

Version History

Version	Ausgrid Design Template Validation Report
1	Initial release

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1. Introduction

1.1 Purpose of the Validation Report

The **Validation Report**:

- Provides a targeted **pass/fail assessment** against applicable design standards, including **NS220** and **AS/NZS 7000**, for both internal Ausgrid designers and external ASP designers.
- Offers **early, high-level visibility** of design non-compliances, enabling timely resolution and improved compliance throughout the design workflow.
- Is a **mandatory submission requirement*** for Ausgrid ASP3 designers using Neara, forming part of Ausgrid's overhead project certification process.
- Enables designers to **qualify and document areas of non-compliance** where dispensation may be required.
- Supports an overall **uplift in quality assurance** for design submissions.

*Ausgrid has developed a standalone application that allows Connections Project Coordinators to create a Project Summary Validation PDF Report. This report provides documented visibility into design submission compliance. An example report is provided in **Annexure 1**.*

2. Disclaimers

The Validation Report provides a summary of selected compliance criteria and **does not represent the full extent of compliance obligations**. Additional checks may be required to achieve full compliance with the relevant standards.

Ausgrid reserves the right to assess designs against the complete requirements of the applicable standards, and responsibility remains with the designer to ensure full compliance.

Ausgrid will undertake **regular audits** to maintain high standards of compliance and design quality.

As stipulated in the **Ausgrid Contract for Design Related Services** and **Ausgrid Software Terms and Conditions**, it is the responsibility of the customer or their appointed ASP to verify the accuracy of all data provided, including:

- LiDAR data
- Network models
- Library contents
- Validation reports
- Environment settings
- GIS information

Ausgrid expressly disclaims liability for any errors or inaccuracies in information accessed through the Neara ASP Portal. ASPs must perform their own quality assurance checks prior to commencing and finalising design work.

3. Expectations and Feedback

The Neara Validation Report is subject to continuous improvement. Modifications and refinements are anticipated as the validation process matures and your feedback is important. The Neara ASP Portal represents a significant step in providing access to Ausgrid-approved templates and related resources only. This support is limited to template development and does not extend to technical guidance on software operation or powerline design methodologies.

Neara provides a support channel through the **Chat with Support** which can be found in the Help pulldown menu.

If you have any feedback regarding Ausgrid's design templates, please contact Ausgrid at:

digitaltwin@ausgrid.com.au

4. Design Certification

The **Validation Report** is expected to be reviewed by designers as part of every design to provide guidance on areas of compliance and non-compliance.

Where non-compliances are identified, designers are expected to either:

- **Mitigate the non-compliance**, or
- **Record appropriate justification** within the **Notes** section of the report.

This may include instances where a dispensation is required or where a known software limitation or defect has influenced the result.

As part of the assessment of submitted Neara *.power* files, **Ausgrid Connections Project Coordinators** will use the Validation Report to obtain rapid visibility of whether a design is likely to be certifiable, or whether further design development and remediation is required prior to certification.

Any Validation Report submitted **without appropriate justification for identified non-compliances** will result in the design being **automatically rejected**.

5. Location

The Design Validation Report is available within the **Design Validation** workspace in the **Ausgrid Design V3.00** template.

6. Design Validation Checks – Overview

6.1 Validation Checks Report

The design template automatically validates each design against a defined set of requirements. The **Validation Checks** report details:

- Each validation check performed, and
- The custom environment field(s) used for each check.

6.2 Validation Report

The **Validation Report** consolidates the results of all validation checks into a single summary report. This report is generated for assets that are **in scope** for validation and is used to confirm overall design compliance.

7. Material Status in Design

Assigning material status throughout the design workflow allows effective filtering and inclusion of assets within the **in-scope** Validation Report.

An “**In Scope**” flag defines which components are required to be included in validation. Components considered in scope include:

- All **new, replacement, or retensioned assets** (poles, assemblies, conductors), and
- Any **adjacent structures** connected to the above nominated assets via common spans.

This approach ensures that changes in mechanical loading and electrical clearances between interconnected assets are captured in structural, mechanical, and electrical assessments.

Ausgrid retains the right to include additional assets in validation for certification where deemed necessary.

8. Assets In Scope for Validation

8.1 Poles

A pole is considered **in scope** if:

- Pole status is **New, Replace, or Existing (adjacent to New or Replace)**; or
- Attached span status is **New or Retention**; or
- Attached assembly status is **New, Replace, Remove, or Reposition**.

8.2 Spans

Spans are in scope if they:

- Are attached to a **New** or **Replace** pole;
- Are designated as **New**, **Replace**, or **Retention**; or
- Are one span removed from a **New**, **Replace**, or **Retention** span.

8.3 Assemblies

Assemblies are in scope if they:

- Are **New**, **Replaced**, or **Repositioned**; or
- Are attached to a **New** or **Replace** pole or a **Retention** span; or
- Are one span removed from a **New**, **Replace**, or **Retention** span.

8.4 Library Items

Library validation checks apply to input parameter deviations from default configurations for:

- Poles
- Conductors
- Environments

9. Design Check Categories

Design validation checks fall into three primary categories:

- **Clearance Checks** – Includes all mechanical and electrical clearance requirements.
- **Library & Environment Checks** – Confirms that no unauthorised modifications have been made to approved library and environment configurations.
- **Structural Analysis** – Validates components using finite element analysis and structural capacity checks against defined criteria.

Note:

Project Tools → Visualisations → Design Validation Checks

The following must be enabled for inclusion in the Validation Report:

- Enable Crossarm Moment Check
- Enable Insulator Uplift Check

- Enable Insulator Strength Check
- Enable Pole Moment Check

10. Design Check Criteria

Validation checks include, but are not limited to:

- **Ausgrid Components and Assemblies** – Confirms all **in-scope** assets are Ausgrid-certified library items.
- **Ausgrid Conductors** – Ensures all new conductors are approved AML items identified via *u_design_standard*. Existing conductors are exempt. Additional or modified conductors not originally contained within the conductor library will be flagged.
- **Ausgrid Poles** – Confirms **in-scope** poles are Ausgrid-approved standard poles (AG_T, AG_S, AG_C). Non-AML, 16 kV, and custom pole strength poles will be flagged if inappropriately used for new designs.
- **Environment Library Verification** – Ensures environment parameters remain unchanged from approved defaults.
- **Creep Application** – Confirms correct creep temperature offsets are applied to new conductors.
- **Structural Checks** – Includes pole tip load and bending moment capacity, crossarm moments, insulator strength, conductor strength, stay strength, fixed-insulator uplift, and failure containment.
- **Pole Integrity Checks** – Includes pole lean, embedment depth verification, and sink depth limits.
- **Clearance Checks** – Covers span clash (k-factor), ground clearance, electrical separation (anywhere in span), attached/unattached crossing clearances, and inter-span pole clearance checks.
- **Ground Data Source Verification** – Confirms ground clearances are derived from Ausgrid or ELVIS point cloud datasets.

Note: Additional clearance envelopes are recommended where ELVIS point cloud data is used.

- **World Terrain Warning** – Flags designs where World Terrain is enabled.

Note: World Terrain **must not** be used for design purposes.

11. Annexure A – Sample Validation Report

VALIDATION REPORT

Design ID: dm0QJzArtFsj

Generated: 19/03/2026 10:37 AM AEST



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EXECUTIVE SUMMARY

SPAN VALIDATIONS

Category	Total	Passed	Failed
Clearance	6	6	0
Library check	3	3	0
Structural analysis	3	3	0
TOTAL	12	12	0

POLE VALIDATIONS

Category	Total	Passed	Failed
Unknown	3	3	0
Library check	3	3	0
Structural analysis	18	18	0
TOTAL	24	24	0



COMPLIANCE ACHIEVED

Excellent! All validation checks have passed successfully.

There are no non-compliance issues associated with this project.

VALIDATION REPORT - DETAILED ANALYSIS



SPAN VALIDATIONS

Span	Status	Pass?	Category	Check Type	Environment	Details	Notes
Pole2:Pole3 11kV	?	PASS	library_check	AusGrid Conductors		PASS	
Pole2:Pole3 11kV	?	PASS	clearance	span clash (k factor)	Electrical Clearance (Midspan) - T50	measured: 0.61 / required: 0.60	
Pole2:Pole3 11kV	?	PASS	clearance	span ground clearance	Max. Temp. 11kV (Bare) - T75	√ non-traverse √ traverse √ carriageway	
Pole2:Pole3 11kV	?	PASS	structural_analysis	span strength	LSL I - Ultimate Strength (D) - T15	util: 44.21% (tension: 5.4kN)	
Pole3:Pole4 11kV	?	PASS	library_check	AusGrid Conductors		PASS	
Pole3:Pole4 11kV	?	PASS	clearance	span clash (k factor)	Electrical Clearance (Midspan) - T50	measured: 0.55 / required: 0.40	
Pole3:Pole4 11kV	?	PASS	clearance	span ground clearance	Max. Temp. 11kV (Bare) - T75	√ non-traverse √ traverse √ carriageway	
Pole3:Pole4 11kV	?	PASS	structural_analysis	span strength	LSL I - Ultimate Strength (D) - T15	util: 44.21% (tension: 5.4kN)	
Pole4:Pole5 11kV	?	PASS	library_check	AusGrid Conductors		PASS	

SPAN VALIDATIONS Summary: 12 total items | 12 passed | 0 failed

VALIDATION REPORT - DETAILED ANALYSIS



SPAN VALIDATIONS (continued)

Span	Status	Pass?	Category	Check Type	Environment	Details	Notes
Pole4:Pole5 11kV	?	PASS	clearance	span clash (k factor)	Electrical Clearance (Midspan) - T50	measured: 0.51 / required: 0.40	
Pole4:Pole5 11kV	?	PASS	clearance	span ground clearance	Max. Temp. 11kV (Bare) - T75	√ non-traverse √ traverse √ carriageway	
Pole4:Pole5 11kV	?	PASS	structural_analysis	span strength	LSL I - Ultimate Strength (D) - T15	util: 44.21% (tension: 5.4kN)	

SPAN VALIDATIONS Summary: 12 total items | 12 passed | 0 failed

VALIDATION REPORT - DETAILED ANALYSIS



POLE VALIDATIONS

Pole	Status	Pass?	Category	Check Type	Details	Notes
Pole2	Existing	PASS		AusGrid Components	All Assemblies are AusGrid	
Pole2	Existing	PASS	library_check	AusGrid Poles	PASS	
Pole2	Existing	PASS	structural_analysis	crossarm moment	util: 7.60% (0.3kN·m)	
Pole2	Existing	PASS	structural_analysis	failure containment	PASS	
Pole2	Existing	PASS	structural_analysis	fixed ins uplift	-135.5N	
Pole2	Existing	PASS	structural_analysis	pole lean	PASS	
Pole2	Existing	PASS	structural_analysis	pole moment	util: 29.88% (114.9kN·m)	
Pole2	Existing	PASS	structural_analysis	pole sink depth	Existing pole - PEC check not required	
Pole3	New	PASS		AusGrid Components	All Assemblies are AusGrid	
Pole3	New	PASS	library_check	AusGrid Poles	PASS	
Pole3	New	PASS	structural_analysis	crossarm moment	util: 5.74% (0.7kN·m)	
Pole3	New	PASS	structural_analysis	failure containment	PASS	
Pole3	New	PASS	structural_analysis	fixed ins uplift	-189.2N	
Pole3	New	PASS	structural_analysis	pole lean	PASS	
Pole3	New	PASS	structural_analysis	pole moment	util: 54.43% (102.5kN·m)	
Pole3	New	PASS	structural_analysis	pole sink depth	measured: 2.40m / required: 2.40m - 4.15m	
Pole4	Existing	PASS		AusGrid Components	All Assemblies are AusGrid	
Pole4	Existing	PASS	library_check	AusGrid Poles	PASS	
Pole4	Existing	PASS	structural_analysis	crossarm moment	util: 6.76% (0.4kN·m)	
Pole4	Existing	PASS	structural_analysis	failure containment	PASS	

POLE VALIDATIONS Summary: 24 total items | 24 passed | 0 failed

VALIDATION REPORT - DETAILED ANALYSIS



POLE VALIDATIONS (continued)

Pole	Status	Pass?	Category	Check Type	Details	Notes
Pole4	Existing	PASS	structural_analysis	fixed ins uplift	-339.1N	
Pole4	Existing	PASS	structural_analysis	pole lean	PASS	
Pole4	Existing	PASS	structural_analysis	pole moment	util: 27.75% (95.9kN·m)	
Pole4	Existing	PASS	structural_analysis	pole sink depth	Existing pole - PEC check not required	

POLE VALIDATIONS Summary: 24 total items | 24 passed | 0 failed