Connection Application Checklist – Loads

Date:	5 June 2025
Department/Team:	Network Operations
Revision	2.3

1 Load Connection Application Package

The *connection applicant* is expected to provide the following information to TasNetworks as part of their *connection application* package for *loads* connecting under S5.3 of the National Electricity Rules (the Rules). An application is not considered to be complete until all of the below items are provided, and the connection fee is paid.

Items marked (*) in Section 2 may not be available at the time of the submission, however TasNetworks expects to see information within the Connection Application Package outlining how these requirements will be met, e.g. relevant test plans etc.

Items marked with (†) are only required for some specific load connection types (mainly those classed as Inverter Based Loads by AEMO). Please confirm with TasNetworks whether this information is required for your connection – noting TasNetworks may need to refer to AEMO.

TasNetworks recommends that *connection applicants* submit complete and final design information in their application package wherever possible, however preliminary design information may be accepted by TasNetworks if necessary, at the Applicant's risk. Any assessment or determination made by TasNetworks on the basis of preliminary information is subject to change should the final design or as-constructed *plant* materially change from the original submission. Any preliminary design information must be updated with final design information no later than three months prior to commissioning.

The *connection applicant* is responsible for understanding and demonstrating compliance with *Rules* requirements. In proposing a new *connection,* the *connection applicant* must ensure their proposed *connection* will not result in any adverse impacts to the power system and other *network users.*

2 Checklist

To complete a *connection application* due diligence assessment to provide an *offer to connect*[1], TasNetworks requires all the information as defined in this section to be provided by the *connection applicant*.

For TasNetworks to commence its due diligence assessment and undertake power system studies, the *connection applicant* may choose to initially submit all the finalised modelling information as per Tranche 1.

The information specified in Tranche 2 can be provided after Tranche 1. Whilst TasNetworks will commence its due diligence studies with the information as per Tranche 1, the time to

[1] Subject to meeting other NER and regulatory requirements

process a complete connection application will only commence until the items as described in Tranche 2 have also been provided to TasNetworks.

Should the information provided to TasNetworks in Tranche 1 materially change by the time Tranche 2 has been submitted, the *connection applicant* may be required to resubmit the information as per Tranche 1 and the process will restart.

2.1 Checklist - Tranche 1

The information in this section defines the minimum information to be provided by the *connection applicant* to allow TasNetworks to commence a due diligence assessment against Schedule 5.3 of the NER.

TasNetworks will require the information as per Tranche 2 to be provided to be considered a complete *connection application* by the *connection applicant.*

☐ Connections Study report demonstrating compliance against S5.3 of the *Rules* (See Section 3 of this document);

☐ information about the *control systems* of the equipment including†:

- a set of functional block diagrams, including all functions between feedback signals and output;
- the parameters of each functional block, including all settings, gains, time constants, delays, deadbands and limits; and
- the characteristics of non-linear elements.

☐ encrypted models in a form suitable for the software simulation products nominated by AEMO in the *Power System Model Guidelines:*

- PSS/E™ Model – associated model files, Block diagrams, Model Source Code and Releasable User Guide (RUG);
- PSCAD™ Model† – Releasable User Guide (if applicable); and
- PowerFactory™ (Frequency Domain) model of the Proposed Connection or equivalent data.

☐ Confirmation by the *connection applicant* that the modelling information provided is consistent, accurate and fit for purpose including any verification of model benchmarking demonstrating identical performance†.

- TasNetworks also undertake its own due diligence on model performance and benchmarking to ensure compliance with *power system model guidelines.*

☐ single line diagram with the protection details and asset boundary shown;

☐ Site specific operational arrangements;

☐ general arrangement locating all the equipment on the site*;

☐ general arrangement for each new or altered *substation* showing all exits and the position of all electrical equipment*;

2.2 Checklist - Tranche 2

The information in this section represents *connection application* data as per the NER that may be provided after the initial information as per Tranche 1. All the information as per Tranche 1 and Tranche 2 must be submitted to TasNetworks to allow TasNetworks to complete a due diligence assessment of a *connection application.*

The expectation is that the information in Tranche 2 will be consistent with the information as provided to TasNetworks in Tranche 1. Any material changes to that provided in Tranche 1 may require the proponent to resubmit updated information to TasNetworks.

TasNetworks time to complete its *connection application* due diligence will commence when the complete information as per Tranche 1 and Tranche 2 has been submitted.

- ☐ Information as per AEMO's *Power System Design Data Sheet* and *Power System Setting Data Sheet**†;
- ☐ information detailing the *protection systems* of the equipment*;
- ☐ proposed methods of earthing cables and other equipment to comply with Tasmanian regulations*;*
- ☐ earthing details;
- ☐ type test certificates for all new switchgear and *transformers*, including measurement *transformers* to be used for metering purposes in accordance with Chapter 7 of the *Rules*;*
- ☐ *metering system* design details for any metering equipment being provided by the *Network User*;*
- ☐ *plant* and earth grid test certificates from approved test authorities*;
- ☐ secondary injection and trip test certificate on all circuit breakers*;
- ☐ certification that all new equipment has been inspected before being *connected* to the s*upply**; and
- ☐ model source code†
    - This information is required to be submitted to AEMO only and not the *network service provider*

3 Load Connection Studies Report

The Connection Studies[2] Report should comprise the following:

- ☐ Summary of all the information submitted by the *connection applicant;*
- ☐ physical *connection* arrangements between the *connection applicants' facility* and TasNetworks;
- ☐ description of the analytical *power system* models and supporting documentation that meet AEMO *Power System Model Guidelines* used in undertaking the Connection Studies†*;*
- ☐ methodology applied demonstrating how the *connection applicant* has ensured that the Proposed Connection addresses the performance requirements specified in S5.3 of the *Rules;*
- ☐ detailed description of how the *power system* modelling studies undertaken by the *connection applicant* demonstrate compliance with *performance standards* outlined in S5.3 of the *Rules*;
- ☐ clear references[3] to any non-modelling information and documentation that has been used as evidence (or supporting information) of *performance standard* compliance for S5.3 of the *Rules*;
- ☐ relevant Performance Standards the Proposed Connection meets as per S5.3 of the *Rules*;
- ☐ *plant* and equipment ratings, for the purposes of both steady state and fault conditions[4];
- ☐ detailed description how the *plant* will operate on the *network* within the technical envelope of the power system including any operational arrangements required to facilitate the *connection* to the *network*[4];
- ☐ details of proposed *protection system* and *control systems* to facilitate the *connection* to the *network*[4];and
- ☐ communications, remote monitoring, metering and SCADA arrangements between the *connection applicants' facility* and TasNetworks[4].

[2] The applicant will need to engage an appropriately qualified consultant to undertake this assessment. TasNetworks is unable to undertake this work on your behalf under our NER obligations.

[3] All reference material and documentation that supports the *connection application* must be included as part of the connection application package.

[4] When undertaking detailed *connection design* work for equipment that requires interface with TasNetworks' systems (such as protection and SCADA), the *connection applicant* should contact their TasNetworks Connection Project Manager, in order to initiate discussions with the appropriate TasNetworks representatives and determine the applicable connection and design requirements.