

National Certificate in Electricity Supply (Line Mechanic Transmission) (Level 4) with optional strands in Optional Work Skills (E1 (O)), and Optional De-energised Work Skills (E3)

Level 4

Credits 83

This qualification has been **reviewed**. The last date to meet the requirements is 31 December 2018.

Transition Arrangements

This qualification has been reviewed and replaced by the New Zealand Certificate in Electricity Supply (Transmission Line Maintenance) (Level 4) with strands in Line Mechanics and Structure Maintenance [Ref: 2705].

All existing candidates may either complete the requirements of the replaced qualification or transfer to the New Zealand qualification according to programme availability.

The last date for entry into training programmes or a course for the replaced qualifications is 31 December 2016. The last date for assessments to take place for the replaced qualification is 31 December 2018. At that point the qualification will be designated discontinued and from that date no results can be reported against the qualification.

It is anticipated that no existing candidates will be disadvantaged by these transition arrangements. However, anyone who feels that they have been disadvantaged may appeal to Connexis at the address below. Appeals will be considered on a case by case basis.

This qualification contains an expiring unit standard for which a replacement unit standard has now been registered. For the purposes of this qualification, people who have gained credit for the replacement unit standard are exempt from the requirement to gain credit for the expiring unit standard.

Credit for	Exempt from
28112	10510

For detailed information see [Review Summaries](#) on the NZQA website.

NZQF National Qualification Registration Information

Process	Version	Date	Last Date for Assessment
Registration	1	June 2008	November 2008
Revision	2	November 2008	December 2018
Review	3	June 2015	December 2018

Standard Setting Body

Connexis
PO Box 2759
Wellington 6011
Email: qualifications@connexis.org.nz

Reviewed

National Certificate in Electricity Supply (Line Mechanic Transmission) (Level 4) with optional strands in Optional Work Skills (E1 (O)), and Optional De-energised Work Skills (E3)

Level	4
Credits	83

Purpose

This national certificate is awarded to people who have demonstrated competence in the skills and knowledge required for employment as a Line Mechanic in the transmission sector of the electricity supply industry.

The compulsory section of this qualification meets the requirements for registration with the Electrical Workers Registration Board as a Line Mechanic with transmission limitation. The optional strands are mapped against the Transpower TP.SS 06.20 E1 (O) Optional and E3 Optional modules, and introduce more specialist transmission line work skills.

Holders of this qualification will be able to:

- Replace tower steel components
- Rig electrical network structures
- Apply earths to and remove earths from overhead electric line conductors
- Restore electricity network lines using emergency structures
- Install and replace electricity network pole structures
- Joint electricity network overhead conductors
- Install and replace insulators and fittings.

Those taking the Optional Work Skills (E1 (O)) optional strand will be able to perform (or, if specified, demonstrate knowledge of), one or more of the following:

- Operate power-operated elevating work platforms (EWP)
- Carry out soil resistivity tests for high voltage earth system
- Use a vehicle-mounted winch in heavy haulage operations
- Demonstrate knowledge of off-road motorcycle performance, design, and handling characteristics.

Those taking the Optional De-energised Work Skills (E3) optional strand will be able to perform (or, if specified, demonstrate knowledge of), one or more of the following:

- Work with helicopters
- Use and maintain test instruments used within the high voltage electrical industry
- Reconduct and install electricity network overhead conductors over 50kV
- Use a conductor trolley on de-energised transmission line conductors
- Plan and manage helicopter overhead lines operations
- Demonstrate knowledge of, and carry out, implosive jointing of electricity network overhead conductors
- Erect electricity transmission towers.

The qualification forms a part of the pathway for trainees who are seeking to become live line mechanics in the transmission sector of the electricity supply industry. It is the entry point for live transmission work as defined in NZECP 46:2003 and is the prerequisite for those people wishing to progress into the National Certificate in Electricity Supply (Line Mechanic Transmission Live Work) (Level 5) [Ref: 1120].

This qualification contains standards that build on the knowledge and skills recognised by the National Certificate in Electricity Supply (Level 2) with optional strands in Electrical, Electrical Fitter, and Line Mechanic [Ref: 1293].

This qualification has been mapped against, and meets the requirements of Transpower specifications for the E1 and E2 modules as published in TP.SS 06.20. Additional optional strands cover all the specifications detailed in the TP.SS 06.20 E1 (O) and E3 modules.

Replacement Information

This qualification replaced the National Certificate in Electricity Supply (Line Mechanic Transmission) (Level 4) [Ref: 0872].

Special Notes

Prerequisite: National Certificate in Electricity Supply (Level 2) with optional strands in Electrical, Electrical Fitter, and Line Mechanic [Ref: 1293], or National Certificate in Electricity Supply (Line Mechanic) (Level 3) with the Transmission strand [Ref: 1116], or demonstrate equivalent knowledge and skills.

The compulsory section of this qualification meets the requirements of the Transpower specifications for the E1 and E2 modules of TP.SS 06.20. The Optional Work Skills (E1 (O)) optional strand covers all the specifications detailed in the TP.SS 06.20 E1 (O) module and the Optional De-energised Work Skills (E3) optional strand covers all the specifications detailed in the TP.SS 06.20 E3 module. The structure of modules within TP.SS 06.20 can be found in the diagram at the end of this qualification.

Credit Range

	Compulsory	Optional Work Skills (E1 (O)) Optional Strand	Optional De-energised Work Skills (E3) Optional Strand
Level 2 credits	8	-	-
Level 3 credits	32	0-5	0-4
Level 4 credits	43	0-7	0-10
Level 5 credits	-	-	0-10
Minimum totals	83	5-7	2-10
Minimum qualification total with strand		88	85

Requirements for Award of Qualification

Award of NQF Qualifications

Credit gained for a standard may be used only once to meet the requirements of this qualification.

Unit standards and achievement standards that are equivalent in outcome are mutually exclusive for the purpose of award. The table of mutually exclusive standards is provided in section 7 of the New Zealand Qualifications Authority (NZQA) Rules and Procedures publications available at <http://www.nzqa.govt.nz/ncea/acrp/index.html>.

Reviewed standards that continue to recognise the same overall outcome are registered as new versions and retain their identification number (ID). Any version of a standard with the same ID may be used to meet qualification requirements that list the ID and/or that specify the past or current classification of the standard.

Summary of Requirements

- Compulsory standards

The following strands are optional

- Optional Work Skills (E1 (O)) Optional Strand
- Optional De-energised Work Skills (E3) Optional Strand

Detailed Requirements

Compulsory

The following standards are required

Agriculture, Forestry and Fisheries > Forestry > Non Commercial Forestry Skills

ID	Title	Level	Credit
6917	Operate a chainsaw	3	5

Engineering and Technology > Civil Works and Services > Civil Infrastructure Health, Safety, and Environment

ID	Title	Level	Credit
20877	Demonstrate knowledge of working safely at sites under temporary traffic management	2	1

Engineering and Technology > Electricity Supply > Electricity Supply - Core Skills

ID	Title	Level	Credit
10509	Climb and work on electricity network structures	3	6
17025	Carry out a rescue from an electrical structure	3	2
18273	Demonstrate knowledge of the sources, origin, basic composition, and properties of electricity	2	5
18276	Operate light lifting and rigging equipment in the electricity supply environment	2	2
24746	Rig electrical network structures	4	6

Engineering and Technology > Electricity Supply > Electricity Supply - Distribution Networks

ID	Title	Level	Credit
10510	Use machinery, plant and equipment in an electricity network environment	4	6
10512	Joint electricity network overhead conductors	3	4
10521	Install and replace electricity network pole structures	4	10
12295	Apply earths to and remove earths from overhead electric line conductors	3	4

Engineering and Technology > Electricity Supply > Electricity Supply - Transmission Networks

ID	Title	Level	Credit
20420	Replace transmission tower steel	4	6
24747	Install and replace insulators and fittings	4	5
24749	Restore electricity network lines using emergency structures	4	10

Health > Occupational Health and Safety > Occupational Health and Safety Practice

ID	Title	Level	Credit
17600	Explain safe work practices for working at heights	3	3
17602	Apply hazard identification and risk assessment procedures in the workplace	3	4

Service Sector > Driving > Specialist Driving Knowledge and Skills

ID	Title	Level	Credit
17978	Operate a light four wheel drive (4WD) vehicle in an off-road environment	3	4

Optional Work Skills (E1 (O)) Optional Strand

A minimum of 1 standard

Engineering and Technology > Electricity Supply > Electricity Supply - Core Skills

ID	Title	Level	Credit
18272	Operate power-operated elevating work platforms (EWP) in a electricity supply environment	3	5

Engineering and Technology > Electricity Supply > Electricity Supply - Testing

ID	Title	Level	Credit
14284	Carry out soil resistivity tests for high voltage earth system	3	5

Service Sector > Commercial Road Transport > Heavy Haulage

ID	Title	Level	Credit
23891	Use a vehicle-mounted winch in heavy haulage operations	4	7

Service Sector > Driving > Driver Educator

ID	Title	Level	Credit
14515	Demonstrate knowledge of off-road motorcycle performance, design, and handling characteristics	4	6

Optional De-energised Work Skills (E3) Optional Strand

A minimum of 1 standard

Community and Social Services > Outdoor Recreation > Outdoor Equipment

ID	Title	Level	Credit
423	Work with helicopters	3	3

Engineering and Technology > Electricity Supply > Electricity Supply - Testing

ID	Title	Level	Credit
14287	Use and maintain test instruments used within the high voltage electrical industry	3	4

Engineering and Technology > Electricity Supply > Electricity Supply - Transmission Networks

ID	Title	Level	Credit
18025	String, install, and attach transmission network conductors	4	10
20419	Use a conductor trolley on de-energised transmission line conductors	4	3
24680	Plan and manage helicopter overhead lines operation	5	10
24681	Demonstrate knowledge of, and carry out, implosive jointing of electricity network overhead conductors	4	2
24748	Erect electricity transmission towers	4	10

Transition Arrangements

Version 2

Version 2 was issued following revision.

Changes to structure and content

- Requirements of the Optional Strands amended from all standards in the strand, to a minimum of 1 standard.
- Titles of the optional strands changed to Optional Work Skills (E1 (O)), and Optional De-energised Work Skills (E3), to match the title of the module they are each mapped against.

For detailed information see [Review Summaries](#) on the NZQA website.

This qualification contains standards that replace earlier standards. For the purposes of this qualification, people who have gained credit for the expiring standards are exempt from the requirement to gain credit for the replacement standards – see table below.

Credit for	Exempt from
10516	24747
10520	24748
10527	24749
12297	24746

No candidates have been signed on to programmes leading to version 1 of this qualification. As a result there are no transition implications. All new candidates will be signed on to programmes leading to version 2 of this qualification.

Previous version of the qualification

Version 1 of this qualification replaced the National Certificate in Electricity Supply (Line Mechanic Transmission) (Level 4) [Ref: 0872].

Summary of differences between the qualifications

- Optional strands were added to, and an elective set was removed from, the qualification.
- Ref: 1293 was added as a prerequisite qualification.
- Standards 6917, 10509, 10510, 12295, 17025, 17600, 17978, 18273, 18276, 20877, 24746, 24747, and 24749 were added to the Compulsory.
- Standards 20419 and 18025 were moved from the Compulsory and Elective, respectively, to the E3 optional strand.
- Standards 1901, 2514, 10511, 10513, 10516, 10517, 10520, 10527, 10529, 17027, 17532, 17537, 17538, 17542, 17569, 18022, 19950, and 20847 were removed from the qualification.
- Credit total was decreased from 111 to 83.

People currently working towards the replaced qualification may either complete that qualification or transfer their existing achievements to this qualification.

The last date for assessment of the replaced qualification is 31 December 2010. All training programmes and courses from 1 January 2010 will lead to the award of this qualification.

It is anticipated that no existing candidates are disadvantaged by these transition arrangements. However, candidates may appeal in the first instance to Electricity Supply Industry Training Organisation, which will consider any appeal on a case by case basis. See contact address below.

Other standard setting bodies whose standards are included in the qualification

Forest Industries Training and Education Council (FITEC)
 InfraTrain New Zealand
 New Zealand Industry Training Organisation
 Sport, Fitness and Recreation Industry Training Organisation Limited
 Tranzqual ITO

Certification

The certificate will display the logos of NZQA, the Electricity Supply Industry Training Organisation and the accredited organisation.

Classification

This qualification is classified according to the NQF classification system and the New Zealand Standard Classification of Education (NZSCED) system as specified below.

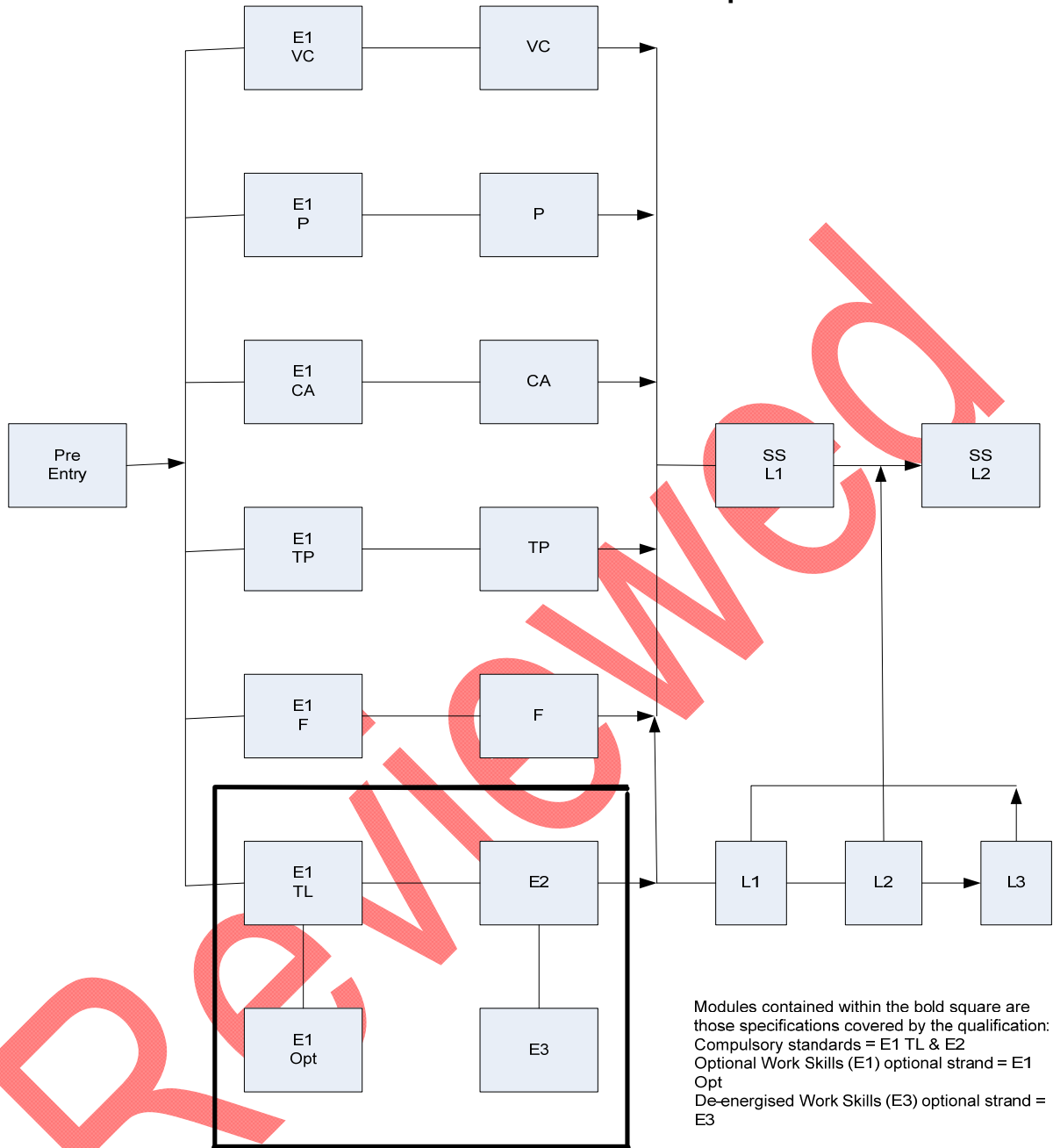
DAS Classification		NZSCED	
Code	Description	Code	Description
318	Engineering and Technology > Electricity Supply	031311	Engineering and Related Technologies > Electrical and Electronic Engineering and Technology > Power Line Installation and Maintenance

Quality Management Systems

Providers and Industry Training Organisations must be accredited by a recognised Quality Assurance Body before they can register credits from assessment against standards. Accredited providers and Industry Training Organisations assessing against standards must engage with the moderation system that applies to those standards. Accreditation requirements and the moderation system are outlined in the associated Accreditation and Moderation Action Plan (AMAP) for each standard.

Prerequisite Diagram

TP.SS 06.20 Transmission Line Work Competencies



Legend

- E1 General safety, industry knowledge, basic skills
- TP Tower Painting
- F Foundations
- P Line Patrols
- CA Condition Assessment
- E2 Earthed-Line Line Mechanic
- E3 Earthed-Line Line Mechanic-Optional
- VC Vegetation Control
- TL Transmission Lineman
- L1 Live Line pre-requisites
- L2 Live Line Level 2
- L3 Live Line Level 3-Optional
- SS Site Supervision

Reviewed

