Public

Transitional Regional Energy Strategic Plan Strategic Energy Need Methodology and Detailed Design

January 2026

NESO
National Energy System Operator

Public

Contents

1. Context

This detailed methodology will focus on Strategic Energy Need (SEN). NESO has collaborated with customers and stakeholders to identify areas within a nation or region where a strategic, proactive approach to investment ahead of need should be considered for progression within the Revenue = Incentives + Innovation + Outputs (RIIO) electricity distribution price control period, 2028-2033 (ED3). It is noted that investments may extend beyond 2033, and the scope set out here considers energy needs looking to connect up until 2040.

1.1 What is Strategic Energy Need?

SEN is one of NESO's Transitional Regional Energy Strategic Plan (tRESP) components. It determines geographic areas where a strategic approach to electricity network investment, ahead of certain need, may be required to enable key priorities across Great Britain (GB). Targeted investment, supported by NESO's SEN, can enable more complex energy needs which may otherwise struggle to connect to the electricity distribution network through existing mechanisms. SEN looks to unlock additional investment opportunities over and above business-as-usual (BAU) investment. For example, building on the forecasted uptake of low carbon technologies captured within the tRESP Pathways.

NESO's SEN outputs do not indicate network investment, or a connection is guaranteed. The output is one of many distribution network operators (DNOs) will utilise for ED3 business planning.

The detailed methodology for identifying areas of SEN is captured within this document. To summarise, energy needs are assessed against a framework of Strategic Value and Uncertainty (see Section 3.1 for definitions), where additional criteria are applied to ensure the SEN outputs do not duplicate other tRESP products or investment mechanisms. This enables NESO to highlight where additional network investment may be required to support key priorities. However, projects identified within SEN are not the only priorities for nationwide customers and stakeholders.

Within the SEN component of tRESP, NESO is publishing a small subset of needs assessed as strategic to the nation or region and which we suggest should be considered for proactive investment in the ED3 price control.

SEN is not about:

- The maintenance of networks to ensure safety, resilience and security of supply.
- Straightforward, lower value load-related expenditure, such as unlooping of domestic supplies.
- Projects already within the tRESP Pathways.

1.2 Strategic Energy Need vs Strategic Investment Need

Within the final tRESP you will see that we've changed our language from 'Strategic Investment Need' (SIN) to 'Strategic Energy Need' (SEN). This doesn't represent a change in our scope. Rather, we've changed our language so that it better describes what's in tRESP. We made this change through discussion with the regulator, Ofgem, to ensure stakeholders understood the role of our analysis in the ED3 Business Planning Process.

This is because tRESP will only identify where there is a strategic energy need. It's not in the scope of tRESP to consider available capacity on the distribution networks; it's the difference between demand and capacity that will demonstrate the need for investment.

The DNOs will be responsible for using the information in tRESP and other inputs to identify areas of strategic investment need, as part of their network planning activities. In full RESP, NESO will consider both Strategic Energy Need and Strategic Investment Need.

To avoid further confusion, NESO has taken the decision to rename the component as SEN, given the assessment focus here is on the energy needs themselves, rather than the network status.

This represents a significant change from previous approaches to network investment. It promotes the ongoing electrification of large parts of the economy without being held back by the distribution infrastructure. Investing ahead of certain need within SEN areas will be well placed, given the anticipated electrification and growth in these areas, utilising the network investment one way or another.

1.3 What value will this bring to ED3?

NESO's SEN output will provide independent, consistent evaluation of specified energy needs to support justification of additional network investment within the associated RESP area.

SEN will build on and complement the tRESP Pathways by providing insights on specific areas of investment need that are not covered by the pathway building blocks, such as across ports, industrial growth or decarbonisation.

Regardless of the outcomes of tRESP, if you are considering a project or programme that requires a connection you should engage with your DNO in the normal way. All projects must still apply to their local DNO for a connection through existing processes, regardless of whether they are in an area of SEN.

1.4 Alignment to other tRESP component parts

SEN is one of four interrelated components of the tRESP deliverable and, for tRESP, SEN links to the Nations and Regions Context (NRC). Through its horizon-scanning analysis, NRC informs how NESO's understanding of where SEN output areas are likely to exist and the make-up of energy

needs (defined as projects, programmes, initiatives, and so on) within those areas. As discussed in Section 4, this insight enables NESO to engage with relevant customers and stakeholders to better understand the pipeline of energy needs.

Upon completion of tRESP the SEN outcomes will be compared to the NRC to determine whether any key gaps exist (in terms of areas of activity, or energy need typology) and to inform future updates to the NRC, for Full RESP, based on additional analysis and engagement through SEN.

SEN also aligns closely to the Pathways work, which seeks to model the changes to supply and demand within a given RESP area. For tRESP, some of the alignment between SEN and Pathways will focus on avoiding duplication of the energy needs/projects being considered within the two areas, to ensure SEN is highlighting areas of additional investment beyond the Pathways. SEN and Pathways will have a spatial relationship within tRESP to reinforce the need for network investment, where both components are mapped to grid supply point (GSP) areas. This is explored in more detail within Section 5.

For consistency, a set of GSP areas were defined by NESO for tRESP to establish the pathways, ensuring that there is one consistent set of areas across GB for tRESP. This set of areas, referred throughout this document as tRESP GSP areas have been defined for and used as required by all the tRESP outputs (Pathways, NRC and SEN).

1.5 Distribution Network Operator (DNO) application

We anticipate that the SEN GSP areas specified by NESO will be further considered by DNOs to determine if additional network investment is required to accommodate the emerging needs recommended by NESO. Ofgem will clarify, through their business planning guidance, how SEN should be integrated into the development of DNO business plans for ED3.

2. Scope

2.1 Ofgem specifications

The tRESP Open Letter[1] explains that each RESP area will include "specification of identified areas of Strategic Investment Need within each region", and there should be an "associated commentary summarising the application of locational information in the development of the Pathways and assessment of Strategic Investment Need". As agreed with Ofgem and noted in the introduction, since NESO's output has transitioned from SI Need to SEN, NESO will geospatially

[1] Open Letter regarding the scope of the transitional Regional Energy Strategic Plan, Ofgem

identify areas of SEN within each RESP area to enable DNOs to propose SI Needs within their ED3 business plans.

NESO's customer and stakeholder engagement began by briefing and sharing the Request for Information (RFI) to the DNOs and gas distribution networks (GDNs). NESO worked with other customers and stakeholders to identify energy needs to inform SEN areas, utilised insights captured within the NRC, and engagement delivered by our RESP teams. Our full approach to customer and stakeholder engagement for SEN is detailed in Section 4.2.

To strengthen the approach for how NESO conducted the assessment of energy needs, used to inform areas of SEN, NESO has drawn on the Ofgem RESP decision document[2] to bring forward elements that underpin the Full RESP. NESO assessed energy needs against a framework of 'Strategic Value' and 'Uncertainty', detailed in Section 3, which are referenced in the Ofgem RESP decision document. Furthermore, the majority of the "direction-setting specification" noted in this document has informed the content for NESO's output on SEN. Both the assessment approach and content of the output are explored further in Sections 3 and 5, respectively.

2.2 Connections Reform

Separately to tRESP, NESO has been conducting Connections Reform to ensure a ready to connect pipeline of generation and storage projects are prioritised for grid connection to pursue the UK Government's Clean Power 2030 Action Plan. NESO has ensured that the tRESP SEN outputs do not clash or misalign with the outcomes derived from Connections Reform. The methodology used to achieve this is captured in Section 3.

2.3 Whole energy system analysis

Whilst the tRESP is inherently focused on electricity distribution, given its application for ED3, NESO is keen to integrate opportunities for whole energy system analysis into our work. As a result, NESO has engaged customers and stakeholders with interests across all energy vectors for consideration within SEN. NESO has assessed projects where electricity is not the primary energy vector (provided they would have an impact on the electricity distribution network) in the same consistent manner as where electricity is the primary vector.

2.4 SEN outcome categories

We have considered strategic energy need at a tRESP Grid Supply Point (GSP) area level; this enables us to breakdown Great Britain based upon how the local electricity system is organised. Each tRESP GSP area represents a catchment that is served by the same connection point to the higher voltage transmission network.

[2] Decision on the Regional Energy Strategic Plan Policy Framework, Ofgem

Each GSP area has been categorised as follows.

1. **Needs that have been assessed as strategic to the nation or region,** and that we consider will be pertinent to future demand, although there is either uncertainty whether this will fall within the ED3 price control, or they already have sufficient certainty to be included in the tRESP Pathways.
2. **GSP areas to be considered for proactive investment;** these are a smaller subset of the strategic needs, which we suggest should be considered for proactive investment ahead of need in the ED3 price control. GSP areas to be considered for proactive investment are underpinned by energy needs that are unlikely to be supported by existing business-as-usual network investment mechanisms, which require higher levels of certainty of need. This helps ensure the network is ready to support future economic growth and decarbonisation activities.
3. **Early stage or needs within the scope of transmission connections reform;** these are needs that are at an earlier stage of development and we anticipate do not yet require network investment but should be kept under review, or would be within the scope of transmission connections reform (generation or storage above 200 kW within Scotland, or above 5 MW within England and Wales).

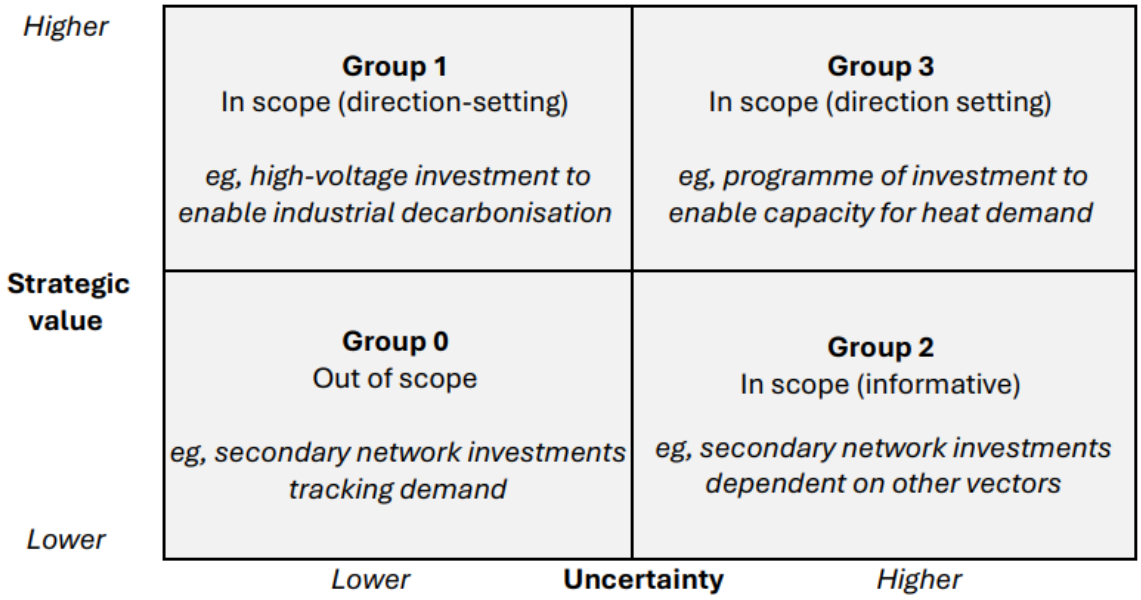
The data captured within these categories forms the SEN Data Workbook, which is provided to the DNOs to inform ED3 business planning. The SEN Data workbook will be used as the starting point for creation of the In Development Register (IDR), used to inform NESO's next revision of SEN within our first Full RESP, which will commence following publication of tRESP.

Almost all the evidence we received from customers and stakeholders informed this analysis, with a very few pieces of evidence being deemed out of scope (for example, because they related to the electricity transmission network rather than the distribution network).

3. Assessment

To develop the assessment approach for SEN, NESO began by drawing on the matrix set out by Ofgem in it's decision document, shown in Figure 1:

Figure 1: Ofgem SEN categorisation matrix based on Strategic Value and Uncertainty



Through the RESP GB Steering Committee, the SEN methodology was developed further with input from Ofgem, DESNZ, Scottish Government and Welsh Government. The approach was also refined through engagement with all DNOs, in sessions facilitated by the Energy Networks Association (ENA).

Feedback received from stakeholders during the September 2025 tRESP consultation was also used to help shape the final tRESP SEN methodology.

NESO developed an automated tool to support the assessment process and ensure assessments were consistent and objective. The tool was designed to replicate NESO's assessment process, which was tested and refined using hundreds of manually derived outcomes. A statistically relevant sample of these outcomes underwent peer review and received oversight from NESO Senior Managers.

Subsequent automated outcomes were checked by NESO's RESP teams to ensure correct outcomes were being derived and the automation was utilising the correct data points from across the RFI submission, detailed in Section 4.

NESO conducted a series of internal and external assurance activities across the tRESP products, with the relevant activities discussed in the tRESP Executive Summary.

Having established the proposed SEN output areas, NESO was able to compare and contrast the findings both to, and from, the NRC. The outcomes from SEN should support the confirmation of findings within the NRC, such as whether a particular typology of energy need is growing within a RESP area, but also highlight gaps within the NRC which can then be captured in the Full RESP.

NESO was able to determine whether the RFI process (defined further in Section 4) captured all known areas of emerging energy need within a given RESP area, based on expectations from the NRC. This comparison informs where the RFI process was unable to capture certain energy needs, which will then be securely passed to the DNOs to be included as another input in ED3 planning.

3.1 Assessment terminology

The assessment of Uncertainty has been considered through the following four lenses:

- **Consenting Status** – uncertainty surrounding key consenting components such as land development agreements, planning permission assumptions and alignment with local land development strategies.
- **Policy Stability** - uncertainty associated with enabling policies which the energy need aligns with.
- **Technology Maturity** - utilising the Technology Readiness Level (TRL) framework, the assessment aims to establish the uncertainty associated with the core technology being deployed by the energy need at the time of assessment.
- **Funding Status** - uncertainty associated with the financial investment required for the energy need to be developed to a point whereby it is ready to connect to the energy system.

To interpret how an assessment against Strategic Value could be conducted, this term has been broken down into two component parts, which are defined as follows:

- **Regional Significance** - an energy need's alignment with regional and national policies, strategies and ambitions (meaning growth plans, decarbonisation strategies, carbon reduction pathways, and so on).
- **System Value** - based upon the World Economic Forum's Definition: "System Value is a holistic framework that evaluates economic, environmental, social, and technical outcomes of potential energy solutions".

3.2 Assessment matrices

Using the detail noted within the previous terminologies above, NESO has defined qualitative assessment matrices for both Strategic Value and Uncertainty.

Figure 2: Assessment and rating tables for Uncertainty

Uncertainty Matrix				
Rating	**Consenting Status**	**Policy Stability**	**Technology Maturity**	**Funding Status**
3 - High	Project consenting requirements and authorisations undefined and speculative (Planning/Land).	Policies yet to be defined or initiated (for example, pilot programme, no regulatory clarity).	Experimental, pre-commercial or basic validated technology (TRL 1<6).	Project funding undefined and speculative.
2 - Medium	Project consenting requirements and relevant authorisations identified and engaged (Planning/Land).	Policies evolving or under consultation, with key topics established. National or Regional Policy established, but not jointly.	Prototyped through UK pilots/innovation projects in relevant or operational environment. (TRL 6<7).	Project funding identified and ongoing.
1 - Low	Project consenting requirements and relevant authorisations secured (Planning/Land).	Supported by long-term, stable national and regional policy.	Qualified, proven and implemented technology at commercial scale. (TRL 8<9).	Project funding secured.

Uncertainty Matrix				
Overall Rating	**Consenting Status**	**Policy Stability**	**Technology Maturity**	**Funding Status**
Very High	12			
High	9-11			
Medium	8			
Low	5-7			
Very Low	4			

Figure 3: Assessment and rating tables for Strategic Value

Strategic Value Matrix		
Rating	**National and Regional Significance**	**System Value**
6 - High	Prospective anchor project directly aligned with national and regional policies.	Enables key national and regional benefits (for example, Societal, Economic, Environmental).
4 - Medium	Project indirectly aligns with national and regional policies.	Supports aspects of growth/ energy/sustainability benefits.
2 - Low	Minimal alignment with national and regional priorities and/or very localised alignment only.	Does not support /or align with national and regional benefits.

Strategic Value		
Overall Rating	**Regional Significance**	**System Value**
Very High	12	
High	9-11	
Medium	8	
Low	5-7	
Very Low	4	

To ensure equal weighting between Strategic Value and Uncertainty, the scores awarded for high, medium and low in the Strategic Value matrix (Figure 3) have been doubled to match the possible maximum score that can be achieved from the Uncertainty matrix (Figure 2).

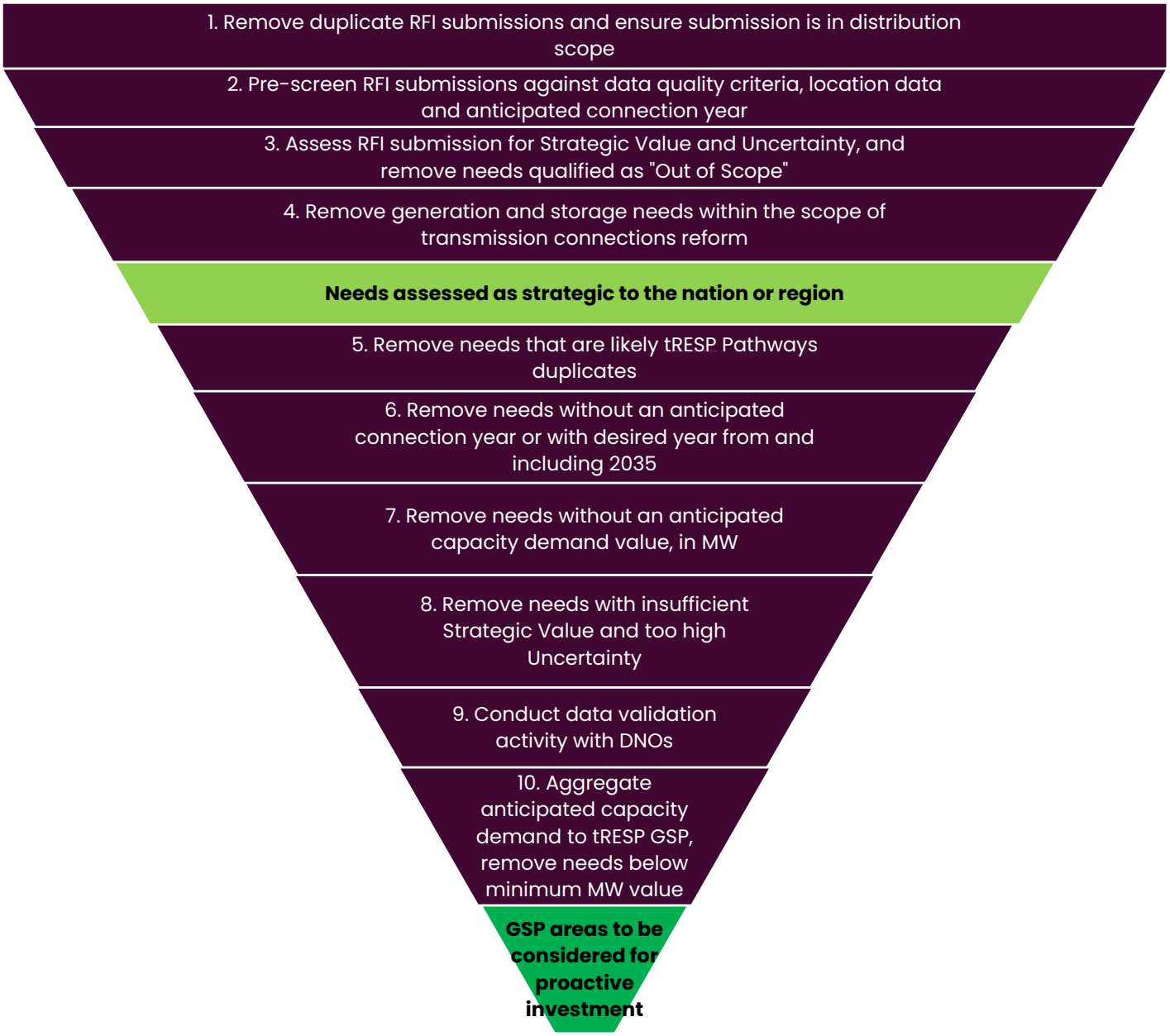
By combining the scores assessed for a given energy need across the Strategic Value and Uncertainty matrices, an energy need will be concluded as either in or out of scope for SEN.

3.3 Assessment methodology

Figure 4 illustrates the process NESO has taken to conclude the SEN outcomes, with each step of the process explained in more detail. The approach ensured the removal of energy needs that are already being accounted by alternative investment mechanisms. It also ensured outcomes reflect key priorities across GB. This includes energy needs that have a credible basis for informing network investment.

Appendix C captures further detail of how data provided through the RFI process (Section 4) was processed, refined and then used throughout the SEN assessment approach, Figure 4, and to generate the published tRESP SEN product.

Figure 4: SEN Outcome Filtering Approach



Step 1: Remove duplicate RFI submissions and ensure submission is in distribution scope

NESO received several submissions about the same energy need, containing identical information that needed to be removed from the process to ensure SEN outputs and demand were not overstated.

Based on information provided in some RFI submissions, it was clear they were specifically targeting the electricity transmission network, which is not the purpose of tRESP. These were also removed from the process.

As the purpose of this process is to assess and put forward underlying energy needs rather than network solutions, if any electricity network solutions for infrastructure were submitted, these too were removed from the process.

Step 2: Pre-screen RFI submissions against data quality criteria, location data and anticipated connection year

Prior to an RFI progressing to assessment, NESO is conducting a scope check to screen out RFIs against the following criteria:

- Projects seeking a connection after 2040.
- Projects already with a connection agreement in place.
- RFIs which did not meet the minimum threshold of data quality needed to enable NESO to conduct an assessment.
- RFIs missing key locational information.

Step 3: Assess RFI submission for Strategic Value and Uncertainty, and remove needs qualified as "Out of Scope"

Each individual RFI submissions is assessed objectively and consistently using a NESO developed automated tool. Assessment outcomes are reviewed by each RESP Area to ensure local relevance and nuance is considered. Needs that are assessed as out of scope are removed at this step.

Step 4: Remove generation and storage needs with anticipated connection year on or before 2035, already considered through Connections Reform

As noted in Section 2.2, NESO has adapted this approach to ensure that the SEN outputs do not misalign to the results from Connections Reform. To this end, NESO has ensured that any generation or storage projects with a desired connection date up to and including 2035 were not considered, provided they exceeded 5 MW (for England and Wales) or 200 kW (for Scotland). Generation and storage projects of all sizes with a desired connection date between 2036-2040 could be eligible, provided that the RFI submission passes through the prior steps.

RFI submissions that are removed at steps 2, 3 or 4 form part of the first SEN classification; early stage or needs within the scope of transmission connections reform. These are needs that are at an earlier stage of development and we anticipate do not yet require network investment but should be kept under review, or would be within the scope of transmission connections reform (generation or storage above 200 kW within Scotland, or above 5 MW within England and Wales). These RFI submissions are likely missing important information because of being in an early stage of maturity.

RFI submissions that have passed through Steps 1-4 will form part of the second SEN classification; needs assessed as strategic to the nation or region, and that NESO consider will be

pertinent to future demand, although there is either uncertainty whether this will fall within the ED3 price control, or they already have sufficient certainty to be included in the tRESP Pathways.

Step 5: Remove needs that are likely tRESP Pathways duplicates

As the third and final SEN classification is in place to build on the proactive investment indicated by the tRESP Pathways, it is crucial to remove the Pathways duplicates from the process at this stage. Informed by the scope of the tRESP Pathways building block list, RFI submissions containing energy need relating to EV charging infrastructure (excluding strategic highway service areas), generation, storage and heat networks for domestic customers supplied by heat pumps are removed at this step.

Across much of RESP nations and regions, this has been an impactful step in the filtering process, highlighting the volume of activity already being considered through the tRESP Pathways.

tRESP Pathways duplicates were left in for the needs assessed as strategic to the nation or region classification to provide information on spatial allocation of energy needs for DNOs when using the tRESP outputs.

Step 6: Remove needs without an anticipated connection year or with desired year from and including 2035

Ofgem have specified within the Sector Specific Methodology Consultation[3] that there will be an ED3 RESP reopener. Considering this and given the emerging Full RESP methodology will be more sophisticated than the tRESP approach, we concluded the tRESP SEN classification should focus on a nearer time horizon (of 2034 and before). Longer-term energy needs can then be better considered within the next iteration of the SEN and delivered using the refined Full RESP methodology.

Any RFI submissions with a desired connection date of 2035 or beyond, or without a connection date at all, were removed at this step.

Step 7: Remove needs without an anticipated capacity demand value, in MW

To ensure DNOs can conduct necessary analyses and modelling to inform whether SI Need is required to deliver proposed areas of SEN, it is critical to have the desired connection size as an input. Therefore, if this information was not provided, as requested within the RFI form, these energy needs have been removed at this step.

Step 8: Remove RFI submissions with insufficient Strategic Value and too high Uncertainty

We utilise the same assessment outcome and scores generated and used at Step 3. However, to enable NESO to support a potential proactive investment decision, the threshold for remaining in

[3] ED3 Sector Specific Methodology Consultation, Ofgem

scope is increased compared to Step 3. A higher Strategic Value and lower Uncertainty must be present. In this step, energy needs must have secured either the necessary consenting or finance in additional to being assessed as having sufficient Strategic Value to proceed through to Step 9.

Step 9: Conduct data validation and additional distribution-connected checks with DNOs

Prior to concluding the SEN classification, NESO met with all DNOs to sense-check provisional results. NESO was looking to clarify with the networks if any data points material to the assessment process had changed since the RFI had been received, notably relating to connection status. If any new data was evidenced and captured during these workshops, then those results could be fed back into the process.

Step 10: Aggregate remaining needs to tRESP GSP areas, remove those with anticipated capacity demand of need, in MW, below certain individual and aggregated minimums

To ensure that NESO's proactive investment recommendations are considering energy needs of a size that are significant enough to have a material impact on the primary network, NESO has conducted some geospatial analysis to consider the aggregated desired connection sizes per tRESP GSP area.

This is a multi-stage process:

1. Remove energy needs with individual anticipated capacity demand less than 1 MW in size.
2. Aggregate anticipated capacity demand of remaining energy needs to tRESP GSP areas.
3. Remove all remaining energy needs within GSP areas with aggregated demand less than 10 MW.
4. If aggregated demand for GSP areas is greater than 20 MW, the remaining energy needs qualify.
5. If aggregate demand within tRESP GSP area is greater than or equal to 10 MW but less than 20 MW, remove remaining energy needs with individual capacity demand less than 10 MW. The remaining energy needs in the tRESP GSP area with demand greater than or equal to 10 MW qualify and do not need to be removed.

Energy needs passing through all ten Steps are qualified within a tRESP GSP area for proactive investment; these are a smaller subset of the strategic needs, which we suggest should be considered for proactive investment ahead of need in the ED3 price control. tRESP GSP areas to be considered for proactive investment are underpinned by energy needs that are unlikely to be supported by existing business-as-usual network investment mechanisms, which require higher levels of certainty of need. This helps ensure the network is ready to support future economic growth and decarbonisation activities.

4. Request For Information

To identify and assess energy needs that could inform SEN output areas, NESO was keen to build on the existing information sharing between local actors and the energy networks on local investments and economic growth priorities. Alongside this, NESO issued an invitation through an open RFI process to engage local actors in providing further information on the pipeline of key growth and development areas.

4.1 What was the RFI asking for?

The RFI form was divided into four sections:

- **Pre-screening** – used to quickly determine whether a given energy need should be considered any further based on some overarching, necessary criteria to not waste customer and stakeholder time. An example is confirming if an existing connection agreement already exists, if it does, that energy need is likely to already be captured within the Pathways and thus should not be considered further within SEN. tRESP SEN's scope is not to duplicate existing DNO processes, such as the existing connection offers and agreements.
- **General Information** – context setting for the energy need; who, what, when, where and why.
- **Strategic Value Questionnaire** – a series of questions aimed specifically at providing the necessary detail to assess an energy need against the assessment matrix for Strategic Value (Figure 3).
- **Uncertainty Questionnaire** - a series of questions aimed specifically at providing the necessary detail to assess an energy need against the assessment matrix for Uncertainty (Figure 2).

Furthermore, where NESO is classifying an RFI with either of the SEN outcomes, our RFI has been structured to capture the majority of the "direction setting specification" Ofgem has set out for the Full RESP within their decision document for inclusion in our outputs, notably the following:

- Location and spatial context
- Network license area(s)
- Categorisation
- Energy need capacity
- Vector

A copy of the RFI form used during this process is available upon request to NESO.

4.2 Customer and stakeholder engagement approach

NESO's customer and stakeholder engagement began by briefing and sharing the RFI to the DNOs and GDNs. We took this approach as the respective customer and stakeholder teams of the DNOs and GDNs conduct extensive work to engage customers and stakeholders and understand the energy landscape within their license areas, which NESO could learn from. Alongside an understanding of the energy landscape and key customers and stakeholders formed in the NRC, the information captured from the DNOs and GDNs helped to structure the additional customers and stakeholders NESO would engage (alongside key customers and stakeholders such as local government) to proactively fill potential gaps in the customer and stakeholder landscape, not yet captured by the DNOs and GDNs.

Recognising that completion of the RFI was a time-consuming task, and being cognisant of the resource constraints that exist within many of NESO's customers and stakeholders, NESO set out a suite of support mechanisms to drive greater levels of equity of opportunity for local actors to engage with the invitation:

1. NESO began by reaching out to customers and stakeholders to set the context for SEN and invite them to engage in the process.
2. Interested parties were then issued briefing documentation ahead of meeting with NESO.
3. NESO would then present the briefing documentation and formally issue the RFI pack, including a covering letter, shareable slides, and the RFI form itself. During the briefing, NESO highlighted its support is available throughout the RFI process to enable customers and stakeholders to complete the RFI to the best of their ability.
4. Where appropriate, RESP teams have hosted drop-in sessions in their region.
5. NESO has also collaborated with other well-connected customers and stakeholders to spread the messaging and invitation further through podcasts, supporting papers and joining webinars to discuss and explore this topic in further detail with a wider audience.

4.3 RFI timeline and milestones

We ran a request for information (RFI) process from 27 May to 30 September 2025, which was open to any customer or stakeholder that wished to provide a submission. The process was advertised on NESO's website, presented during our public RESP Forums, promoted within the September 2025 tRESP consultation, and promoted further through a public webinar with **Regen**. Our RESP nations and regions teams also engaged with their local customers and stakeholders. Targeted bilaterals were also conducted with DNOs.

Customers and stakeholders that had submitted by the 30 September 2025 deadline were also invited to provide any missing data until 30 October 2025. NESO provided support to RFI respondents as part of the RFI process May-September 2025 and extended the deadline to end-October 2025 to give respondents more time to submit additional information.

In the majority of cases, we had enough information in the RFIs to be able to assess them as part of our analysis. In a small number of cases, where there were gaps in data, we were able to fill these through follow up discussions.

DNOs and GDNs were on an accelerated timeline to provide necessary input to NESO to allow sufficient time for processing and assessment to ensure that some proposed areas of SEN could be included within the September 2025 public consultation that NESO ran. Wider actors were therefore granted additional time to reduce the resource requirements needed and ensure ample opportunity for engagement.

4.4 Limitations of the RFI process

There were two main limitations of this process, summarised below, with mitigants also included:

1. There are, inevitably, some gaps in the customers and stakeholders NESO were able to engage and who then completed a RFI submission, resulting in some inconsistencies across GB. NESO conducted consistency analysis (appendix A) which identified known gaps and forms part of data workbooks for DNOs and Ofgem.
2. The method of data collection, an excel file, did not ensure the data provided in RFI submissions was of consistent and high quality. An alternative method of collection with increased data validation, mandatory fields, clarified terminology and standardised units would have been beneficial. Data preparation and transformation activity was conducted to maximise value of data collected. This has been a key learning to be incorporated into Full RESP delivery.

5. Output

Within the tRESP publication, NESO includes an interactive map which allows customers and stakeholders to explore the applicable tRESP GSPs which NESO recommend are considered for proactive investment within ED3.

Supporting each interactive map is an accompanying narrative, divided into two sections:

1. **Needs assessed as strategic to the nation or region:** a clear explanation of the tRESP GSP areas with emerging strategic needs in the RESP area and associated key themes.
2. **GSP Areas to be considered for proactive investment within ED3:** a clear explanation of the tRESP GSP areas with needs to be considered for investment in the RESP area, associated key themes and the anticipated aggregate demand, in GW in each GSP area.

In addition, an introduction to the SEN product provides insight to SEN's purpose, process and the evidence received across GB, whilst also summarising anticipated next steps.

5.1 Data sensitivity

To mitigate customer and stakeholder concerns of sharing potentially sensitive information, energy needs are aggregated to tRESP GSP area in NESO's tRESP publication, no details from an individual RFI submission are shared publicly.

To enable detailed network planning utilising the SEN outputs derived by NESO, the DNOs and Ofgem (only) will receive an SEN data workbook containing details from the RFI submissions and NESO's SEN assessment outcomes, unless RFI submissions have been flagged as confidential, not be shared with DNO or used in public product, in which case the submissions have not been used within tRESP's outputs.

Appendix A – Consistency Analysis

Overview

The purpose of this analysis was to assess how the RFI submissions aligned with the project categories identified through engagement with Ofgem. By comparing submitted needs against these predefined categories, we determined missing submissions and identified any gaps across regions.

DNOs can use the identified evidence gaps as an additional evidence source to inform ED3 business planning and ensure regional considerations are appropriately reflected.

Categories analysed

The categories chosen to compare against submissions received were derived through engagement with Ofgem. These are:

- Freeports
- Ports
- Enterprise Zones
- Growth Zones
- Decarbonisation Zones
- AI Zones
- GB Strategic Road Service Areas
- Local Industrial Decarbonisation Plans

Key data sources (Government or other official lists)

- Freeports – GOV.UK [gov.uk]
- UK Freeports Directory [ukfreeport...ign.gov.uk]
- Enterprise Zones – GOV.UK [gov.uk]
- AI Growth Zones – GOV.UK [gov.uk]
- Office for Zero Emission Vehicles - GOV.UK [gov.uk]
- UK Ports Directory [uk-ports.org]
- Decarbonisation Zones- GOV.UK [gov.uk]
- Motorway Services Online | motorway services & motorway service stations
- Serviceme.uk
- London Strategic Road Network
- Our roads | Traffic Wales
- The Trunk Road Network | Transport Scotland

Appendix B – SEN Data Process

Overview

Explanation of the end-to-end data process used to transform raw data collected during the RFI process into the published SEN product, a geospatial map of emerging energy needs at a tRESP Grid Supply Point (GSP) area level, and data workbooks to inform ED3 business planning.

Process

A – Collect Data: data acquired from external organisations through the RFI process (see Section 4).

B – Triage Data: NESO conduct a manual review of the RFI submission from a data quality perspective. Specific, key data fields are reviewed alongside activity to identify duplicate RFI submissions, which are required to be combined, and large multi-need RFI submissions that need to be disaggregated.

C – Conduct External Data Validation and Additional Data Collection: engage with the RFI submitter to validate or improve the quality of data in their RFI submission. NESO also conducted workshops with each DNO to further validate data and discuss emerging themes.

D - Transform Data: automated solution developed by NESO to extract and prepare individual RFI submission data, ready for assessment and further analysis.

E – Assess Data: automated solution developed by NESO to replicate existing Assessment Framework, co-developed with Ofgem and DNOs. Each RFI submission is assessed objectively and consistently, based only on the information provided in the RFI.

F – Conduct Internal Data Improvement: NESO RESP area teams review and validate key data fields, requesting evidence-based overrides where necessary, and approve both automated assessment scores and final outcomes.

G – Approve Data: NESO followed a three-stage process, to assure the raw data quality. They were:

a) RESP area manager review and approval
b) tRESP SEN lead review and approval
c) RESP Senior Leadership Team

H – Prepare Location Data: NESO converts location data to tRESP GSP areas.

I – Apply the SEN 'Funnel': with a mix of manual and automated data activity, NESO qualifies each RFI submission as either:

a) **Needs that have been assessed as strategic to the nation or region,** and that we consider will be pertinent to future demand, although there is either uncertainty whether this will fall within the ED3 price control, or they already have sufficient certainty to be included in the tRESP Pathways.

b) **GSP areas to be considered for proactive investment;** these are a smaller subset of the strategic needs, which we suggest should be considered for proactive investment ahead of need in the ED3 price control. GSP areas to be considered for proactive investment are underpinned by energy needs that are unlikely to be supported by existing business-as-usual network investment mechanisms, which require higher levels of certainty of need. This helps ensure the network is ready to support future economic growth and decarbonisation activities.

c) **Early stage or needs within the scope of transmission connections reform;** these are needs that are at an earlier stage of development and we anticipate do not yet require network investment but should be kept under review, or would be within the scope of transmission connections reform (generation or storage above 200 kW within Scotland, or above 5 MW within England and Wales).

J - Consistency analysis: see appendix A.

K – Review and Approve SEN 'Funnel' Outcomes: NESO RESP teams, with manager oversight, rigorously review and sign off SEN outcomes for their respective areas to ensure accuracy, consistency and local relevance.

L - Prepare Data for Visualisation: NESO prepare data for visualisation, working with GIS capability to design and produce data to agreed schema for area map visualisations.

M - Visualise Data: NESO leverage ArcGIS to generate geospatial maps of emerging energy needs at a tRESP GSP area level, with RESP area boundaries also applied.

N - Generate Data Workbooks: NESO produce data workbooks for each DNO, containing emerging energy needs relevant to that network operator. These are shared with DNOS with appropriate arrangement in place, relating to the sharing of sensitive data.

O – Process and Outcome Assurance: NESO conduct internal and instruct external assurance to ensure process has been followed consistently and outcomes are fair.