

Public

Hydrogen system planning

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National Energy System Operator (NESO)

NESO is an independent, public corporation at the centre of the energy system, created by the Energy Act 2023.

Net Zero



Efficiency & economy



Security of supply



Facilitating competition



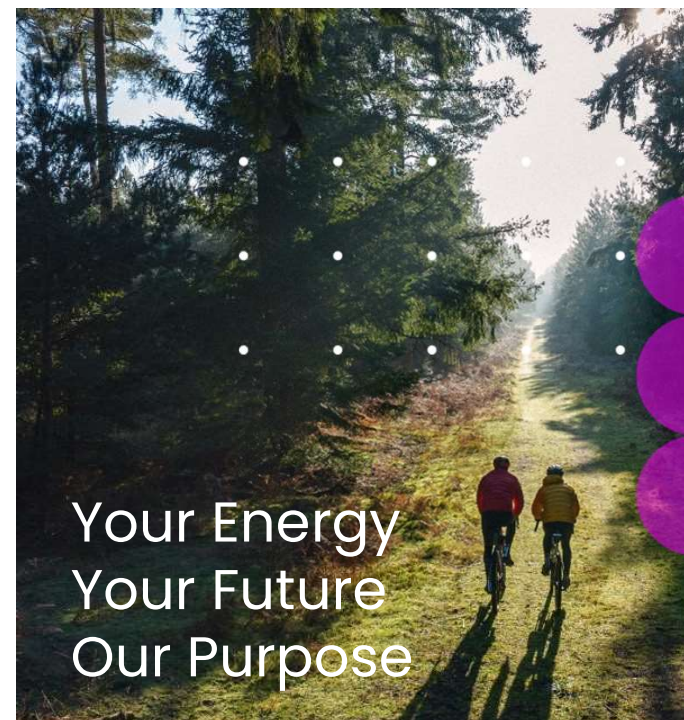
Consumer impacts



Whole system impacts

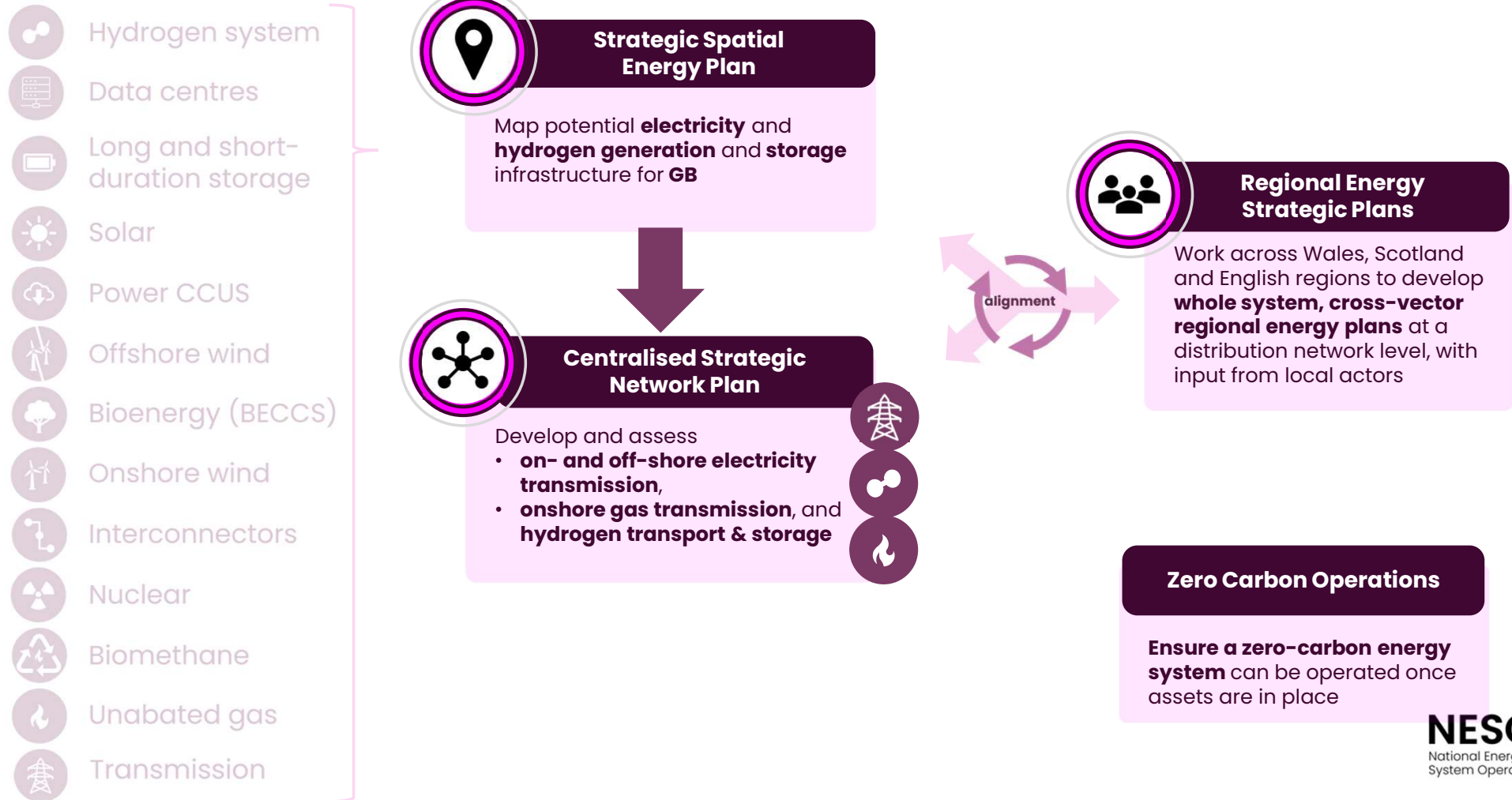


Facilitating innovation



Your Energy
Your Future
Our Purpose

How we're planning the energy system



Delivery of a whole system CSNP

To reflect different regulatory and engineering considerations, the current proposal is that the whole system CSNP will consider all three vectors, but with different levels of detail

- Electricity transmission
- Gas transmission
- Hydrogen transmission & distribution*

All three vectors will present a whole-system approach, aligning on assumptions, language, modelling approaches and assessment methodologies.

*Currently, no distinction is made between transmission and distribution for the hydrogen network. For the initial CSNP we expect to cover all common carriage systems, but not single-party connection systems.



Whole system framework

1	Drive	The Strategic Spatial Energy Plan (SSEP) will be used and complimented by the Future Energy Scenarios (FES), by the CSNP to plan the energy networks required for the wider transfer of electricity, gas, and hydrogen.
2	Identify	The CSNP will provide a view of the current capability and future needs of the networks to inform network options development for each energy vector.
3	Develop	Considering each vector's system requirements, a range of reinforcement options will be identified and put forward by NESO, Network Owners, and broader parties, as appropriate.
4	Appraise	Options will then be assessed across multiple assessment criteria to determine the best design across GB. Required reinforcements will progress into the delivery phase.
5	Plan publication	A draft plan will be published, and a consultation window will provide an opportunity to shape the final CSNP publication. Where required, this will include statutory consultations for environmental assessments.
6	Deliver	Following publication of the final CSNP, the required reinforcements will progress through detailed design, consenting and delivery. An ongoing change control process will ensure delivery in line with the plan.

Stakeholder engagement

We will engage with stakeholders using the established Strategic Energy Planning (SEP) expert working groups. These groups include industry, societal interest, environmental, marine and land spatial planning.

They serve as an engagement channel that:

- facilitates networking among members
- provides a clear overview of the CSNP
- tests understanding
- gathers data and feedback
- ensures deliverable outputs
- offers opportunities for stakeholder review

Who will we engage with?



Public

Q&A