

**Reference**

2023 CSNP Step 2-4 Consultation

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Your Gas Network

**CNSP Consultation on the framework for identifying and assessing transmission investment options**

We have provided responses to the consultation questions in the attached Annex, but I first wanted to amplify a number of key points regarding the overall CSNP process that is emerging.

Understandably the proposed CNSP process is a continuation of the journey the electricity networks are taking to address the challenges of net zero. This is primarily driven by the growth in renewables, and by definition is somewhat reactive in nature - dominated by the location and timing of new renewables and the inherent interruptible nature of their mode of operation.

**The planning required for future gas networks**

The key point we would like to stress is that the CSNP for electricity transmission is very different from the strategic planning process that will be required for the decarbonisation of the gas network with its 800-900TWh of methane gas demand, which must all be switched to a net zero alternative by 2050. This will require far more planning based around industrial and domestic consumer demand for energy, which can be met by different energy vectors and technologies. It is very different to the largely top-down process that can be followed in connecting renewables to the existing grid infrastructure, or creating new infrastructure to increase capacity.

Hydrogen and the future of the gas grid, and/or electrification of heat will require a process, and strategic plan, that is designed to convert each current gas customer. This will need to be 'A Plan for All': a strategic conversion plan for gas demand, starting with industrial and commercial customers, and ensuring the required increments of network and energy production and storage are brought on in line with each consumer switching.

It would be dangerous to assume, or expect, that the solutions being designed for electricity transmission and presented in the future CSNP process, can be 'cut and pasted', or easily adapted to deal with hydrogen and methane to deliver a whole system CSNP. The CSNP and FSO are being designed initially to solve a completely different problem.

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## Decision making

A general observation on this consultation document is also the perceived ambiguity in accountability for decision making. For example, there are regular references to the “FSO leading” but the document does not always set out who the final decision maker is. For example, does the FSO lead subject to Ofgem approval? We look forward to this clarity being provided when the drafting of the Licence conditions and CSNP Governance and Methodology is published.

## The complexity of decision making

Another general observation on the new process is the impression that stand-alone decisions will be taken for largely independent projects. In reality, with the scale of change required, the process will need to look across multiple needs cases to identify an overriding preferred solution. The scope or process for the FSO to identify large solutions that address a number of smaller sub-needs cases is far from clear. This needs to be addressed for electricity, but also to enable effective cross-vector whole energy system decision-making.

This consultation demonstrates the enormous scale of issues that need to be addressed for the FSO to function as required. We are concerned that with the level of complexity involved and the number of critical parties contributing, including Ofgem and Government, that it may take many years for the electricity facing CSNP process to become stable business as usual. There is therefore a considerable risk that the FSO’s focus and organisational bandwidth will be utilised in implementing and fine tuning the electricity arrangements.

## Ensuring the FSO focus on methane and hydrogen

The required level of attention to solve the very different methane and hydrogen strategic planning challenges will not be available unless the FSO organisation is established in a way to allow the work to be progressed independently and in parallel. This could be enforced through the Licence Obligations and supported in the CSNP Governance Document.

I noted above the need for the processes to support many interacting projects and identify the overall best approach, which may be lots of smaller project or one large scheme. A similarly clear decision-making process will be required for whole energy system decisions. We believe the ESO is progressing a piece of work to address this, and we look forward to that being socialised across the energy networks at the earliest convenience.

Noting the already challenging workload to implement the changes for electricity transmission, to ensure the appropriate prioritisation of the design of the whole system planning process, the associated obligations may be best placed within the Gas Planning Licence. This will need to be in place to support the first whole energy system CSNP in 2026. We are assuming the obligation to produce a whole system CSNP will be repeated in both the ESO and Gas System Planner Licences.

The work to determine how robust whole system decisions can be taken will be hugely valuable. The complexity of the electricity process suggests there may be value in taking a step back to consider the key building blocks for a whole system decision-making process, before overlaying the realities of the current starting points. The value of such a piece of work is increased further if the Regional System Planning function is considered, and the delivery programme



that will be required to implement the Government's heat policy in a few years' time. Cadent would be very happy to support Ofgem and the FSO in the development of this critical process design.

### **Guiding principles**

One observation on the consultation is that there does not seem to be any clear guiding principles that can act to focus decision-making and help arrive at a preferred solution for each issue more efficiently, as well as a coherent and robust overall industry process.

Whilst we can see how the complexities of the electricity sector create many challenges, the lack of guiding principles is likely to make it close to impossible to extend the decision-making process into the other vectors outside of electricity. This would mean the expansion can either not be delivered without fundamental change to the electricity set up, or the other vectors are forced to play a secondary role due to the 'top heavy' dominance of electricity.

We would actively support and champion a wider industry discussion on how whole energy system decisions will be made. Without a clear view of the problem and how we want to address it, we are unlikely to reach a period of stable operation very quickly. Getting these processes working effectively is fundamental to delivering net zero to the required timetable.

Yours sincerely

Dr Tony Ballance  
Chief Strategy & Regulation Officer, Cadent



## **Annex**

### **Cadent Response to Consultation Questions from the CSNP Consultation on the framework for identifying and assessing transmission investment options**

#### **Q1. Do you agree with our broad regulatory approach to establishing the FSO's obligations to deliver the CSNP products?**

We support the approach with Licence Obligations, a Governance Document and a CSNP Methodology to deliver the electricity transmission decision-making process. We note however that a huge amount of detail will only become visible as the Licence conditions, Governance Document and CSNP Methodology are drafted and consulted upon.

However, we do not believe this approach is appropriate for the level of strategic planning heat decarbonisation will require. The thinking to date is driven by the challenges of supporting the growth in renewables. This has resulted in the CSNP process designed to identify incremental strategic investments. It is not designed to strategically plan the conversion of the whole energy system to net zero.

It may become clearer as Licence drafting is published but we would welcome clarity on how the proposed regulatory approach interacts with the emerging Strategic Priorities and the contents of the Energy Bill.

#### **Q2. What are your views on the types of system need that we have proposed are covered by the CSNP? Are there any gaps?**

These are electricity based and whilst each individual decision makes sense, it is not clear how an efficient overall programme of works would be identified. There does also seem to be a lot of duplication of activities without a discussion on whether this is justified.

There does not seem to be a clear underpinning strategy, or golden thread through the design decisions being taken, which constrains the delivery of a coherent package of decisions. There is also very little guidance on how the decision-making would work outside of electricity. A principles approach will be required to ensure robust and consistent decision making when the 'system need' question is applied to non-electrical sectors, and to the whole energy system.

#### **Q3. Do you agree that the time horizon for system need assessment should be extended to 2050?**

Yes, we agree and to avoid future consultations we suggest a rolling 25 or 30 year ahead plan should be the requirement. The energy system will continue to evolve beyond 2050.



**Q4. Do you agree that the FSO should move to a year-round nodal assessment of system need as part of the CSNP?**

Yes – plans with greater granularity will be required as we move towards the large scale decarbonisation of the energy system, including heat. Off peak and seasonal flows will be critical for the planning of gas networks as distributed production will result in a much wider range of energy system flows.

**Q5. We welcome stakeholders' views on how the FSO can communicate effectively about future system needs?**

As a Licenced Gas Transporter we are assuming the communication between ourselves and the FSO will be subject to network to network engagement with the conclusions captured in Licences and if necessary Industry Codes.

**Q6. What are your views on the FSO establishing minimum design requirements for high-level option designs and are there areas where exceptions are needed?**

We support the clear definition of minimum standard requirements with the ability to flex by exception. However, this must be linked to agile funding so that where additional or accelerated work is required, the funding is available for the appropriate party to undertake the required work. Without linked funding, it cannot be expected that the required activities will be completed.

**Q7. Do you have any views on our proposals for considering environmental and community impacts as part of high-level design of options?**

We support this approach as it can be done on a whole system basis.

**Q8. Do you have any views on our proposal for the FSO to independently decide which network needs it may lead the high-level design of?**

We support this approach and note the requirement for the FSO to signpost their plans as early as possible to avoid delays or inefficient duplication. Where the FSO is directing a TO to provide an option, this must be linked to agile funding.

**Q9. Do you have any views on our proposal for the FSO to set out how and when third parties can be involved within the CSNP?**

We support this approach but would ask that 'Deliverability' is included as a criteria when assessing the value of 3<sup>rd</sup> party delivery. Without a high weighting on deliverability, there is a major risk we will not meet the UKs net zero targets. We do not have the luxury of time to take a fingers-crossed approach with a Plan A, and then switch to an alternative Plan B at a later date.



**Q10. Do you have any views on our proposals on data exchange to enable the implementation of CNSP?**

As this is currently focussed on electricity networks, we are not providing a response to this consultation question. We note however that funding will also be an issue to support significant new data exchange protocols, should they be required in future from the gas networks.

**Q11. Do you have any views on our proposals regarding the principles to be followed in the CNSP decision-making framework?**

The principles set out are very sensible and we support them. They are however not principles that enable the FSO to make a decision, but are principles the FSO should follow in making a decision e.g. transparency and stakeholder engagement. We support these principles, but would like to highlight the lack of the principles, criteria, and weighting by which the FSO makes a decision. For example, how does the FSO balance capital costs, operating costs, environmental impact, deliverability, customer impact etc.?

We are anticipating that these will be set out in the Licence conditions and CNSP Governance Document, however a view of the high-level thinking would have been of benefit at this stage of the development process.

The decision-making principles will also need to govern how the FSO makes holistic decisions for example selecting one bigger project solving a number of issues, rather than a number of smaller projects solving specific problems. These principles must also be transferable to the FSO taking decisions outside of electricity and for the wider whole energy system.

**Q12. Do you have any views on our proposals on the decision-making framework for selecting potential projects to address longer-term system needs?**

We support the broad approach although we note the suggestion that this could reduce stranding risk for early procurement of land. This may not be the case when considering the interaction with wider overarching projects. For example, a TO project for a specific and localised issue could require the purchase of land for a new substation. This could then be stranded when the FSO selects a larger scheme that addresses a number of emerging issues.

**Q13. Do you have any views on the decision-making framework to bring potential projects into the 'delivery pipeline' for nearer-term needs?**

We do not have any additional points to contribute.

**Q14. We would welcome views on our proposal to not re-evaluate projects that are in the delivery pipeline, and whether a materiality trigger is appropriate and what criteria might be used.**

We support this common-sense approach.





**Q15. Do you have any views on our proposal on inclusion of environmental and community impacts in the CSNP CBA?**

We have noted above our view that 'Deliverability' needs to be a key factor in the decision-making process. This has an interaction with environmental and community impacts, as a project that is expected to have a greater level of environmental or community challenge will be much less deliverable than another project with less. An obvious example of this is when comparing more physically and visually obtrusive network infrastructure with other less invasive options. We believe a highly deliverable whole energy system CSNP is critical to achieving net zero and therefore must value those projects with the lower environment and community impact.

**Q16. Do you have any views on our proposal for the CSNP to include a methodology for assessing and taking forward system operability solutions?**

At this stage of the FSO's development, this is primarily an electricity network matter.

**Q17. Do you agree with our proposal for the ESO to review its current approach to assessing short and long term solutions, and for the FSO to set out its approach in the CSNP Methodology?**

We support this approach although we do note that any decision-making criteria that fundamentally and directly impact investment decisions may not be best placed in the bottom tier of regulatory governance. The CSNP methodology sits underneath the CSNP Governance Document, which is under the Licence, which is under the Primary Legislation. Clarity on the function and nature of the information would be helpful to avoid fundamental and far reaching factors to be placed at the appropriate level in the industry framework. Whilst Ofgem may desire the more complex and operational processes to be defined by the FSO, the balance of control needs to be established by some clear parameters set out at the start. The fact that Ofgem approves the Methodology should not make us more relaxed about placing excessive control over current and future arrangements with the FSO.

**Q18. Do you have views on our proposals for FSO to develop capabilities to consider different combinations of options and how this should be implemented?**

We fully support the FSOs development of this capability. The FSO should be able to make sensible whole system least cost decisions as well as simply providing advice and guidance to support policy. If a hydrogen pipeline represents the least cost solution to an immediate electricity capacity issue, then the FSO should be able to approve the pipeline and decline the alternative electricity grid upgrades. A further whole system example where the FSOs role would be key is to build a coherent and coordinated plan for new infrastructure into major conurbations. A hypothetical example: we should ensure separate plans for electricity tunnels into London from the West and North are assessed



alongside plans to install a large-scale hydrogen pipeline into London from the East.

**Q19. Do you agree with our proposal to introduce a requirement, as part of the new CSNP licence condition, for the FSO to make recommendations on additional interconnection and OHAs opportunities between GB and other markets?**

This is a sensible approach but care must be taken to make this scalable to non-electricity interconnectors and other energy import terminals e.g. hydrogen. The same principles may also apply to strategic energy storage.

**Q20. Do you agree with our proposal that the FSO should use reasonable endeavours to support relevant stakeholders as part of the offshore asset development process?**

Yes, we support this proposal.

**Q21. Do you agree with our proposal that the FSO assess third-party options under the CSNP and recommend delivery by competition where proposed solutions meet the relevant competition criteria?**

Yes, we support this proposal, but note our expectation that deliverability is a key element of the assessment criteria.

**Q22. What are your views on whether changes to the SQSS or obligations on licensees are needed to support the CSNP – where specifically are these changes needed and when do they need to happen by?**

Not having extremely clear accountabilities for such vital matters would not seem a very sensible or sustainable position. Such lack of clarity would not be acceptable within a gas system Safety Case.

We note that there are operating and design standards, and any approach deployed for electricity must be mindful of a future state when gas and hydrogen network design decisions are also being taken, and how any trade-offs should be assessed.

**Q23. Do you agree that the FSO should evaluate the climate resilience of the long-term whole-system CSNP?**

We welcome the consideration of climate resilience and support the view that the FSO should take a leading role.

We would support a further step for the FSO to develop and own network design and operating standards that can be used to ensure appropriately resilient assets are built into the future. We have design standards around system peak, and the gas networks use a 1-in-20 winter assessment, but we do not yet have deterministic design standards that tell networks what level of resilience they need to build into their assets. This may need to differentiate between new assets and older assets





where the retro-fitting of additional protection may take many years to complete.

A clear design standard for the gas and electricity would allow the networks to submit consistent and comparable investment plans for future price controls.

**Q24. Do you agree with the proposed position on the treatment of connections in the CSNP?**

We can see how the approach in electricity would work, and we would be very happy to discuss with Ofgem and the FSO what this would mean for hydrogen and meeting the Governments targets in this space. If this is a whole system approach then it must also apply to the planning of any hydrogen fuelled power generation required to meet the 2035 net zero power grid ambition.