

Public

CSNP Electricity

22 July 2025

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Agenda

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Presentation includes:

- NESO: Planning the energy system
- Whole system CSNP
- Next steps
- Q&A

NB – we'll record the presentation including Q&A

Please use Slido to ask questions

Code: 34793987

We will moderate and answer questions that are relevant to CSNP and reflect a diverse perspective. You can also get in touch via (box.sep-portfolio@nationalenergyso.com) for any specific consultation questions.



NESO – Planning the whole system

The challenge

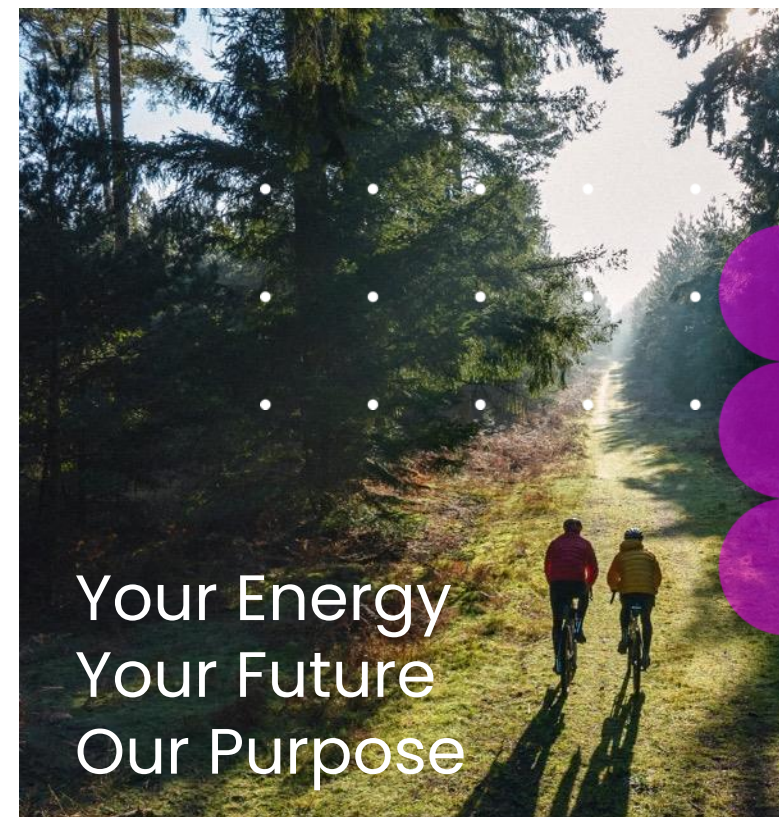
It is our job to transform the whole energy system, strategically planning the transition to a clean energy system, embracing new technologies and cleaner generation sources, always with the cost to the consumer in mind.

The opportunity

The way we use, store and source energy is evolving, and we have an opportunity in this period of change to shape an energy system that fosters economic growth and prosperity for Great Britain, creating jobs and building skills.

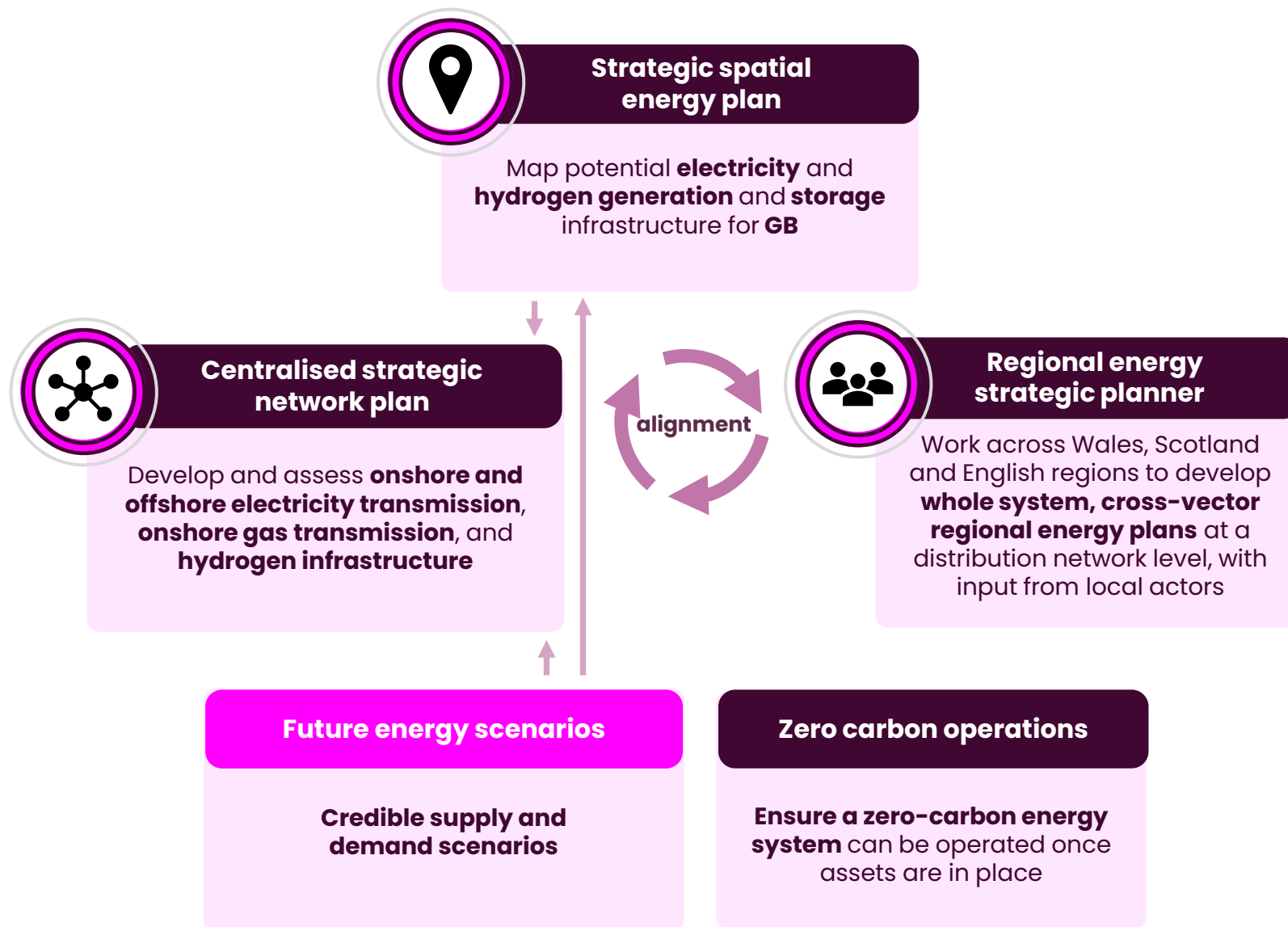
The plan

Having recently published how we intend to deliver spatial energy planning, we are now consulting on proposals for how transmission networks should be planning to transfer this energy to where it's needed over the next 25 years.



Strategic energy planning (SEP)

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Whole system CSNP

Our energy networks cover onshore and offshore **electricity transmission, international electricity interconnectors, and onshore gas.**

Electricity networks need to keep growing, so we must get ready to **support an expanded power system.**

While gas demand is likely to reduce, **we still need some supply.**

And there may be **more demand for hydrogen in future,** which will affect the electricity and gas networks.

Aims of the CSNP:

Ensure efficient energy network development by holistically planning the onshore and offshore electricity networks, and strategic gas and hydrogen networks.



Plan strategically, ahead of need, to enable investments required to ensure reliable, clean and affordable energy.



Accelerate delivery of network by providing certainty on the needs case and strategic parameters of options to support planning and regulatory processes.



Conduct a consistent, robust and transparent assessment on a broad range of network options considering multiple assessment criteria.



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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?



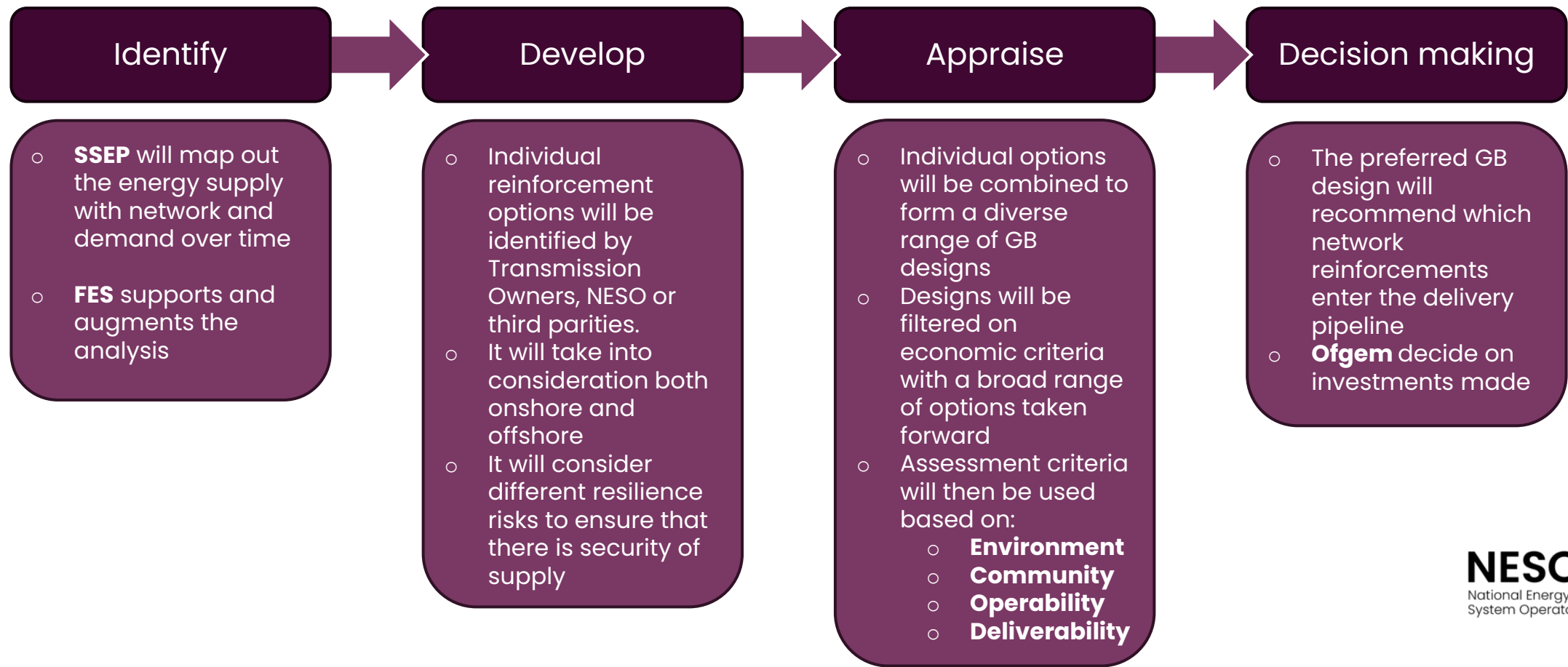
Whole system framework

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.



The CSNP framework applied to electricity network planning processes

We will holistically plan wider reinforcements on the onshore transmission network alongside the offshore network and identify opportunities for interconnectors and offshore hybrid assets.





Identify



The CSNP will identify electricity network requirements out to 2050 to support a strategic approach to network planning and the development of reinforcement options.



Alongside boundaries, additional analysis will be undertaken to provide insight at a circuit-level and consider a wide range of system conditions.



The CSNP for electricity will also identify residual stability and voltage needs to ensure the safe, reliable operation of the electricity network.



Develop



For electricity, the CSNP will consider a range of options, including network management options, upgrades to the existing network and new circuits



Different technology types and strategic designs will be considered early in the network planning process to enable a robust assessment



We will establish a structured framework to support the development of reinforcement options proposed by third parties



Appraise



During the appraise step, we will combine various reinforcement options identified in the develop step to create multiple GB network designs, ensuring a comprehensive exploration of potential combinations



The cumulative impact of these reinforcement option combinations will be evaluated using a range of assessment criteria, including economic efficiency, environmental and community impacts, deliverability, and operability, to ensure a balanced assessment of potential impacts and benefits of the GB network designs



The goal is to identify NESO's preferred GB network design and ensure stakeholders clearly understand how the recommendations are made by transparently and robustly demonstrating the application of assessment criteria in the decision making process



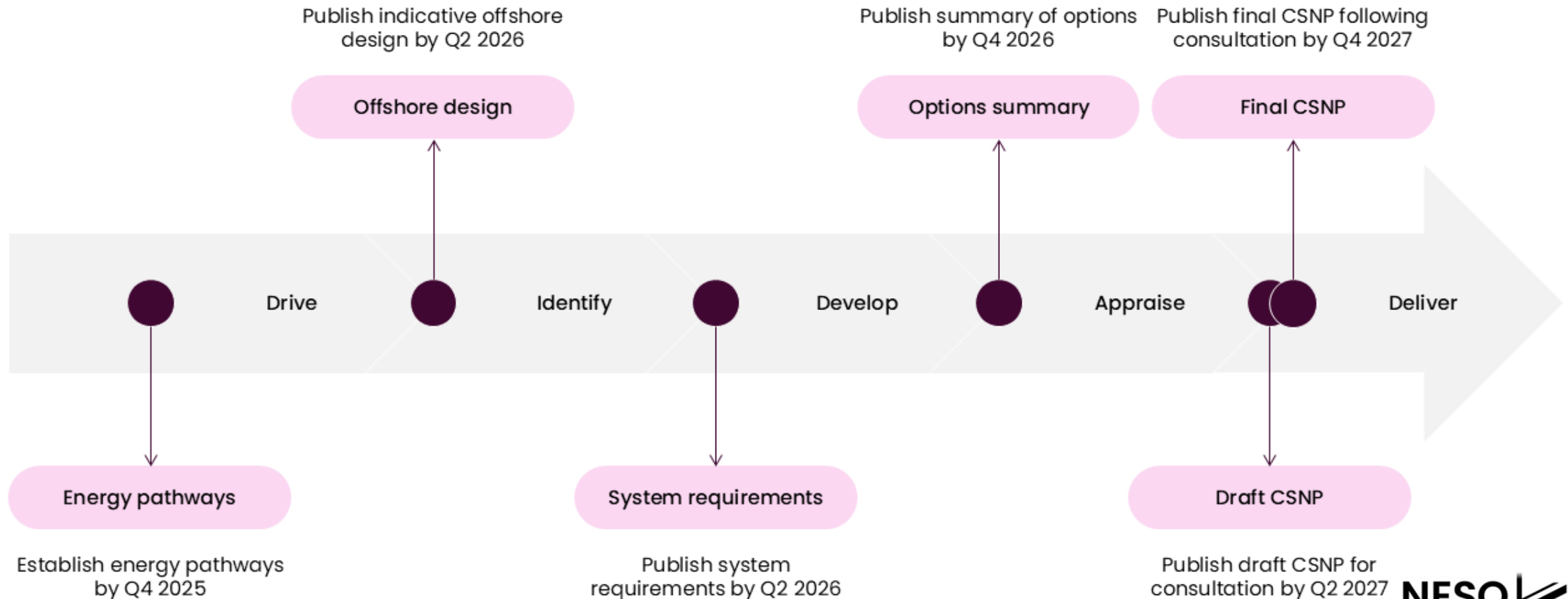
Appraise

Criteria	Description
Economic efficiency	Use economic assessment tools to identify efficient designs which create consumer value.
Environmental impact	Use geospatial data and information across multiple impact themes to assess impact on the environment.
Community impact	Use geospatial data and information across multiple impact themes to assess community impact.
Deliverability	Consider supply chain factors, construction timelines, technology readiness, and complexities, including challenges from multi-project interactions, to ensure practical delivery.
Operability	Consider real-time operability challenges associated with the GB network design options.



Plan timeline

The electricity transmission network will be developed in line with the overall CSNP timeline



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