Jemena Electricity Networks (Vic) Ltd

Contestable Works Guideline

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GLOSSARY

JEN	Jemena Electricity Networks Pty Ltd
augmentation	works undertaken to enlarge the distribution system or to increase its capacity to distribute electricity.
connection applicant	an applicant for a connection service of one of the following categories: (a) retail customer; (b) retailer or other person acting on behalf of a retail customer; or (c) real estate developer.
connection assets	those components of a transmission or distribution system which are used to provide connection services
contestable activities	activities may be undertaken by a suitably JEN accredited provider.
distribution system	a distribution network, together with the connection assets associated with the distribution network, which is connected to another transmission or distribution system. Connection assets alone do not constitute a distribution system.
extension	an extension of the distribution network (owned, controlled and operated by JEN) to provide a connection.
least cost technically acceptable	a connection that is designed and constructed to JEN's technical and safety standards that is of the lowest cost.
non-contestable activities	activities that can only be undertaken by JEN.

1. INTRODUCTION

Jemena Electricity Networks (Vic) Ltd (herein referred to as JEN owns and operates the electricity network that safely, reliably and affordably services over 350,000 homes and businesses across North West Melbourne—from Mickleham to Footscray, and Gisborne South to Ivanhoe (see Figure 1–1). We also own, maintain and read the meters that allow electricity retailers to bill our customers for their electricity usage, and provide them with information to help them better manage this usage. Our customers, stakeholders and community depend on our service performance every day to enhance their lifestyle and support their businesses.

Figure 1–1: Map of JEN distribution area.

1.1 PURPOSE OF THIS DOCUMENT

This document has been prepared to ensure that JEN is providing a safe, reliable and secure network in accordance with its regulatory requirements. JEN is committed to safety and quality of the network and thus aims to benefit customer using the network whilst balancing the risk to JEN.

This document provides guidance around those tasks which are Contestable versus Non-Contestable for the different type of projects undertaken on the network when a connection applicant has elected to undertake the design and construction works themselves (under JEN's Connection Policy).

1 — INTRODUCTION

Who should read this document?

All customers seeking to:

- connect to JEN
- upgrade or alter an existing connection
- relocate an existing JEN asset.

that wish to undertake the contestable activities.

Related information

This document should be read in conjunction with:

- Jemena Electricity Networks (Vic) Ltd Connection Policy.
- Electricity Supply for Residential Subdivisions for works relating to electricity supply for residential subdivision (JEN MA 0150).

2. INTRODUCTION

JEN's Connection Policy states that the design and construction of *connection* assets, network *extensions* and *real estate developments* are considered contestable works by JEN and that:

1. A *connection applicant* may elect that JEN undertake the design, but request JEN to conduct a tender process for the construction works on behalf of the *connection applicant* for a fee to recover the reasonable costs incurred by JEN in conducting the tender. JEN will provide the *connection applicant* an estimate of the cost of conducting the tender process and seek agreement before it commences the tender process.

2. A *connection applicant* may elect that JEN undertake the design for a fee and elect to undertake the construction works themselves, provided the connection works are performed to JEN's construction standards and by contractors approved by JEN.

3. A *connection applicant* may elect to undertake the design and construction works themselves, provided design and construction works are performed to JEN's technical and construction standards and by contractors approved by JEN. Where a *connection applicant* chooses to conduct their own tender process, JEN will provide a list of accredited construction contractors to the *connection applicant* on request.

3. CONTESTABLE VS NON-CONTESTABLE WORKS

When a *connection applicant* has elected to undertake the design and construction works themselves, JEN will provide a list of accredited design and construction contractors on request. Further, we will detail the activities that we consider as either Non-Contestable or Contestable for a particular application. At a high level, JEN defines:

- Non-contestable work as work that can only be undertaken by JEN; and
- Contestable work as work that may be undertaken by a suitably JEN accredited provider.

Non-Contestable work generally includes:

System planning / design

- System design and planning requirements and approval;
- Electrical design plan approval;
- Updating JEN records;

Construction

- Design approval of the network
- Inspection of the “Contestable” works during construction
- Disconnection of existing supplies
- Network reinforcement (significant augmentation works on JEN’s existing distribution system to provide the contracted electricity supply)
- Administration of costs associated with network adoption
- Connection to the electricity network
- Work in/on existing live brownfields sites/assets including final network tie-ins.

Other

- Review of contractors accreditation to complete contestable works
- Network access (includes operators and control room).

For the avoidance of doubt, the customer is not able to pick and choose elements of the contestable works.

In section 3, we set out in detail activities that are contestable and non-contestable.

3.1 NETWORK ZONE SUBSTATION

Project Management

Non-Contestable	Contestable
• Project Management of Non-Contestable Components • Construction Management of Non-Contestable Components	• Project Management of Contestable Components • Construction management of Contestable Components • HSE Management of Contestable Components • Quality Management of Contestable Components

Design

Non-Contestable	Contestable
• Project Functional Scope of Works including Responsibility Matrix. • Detailed design for works at adjacent substations (if impacted). • Review design documents and drawings. • Participate in Safety in Design (SiD) processes. • Review of Network Modelling. • Review of Earthing Study. • Review of Protection Studies. • Make available standard/template drawings to the Approved Designer for construction of gifted assets. • Provision of Network Data for Studies. • Document management and storage into ECMS and drawbridge. • Enter equipment detail into JEN's systems.	• Facilitate Network studies. • Detailed design. • Undertake Safety in Design process. • Protection studies. • Earthing design including necessary site tests. • As-Builts.

Materials

Non-Contestable	Contestable
• Provision of equipment requirements and specifications. • Attendance to Factory Acceptance Testing (if required).	• Procurement of materials.

Construction

Non-Contestable	Contestable
• Plan and execute field switching and outage coordination. • Earth grid inspection. • Implement protection settings • Review and input into Commissioning Plan • Works at adjacent substations • Review and acceptance of ITPs • Review and acceptance of ‘as built’ test reports. • Auditing • Site walk through • Development of Operational Document (subject to point of connection)	• Civil Works • Erection of Primary Plant Equipment • Installation of earth grid • Secondary Wiring • Site Drawing Mark-ups • Pre-commissioning Tests • Completion of ITPs • Submit Outage Requests

SCADA/Communications

Non-Contestable	Contestable
• Supervisory Control and Data Acquisition (SCADA) and RTU design, development, software installation and commissioning.	

Testing & Commissioning

Non-Contestable	Contestable
• Final tie-in into the network • Review and acceptance of pre-commissioning test reports • Oversight of commissioning of new equipment • Final commissioning of equipment, protection and operation	• Development of Commissioning plan • Testing and Commissioning of new assets

3.2 DISTRIBUTION INDOOR SUBSTATION (22KV/11KV/6.6KV)

Design

Non-Contestable	Contestable
• Project Functional Scope of Works including Responsibility Matrix. • Detailed design for works at adjacent substations (if impacted). • Review the detailed design documents and drawings. • Participate in Safety in Design (SiD) processes. • Review of Network Modelling. • Review of Earthing Study. • Review Protection Studies. • Review Cable Modelling (if required) • Make available standard/template drawings to the Approved Designer for construction of gifted assets. • Provision of Network Data for Studies. • Document management and storage into ECMS and drawbridge. • Detail entered into SAP (Asset Management System).	• Facilitate Network Studies. • Detailed Design • Undertake Safety in Design Process. • Protection Studies. • Earthing Design including necessary site tests. • As-Builts • Cable Modelling (if required)

Materials

Non-Contestable	Contestable
• Provision equipment requirements and specifications. • Attendance to FAT (if required).	• Procurement of materials.

Construction

Non-Contestable	Contestable
• Plan and execute field switching and outage coordination. • Earth grid inspection. • Implement protection settings • Works at adjacent existing substations • Review and acceptance of ITPs • Review and acceptance of 'as built' test reports. • Auditing • Site walk through • Development of Operational Document (subject to point of connection)	• Civil Works • Cable Hauling and Terminations • Overhead Works • Detailing • Submit Outage Requests

SCADA/Communications

Non-Contestable	Contestable
• Supervisory Control and Data Acquisition (SCADA) and RTU design, development, software installation and commissioning.	

Energisation

Non-Contestable	Contestable
• Final tie-in into the network • Review and acceptance of pre-commissioning test reports • Oversight of commissioning of new equipment • Final commissioning of equipment, protection and operation	• Development of Commissioning plan • Testing and Commissioning of new assets

3.3 SUB-TRANSMISSION AND HIGH/LOW VOLTAGE OVERHEAD AND UNDERGROUND WORKS (INCLUSIVE OF KIOSK, GROUND AND POLE SUBSTATIONS)

Project Management

Non-Contestable	Contestable
• Project Management of Non-Contestable Components • Construction Management of Non-Contestable Components	• Project Management of Contestable Components • Construction management of Contestable Components • HSE Management of Contestable Components • Quality Management of Contestable Components

Design

Non-Contestable	Contestable
• Project Functional Scope of Works including Responsibility Matrix. • Approval of Route • Detailed design for works at adjacent substations (if impacted). • Review Detailed Drawings. • Participate in Safety in Design (SiD) processes. • Review of Network Modelling. • Review of Earthing Study. • Review Protection Studies. • Review Cable Modelling (if required) • Review of Circuit Data Sheets and/or any other drawings • Make available standard/template drawings to the Approved Designer for construction of gifted assets.	• Facilitate Network Studies. • Surveys • Detailed Design • Undertake Safety in Design Process. • Protection Studies. • Earthing Design including necessary site tests. • As-Builts • Cable Modelling (if required) • Circuit Data Sheets

• Provision of Network Data for Studies. • Document management and storage into ECMS and drawbridge. • Enter equipment detail into JEN's systems	

Materials

Non-Contestable	Contestable
• Provision equipment requirements and specifications. • Attendance to FAT (if required).	• Procurement of materials.

Construction

Non-Contestable	Contestable
• Plan and execute field switching and outage coordination. • Earth grid inspection. • Implement protection settings • Works at adjacent existing substations • Review and acceptance of ITPs • Review and acceptance of 'as built' test reports. • Auditing • Site walk through • Development of Operational Document (subject to point of connection)	• Civil Works • Cable Hauling and Terminations • Overhead Works • Detailing (??) • Submit Outage Requests • Crossing with other utility / services • Removing decommissioned assets

SCADA/Communications (if required)

Non-Contestable	Contestable
• Supervisory Control and Data Acquisition (SCADA) and RTU design, development, software installation and commissioning.	

Energisation

Non-Contestable	Contestable
• Final tie-in into the network • Decommissioning of assets. • Review and acceptance of pre-commissioning test reports • Oversight of commissioning of new equipment • Final commissioning of equipment, protection and operation at adjacent sites	

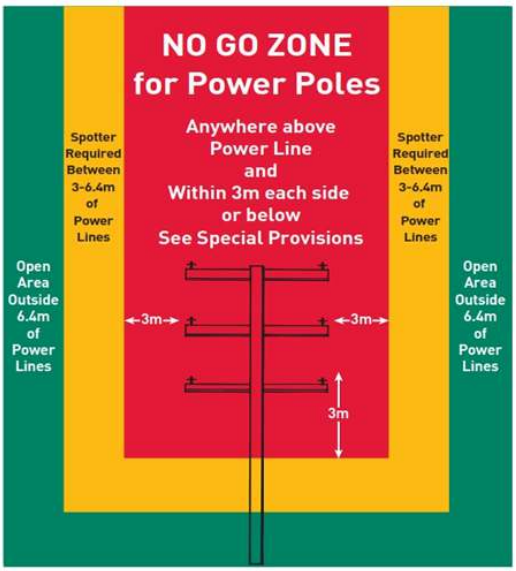
4. VICTORIAN ELECTRICITY SUPPLY INDUSTRY (VESI) REQUIREMENTS

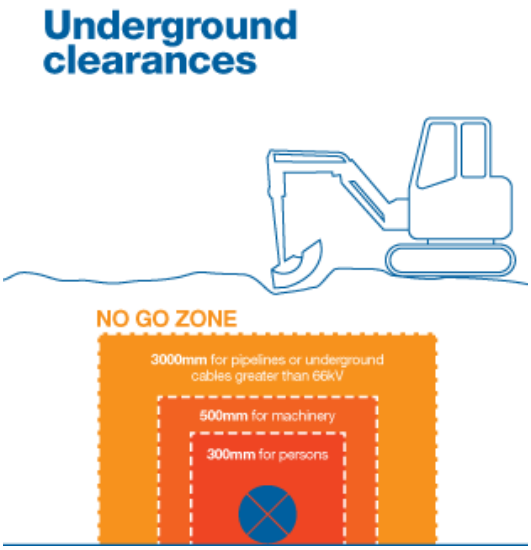
Access to the JEN network is provided in accordance with Victorian Electricity Supply Industry (VESI) networks standards and practices and is governed by the requirements of the Green Book.

4.1 ABOUT NO GO ZONES (NGZ)

Works performed by non-ESI employees (i.e. road workers, construction industry, etc.) near JEN assets must be performed according to Energy Safe Victoria's (ESV) No Go Zone (NGZ) Rules.

A person is prohibited from working within the **RED** area of a NGZ, without first obtaining written permission from the network operator (Permit to Work). The image below is a sample only and reference shall be made to the complete guideline which provides guidance for network operators when applying the NGZ rules.





The NGZ concept was introduced in response to a number of incidents related to contacting power lines by persons not under the control of Network Operators, and the need to have uniform arrangements for work carried out within a NGZ.

To assist network operators achieve these requirements, the VESI NGZ committee has established a Guideline document. The original Guidelines were developed in consultation with WorkSafe Victoria, ESV, unions, employers and representatives from the electricity industry and subsequently updated in 2007. These guidelines are for the use of VESI NGZ assessors and are prohibited from circulation beyond VESI companies.

It should be noted that resulting from this consultation process the distances where written permission of the network operator is necessary have, in some cases, been altered from the distances specified in the Electricity Safety (Network Asset) Regulations. This has taken into consideration clearances defined in other legislative and regulatory frameworks such as the Occupational Health & Safety Act, Regulations, Codes and Australian Standards.

4.2 NGZ SITE ASSESSORS

The minimum competencies for a person required to perform the task of a NGZ assessor are:

- Recognition and understanding of the Code of Practice on Electricity Safety for Distribution Businesses in the Victorian Electricity Supply Industry (the Green Book)
- Successful Authorised Recipient training or an Authorised Recipient
- The ability to recognise the Electricity Distribution network including:
  - Overhead construction and/or underground construction including the voltage and conductor types
  - Reading and understanding relevant network circuit plans, including overhead and/or underground cable plans
- The ability to correctly apply the Framework for Undertaking Work Near Overhead and Underground Assets
- Recognise and correctly apply the Guide for Undertaking Work Near Underground Assets
- Recognise and understand the VESI NGZ Guidelines and clearance tables within
- The ability to apply correct clearances to meet the NGZ and building requirements.

4.3 SPOTTERS

The NGZ rules refer to the requirement for spotters (safety observers) when undertaking work within 6.4m of Distribution assets and 10m of Transmission assets. The general requirements for persons to act as spotters have been defined by ESV (see link at top of page).

4.4 EXCLUSIONS

Activities not covered under these Guidelines include, but are not limited to:

- Work performed by persons working for or under the control of a Network Operator;
- Vegetation pruning work near power lines that are performed under existing Regulation 45 (2) of Electricity Safety (Network Assets) Regulations 1999;
- Work performed by others deemed to comply with the “safe system of work” as defined in the WorkSafe Victoria Framework for Undertaking Work near Overhead & Underground Assets;
- Work undertaken by persons working for or under the control of the owner of a railway or tramway systems; and
- Emergency works where the Network Operator is managing the electricity safety requirements on site and/or when assisting emergency services exercising their powers under the Emergency Management Act.

The assessment of sites for NGZ enquiries is managed by JEN.

5. OCCUPATIONAL HEALTH AND SAFETY

5.1 PRINCIPAL CONTRACTOR

When a connection applicant has elected to undertake the design and construction works themselves, JEN will appoint them as the Principal Contractor for the duration of the Design and Construction (D&C) Works. The applicant must comply with the obligations imposed on a Principal Contractor as set out in part 5.1 of the Occupational Health and Safety Regulations 2007 (Vic) (or as updated).

5.2 OCCUPATIONAL HEALTH AND SAFETY COMPLIANCE

The connection applicant must:

I. comply with all of the OH&S Requirements, including as a Principal Contractor in relation to the D&C Works;

II. undertake the performance of the Services in a manner which ensures that JEN is not in breach of any of the OH&S Requirements;

III. comply with directions on occupational health and safety issued by any relevant Government Agency; and

IV. take all steps necessary to protect the safety of JEN, JEN's Associates and any Related Works Contractor from risks to safety caused by performing the Services.

5.3 OCCUPATIONAL HEALTH AND SAFETY REPORTING

The connection applicant must:

(a) provide a report of any incident (including medically treated injuries, lost time injuries, incidents without injuries, first aid incidents and near miss incidents) or accident that occurs during the performance of the Services following the incident, whether or not the incident or accident resulted in injury or damage; and

(b) immediately notify JEN of any incident (including a near miss incident) or accident that occurs during the performance of the Services that is required to be notified to a Government Agency in accordance with OH&S Requirements and which involves the Contractor or any Contractor Responsible Party.

5.4 JEN PERSONELL AND CONTRACTORS

To ensure health and safety at the Project Sites, JEN will ensure that:

(a) its Related Works Contractors have in place and observe adequate health and safety procedures and the work they are engaged by JEN to perform on the Project Sites will be performed by them in a safe manner in compliance with OH&S Requirements;

(b) its Related Works Contractors are suitably qualified, trained and experienced to perform the work in a safe and competent manner and hold necessary Authorisations required for the performance of the work;

(c) any plant and equipment used by JEN and its Related Works Contractors when performing work on the Project Sites in the performance of such work is safe and without risks to health; and

(d) its Related Works Contractors have a construction induction card.

6. MATERIALS

All materials must comply with JEN's specifications and be listed on the JEN Approved Materials List, as the standards apply for the specification of materials are exacting to ensure the longevity, compatibility and interchangeability of components. The specialised nature of the materials, coupled with the need for some of these to be purchased offshore, can lead to relatively long lead times without good contractual arrangements.

Key considerations:

- All materials used for construction works are required to be approved by JEN
- Any material item proposed to be used which does not appear on JEN's approved inventory list, is to be assessed and approved by JEN, to ensure it conforms to JEN's current technical requirements.
- The customer will be responsible to supply all materials for use in their project. Surplus materials will be the property of the customer.
- All materials recovered from the existing network are to be returned to JEN.
- Materials may be purchased from JEN, if available, including standard poles.

7. STAKEHOLDER CONSULTATION

Where the customer performs the electrical works, all necessary community and stakeholder consultation shall be undertaken with businesses and residents to minimise the impact due to the construction of the new assets and meet any community relations obligations. The approach provides better community and project outcomes by keeping the community informed, minimising potential impacts and responding to the reasonable needs and requirements of stakeholders in Project decision-making.

The customer will need to develop a stakeholder management plan, letters and evidence of consultation prior to any construction commencing and **must be endorsed/approved** by JEN.

Any issues are to be reported to JEN's representative.

8. LAND TENURE

JEN's policy is to own land where zone substations or other major pieces of electrical infrastructure is housed; to hold registered leases for indoor substations; and to hold registered easements for all other electrical assets. Assets in road reserves do not require specific land tenure arrangements as the Electricity Act enables the right to access and maintain that asset.

The customer must provide suitable easements and reserves free of all encumbrances for substations, underground cables and overhead lines as may reasonably be required by JEN. An easement creates for JEN, the right to erect an overhead line or install an underground cable for the transmission of electricity through land other than Crown Land or a Government Road, together with the right to access and maintain that asset.

Where easements are required on land external to the customer to protect existing lines or for new lines, the customer is responsible for negotiating and obtaining those easements. For Crown Land, a license will need to be facilitated.

Details of the required easements and reserves must be shown on the approved construction plan.

JEN must receive all necessary land tenure documents prior to works commencing.

9. OTHER AUTHORITY REQUIREMENTS

Where the customer performs the electrical works, all necessary approvals are to be gained from other relevant authorities that may be affected by proposed works.

It is the customer's responsibility to consult and obtain approvals, as necessary, from the relevant authority affected by the proposed works.

The environmental review process may also highlight the need to consider and obtain approvals from authorities such as Crown Lands, National Parks and State Forests.

JEN must receive all necessary approvals prior to works commencing.

10. JEN ACCREDITED CONTRACTORS

JEN maintains a list of approved consultants, contractors and subcontractors to assist customers, however approval must be obtained on a project-to-project basis of such consultants, contractors or subcontractors..

10.1 APPROVAL PROCESS

It will be in the interest of all consultants, contractors and subcontractors wishing to provide services to customers to seek pre-qualification and approval with JEN. The process for approval will primarily be based on documented evidence demonstrating capability in the skill category by the following:

10.1.1 TRAINING

The successful completion of training at an accredited training institution for the skill category (VESI skills matrix) including refresher training; or

By demonstrated knowledge and skills in the category where appropriate training is not available or the applicant is pre-qualified by significant work experience in the skill category. Assessment may be of interviews, practical demonstrations and testimonial evidence.

10.1.2 QUALITY SYSTEMS AND PLANS

The customer must be able to demonstrate a Quality System, which provides effective control over all activities associated with the electrical works. Subcontractors must be able to demonstrate a Quality Plan appropriate to the complexity of the category of work and the level of integration with the customer's quality system.

10.1.3 PAST PERFORMANCE

Consideration of the contractor's past performance in the skill categories or other activities including references and testimonials.

Where acceptable training or sufficient skills can be demonstrated without satisfactory evidence of past performance, the contractor or consultant may be approved, subject to additional auditing through the quality assurance processes.

10.2 QUALITY ASSURANCE

The customer is required to have a quality system that provides effective control of all activities involved in the project and demonstrates compliance with the customer's contractual obligations for the conduct of the electrical works.

A quality approach provides customers with the maximum flexibility possible in managing and coordinating the works. The role of JEN will essentially consists of surveillance and audit to ensure compliance with JEN construction standards. This is necessary because JEN is responsible for the safety and future maintenance of assets.

10 — JEN ACCREDITED CONTRACTORS

The customer's quality systems should be based on AS/NZS ISO 9001 and preferably be certified by an accredited third party agency.

Where the customer does not have accreditation or an established quality system, then submission of a proposed quality system, a development plan and implementation program will be required. Approval may be given on this basis, following consideration of the customer's commitment to establishing quality system and demonstrated progress in this regard. Generally additional surveillance and audit by JEN will be required.

In all cases, the customer's quality system will require the approval of JEN on a project-to-project basis. Contractors and subcontractors will be required to have a quality system/plan. The extent of the quality system/plan must be appropriate for the complexity of the subcontracted activity and the level of integration with the customer's quality system.

The contractors and subcontractors quality system/plan will require the approval of JEN and to assist JEN in assessing these, they should be submitted for approval with the customer's quality system.

JEN will carry out surveillance of construction activities and audit the quality system, its implementation and documentation submitted.

Auditing and surveillance by JEN will not relieve the customer of his/her responsibility regarding compliance with JEN's specifications. The customer is responsible for the identification and rectification of all non- conformances.

Additional surveillance and audits may be imposed if deficiency in the customer's quality system or undocumented non-conformance is detected and JEN may recover for these additional costs.

In carrying out audits, JEN will not unreasonably cause delays to the customer's works program.

11. INSURANCE AND WARRANTY

11.1 INSURANCES

The customer and/or consultants and contractors must have appropriate professional indemnity and public liability insurance to cover for damage against third party property and/or personal injury.

The customer and/or contractors and consultants may also take insurance against major rectification works required as a result of failure to meet contractual specification or major failure.

The following are Insurance Certificates expectations:

- $20 million Public Liability
- Workers Compensation Certificate of Currency
- $10 million Professional Indemnity Insurance (Design Or Project Management Services Only)

11.2 WARRANTY

Where the customer performs the electrical works, the customer must provide a warranty against all omissions and defects in respect to the electrical works. The warranty shall be for a period of one (1) year from the date of commissioning of the assets.

The warranty may be in the form of insurance, a bank guarantee, or other means acceptable to JEN. The advice of JEN should be sought in this regard. JEN will return any unused portion after one year.