TRANSITIONAL RESP ASSURANCE ANNEX

ED3-O02

CONTENTS

		2
1.	Purpose of this Assurance Submission	3
2.	Application of tRESP Pathways	3
3.	Application of Consistent Planning Assumptions	4
4.	Spatial Disaggregation from GSP to Network Assets	4
5.	Additional Inputs to the Licence-area Load Projection	9
6.	Integration of Strategic Energy Needs	11
7.	Heat-pump Implementation Issue	15
8.	Islands	16
9.	Governance and Assurance	18
10.	Compliance Statement	19

1. PURPOSE OF THIS ASSURANCE SUBMISSION

This annex accompanies SSEN Distribution's ED3 tRESP Assurance Templates for SHEPD and SEPD.

Ofgem requires DNOs to use NESO's tRESP outputs as a key strategic input to their licence-area load projections, including the tRESP Pathways, Consistent Planning Assumptions (CPAs) and Strategic Energy Needs (SENs), and to follow NESO's user guidance in applying them. tRESP does not provide a complete forecast, so DNOs are also expected to supplement it with relevant local evidence and DNO-defined building blocks.

SSEN has fully adopted this approach. Where we've followed the prescribed methodology without variation, this annex provides a short confirmation, and the detailed supporting values are reported in the relevant Assurance Template. Additional narrative is provided where:

- the guidance requires SSEN to define its own methodology;
- additional granularity or permitted latitude has been used;
- SSEN has departed from a tRESP output or methodology;
- a data or modelling issue affects interpretation of the results; or
- specific local circumstances require additional explanation.

This narrative should be read alongside the tRESP Assurance Template, ***(ED3-S01) Load Related Expenditure annex, (ED3-S02) Long-Term Integrated Network Development Plan***, ***(ED3-S17) Islands Strategy*** and associated Engineering Justification Papers.

2. APPLICATION OF TRESP PATHWAYS

2.1 COMPLIANCE WITH THE REQUIRED APPROACH

SSEN has used the January 2026 tRESP Pathways as the strategic starting point for its ED3 licence-area load projections and has mapped the relevant tRESP building blocks into its forecasting process.

The ED3 planning forecast uses the Holistic Transition pathway in accordance with the required planning approach. The tRESP pathway inputs have been reconciled at GSP and licence-area level, with the resulting values and allocations reported through the SHEPD and SEPD Assurance Templates. The ED3 load-planning material similarly records the use of tRESP pathway numbers alongside existing demand and the latest contracted connections position.

Where a tRESP pathway has been applied as published, no further narrative is provided here.

2.2 EXCEPTIONS

SSEN has applied the applicable January 2026 tRESP Pathways without a general pathway deviation across SHEPD or SEPD. The implementation issue identified in relation to primary-network heat-pump processing did not represent an intentional departure from the tRESP Pathway and is described separately

in Section 7. Any specific pathway variation or deviation identified through final assurance is recorded in the relevant Assurance Template.

3. APPLICATION OF CONSISTENT PLANNING ASSUMPTIONS

3.1 COMPLIANCE WITH THE REQUIRED APPROACH

SSEN has incorporated the applicable NESO CPAs into the ED3 Load Forecast for the technology building blocks to which they apply, including EVs, heat pumps and energy efficiency. The CPA logic has been applied in translating technology uptake into demand profiles for network planning.

The applicable CPA values, their implementation and any variations or deviations are reported in the Assurance Templates. Where SSEN has applied the prescribed NESO methodology without variation, no additional explanation is provided in this annex.

This is consistent with the purpose of the CPAs as a common basis for translating tRESP pathway volumes into load while maintaining consistency between DNO forecasts.

3.2 EXCEPTIONS

SSEN has applied the applicable NESO Consistent Planning Assumptions without variation or deviation across both SHEPD and SEPD. The corresponding CPA values and their application are evidenced in the accompanying Assurance Templates; no CPA exceptions are declared.

The primary heat-pump issue identified during assurance was not an intentional alternative CPA assumption. It was an implementation error and is therefore separately described in **Section 7**.

4. SPATIAL DISAGGREGATION FROM GSP TO NETWORK ASSETS

4.1 COMPLIANCE WITH THE REQUIRED APPROACH

Ofgem requires DNOs to document how tRESP technology volumes and demand at GSP level have been disaggregated and spatially allocated to network assets at lower voltage levels. The accompanying Assurance Templates provide the resulting values, including demand technology allocations at primary substations and domestic heat-pump allocations at selected secondary substations.

SSEN has applied this requirement through its established Load Forecasting and network modelling processes. The approach brings together the final January 2026 tRESP pathways, the applicable Consistent Planning Assumptions, SSEN's detailed network topology and the granular spatial evidence developed through DFES. Except for the exceptions and implementation issue identified elsewhere in this annex, the

resulting network-level forecasts have been developed using the prescribed tRESP approach and are reported in the SHEPD and SEPD Assurance Templates. SSEN's contemporaneous ED3 forecasting material confirms that the January 2026 tRESP pathway values and CPA logic for EVs, heat pumps and energy efficiency were incorporated into the updated Load Forecast.

The sections below explain the two distinct elements of this process: first, the granular spatial evidence provided by DFES; and second, SSEN's network modelling used to translate scenario demand into asset-level forecasts.

4.2 DFES SPATIAL EVIDENCE UNDERPINNING THE FORECAST

SSEN uses the spatial distributions developed through its Distribution Future Energy Scenarios (DFES) to provide the geographic granularity needed to allocate tRESP pathway values below GSP level. DFES provides technology-specific projections at primary and, where appropriate, secondary-network level, allowing SSEN to reflect where future demand, generation and storage are most likely to materialise rather than assuming uniform growth across a GSP feeding area.

DFES 2025 was developed on an accelerated basis specifically to inform tRESP. Regen developed technology projections at licence-area level and spatially distributed these to primary or secondary network level, as appropriate to each technology. The resulting projections were aggregated to GSP level and provided by SSEN to NESO as an input to development of the January 2026 tRESP.

The spatial distribution is technology-specific and uses the characteristics most relevant to the location of future uptake. This includes network and geographic information, national and local datasets, known and prospective projects, stakeholder evidence and local plans. For example, EV distributions reflect factors affecting the likely location of vehicles and charging infrastructure, while heat projections reflect property and existing heating characteristics. DFES 2025 also incorporated reconciliation with available Local Area Energy Plan evidence.

This spatial evidence was then used by SSEN when incorporating the final tRESP Pathways into the ED3 Load Forecast. DFES provides the relative distribution of each relevant building block within a GSP feeding area, while the final tRESP Pathway provides the GSP-level control total. SSEN scales the downstream DFES allocations to align with that tRESP control total, as described in **Section 4.4**.

This approach retains the local and technology-specific spatial intelligence developed through DFES while ensuring that SSEN's ED3 planning forecast remains aligned to the final published tRESP Pathways. It is therefore a means of spatially disaggregating tRESP, rather than an alternative to the tRESP forecast.

4.3 RECONCILIATION OF DFES AND FINAL TRESP OUTPUTS

Following publication of the final tRESP, SSEN and Regen undertook comparison and reconciliation between the DFES and tRESP projections.

This included comparison at GSP and technology-building-block level to identify where the final tRESP pathways aligned with the underlying DFES position and where material differences required further consideration. The updated DFES reports included a dedicated tRESP comparison annex, with particular

attention given to technologies where the forecasts differed materially, including large-scale solar, storage and onshore wind.

The final DFES reporting also incorporated tRESP CPAs and scenario alignment to support reconciliation between SSEN's forecasting evidence and the tRESP framework.

The reconciliation process also enabled differences between DFES and emerging tRESP outputs to be identified and investigated with NESO during development of the final tRESP. Where such issues were resolved prior to publication of the January 2026 tRESP, SSEN has used the resulting final published tRESP position and does not treat those matters as deviations within this assurance submission. There have been no issues highlighted following publication of the January 2026 tRESP.

4.4 TRANSLATING TRESP-ALIGNED FORECASTS TO PRIMARY AND SECONDARY NETWORK LEVEL

Following publication of the final January 2026 tRESP outputs, SSEN incorporated the relevant pathway values and Consistent Planning Assumptions into its ED3 Load Forecast. The tRESP pathway values provide the GSP-level control totals, while the granular spatial distributions developed through DFES provide the basis for allocating those values to the parts of the network where the relevant technologies are expected to materialise. This is consistent with the assurance requirement to demonstrate that GSP pathway values reconcile to the sum of their downstream allocations.

To spatially disaggregate the final tRESP pathways to lower voltage levels, SSEN compared the DFES 2025 projections with the corresponding tRESP values at GSP and building-block level. For each building block and GSP, a scaling factor was calculated representing the difference between the DFES projection and the final tRESP pathway value.

This scaling factor was then applied to the corresponding DFES projections at primary and, where applicable, secondary-substation level. This retained the underlying spatial distribution established through the DFES methodology while scaling the aggregate forecast to align with the applicable tRESP GSP value. The resulting allocations therefore use DFES to determine the relative spatial distribution of each building block below GSP level, with tRESP providing the GSP-level control total. This accords with SSEN's documented position that the spatial distribution of DFES 2025 demand was used to apportion tRESP GSP-level demand across the licence-areas.

Following scaling, the resulting sub-GSP allocations were reconciled to the applicable tRESP GSP values. The values resulting from this process are reported in the SHEPD and SEPD Assurance Templates, which provide the quantitative evidence necessary to compare the tRESP GSP pathway values with their downstream allocations.

The applicable CPA methodology was then used to translate technology volumes into the demand characteristics required for network planning, including the relevant treatment of EVs and heat pumps. The Assurance Templates separately evidence the application of the CPAs, diversity corrections and any declared variations or deviations.

This process operated as intended for the relevant building blocks except for the primary-network heat-pump processing issue identified through assurance. That issue affected the implementation of the tRESP-

aligned heat-pump allocation at primary-substation level and is therefore treated transparently as an implementation error, rather than as a deliberate variation to the disaggregation methodology. The issue and its impact on the ED3 plan are explained separately in **Section 7**.

For the secondary network, the resulting technology projections are incorporated within SSEN's bottom-up load modelling to produce asset-level forecasts at secondary-transformer and LV-feeder level. The detailed secondary-network methodology is described in **Section 4.5**.

4.5 TECHNOLOGY-SPECIFIC ALLOCATION

4.5.1 ELECTRIC VEHICLES

For EV building blocks, SSEN uses the DFES spatial distributions described above to allocate the relevant tRESP GSP control totals below GSP level. The spatial distribution reflects the characteristics affecting the prospective location of EV uptake and charging infrastructure, rather than allocating vehicles uniformly across the GSP. The applicable NESO EV CPAs are then used to translate vehicle uptake into charging demand, including the treatment of different charging types and the relevant diversity assumptions. The resulting vehicle allocations and CPA treatment are evidenced through the Demand Allocation, EV CPA and EV07 diversity-correction worksheets in the Assurance Templates.

4.5.2 DOMESTIC HEAT PUMPS

Domestic heat pumps are allocated using the same tRESP-control-total/DFES-spatial-distribution approach, informed by local property and heating characteristics. Consistent with HP01, the spatial allocation takes account of the characteristics of dwellings within each area and the customers served by the relevant network assets, rather than assuming uniform heat-pump uptake across a GSP. The resulting allocation is translated through SSEN's network topology to primary and, where applicable, secondary-substation level.

The Domestic HP Disaggregation worksheet provides additional assurance over this process. For the representative urban, suburban and rural primaries selected in the Assurance Template, Table 2 provides the associated secondary-level heat-pump allocations and customer information, allowing the spatial allocation to be sense-checked against the number and characteristics of customers served. The detailed CPA and diversity treatment is provided through the HP CPA and HP08 worksheets.

4.6 SECONDARY NETWORK: DISAGGREGATING DEMAND TO ASSET LEVEL

For the secondary network, SSEN applies its bottom-up Secondary Load Model to translate system demand and future technology uptake into forecasts at secondary-transformer and LV-feeder level.

The model combines metered consumption data, customer attributes and network topology to produce half-hourly demand profiles at asset level. Where half-hourly metering is available, this is used directly. Where data are partial or unavailable, demand is inferred using profile-based approaches calibrated to estimated annual consumption and clustered customer or feeder characteristics. This provides network coverage while maintaining consistency and traceability across the forecast.

Future technology uptake is incorporated into these underlying demand profiles at secondary-transformer and LV-feeder level. This additional granularity is necessary because the tRESP pathways provide the strategic demand trajectory, but network impacts ultimately occur at individual assets. Two areas within the same GSP can have materially different customer characteristics, technology uptake and existing network headroom. SSEN therefore needs to understand where within the GSP the tRESP-aligned demand is expected to arise in order to assess its impact on the secondary network.

The Secondary Load Model does not create an alternative pathway to tRESP. Instead, it translates the tRESP-aligned technology projections into the level of network granularity required to assess local loading, using the bottom-up demand profiles and network connectivity described above. This provides a traceable link from the strategic tRESP projection through to the individual secondary transformers and LV feeders potentially affected by future uptake. SSEN's wider ED3 methodology similarly describes this bottom-up modelling as the means of translating system-level scenarios into actionable network requirements.

For assurance purposes, the relevant outputs are the resulting spatially disaggregated technology and demand values. The accompanying Assurance Templates provide the required secondary-level heat-pump sample data, customer numbers and associated primary/secondary network information, enabling NESO to assess the robustness of this spatial disaggregation.

The same asset-level forecasts subsequently inform SSEN's wider ED3 network planning by identifying where future demand could result in local network constraints. That subsequent assessment does not alter the tRESP pathway or spatial allocation described above: it determines how the network should respond to the forecast requirement and sits outside NESO's tRESP assurance assessment, which is focused on how tRESP has been incorporated into SSEN's licence-area load projections.

4.7 ASSURANCE AND EXCEPTIONS

The SHEPD and SEPD Assurance Templates provide the detailed evidence supporting this methodology, including:

- Relevant tRESP GSP pathway values;
- Technology allocations to primary substations;
- The required domestic heat-pump allocations at secondary substations;
- EV and heat-pump CPA application and diversity corrections;
- Generation allocations; and
- Declared pathway variations and deviations.

Where the standard process described above has been followed, no further methodological narrative is provided.

The only material implementation issue identified through preparation of this assurance narrative is the primary-network heat-pump processing issue described in **Section 7**. The treatment of SSEN's island networks within the tRESP framework is explained in **Section 8**.

5. ADDITIONAL INPUTS TO THE LICENCE-AREA LOAD PROJECTION

5.1 COMPLIANCE WITH THE REQUIRED APPROACH

tRESP provides the common strategic planning basis for SSEN's ED3 load projections but does not, on its own, provide a complete representation of future demand and generation. In accordance with Ofgem's requirements, SSEN therefore supplements the tRESP Pathways, Consistent Planning Assumptions and Strategic Energy Needs with DNO-defined building blocks and relevant local evidence to produce complete load projections for the SHEPD and SEPD licence-areas.

These additional inputs capture underlying network demand and future energy needs that are outside the scope of the tRESP Pathways or provide the distribution-level evidence needed to reflect committed customer requirements and locally specific developments. Ofgem's requirements explicitly recognise the need for DNO-defined building blocks, including core domestic demand and industrial and commercial demand, alongside local plans and stakeholder evidence.

The detailed methodology, data sources and energy-load assumptions for these building blocks are set out in the ED3 LRE Strategy. This section provides a concise explanation of their role within the tRESP-based licence-area projection and the controls used to avoid double counting.

5.2 DNO-DEFINED BUILDING BLOCKS

The principal additional inputs used within SSEN's ED3 forecasting methodology are summarised below.

Table 1 - DNO-Defined building blocks

DNO-defined building block	Purpose	Relationship with tRESP
Historic and existing network demand	Provides the baseline level of electricity demand against which future growth is assessed, using recorded network demand and observed customer behaviour.	Forms the starting position onto which future demand growth is applied. Demand already present on the network is not added again as incremental tRESP growth.
Contracted connections	Reflects demand and generation projects that have progressed through the connections process and therefore provide higher-confidence evidence of future customer requirements.	Supplements pathway assumptions with known customer requirements. Contracted projects are reconciled against SENs and other forecast inputs before inclusion to avoid duplication.
Distribution Future Energy Scenarios (DFES)	Provides granular regional and local evidence on future technology uptake, customer behaviour and emerging demand and generation drivers.	Provides spatial evidence supporting interpretation, validation and disaggregation of the tRESP pathways. The relationship between DFES and tRESP, and its application in allocating tRESP values below GSP level, is described in **Section 4**.
Strategic Energy Needs (SENs)	Represents strategic energy needs identified through the tRESP process that may need to be reflected in the full energy projection and/or considered for proactive investment.	SENs are assessed separately from the Pathways and reconciled against contracted connections and other forecast evidence. Their detailed treatment is described in **Section 6**.

Stakeholder and local-planning evidence	Draws on evidence from Local Authorities, Local Area Energy Plans, Local Heat and Energy Efficiency Strategies, Strategic Development Plans, developers, major customers and wider stakeholder engagement.	Provides additional evidence on the location, timing and characteristics of future energy needs and can inform DNO-defined inputs and the spatial interpretation of tRESP.

These building blocks are consistent with the forecasting framework set out in the LRE annex, which identifies existing network demand, contracted connections, DFES, SENs and stakeholder-derived local growth assumptions as inputs used to supplement the common tRESP planning baseline.

5.3 INTEGRATION WITH THE TRESP PLANNING BASELINE

The additional building blocks are not treated as independent forecasts that are simply added to the tRESP Pathways. Their purpose is to complete, localise or provide additional evidence for the licence-area projection where the required demand or generation is not already represented.

SSEN therefore distinguishes between:

- existing demand already present on the network;
- future technology growth represented by the tRESP Pathways;
- committed demand or generation represented by contracted connections;
- energy needs identified through the tRESP SEN process; and
- local and stakeholder evidence used to inform the spatial distribution, timing or plausibility of future requirements.

This provides a consistent basis for combining national, regional and local evidence without treating each source as an additional increment of demand.

DFES has a particular role in this process. It provides granular spatial evidence derived from technology-specific analysis and local intelligence. As described in **Section 4**, DFES 2025 was developed as an input to tRESP, while the resulting spatial distribution evidence is also used within SSEN's network forecasting. SSEN has subsequently reconciled DFES and tRESP at technology-building-block and network level to understand material differences between the two projections.

Where local evidence provides additional granularity without changing the applicable tRESP pathway, SSEN treats this as part of the implementation of the tRESP-based forecast. Where evidence results in a material departure from a tRESP output, that departure is declared as a variation or deviation and, where necessary, explained separately in this annex. Ofgem's methodology expressly provides for local evidence to support additional granularity and, where robustly evidenced, specific deviations for network-planning purposes.

5.4 AVOIDING DOUBLE COUNTING

A key control within SSEN's forecasting methodology is that an underlying source of future demand or generation should be represented once within the licence-area projection.

Before an additional input is incorporated, it is reviewed against the tRESP Pathways, Strategic Energy Needs, contracted connections, DFES evidence and other relevant forecasting inputs. Where the same underlying requirement is already represented elsewhere, it is not added again as incremental demand or generation. This control is also set out explicitly in the LRE methodology.

For example, a major industrial development may appear through several evidence routes, including as a prospective development within local-planning evidence, a SEN and subsequently a contracted connection. These are treated as multiple sources of evidence about the same underlying energy need, rather than three separate additions to the forecast.

The same principle applies to SENs. Where a need is already represented through a contracted connection or other forecast input, SSEN identifies this through its SEN validation and reconciliation process rather than adding the SEN independently. Housing projects are a key example of this; while the pathway does not contain volumes of additional housing schemes, our DFES process includes this as a DNO-defined building block, and this can overlap with Energy Needs forming part of the SEN process. The detailed treatment of SENs is set out in **Section 6**.

5.5 APPROPRIATENESS OF ADDITIONAL DATA AND ASSUMPTIONS

In selecting DNO-defined building blocks and their supporting evidence, SSEN considers the:

- Reliability and quality of the source data;
- Relevance of the source to electricity distribution network planning;
- Currency of the information;
- Spatial granularity available;
- Relevant temporal and seasonal characteristics; and
- Extent to which the underlying demand driver is expected to change over time.

These criteria reflect Ofgem's expectation that DNOs justify the suitability of the data and assumptions supporting DNO-defined building blocks, including consideration of reliability, relevance, currency, locational and seasonal variation and future evolution.

Stakeholder evidence is used alongside, rather than in place of, quantitative forecasting evidence. Local Authorities, developers, major customers and other stakeholders provide information that can strengthen understanding of the location, timing and credibility of future energy needs. The LRE evidence base records the use of Strategic Development Plans, Local Area Energy Planning, local-authority evidence and wider stakeholder engagement to validate and refine forecasting assumptions.

Detailed data sources, profiling assumptions and the translation of individual DNO-defined building blocks into annual energy and peak electricity demand are set out in the LRE annex and supporting load-forecast methodology. They are not duplicated here except where their application results in an exception to the required tRESP approach.

6. INTEGRATION OF STRATEGIC ENERGY NEEDS

6.1 COMPLIANCE WITH THE REQUIRED APPROACH

Strategic Energy Needs (SENs) form one of the key tRESP inputs that DNOs are required to consider when developing their licence-area load projections and ED3 network plans. SSEN has assessed the January 2026 tRESP SEN outputs for both SHEPD and SEPD and has applied Ofgem's ED3 Business Plan Guidance alongside the NESO SEN User Guidance in determining how individual needs should be treated. This is consistent with Ofgem's requirement that tRESP Pathways, CPAs and SENs, including relevant post-tRESP SEN updates, form key strategic inputs to the full licence-area load projection.

NESO's SEN guidance distinguishes three outcomes, with different expectations for DNO treatment:

- **Early-stage needs or needs within the scope of transmission connections reform:** these do not require DNO validation and are not normally used to justify ED3 reinforcement unless the DNO holds further evidence supporting their inclusion.
- **Needs assessed as strategic to the nation or region:** these may be considered within the full energy projection and network plan where there is additional supporting evidence. DNOs are not required to undertake the same formal validation applied to proactive investment SENs, but must avoid duplication with tRESP Pathways, DFES or other forecasting inputs.
- **Needs within a GSP area to be considered for proactive investment:** these require DNO validation of the information relevant to network planning followed by a further plausibility assessment before they are used to support proactive ED3 investment.

SSEN has applied this differentiated treatment rather than assuming that all SENs should automatically be added to the Load Forecast or result in ED3 investment.

6.2 NEEDS ASSESSED AS STRATEGIC TO THE NATION OR REGION

Needs assessed as strategic provide additional evidence about future energy requirements but do not, by themselves, establish a case for proactive ED3 network investment. NESO's guidance permits these needs to inform DNO energy projections and plans, subject to appropriate justification and controls against double counting.

SSEN has therefore considered these needs alongside the other evidence described in **Section 5**. Where a strategic need is already represented by the tRESP Pathways, DFES, a contracted connection or another forecast input, it is not added again. Where additional information demonstrates a genuinely incremental requirement, that evidence can inform the licence-area projection through the relevant forecasting route.

This treatment is important because some strategic SENs have limited information on precise location, timing, scale or project maturity. SSEN raised these limitations during development of the NESO guidance and has adopted a proportionate approach rather than treating a strategic classification as evidence of investment need in its own right.

The individual strategic SENs and SSEN's treatment of them are recorded in the relevant SHEPD and SEPD Assurance Templates.

6.3 ASSESSMENT OF PROACTIVE INVESTMENT SENS

For the subset identified by NESO as needs to be considered for proactive investment, SSEN applied a staged assessment to determine whether each need remained valid, its plausibility, and whether additional shared-use network investment was required during ED3.

6.3.1 INITIAL VALIDATION

Each need was assessed against the eight initial-stage validation failure criteria set out in the tRESP SEN guidance and reflected in the ED3 tRESP Assurance Template. These criteria test whether there is a reason why the need should not progress further, including where the need is already fully covered by a distribution

connection agreement, is expected to connect to the transmission network, falls outside the relevant licence-area or applicable scale and timing thresholds, is no longer proceeding, or has materially changed from the need assessed by NESO.

Only needs that passed this initial validation progressed to the subsequent plausibility assessment.

6.3.2 PLAUSIBILITY ASSESSMENT

For needs progressing beyond initial validation, SSEN assessed the maturity and credibility of the underlying developments. In accordance with Ofgem's Business Plan Guidance, particular consideration was given to the status of relevant consents and the level of financial commitment. This evidence was used to classify needs as high, medium or low plausibility, with additional stakeholder evidence sought where required to support the assessment.

The plausibility classification informed the subsequent treatment of the need within ED3 planning. High-plausibility needs could support proactive investment where network intervention was required. For medium-plausibility needs, investment was considered where it represented a low-regret element of a wider scheme, consistent with Ofgem's requirement that the incremental investment directly attributable to the SEN should not exceed 40% of the overall scheme value. For low-plausibility needs, or medium-plausibility needs that did not meet this low-regret threshold, material investment was not progressed on the basis of the SEN alone; instead, proportionate preparatory activity and future investment through the relevant uncertainty mechanism could be considered as the evidence matures.

6.3.3 ED3 NETWORK-INVESTMENT ASSESSMENT

A separate network-investment assessment was undertaken for needs progressing through validation and plausibility assessment. Passing the preceding stages did not automatically establish a requirement for ED3 investment. SSEN considered whether additional shared-use network infrastructure was required during ED3, including whether the need could be accommodated by existing network capacity, was already addressed through ED2 investment, or related to sole-use connection assets rather than shared network reinforcement.

6.4 RECONCILIATION AND AVOIDANCE OF DOUBLE COUNTING

SENs are reconciled against the wider forecasting evidence before being incorporated into SSEN's licence-area projection or used to support an ED3 investment requirement.

In particular, SSEN checks whether the underlying need is already represented through:

- The tRESP Pathways;
- DFES and the wider demand projection;
- An existing or contracted connection;
- Another SEN submission relating to the same underlying development;
- Committed or planned network works; or
- Another DNO-defined building block described in **Section 5**.

Where the underlying demand is already represented, the SEN is not added independently. This prevents multiple evidence sources relating to the same development from increasing the Load Forecast more than once.

This control has affected individual SEN decisions. For example, a specific proactive SEN was not progressed as a separate SEN requirement because a contracted connection at the same site already provided more capacity than the need identified through the SEN process. The SEPD Assurance Template similarly records instances where aggregated development submissions would duplicate individual SENs if separately included.

6.5 OUTCOME OF THE PROACTIVE SEN ASSESSMENT

SSEN's assessment progressively narrowed the proactive-investment SEN population as the validation, plausibility and network-investment tests described above were applied. SSEN did not identify any additional needs assessed as strategic to the nation or region that required promotion to proactive-investment status for ED3.

Of the 36 proactive investment SENs identified for assessment, 24 passed initial validation and 12 progressed through the second-stage validation and plausibility assessment. Of these 12 needs, seven were assessed as having an ED3 investment requirement, representing 66.5 MW of SEN demand. These figures reflect the final position agreed through SSEN's SEN finalisation process.

The remaining five needs that passed validation and plausibility assessment did not require additional ED3 network investment. This does not mean that the underlying energy needs were disregarded. In individual cases the requirement could be met through existing network capacity, investment already being delivered in ED2, investment elsewhere in the ED3 plan, or through customer-specific connection assets rather than additional shared-use reinforcement.

The detailed outcome for each proactive investment SEN, including its validation status, plausibility classification and whether an ED3 investment requirement was identified, is recorded in the relevant Assurance Template and supporting SEN evidence. Where an ED3 investment requirement has been identified, the resulting network intervention and its justification are evidenced through the relevant ED3 investment documentation. This annex does not repeat that investment justification because NESO's tRESP assurance is focused on how SSEN has incorporated tRESP outputs into its licence-area load projections rather than assessment of the resulting investment plan.

6.6 ASSURANCE AND TRACEABILITY

The SEN assurance evidence should be read across three complementary sources:

- The SHEPD and SEPD tRESP Assurance Templates provide the regulatory return, including the needs assessed as strategic and the proactive-investment SEN treatment.
- Appendix 1 - Strategic Energy Needs provides the detailed project-level validation, plausibility and ED3 investment assessment.
- ED3 LRE Strategy explains how validated proactive SENs that create a network requirement are incorporated into the wider ED3 planning and investment process.

This provides a traceable route from the original NESO SEN classification, through SSEN's validation and reconciliation, to its treatment within the licence-area forecast and, where appropriate, the ED3 investment plan.

Importantly, the assurance evidence preserves the distinction between the existence of a strategic energy need, its representation in the Load Forecast, and whether additional ED3 network investment is required. These are related but separate judgements and are not treated as interchangeable.

7. HEAT-PUMP IMPLEMENTATION ISSUE

7.1 ISSUE IDENTIFIED

During preparation of the tRESP assurance submission, SSEN identified an error in the processing of domestic heat-pump projections within the primary-network Load Forecast.

The intended methodology was to spatially disaggregate the tRESP-aligned heat-pump projections using the approach described in **Section 4.4**. However, where a primary substation was associated with more than one local-authority area, the processing only captured the first applicable local-authority record rather than aggregating all relevant records. This resulted in heat-pump volumes being understated at affected primary substations across both licence-areas.

SSEN is treating this transparently as an implementation error in the tRESP alignment and assurance process, rather than as an intentional variation from the tRESP methodology. The issue does not affect the secondary-network modelling because the underlying dataset is not processed using the same local-authority split.

7.2 MATERIALITY AND IMPACT ON THE ED3 PLAN

Following identification of the issue, SSEN assessed the corrected heat-pump projections against the affected primary substations and ED3 investment requirements.

The assessment indicates that the error does not materially change the ED3 baseline investment requirement. Within SHEPD, corrected heat-pump forecasts produced limited changes at primary-substation level, and no material changes were identified to the reinforcement schemes assessed.

More generally, the ED3 baseline had already been developed to protect affordability by retaining higher-confidence investment in baseline funding and managing more uncertain heat-pump-driven requirements through flexibility and the Uncertainty Mechanism. Correcting the heat-pump allocation therefore does not change the case for the baseline investment included in the Business Plan, although higher demand could increase the scale of investment subsequently required through the Uncertainty Mechanism if that demand materialises.

As an additional materiality check, SSEN assessed the effect on the relevant flexibility requirements. The average variance across affected scenarios was approximately 1.3%. Assuming 20% of heat-pump load is flexible reduces the corresponding flexibility impact to approximately 0.26%, equivalent to [redacted] of relevant flexibility expenditure. This supports the conclusion that the effect on flexibility costs is not material.

7.3 REGULATORY TREATMENT AND ASSURANCE

The error does not change SSEN's underlying tRESP methodology or the role of the Holistic Transition pathway as the principal load projection. The separate Ofgem heat-pump sensitivity remains a sensitivity for assessing the timing and certainty of ED3 investment and does not replace the underlying tRESP load projection.

SSEN has therefore:

- Disclosed the implementation error through this assurance narrative;
- Corrected the underlying heat-pump assessment and considered its effect on relevant primary-network requirements;
- Assessed the implications for baseline investment, uncertainty mechanisms and flexibility; and
- Retained the tRESP-aligned methodology described elsewhere in this annex.

On the evidence assessed, the error does not require a change to the ED3 baseline investment ask. Any additional requirement arising if heat-pump uptake develops towards the higher tRESP trajectory will continue to be managed through the mechanisms established for demand uncertainty.

The detailed calculation and supporting impact assessment are retained as supporting assurance evidence rather than reproduced in this annex.

8. ISLANDS

8.1 APPLICATION OF TRESP TO OUR ISLAND NETWORKS

SSEN has applied the January 2026 tRESP Pathways as the common strategic planning basis for its island networks, including the Scottish islands within SHEPD and the Isle of Wight within SEPD. The tRESP pathway is used to determine the level and timing of demand that needs to be accommodated during ED3, alongside the other inputs described in this annex. No separate island pathway or general deviation from tRESP has been applied. This is consistent with Ofgem's requirement to use tRESP as a key strategic input to each licence-area load projection.

Our island networks do, however, require a longer-term approach to network design. SSEN operates an extensive portfolio of infrastructure serving the Scottish islands and the Isle of Wight, including strategically important mainland interconnections and subsea cables. Decisions on this infrastructure can have consequences over several future price controls because of asset lives, delivery lead times and the need to coordinate network development with future demand and generation. Our ED3 Business Plan expressly identifies both the Scottish islands and the Isle of Wight as a distinctive element of SSEN's ED3 network requirements.

For the Scottish islands, these considerations also include resilience and the progressive reduction of reliance on diesel embedded generation. Further details on our approach to Islands can be found in our ED3 Islands Strategy and associated investment evidence rather than repeated here.

8.2 LONG-TERM PLANNING AND ED3 DELIVERY

SSEN distinguishes between the long-term capacity for which an enduring network solution is designed and the capacity that is required and delivered during ED3.

Long-term island network development is considered against credible needs through to 2050 and is aligned with SSEN's Long-term Integrated Network Plan (LINP). The LINP provides the strategic framework for placing ED3 interventions in the context of longer-term network requirements, including the interaction between load growth, asset replacement, resilience and other investment drivers. This allows the design, routing, sizing and sequencing of long-lived infrastructure to anticipate future electrification and identify opportunities to coordinate investment across price controls, avoiding inefficient decisions that could require infrastructure installed during ED3 to be subsequently replaced or materially reconfigured.

This longer-term perspective does not change the basis on which capacity is delivered during ED3. Consistent with the role of the LINP as a strategic reference rather than an investment blueprint, ED3 delivery remains limited to the capacity justified by the tRESP-aligned ED3 forecast and other applicable ED3 requirements. The longer-term view informs the efficient enduring design and sequencing of the network, while investment is paced to evidenced need to protect consumers from premature expenditure. This is particularly relevant for subsea circuits where the impacts of undersized investment are more significant given the high unit costs involved.

So, our approach can be summarised as sizing investments to meet 2050 needs while only building what is needed during ED3 under tRESP. In practice, SSEN therefore:

- **Plans to 2050**, so the enduring network design can accommodate credible longer-term island requirements;
- **Designs efficiently**, taking account of long asset lives, delivery lead times and opportunities to avoid inefficient future rework;
- **Delivers to ED3 need**, with capacity delivered during the price-control period determined by the tRESP-aligned ED3 planning requirement; and
- **Retains flexibility for subsequent investment**, allowing further capacity to be delivered through future price controls or appropriate uncertainty arrangements as demand materialises.

This approach is consistent with Ofgem's requirement to maintain readiness for tRESP-consistent demand growth while adapting and pacing delivery as evidence develops, thereby protecting customers against premature investment.

8.3 INCORPORATING LOCAL ISLAND EVIDENCE

Long-term planning is informed by local evidence alongside tRESP.

For the Scottish islands, SSEN has worked with the Islands Centre for Net Zero and local stakeholders to understand future demand and generation across Orkney, Shetland and the Western Isles. This has included local-authority and stakeholder validation of potential energy requirements through to 2050, including emerging projects not yet represented in the formal connections pipeline.

For the Isle of Wight, SSEN has similarly developed a detailed place-based evidence base in partnership with the Isle of Wight Council, Regen and local stakeholders. The Isle of Wight Net Zero Network Investment

Study considered planned and aspirational electricity demand, generation and storage growth, while subsequent Strategic Development Plan activity has continued to integrate local evidence with network planning.

This locally specific evidence improves SSEN's understanding of the long-term network requirement and development pathway. It does not replace tRESP as the strategic basis for determining the demand capacity required during ED3.

8.4 ASSURANCE POSITION

The Islands approach therefore represents long-term, anticipatory network design within the tRESP framework, rather than a deviation from it.

For ED3:

- tRESP remains the strategic basis for the load projection and timing of required capacity;
- Local island evidence informs longer-term network development and engineering design;
- Infrastructure can be designed with the ultimate longer-term requirement in mind where this avoids inefficient future rework; but
- Capacity delivered during ED3 is limited to that justified within the ED3 planning horizon.

This strikes an appropriate balance between long-term network readiness and affordability. It enables SSEN to make efficient decisions about long-lived island infrastructure without asking today's consumers to fund capacity substantially ahead of evidenced need.

Accordingly, SSEN is not declaring a general tRESP pathway deviation in respect of its Islands planning approach. Any separate and specific exception identified through implementation of tRESP would be recorded independently through the relevant Assurance Template and supporting narrative.

9. GOVERNANCE AND ASSURANCE

SSEN has used the prescribed SHEPD and SEPD Assurance Templates to provide the detailed evidence of its tRESP implementation. These require, amongst other things, reconciliation of GSP demand pathway values, allocation below GSP, domestic heat-pump disaggregation, generation allocation and applicable CPA evidence. The assurance process has been designed to provide clear traceability from planning inputs through to investment decisions.

Key controls include:

- Documented forecasting methodologies;
- Structured SEN review processes;
- Load Forecasting governance;
- Model validation processes;
- Stakeholder review through SDPs;
- Strategic Development Planning challenge;
- Engineering optioneering; and
- Business Plan governance and sign-off.

This framework provides a clear audit trail linking:

tRESP Input → Building-block and CPA Application → Spatial Disaggregation → Licence-area Load Projection → Assurance and Reconciliation

The resulting load projections subsequently inform SSEN's network needs assessment, optioneering and investment planning, which are evidenced through the wider ED3 Business Plan rather than being subject to NESO's tRESP assurance assessment.

10. COMPLIANCE STATEMENT

SSEN has used the January 2026 tRESP outputs as a key strategic input to the development of its ED3 load projections for SHEPD and SEPD. This includes the relevant tRESP Pathways, Consistent Planning Assumptions and Strategic Energy Needs, supplemented where necessary by DNO-defined building blocks and relevant local evidence to provide a complete licence-area projection. This is consistent with the approach required by Ofgem.

Except for the matters expressly identified in this annex and the associated Assurance Templates, SSEN has applied the relevant tRESP outputs in accordance with NESO's user guidance. Where the prescribed approach has been followed without variation, this is confirmed concisely in this annex and evidenced through the detailed data provided in the SHEPD and SEPD Assurance Templates.

Where NESO's guidance is non-prescriptive or permits additional granularity, SSEN has identified and explained the methodology applied. Any material departure from a tRESP output or methodology would be recorded through the relevant Assurance Template and explained in this annex where additional narrative is required.

SSEN has also disclosed the heat-pump processing error identified through preparation of the assurance submission. This was an implementation error rather than an intentional departure from tRESP. It has therefore been identified separately, with its cause and impact explained transparently rather than being presented as a methodological variation.

The completed assurance package should therefore be read as a whole. The Assurance Templates provide the detailed quantitative evidence and declarations; this annex explains the spatial-disaggregation methodology and matters requiring additional narrative; and the supporting technical evidence provides further detail where necessary. Together, these provide the audit trail from the January 2026 tRESP outputs through to SSEN's licence-area load projections.