the right balance between adherence to government policy and realism over delivery. It is

critical that we continue to invest to maintain the integrity and capacity of our network until such time there is clear evidence of change.

Q2. Do you agree that there should be a single forward view of the near term for all pathways?

We are concerned by the perception reported in the consultation document that multiple short-term scenarios could be negative as they are perceived to create uncertainty about the way and where investment in the energy system should be made. We disagree that uncertainty and risk should be hidden whether this is in the short term or the long term. Rather we think it is important to recognise risk, to quantify it appropriately and to effectively determine the right option based on the risk that exists and the pathways that are appropriate.

To pretend that this risk and uncertainty does not exist could be highly misleading to consumers, innovators and investors about alternatives that may exist and could be delivered in a more cost-effective manner.

This can be used to determine a recommendation based on the outcome of this analysis, but this needs to be evidence based, it will be critical to provide the foundation of how that conclusion was determined and to allow others to challenge that conclusion openly and transparently.

It will also be important to have a clear understanding of what 'short-term' covers and on what basis it can be changed. Even with a short-term pathway there is the potential for variations to occur in terms of evidence from customer acceptability of different technologies, policy effectiveness, cost of deployment and technical potential. Therefore, there needs to be an element of flexibility in the delivery of a short-term pathway as changes emerge, such as those expected on hydrogen blending and for heat in domestic buildings. These decisions could have an impact across all sectors in maintaining existing assets to ensure security of supply, the development of critical infrastructure to meet net zero, which could swing investment required across the energy system.

We would propose if a single, short-term scenario is used over a 7 – 12-year period, then it is very important that it is reviewed frequently (every 6 months) to ensure it is kept up to date and is backed by regulatory reform to ensure aligned investment.

Q3. Do you agree with our proposal to have Net Zero compliant pathways (number to be determined by FSO), with a separate counterfactual demonstrating the scale of activities and investment that falls short?

Any pathway development should be carried out from a bottom-up approach, with the aim to meet net zero. However, we would argue that directional pathways for investment should be focused on the most plausible outcome.

If not meeting the net zero targets is a realistic outcome, then it is correct that it should be considered as there are many factors that are not within the FSO's control. Not to do so would risk poor economic outcomes from over investment against a scenario. Rather than 'plan to fail' it should be an 'honest appraisal of'.

A cost assessment should include a full and appropriate options analysis in order that a clear recommendation can be proposed that recognises the different scenarios and economically quantifies the implications of alternative scenarios and risks of those scenarios being realised. Not to do so would be economically misleading and lead to poor decision making. There is a further risk that would create a consumer backlash/challenge by not considering all options.

Q4. Do you agree that the pathways should run to 2050, and if not, why not?

There is a current need to allow the pathways to run to 2050, but there should be recognition within this timescale of the ambitions of devolved administrations to meet net zero earlier than this. We agree that at an appropriate time the development of the pathways for the energy system need to look beyond the point of meeting net zero and move into a BAU regime. There may also be a requirement to consider beyond the 2050 period to fully include the potential costs of decommissioning elements of the energy system that may no longer be required (i.e., the cost of decommissioning elements of the gas network) and recognising whilst there are customers remaining on the network, that asset must be maintained in a safe and reliable manner.

Q5. Do you agree that the model should develop the capacity to include extreme data ranges when requested of the FSO in its role as strategic advisory body?

We would need some clarity around this point to fully understand the implications of modelling low probability, high impact events and how these feed through and are accounted for in the short-term pathway development. There looks to be a relationship with this type of analysis and the question posed on the requirement to have scenarios that do not meet net zero.

When considering extreme ranges these are unsuitable for use in system planning and should be reserved for informing and potentially steering direction of policy.

Q6. Do you agree with our consultation position on modelling network constraints?

Yes, it would be remiss not to consider network constraints when developing the pathways and would provide an unrealistic outcome to meeting net zero if areas of the network with constraints were not to be included. As previously stated CSNP is set to develop pathways that provide greater clarity on investment using evidenced based assessments.

Q7. Do you agree with our consultation position, and do you have a view on which data principles should be possible to adopt for the first FES?

We agree with the consultation position that data used in the development of the FES should be classified as open under the principles set out in the ENA Data Triage Playbook. It is important that credible, market driven data is used in the development of the FES and how this impacts and is impacted by external influences via other stakeholders.

Q8. Are there specific stakeholder needs cases for publication of data, including the format of outputs?

It is our view that the publication of the data sets, input assumptions and the access to the model functionality should be made available to the public and stakeholders. Through this, stakeholders should be able to run their own sensitivities and determine their own 'what-if' analysis to build confidence in, critical review of and customer acceptability of the results that are generated.

We would consider this in line with data best practice guidelines and it would be sensible to have this built in from the outset.

Q9. Are there specific data outputs associated with the FES that we should mandate?

There are no outputs that we should mandate at this time.

Q10. Do you agree that regional and/or industrial hub pathways should be included in the FES?

This is an important area as the granularity starts to focus on more regional aspects of network infrastructure. An understanding of how the scenarios have developed is crucial to ensure that the appropriate informed data sets are used to drive investment for those organisations that will utilise them, as well as mature projects being developed to deliver net zero. There is also a link to the role of the RSP where transparency around data and the decisions that are based on that data become crucial to develop the infrastructure required for the here and now, as well as that required to reach net zero and beyond.

The ambitions set at a regional level also need to be considered when developing the scenarios in the FES, and the targets that many regional and devolved governments have set for net zero. The development of the FES must be through collaboration with stakeholders, it cannot be developed in isolation. This will help ensure a thorough assessment of the pathways is carefully considered and optimised to support net zero and to ensure consumer value for money.

Q11. Do you agree with our proposal for a 'major' FES in the year prior to the main CSNP publication, with smaller annual updates in the intervening years?

This depends on several the points above being addressed, the accuracy of the FES data, and the methodology used to deliver the FES.

Q12. Do you consider that longer-term evolution of energy supply and demand modelling should head in the direction outlined above and if so how?

We consider that the future development of the CSNP needs to show flexibility around areas of current uncertainty, and ensure accurate data, not based on assumptions, is utilised, especially if strategic advice to government and Ofgem is being developed through this methodology. Having a fully optimised energy system is a critical element if net zero is to be achieved.

The insight and input from individual networks is key to understanding how the regional aspects of the energy system are being developed and delivered. This needs to be fed back into the overarching data submission to deliver a well-developed and informed CSNP.