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tRESP

Nations and Regions Context Methodology and Detailed Design

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1.1 Introduction

This document outlines the methodology for the transitional RESP's (tRESP) Nations and Regions Contexts (NRCs), developed by NESO, to support the RII0-ED3 price control setting, providing an initial overview of the conditions and priorities across each RESP nation and region. The prototype tRESP Nations and Regions Contexts was published alongside the other key components of the tRESP consultation (Pathways, Consistent Planning Assumptions (CPAs) and Strategic Energy Need (SE Need)) in September 2025 ahead of this final, enhanced version released in January 2026.

The Full RESP Nations and Regions Contexts will develop a comprehensive understanding and view of conditions and priorities for each RESP nation and region, drawing on embedded engagement through RESP national and regional teams and additional national and regional datasets. tRESP will develop Nations and Regions Contexts to provide an initial assessment of conditions and priorities, drawing on RESP engagement and relevant qualitative and quantitative sources, with a greater focus on consistency between nations and regions than for Full RESP, primarily utilising national data sources. The tRESP Nations and Regions Contexts have been developed with a specific focus on factors influencing ED3 and have also been refined following consultation feedback and engagement with RESP's customers and stakeholders.

1.2 Scope

1.2.1 What is tRESP Nations and Regions Context?

The tRESP Nations and Regions Contexts present essential background information on key elements and topics at a RESP nation or region level or below, in a consistent and comparative way, while allowing for national and regional divergence where necessary to enable a fair reflection of conditions, key challenges, opportunities and priorities. Where possible, national datasets and sources have been used to inform the quantitative elements of the NRCs as a starting point; these sources have been interrogated, analysed and aligned to each RESP, providing a consistent baseline of each nation and region's energy landscape, infrastructure, economic landscape and role in the whole energy system

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of Great Britain (GB). They consider local inputs where possible and provide clarity and consistency across multiple network areas, enabling more nationally and regionally focussed planning and analysis.

The Nations and Regions Contexts reflect local priorities rather than superseding them, providing essential background information on key elements, themes and topics. We have also aligned several parts of the NRC component with the Pathways component through consistent use of specific data and technologies, with some divergence in specific data themes. Greater alignment has been achieved between the NRCs and other tRESP components as part of the wider enhancement for the final tRESP publication.

Through an extensive desktop research exercise, supported by engagement in RESP nations and regions, including engagement with customers and stakeholders in the RESP Forums and targeted bi-laterals, the scope of the Nations and Regions Contexts has been refined and agreed to cover the following themes:

- Demographics, governance and socioeconomics
- Transmission and distribution infrastructure
- Transport and heating
- Industry and economy
- Generation and storage
- Targets and ambitions

Under each of these themes, a number of data areas and topics have been included. In these areas, we have produced geospatial visualisations and qualitative narratives, for each nation and region, aligned to key qualitative and quantitative themes and elements. These are hosted on a digital platform available via the NESO website, to enhance accessibility and usability. The Nations and Regions Contexts also contain summaries, outlining implications and relevance for tRESP, which have guided the selection of themes and data topics.

Whilst deciding what was in-scope for tRESP Nations and Regions Contexts, we also had to consider what to exclude for the purposes of tRESP. This was guided by our desire to set a consistent starting point, whereby the Full RESP from 2026 could build and introduce greater levels of granularity and local input.

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Excluded from tRESP Nations and Regions Contexts	Reason for exclusion
Additional data from local actors to develop a detailed bottom-up view of conditions and priorities for the nations and regions.	<p>The need for consistency between and within nations and regions across selected data topics and themes has meant that nationally available sources, which have been fully validated have been prioritised. Area-specific datasets would have risked consistency issues, requiring greater levels of data processing and validation. Where appropriate, we have referenced additional data or information in our accompanying narratives.</p> <p>Area-specific datasets will be considered in the Full RESP Nations and Regions Contexts.</p>
Embedded engagement in nations and regions and coordination with local stakeholders.	<p>In the Full RESP, the Nations and Regions Contexts will be the starting point of our cycle and will be based on wide-spread place-based engagement. This was not fully achievable for tRESP given the time constraints. Therefore, engagement has been delivered primarily through our RESP national and regional teams across England, Scotland and Wales. They have carried out engagement in their respective nations and regions, including through our RESP Forums.</p> <p>We recognise that local customers and stakeholders possess a wealth of relevant and valuable additional knowledge. Many have developed and collated a number of data sources relevant to specific nations and regions. These will feature more prominently in the Full RESP.</p>

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The above points will instead be within the scope of the Full RESP Nations and Regions Contexts component, as illustrated in Figure 1.

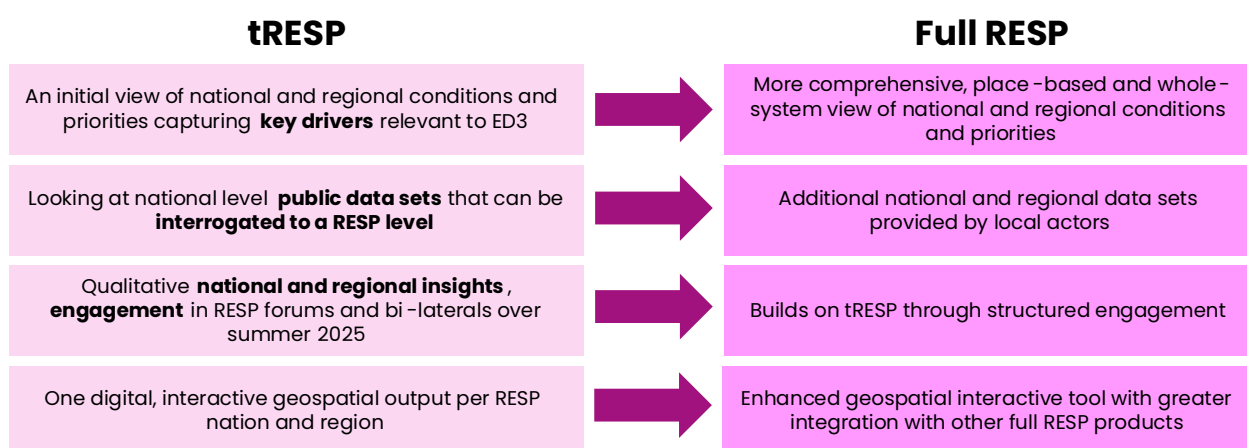


Figure 1: Evolution of Nations and Regions Contexts from tRESP to Full RESP.

1.2.2 What value will this bring to RIIO-ED3?

The tRESP Nations and Regions Contexts will enhance RIIO-ED3 by supporting energy system planning. It will provide an independent, coherent and consistent view of each nation and region's conditions, priorities and ambitions to customers and stakeholders across GB. This will offer a consistent framework while also capturing insights specific to each nation and region.

1.2.3 Alignment to other tRESP components

The Nations and Regions Contexts are the first of four key components of transitional Regional Energy Strategic Planning (tRESP), alongside Pathways, Consistent Planning Assumptions (CPAs), and Strategic Energy Need (SE Need).

The NRCs, and in particular its equivalent component in Full RESP, will help inform the identification and assessment of future SE Need and the composition of energy requirements, defined as projects, programmes, and initiatives. The Nations and Regions Contexts, and the insights they provide, will enable RESP to engage customers and stakeholders to better understand the broader pipeline of energy needs, across the whole energy system, as tRESP evolves into Full RESP.

The design of NRC, particularly the way it processes, packages and presents data, supports the addition of new data sources and themes, enabling the component to evolve over time as RESP evolves from transitional to full.

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The tRESP Pathways component models projected changes in supply and demand within RESP nations and regions. The tRESP Nations and Regions Context component aligns, wherever practical, with the Pathways component through consistent use of specific data and technologies aligned to the themes included in the component, with some divergence in specific data themes.

Several data topics included in the NRC component are aligned with the building blocks developed by the Pathways component. These include topics such as heat pumps, electric vehicles and heat networks. The NRCs presents data at a high granularity wherever possible, enriching the overall tRESP publication by offering a detailed baseline view, at a higher granularity to the Pathways component and offering the user a platform to assess different data insights from each nation and region alongside other tRESP components.

1.2.4 Ofgem specifications

The tRESP Open Letter¹ details that each RESP area will include “an initial view of regional conditions and priorities, informed by regional stakeholders, capturing key drivers of network investment”. NESO has designed the scope of the tRESP Nations and Regions Context component around this guidance to ensure alignment, while undertaking a tailored assessment approach to identify and evaluate the unique characteristics, challenges, and opportunities of each RESP nation and region.

1.3 Assessment

1.3.1 NESO assessment process

The development of the tRESP Nations and Regions Contexts was underpinned by a thorough assessment process that enabled the identification of key drivers of network investment within the ED3 price control. NESO ideated an extended list of potential topics and datasets for inclusion in the final publication through internal workshops, leveraging insights from the RESP national and regional teams and desktop research. This collaborative approach facilitated the capture of diverse national and regional insights and

¹ Open Letter regarding the scope of the transitional Regional Energy Strategic Plan.

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priorities, ensuring that the final publication accurately reflects the unique characteristics of each nation and region while maintaining a focus on ED3 and consistency.

Subsequently, structured assessment criteria were applied in three key stages against each proposed topic to iterate and refine the long list, enabling the development of a holistic overview of each RESP nation and region whilst ensuring NESO could deliver a credible component for tRESP.

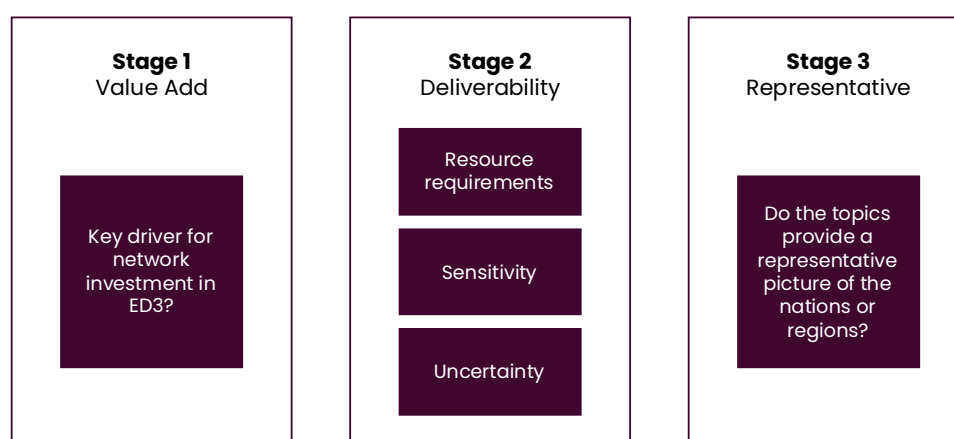


Figure 2: tRESP Nations and Regions Context data and topic selection process

1. **ED3 Value Add:** This initial assessment evaluates the contribution of each topic to regulatory decision-making.
2. **Resource Requirement:** Considers the level of resource required to secure the relevant datasets for the proposed topic and consolidate these into a credible, robust and auditable position.
3. **Sensitivity:** Evaluates the interpretability of the data associated with each topic and the potential need for additional engagement to accurately articulate the findings.
4. **Uncertainty:** Addresses the level of confidence in the availability and consistency of data across all regions associated with each topic.
5. **Representative:** Following completion of the prior assessments, the Contexts were assessed ensure it provided a representative view of the nation or region.

By applying these lenses and evaluation approach, NESO has ensured that the tRESP Nations and Regions Contexts are refined and strategically aligned with the objectives of the ED3 price control. After reviewing the publications from this initial assessment, the proposed topics have either been selected for inclusion in the final tRESP Nations and

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Regions Contexts or taken forward for further evaluation for the Full RESP Nations and Regions Context methodology. For topics that are excluded from the tRESP Nations and Regions Context publication, the RESP national and regional teams may opt to include qualitative insights on them in the supporting narratives, where relevant, for their respective tRESP Nations and Regions Context.

1.3.2 Data assurance

The development of the tRESP Nations and Regions Context publication has utilised and analysed publicly available datasets, primarily those published by official government sources, to ensure a high standard of data credibility. Where possible, data points were cross-referenced with alternative sources to validate consistency and build confidence in the Contexts. The data inputs used to build the Contexts have been rigorously assessed for quality and credibility and are presented in the digital output at a high granularity in a clear and accessible and accessibility format. Data has been clearly sourced, with the process of transforming from source data to visualisation and other graphical outputs clearly set out, including metadata, units and any assumptions or cross referencing.

Data covering a range of relevant themes were systematically consolidated and processed using standardised methods to enable comparability across RESP nations and regions in GB, in line with NESO data governance and assurance. We use a single authoritative repository to store our input data, with version control, to ensure consistency and reproducibility.

Quality assurance checks were applied throughout all stages of data handling to identify gaps, inconsistencies, or anomalies. Where limitations were identified, such as uneven data coverage or varying definitions between sources, appropriate mitigations were introduced. This included the documentation of assumptions, clear communication of caveats, and, where relevant, assessments of uncertainty to maintain transparency.

Stakeholder engagement (outlined in further detail in the below section) was a key element of the assurance process. Input from subject matter experts and relevant regional stakeholders helped contextualise the findings and provided an additional layer of validation, ensuring the Contexts were both robust and fit for purpose.

1.3.3 Stakeholder engagement approach

Over the past six months, RESP's national and regional teams have been engaging with customers and stakeholders to enhance their existing understanding of the RESP nations

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and regions. Building on this, emerging draft versions of the tRESP Nations and Regions Context publication were shared at each summer RESP Forum to gather stakeholder insights. Each RESP national and regional team presented an emerging view of their respective nation or region's Context and invited customers and stakeholders to provide their comments and input, particularly on the relevance and criticality of the content and data topics included. The messaging to these local actors on the Contexts emphasised the specific focus on tRESP and its objective in supporting ED3, highlighting that it is not as comprehensive as the Full RESP Nations and Regions Context component will be. The insight gained has been reviewed and either included in the final tRESP publication or taken forward to be assessed as part of the Full RESP Nations and Regions Context methodology.

Additionally, NESO will collaborate with networks to review the tRESP Nations and Regions Contexts, ensuring that the energy infrastructure section accurately reflects their networks. This will be achieved through bi-laterals with gas and electricity networks. As part of the consultation process, NESO has also updated the tRESP Nations and Regions Context component based on stakeholder feedback received ahead of the final tRESP publication in January 2026.

Output

As mentioned, Nations and Regions Contexts will be published for each RESP nation and region, covering a range of topics with comparisons to GB averages (where appropriate) to highlight relevant differences.

1.3.4 Regional landscape, conditions and ambitions

This initial section focuses on those aspects of regional landscape, challenges and opportunities, that are key drivers for investment for ED3.

Demographics, Governance and Socioeconomics	Transmission and Distribution Infrastructure	Transport and Heating	Industry and Economy	Generation and Storage	Targets and Ambitions
National & Local Governance	Electricity Transmission	Electric Car Uptake and Distribution	Industrial and Commercial Energy Demand	Operational Electricity Generation and Storage	Clean Power 2030 and Connections Reform
Population	Electricity Distribution	Public Charging Infrastructure	Main Industrial Zones	Planned Electricity Generation and Storage	Local Energy Planning
Housing	Gas Distribution	Heat Networks	Ports	Hydrogen Projects	Targets & Ambitions
Energy Performance Certificates		Domestic Gas Connections			Strategic Spatial Energy Planning
Fuel Poverty		Domestic Heat Pump Uptake			
		Non-Domestic Heat Pump Demand			

Figure 3: Proposed content for tRESP Nations and Regions Context.

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Each overarching topic (Demographics, Governance and Socioeconomics, Transmission and Distribution Infrastructure, Transport and Heating, Industry and Economy, Generation and Storage, and Targets and Ambitions) features a range of data visualisations, supplemented by qualitative narratives and summaries that provide deeper context and insights. The Targets & Ambitions and SSEP Targets sub-topics consist of written summaries that provide essential insights into the strategic direction and objectives shaping the energy landscape and influencing national and regional priorities. These qualitative narratives and summaries have been developed by each RESP Team, leveraging their expertise and knowledge gained through sustained regional stakeholder engagement. This input ensures the reports are contextually grounded, tailored to national and regional priorities, and enhanced with the nuance required to complement the quantitative analysis.

1.3.5 Summary and implications for tRESP

In this section, the insights from each data topic will be summarised and synthesised to outline the potential implications for tRESP and RIIO-ED3. This aspect of the tRESP Nations and Regions Context publication will explore the critical drivers for network investment, considering factors such as demographic trends, energy generation capacity, and infrastructure constraints.

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Figure 4: Data sources for selected tRESP Nations and Regions Context topics.

Selected Topic	Data Source(s)	Coverage
National and Local Governance	<ul style="list-style-type: none"> • ONS – LA Boundaries 	Great Britain
Population	<ul style="list-style-type: none"> • ONS Population Estimates – England and Wales • ONS – England and Wales Population – LAs 	England & Wales
	<ul style="list-style-type: none"> • NRS – Scotland Population – Data Zones • NRS – Scotland Population – LAs 	Scotland
	<ul style="list-style-type: none"> • National Planning Policy Framework 	England
	<ul style="list-style-type: none"> • Housing and economic needs assessment – GOV.UK • lhn-outcome-of-the-new-method.ods 	England
Fuel Poverty	<ul style="list-style-type: none"> • Fuel Poverty in England 	England
	<ul style="list-style-type: none"> • Scotland – Fuel Poverty by LA • Scotland Overall (2023) 	Scotland
	<ul style="list-style-type: none"> • WHCS 2017-2018 	Wales
EPC Splits	<ul style="list-style-type: none"> • EPC Data – England and Wales 	England & Wales
	<ul style="list-style-type: none"> • EPC Data – Scotland 	Scotland
Electricity Transmission	<ul style="list-style-type: none"> • NESO Beyond 2030 baseline 	Great Britain
Electricity Distribution	<ul style="list-style-type: none"> • NESO Data Portal – GIS Boundaries for GB DNO Licence Areas – GIS Boundaries for GB DNO Licence Areas National Energy System Operator 	Great Britain

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Selected Topic	Data Source(s)	Coverage
Gas Distribution	<ul style="list-style-type: none"> Shape files sourced from GDNs and Find My GDN 	Great Britain
Public Charging Infrastructure	<ul style="list-style-type: none"> DfT Public Charger Data 	Great Britain
Electric Vehicle Uptake and Distribution	<ul style="list-style-type: none"> Baseline data from tRESP Pathways (VEH0142) 	Great Britain
Heat Networks	<ul style="list-style-type: none"> Baseline data from tRESP Pathways (domestic EPC data coupled with Department for Energy Security and Net Zero (DESNZ) heat network data (Heat Networks registered under the Heat Network (Metering and Billing) Regulations) - Further detail can be found in the tRESP Pathways Methodology. <p><i>Note: the output shown in NRC differs from Pathways in that NRC includes all heat network connected customers, regardless of fuel source, whilst pathways only includes domestic customers connected to heat networks supplied by heat pumps, and is aggregated to tRESP GSP area</i></p>	Great Britain
Domestic Gas Connections	<ul style="list-style-type: none"> DESNZ Sub National Gas Connection Rates 	Great Britain
Domestic Heat Pump Uptake	<ul style="list-style-type: none"> Baseline data from tRESP Pathways – domestic Energy Performance Certificates (EPC) and Microgeneration Certification Scheme (MCS) 	Great Britain
Non-Domestic Heat Pump Demand	<ul style="list-style-type: none"> Baseline data from tRESP Pathways – non domestic Energy Performance Certificates (EPC) and Future Energy Scenarios (FES) 2025 	Great Britain

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Selected Topic	Data Source(s)	Coverage
Industrial Clusters	<ul style="list-style-type: none"> Industrial Clusters – Zero Carbon Hubs Industrial Decarbonisation Challenge Local Industrial Decarbonisation Plans 	Great Britain
	<ul style="list-style-type: none"> Further data for Wales – SWIC and NEWID 	Wales
Industrial Strategy Zones	<ul style="list-style-type: none"> Industrial Strategy Zones Action Plan 	Great Britain
	<ul style="list-style-type: none"> UK Freeports 	Great Britain
	<ul style="list-style-type: none"> UK Investment Zones 	Great Britain
Enterprise Zones / Areas	<ul style="list-style-type: none"> England Enterprise Zones 	England
	<ul style="list-style-type: none"> Wales Enterprise Zones 	Wales
	<ul style="list-style-type: none"> Scotland – Enterprise Areas 	Scotland
Ports	<ul style="list-style-type: none"> Major and minor port list for freight statistics UK Ports Directory 2024-25 	Great Britain
Industrial and Commercial Energy Demand	<ul style="list-style-type: none"> DESNZ – sub-national electricity consumption DESNZ – sub-national gas consumption 	Great Britain
Industrial Emissions	<ul style="list-style-type: none"> NAEI 	Great Britain
Operational Electricity Generation & Storage	<ul style="list-style-type: none"> Consolidated Embedded Capacity Registers from each DNO TEC Register Crown Estate – England and Wales Crown Estate – Scotland 	Great Britain

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Selected Topic	Data Source(s)	Coverage
Planned Electricity Generation & Storage	<ul style="list-style-type: none"> • Renewable Energy Planning Database (REPD), October 2025 • Crown Estate - England and Wales • Crown Estate - Scotland 	Great Britain
Proposed Hydrogen Projects	<ul style="list-style-type: none"> • HEA - H2 Map 	Great Britain
Local Energy Planning	<ul style="list-style-type: none"> • Energy Systems Catapult - Ready for RESP 2025 	England & Wales
	<ul style="list-style-type: none"> • The Local Heat and Energy Efficiency Strategies (LHEES) (Scotland) Order 2022 - set out that local authorities must prepare, publish and update a strategy and delivery plan on or before 31 December 2023 	Scotland
Clean Power 2030 Action Plan Targets	<ul style="list-style-type: none"> • UK Government Clean power 2030 Action Plan • Connections Reform - Detailed Results Data 	Great Britain