Have a go!

 Grab the VR headset and scan the QR code. At the bottom of the page there is a rollercoaster to try





OR come and test the real headsets.

Vocational Education and and Training



VET Reform – Moving to ISB's

- Government has announced a move to an independent, industry-led model (Option B)
- TEC currently consulting on coverage of Industry Skills Boards (ISBs)
- ISBs not permanent two years from 1 Jan 2026 to manage apprentices and trainees currently enrolled with work-based learning divisions in Te Pūkenga
- ISBs will take over training agreements, support on-job learning, and be responsible for arranging assessment
- Continuity and time for new work-based providers and programmes to be in place by 1 Jan 2028
- Infrastructure ISB included as an option

VET Reform – Moving to ISB's

- Electricity representation on the infrastructure ISB and the proposed Establishment Advisory Group for Industry Skills Boards is essential to give us a voice and a vote.
- EEA focused on supporting our workforce with the technical training and education they need now and in the future - having a say matters
- How would you like to see the electricity sector involved and what an infrastructure ISB would mean for the future of our sector?
- Do you see any risks/alarm bells with the Government's proposal?

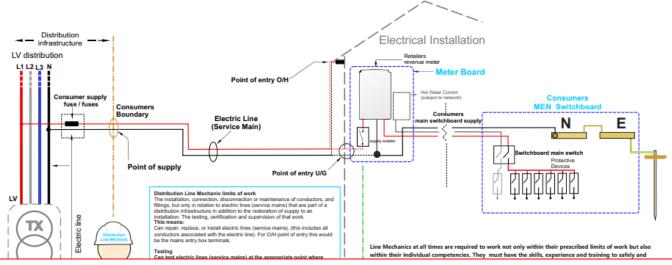


2024 – Changes

Distribution Line
 Mechanic

Guidelines to Clarifying the Limits of Work

for Distribution Line Mechanic



Line Mechanics at all times are required to work not only within their prescribed limits of work but also within their individual competencies. They must have the skills, experience and training to safely and competently carry out this work.

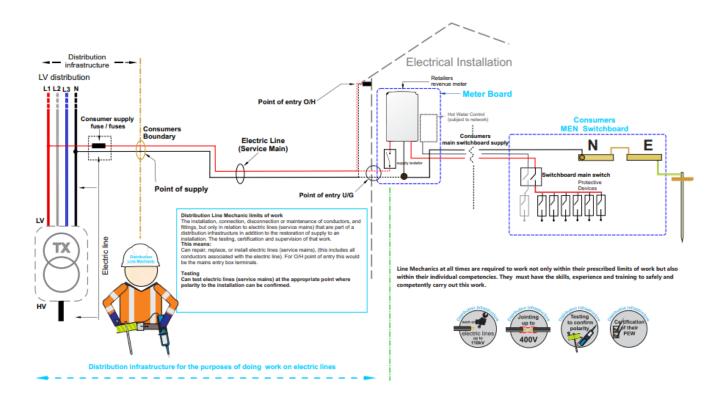


2024 – Changes

- Distribution Line
 Mechanic
- Electrical Inspector
- Electrical Engineer

Guidelines to Clarifying the Limits of Work

for Distribution Line Mechanic





2025 – Changes

- Mains parallel generation systems
- Medical cardiac protected areas
- Hazardous areas
- Mining Operations
- Supervise 3 or more people (except Electrical Inspectors)

Karakia mō te kai

Whakapainga ēnei kai
Hei orange mō te tinana
Mō ō māou wairua
Hoki
Amine

MAORI PRAYER BEFORE
 MEALS "KARAKIA" #auckland
 #newzealand#prayerbeforeme
 als #food

Bless these foods
For the goodness of our bodies
And for our spirits
As well
Amen



2025 Update

Common Competency Framework (CCF)



Purpose

- The (CCF) sets the minimum levels of knowledge, skills, and experience
- The purpose of this framework is to reduce risk to workers and the public
- A common set of competencies is more efficient and cost-effective when workers and contractors are moving between businesses
- Increasingly important in emergency situations
- Developed in 2018
- Maintained and updated regularly



Principles

- 1. Common
- 2. Usable
- 3. Transportable
- 4. Auditable
- 5. Updatable

Governance Group

- The purpose of the GG is to ensure that the CCF remains effective throughout its lifetime
- Provides oversight over its management (including administration, review, and improvement) and ensures that the management of the CCF is consistent with the agreed principles
- Independent Chair Ken Stirling
- Representation from:
 - ENA, EEA, PowerNet, WEL Networks, Horizon Energy, Powerco, Scanpower, Connetics, Lines & Cables, and a Consultant

User Working Group

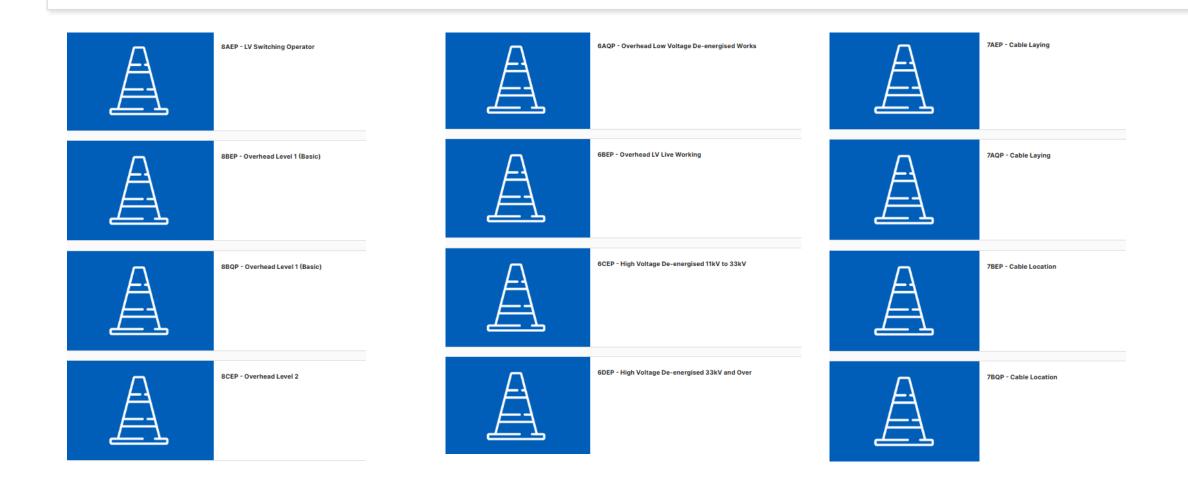
- A body established to represent all participating and prospective organisations and ensure the relevancy of the CCF over time
- Review the CCF and recommend amendments to the Governance Group
- Chair Mark Keller, WEL Networks
- Representation from:
 - Firstlight Network (Clarus), Horizon Energy, Northpower, Powerco, Scanpower, The Lines Company, Top Energy, Aurora Energy, Delta, EA Networks, MainPower, Marlborough Lines, Network Waitaki, PowerNet, Westpower Electronet, Waihanga Ara Rau, Connexis and EEA

Revisions

- Version 1.7
- Update to 2. Minor Works Management (Including Live Low Voltage Permit Recipient & Permit Issuer)
- Update to 4. Vegetation (Ground Worker, Climber, Sprayer & changes to Felling)
- Review of 6. Overhead Works
- Review of 7. Underground Works
- Update to 8. Switching (Including Low Voltage switching & bonding)
- Update to 10. High Voltage Supply Electrician (Inspection, Maintenance, Construction & Commissioning)

Knowledge and Skills

• Unit (skill) standards and subsequent standards or demonstrate equivalent knowledge and skills.



Knowledge and Skills

Clear alignment to the framework must be proven



ON-SITE OBSERVATION ASSESSMENT Overhead Level 1 Switching Operator Purpose Operate manually operated air break switches, dropouts, links and application of portable earths in the electricity supply industry. Activity: Years of experience: Employee: Assessor: On-site Observation Assessment is to be completed when a worker has been trained and has undergone sufficient experience in the discipline (under supervision) that demonstrates to the employer that the worker is competent to undertake of carry out the activity. Outcomes and Performance Criteria Demonstrate knowledge of air break switches, dropouts and links commonly used in electricity supply Performance Criteria 1. Switchgear types used in electricity supply networks are described in terms of air break, expulsion fuses, links, circuit breakers (oil, SF6, vacuum), fuse switches, isolators, and fuses. 2. The purpose of switching on the electricity network is described in terms of isolation, disconnection, transfer of load, fault finding, earthing, testing, and parallels. 3. Understands all safe work procedures relating to air break switches, dropouts and links. SWP-0088 Working with horizontal ABS frames SWP-0271 High Voltage Switching Pole Top Devices SWP-0272 EDO (expulsion fuse) operation 4. The switchgear numbering system is described for air break switches, dropouts and links.



Identify and communicate switchgear status.

forman	

Air break switches correctly identified.	
2. Dropout and Links correctly identified.	
3. Earthing procedures correctly identified.	

Outcome 3

Operate electrical switchgear.

Performance Criteria

- Manually operated air break switches, dropouts and links operation is carried out in accordance with industry safety rules, company procedures, and ensuring that security of supply is maintained.

 Switching sequences to operate equipment are carried out in accordance with SYSCON.
 - witching sequences to operate equipment are carried out in accordance with SYSCON.

Outcome 4

Test and apply portable earths.

Performance Criteria

1.	Can demonstrate testing to prove de-energised using the prove-test-prove method.	
2.	Application of portable earths is carried out in accordance with industry safety rules, company procedures.	
3.	Can explain the difference between issuer and recipient applied earths and the requirements for each.	
4.	Can explain the operational restrictions for spider earths.	

5.	WEL Safety Alert - Rusted bolts in fused ABS frames March 2019 can be accessed via th
	following link: https://welecm.welnet.co.nz/otcs/llisapi.dll/Overview/8908601

SWP-0166 Methodology for safe use of spider earths



Tick ap	plicable box when complete
	plicable box when complete
	Competent
	Competent Update competency management system
	Competent

On-Site Assessment Evaluation

Supporting Evidence

Accessor to provide specific comments on tack observed

At leas assessi	: one of the following pieces of evidence must be provided to support this on-site observati nent:
	Safe Job Start

Photograph of employee undertaking activity

Assessor name:	Signature:	Date:
, and a second second	o grider e i	50121

Get in touch

- https://www.ena.org.nz/ourwork/resources/ccf
- If you have any questions, concerns, or good ideas about the CFF, please email: <u>ccf@electricity.org.nz</u>
- Mark Keller mark.keller@wel.co.nz



Sustaining the Backbone: The role of Grid Skills and Operational Training in the Transmission Sector

6 May 2025



Transpower - Who we are

- Owner and operator of New Zealand's national electricity transmission system
- We provide the infrastructure and market system that connects electricity generators to major electricity users and the distribution network
- Over \$5 billion in assets positioned across some 30,000 properties
- 174 substations, 25,000 transmission towers and more than 11,000 kilometres of lines
- Operate the electricity market system in real time
- Offices in Wellington, Auckland, Hamilton and Christchurch
- Around 1000 staff









The role of the Sector Workforce Development Group

The Transpower Sector Workforce Development Group, comprises of Grid Skills (PTE) and Technical Training (internal).

The group designs and delivers trades training and technical training for the electricity transmission sector. The Group supports Transpower and the New Zealand transmission sector to attract, train and retain more skilled workers.

Products and services

The Group provides a broad range of products and services to learners and stakeholders. Learners include:

- Transpower employees
- the Service Provider field workforce and subcontractors.

As a registered Private Training Establishment, we must support the diverse needs and backgrounds of all learners and be ready to respond to changing workforce demographics.

Technical Training (Internal)

- Training courses, programmes, and resources for critical operational areas and projects
- Support of simulator training for Operations Control Centres
- Business as usual technical training

Grid Skills (Trades)

- Training courses and programmes for field workers, some of which lead to NZQAaccredited qualifications
- Compliance training for people who enter Transpower restricted areas to work on Transpower assets

Workforce Activation (Transpower and Sector)

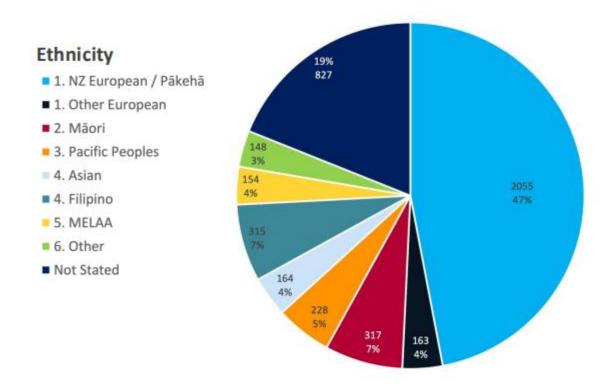
- Initiatives to support workforce growth for Transpower and the sector
- Stakeholder and sector engagement

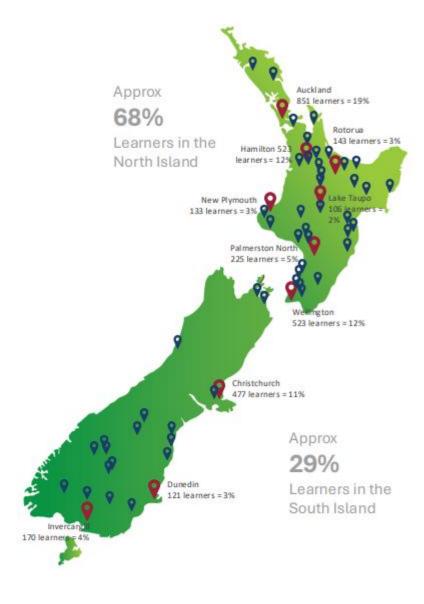
- Training advice and consultancy
- Training needs analyses, strategies and plans
- Learning experience design
- Programme development
- · Learning systems
- Assessment and moderation
- Evaluation, data, analytics and insights
- Quality assurance and compliance of training
- Training delivery and coaching
- Training centres and equipment
- Maintaining training simulators



Grid Skills active learners

Grid Skills Active learners or currently progressing through training curriculum and location.





Note - these demographics are representative of the time of learner registration (This data is based on the past 2.5 years (July 2022 – January 2025)). Map Key: **Red** = Areas with a higher concentration of learners (100+ learners). **Blue** = Areas with a smaller number of learners.

GRID SKILLS SNAPSHOT

2024 CALENDAR YEAR

2087

Total number of Grid Skills learners

8.7% Grid Skills Learners under 25



	TRADES		COMPLI		ANCE	
Ethnicity	Number	96		Number	96	
■ 1. NZ European / Pākehā	161	31%		1118	47%	
■ 1. Other European	12	2%		71	3%	
■ 2. Mäori	61	12%		135	6%	
3. Pacific Peoples	40	8%		130	5%	
■ 4. Asian	1	0%		101	4%	
4. Filipino	225	43%		168	7%	
■5. MELAA	4	1%		102	496	
■ 6. Other	8	2%		131	5%	
■ Multiple	0	0%		0	096	
■ Not Stated	11	2%		447	19%	
■ Not Stated %	2%	523		19%	2403	



TRAINING SNAPSHOT

410

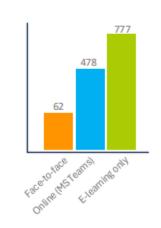
Compliance training sessions delivered

117

Trades training sessions delivered

68 NZQA qualifications awarded

SESSIONS HELD



ELECTRICITY SUPPLY WORKFORCE SNAPSHOT

90% Male

10% Female

25% Over 55 higher than the average of the total economy

Approx 15%

in Auckland, with a large proportion of the workforce in Northland, Waikato, Taranaki, and Manawatu Workers report long working hours and lack of flexibility

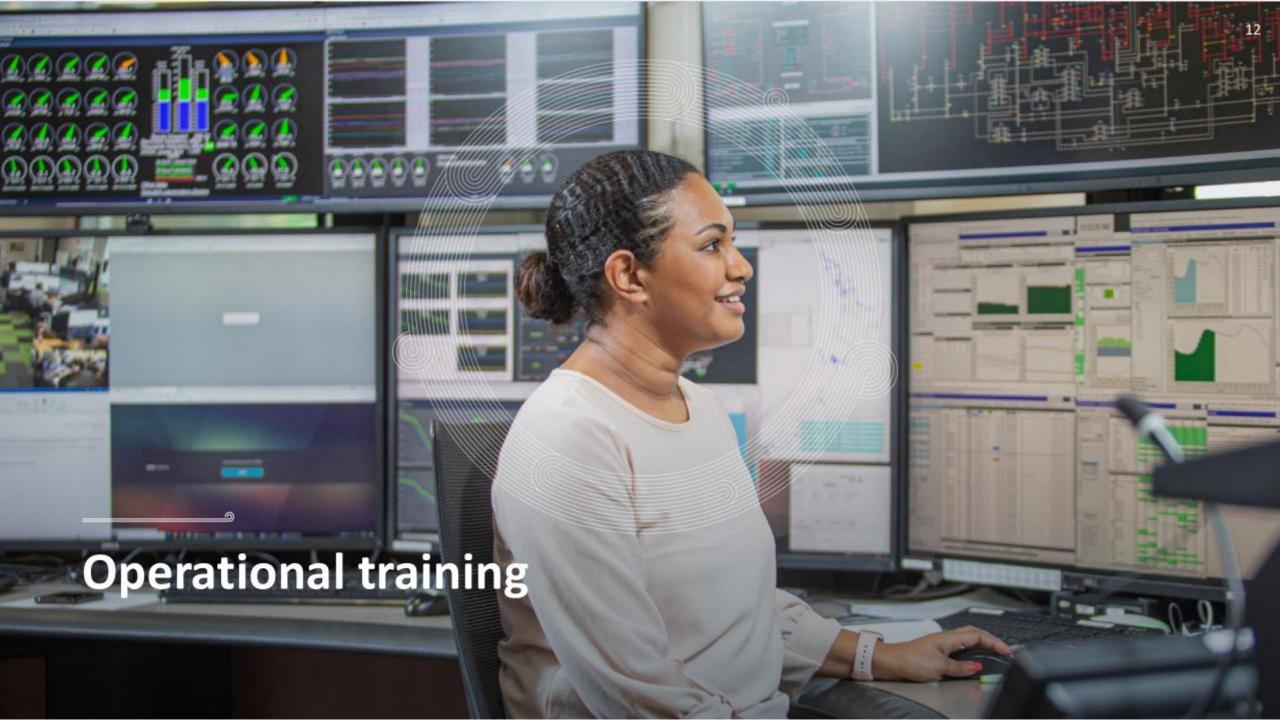
TRAINER NUMBERS

15 Trades trainers



Delivery

Compliance Training	Substation Training	Line Mechanic Training		
Substation Entry Level 1 & 2	Connected Party Operator	Tower structure Maintainer		
Work Management	Maintenance Switcher	Transmission Lines Core 1 & 2		
Permit Recipient	Field Operator	Transmission Line Mechanic 1 & 2		
Lines and Structures Fundamentals	Power Technician Fundamentals	Permit Recipient Lines		
	Power Technician Relays	Condition Assessor		
	Power Technician DC Systems	Patrols		
	Power Technician Instrument Transformers	Foundation Refurbishment		
	Power Technician HV Insulation	Live Line Mechanic 1 & 2		
	SF6 Test and Top-up	Emergency Restoration Structures Year 1, 2, 3, 4		
	SF6 Degas to transport Pressure	Live Lines 1 & 2		
	SF6 Approved Filler Refresher	Vegetation Controller		
	Substation Maintainer Core 1, 2 & 3	Earth Potential Rise		
	Substation Transformers			
	Substation Disconnectors			
	Cable Jointers (not Grid Skills affiliated training)			



TECHNICAL & OPERATIONAL TRAINING SNAPSHOT

2024 CALENDAR YEAR

TRAINER NUMBERS

3 (1 NCC trainer, 2 NGOC trainers)



1 TTSE (training simulator) specialist

NGOC AND NCC

58 Learners attended an NCC or NGOC Team Training session (33 sessions held)

6 New NCC New Start learner registrations

9 New NGOC New Start learner registrations

TRAINING SNAPSHOT

598 Transpower learners accessed online training provided by Technical Training

121 Transpower learners attended a Technical Training Session (eg. Team Training, PMP)

632 Transpower learners attended either online or session training, or both

106 Transpower enrolments in Grid Skills compliance curriculums

48 Transpower staff enrolled in Technical Training curriculums

SIMULATOR UTILISATION

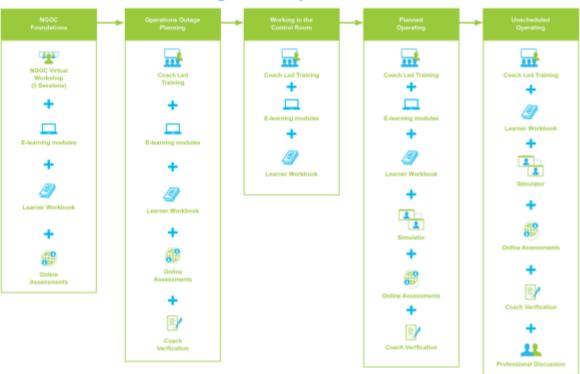


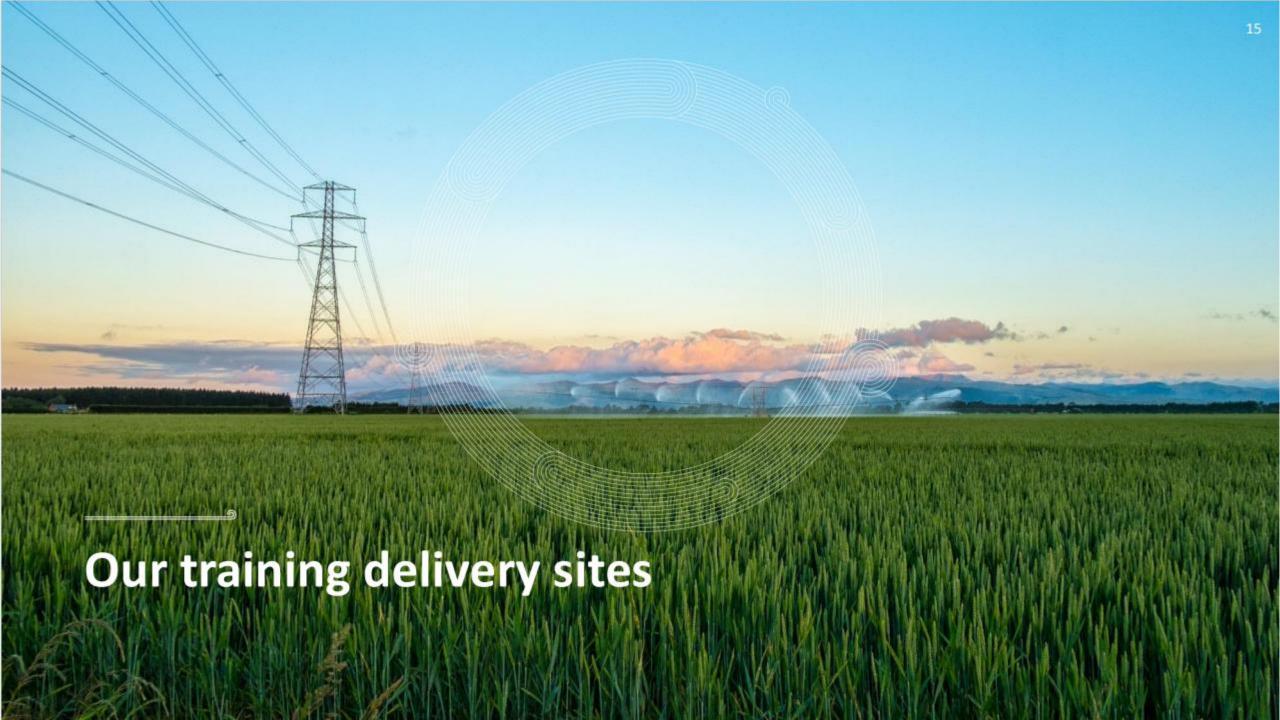
Delivery

Team training

- NGOC 9 monthly cycle
- NCC 6 monthly cycle

NGOC New Start Training Pathway





Omaka training facility



Bunnythorpe training facility





Huntly training facility





Our trainers

Grid Skills training use experts from the industry who train via online webinars and face to face block courses.

Operational Training adopts a facilitative and coaching approach to training using SMEs, trainers and simulation.



Projected RCP4 uplift

Delivering on the projected uplift for RCP4 will require a substantial increase in staffing and resources to support the expanded work programme across both Transpower and our Service Providers. Achieving this will demand a significant shift in workforce capacity and capability, including recruitment in a highly competitive market for skilled professionals.

Key workforce and training considerations include:

- Investment in Transpower's training infrastructure to accommodate a greater volume of trainees
- Implementation of a workforce activation plan and the Sector Workforce Development Group
- · Strategies to attract and retain a diverse workforce
- Adoption of flexible and responsive training delivery methods
- · Recognition of prior learning and relevant experience
- Development of a talent pipeline through engagement with schools and polytechnics
- Strengthened partnerships with engineering schools





Internship Roles we have taken in the past

ENGINEERING:









Engineering science

Computer (systems)

First year students

NON-ENGINEERING:









+ More!







Graduate Program

Transpower graduates are part of a structured, supportive 2 year program designed to extend and challenge, while providing experience across a wide range of operations.

Graduates move through the programme in experiencing a range of experience in preparation for permanent work at Transpower.

Development Opportunities

- Rotations around a range of teams
- Accelerated pathway to becoming a chartered engineer (save 3 years)



Graduate roles



Electrical / electronics



Mechatronics



Mechanical



Civil / structural



Engineering science



Physics / Maths



Thank you

TRANSPOWER.CO.NZ

The Life and Times of the Genesis PTE

EEA Trainers Forum Christchurch May 2025



Genesis Energy Overview

~500,000

24% Electricity market share

36%
Gas market share

21% LPG market share

13
Products per customer

Waikaremoana Huntly 1,204 138 Peak Capacity/MW Peak Capacity/MW Key Waipipi¹ **Thermal** 133 Hydro Peak Capacity/MW Wind Kupe Tongariro 46 Gas 362 % Share Peak Capacity/MW Solar joint venture with FRV Australia Lauriston 63 Peak Capacity/MW Tekapo 190 Peak Capacity/MW Genesis has a Power Purchase Agreement (PPA) linked to the electricity generated from Waipipi

genesis

Business sustainability

- Why is training critical to our business sustainability?



Generation Controllers Run the station or schemes



Operator Maintainers On-plant, maintenance







Genesis PTE

What is it?

A tertiary education organisation

What can the PTE do?

• Award (business-critical) qualifications and micro-credentials.



Rise and fall...

— 2003 to 2016 2010 2003 2016 genesis 107. 14 MAY 2025

... and Rise again...

— 2019 onwards

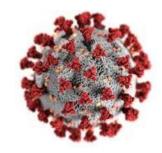








2025





Te Taura Here Tohu Mātauranga o Aotearoa

New Zealand Qualifications & Credentials Framework

2019 2020



2022

2023



108. 14 MAY 2025

What's next for us...

— Other qualifications/pathways

ENCHEM Level 4

New Zealand Certificate in Energy and Chemical Field Operations (Level 4) with strands in Advanced Steam Generation Plant Operation (with optional strands in Gas Turbine Operation, and Steam Turbine Operation)

Electricity Supply Operator Level 4

New Zealand Certificate in Electricity Supply (Operation) (Level 4) with optional strand in Hydro-operation

Potential external provision







New Zealand Certificate

ENERGY AND CHEMICAL PROCESS OPERATIONS (LEVEL 3)
(BOILER OPERATIONS)

[REF: 4128]

This is to certify that on 9 September 2024

Billie McNamee

met the requirements of an approved programme leading to the qualification above and it was awarded by Genesis Energy Ltd Private Training Establishment

Malcolm Johns, Chief Executive Genesis Energy

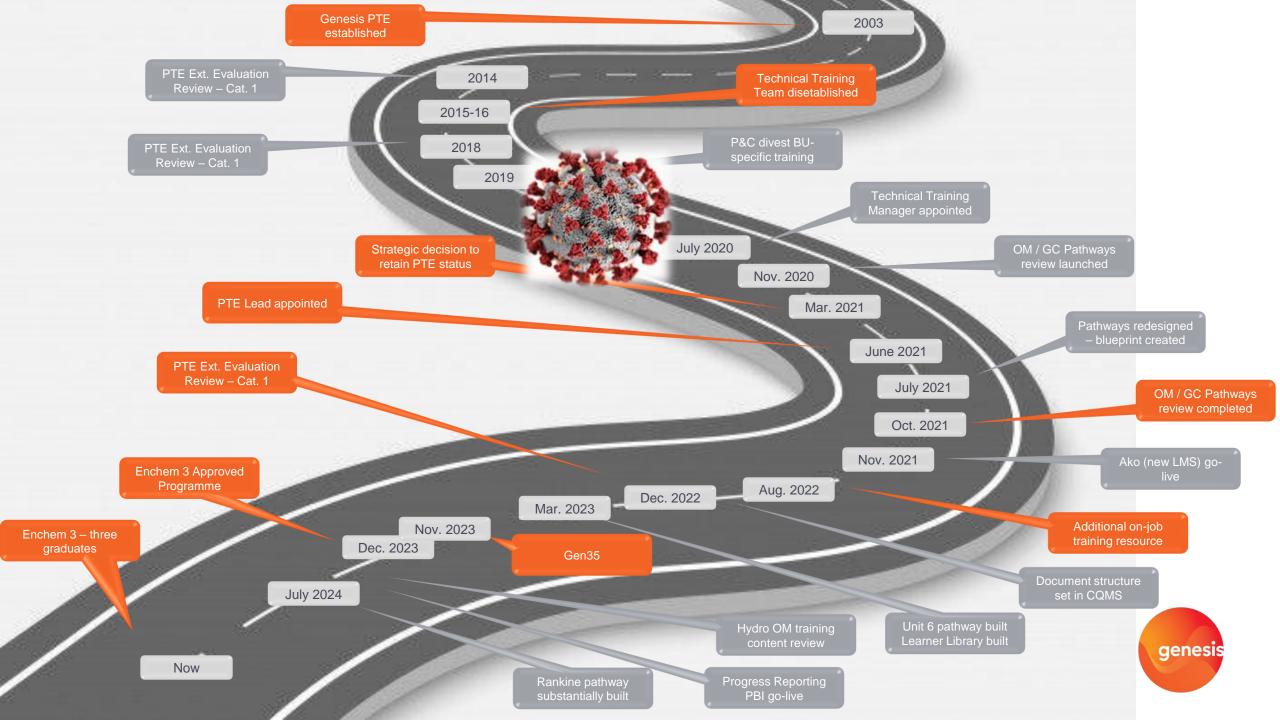
Issued on: 29 April 2025 NSN: 120911631



The Life and Times of the Genesis PTE

EEA Trainers Forum Christchurch May 2025







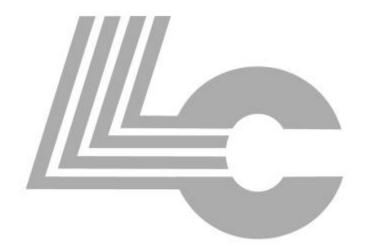
Afternoon Tea

2.15 - 2.30



Who are we?

- Lines & Cables Training Ltd
- Whangarei Head Office
- Background
- Trainers
- Work Scope









Electricity Supply Industry Trainer's Forum

Thinking Differently



Why did we have to Think Differently

Paper-based assessment challenges

We noticed a change of learners with different learning needs

Assessment processing times became a focus area for us

We are an agile service provider, and we needed to streamline our processes

All the while ensuring that our learners and client needs weren't being compromised



What have we done about it?

- QR codes and how we use them
- L&C 3D models for students
- Virtual Training Resources for gaining understanding
- Digital logbooks Live Work or task specific areas

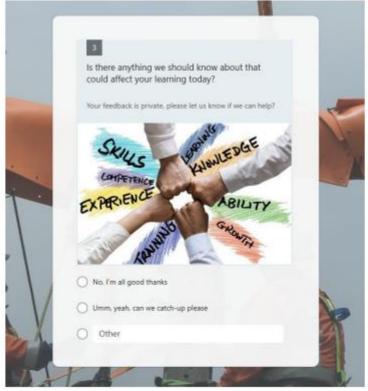


QR Codes

Quick Response Codes – simplifying processes

- Daily attendance records easy access
- Wellbeing of learners pastoral care obligations
- Learner's individual needs for each day are known
- Instantaneous results awareness



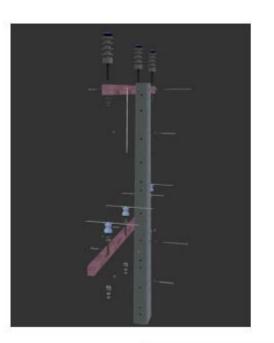


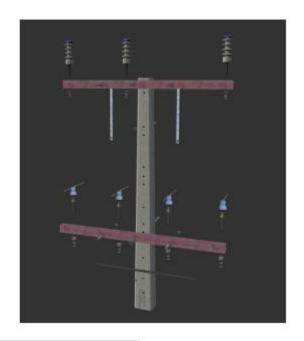


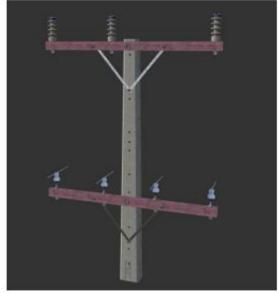
3D Models

3D Models – giving learners other options

- Variation method to learning for hands on learners
- Visual, engaging and different.





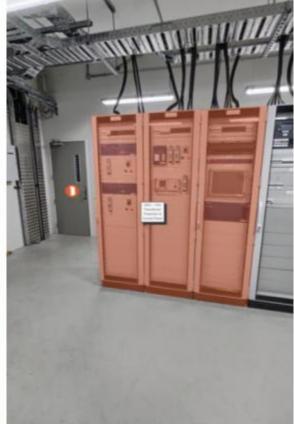


Virtual Resources

Virtual Substation – setting clear safety processes before completing actual assessments

- Variation method to learning for hands on learners
- Visual, engaging and different.
- Safe introduction to the entry and exit process
- Staged approach and shouldn't replace the practical

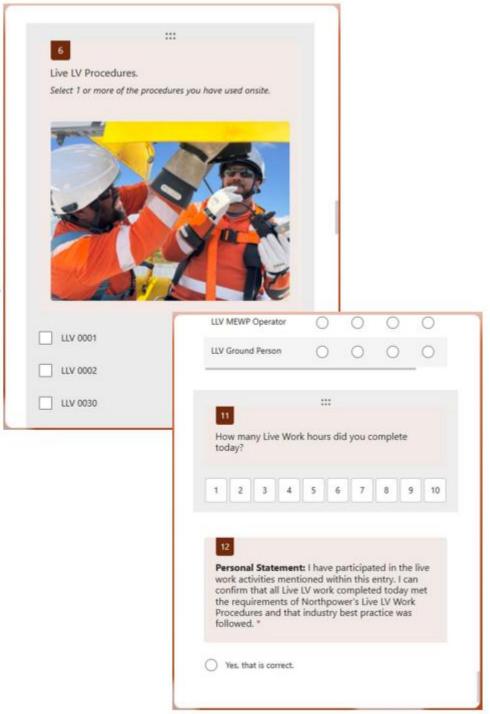




Digital Log-books

Digital Logbooks – managing field data easily and effectively

- Entries logged instantly
- Customised to each PCBU requirements
- Easy access Not complicated for the user
- Information is easily collatable
- Efficient tool for team managers



Positive Outcomes & Observations

- Work / Life balance for trainers
- More engaged learners
- Low-cost solutions to these issues,
- Less stressful using simple solutions
- Our team has become more efficient
- Client reporting became quicker





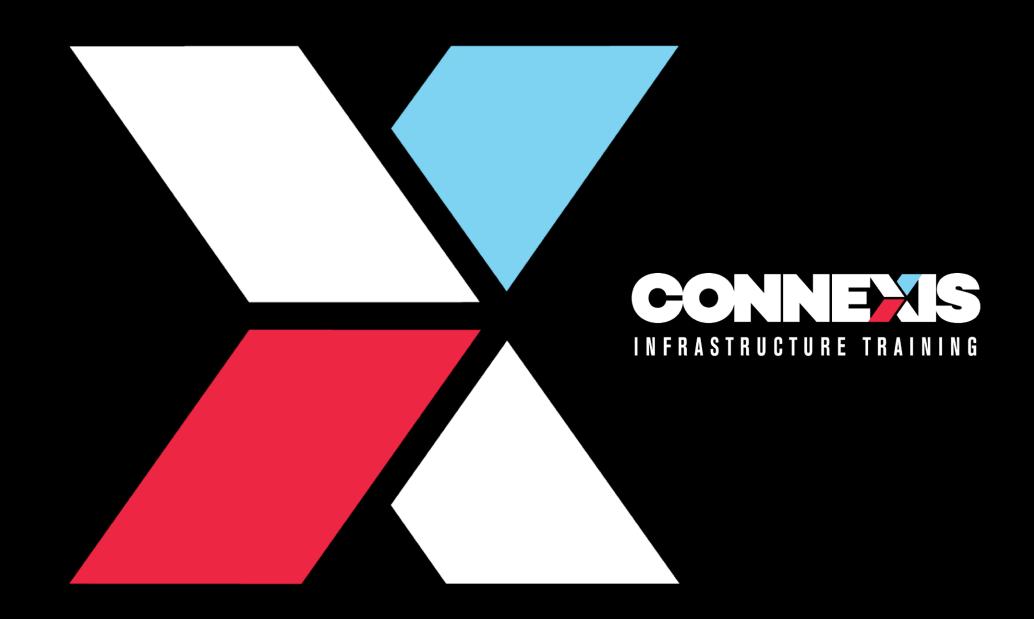
What can we share with you from our L&C Trainers

- Change your approach to become device friendly – but only a little bit
- Devices become more accessible for the learner – users can be easily distracted
- Clearly set you expectations from the start, whether it's reminding them of their own policies or setting your own rules. MAKE SURE YOU DO IT!!!
- Be mindful of the transition into the practical areas with devices. In pockets or as distractions...









CONNEXIS



INFRASTRUCTURE INDUSTRY TRAINING

CIVIL + ENERGY + TELCO + WATER



Programme Updates

What we are working on?



CONNEXIS

ESI Level 2

- An industry working group has been established
- 1st meeting May 7th
- Expected programme review completion August
- Proposed launch October



Network Control Level 4

- Variety of feedback that relates to the qualification, unit standards and learning and assessment resources
- Subgroup is reviewing the unit standards that make up the programme
- Programme development completed by August
- Proposed launch October





LMS Updates

Employer and CSAM View



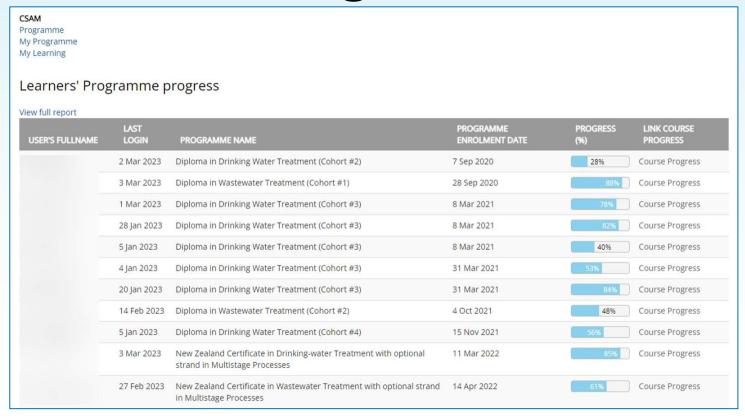
LMS Employer View

Learner Progress

- Overview of all learners
- Drill down into individual learners
- View assessments (read only)

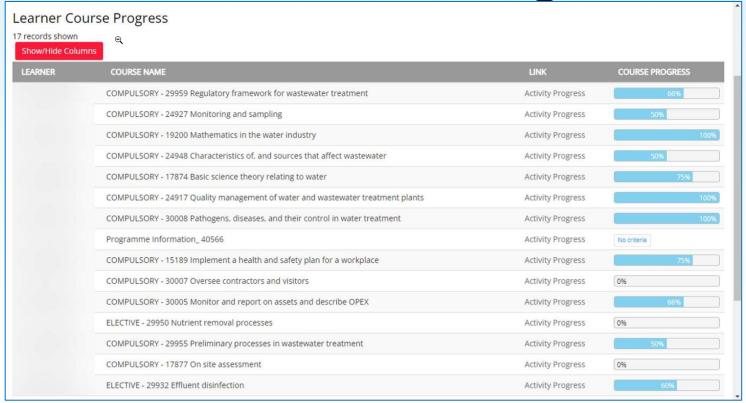


All Learner Progress



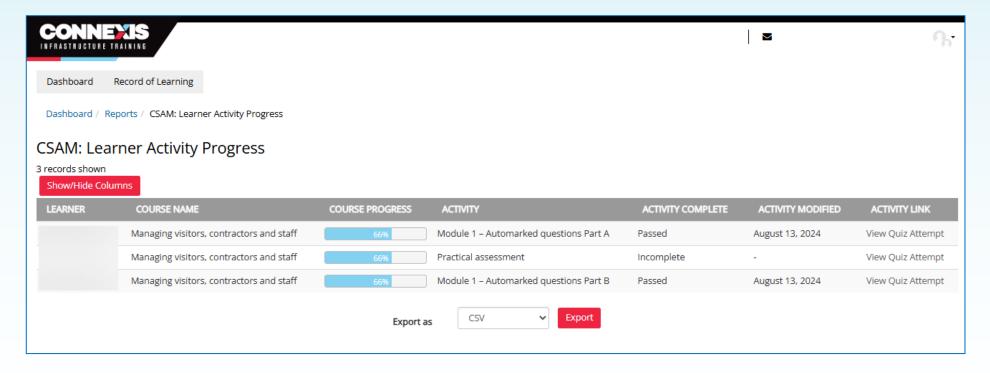


Individual Learner Progress





Learner Activity Progress







VET Redesign

Connexis Commitment



VET Redesign

December 2024 Annoucement

- Formation of Industry Skills Boards (ISBs) for standard setting
- Disestablish Te Pūkenga
- Regional-based Polytechnics or a Federation
- Further consultation on Work-based Learning



VET Redesign – April 2025 Announcement From 1 January 2026:

- New Industry Skills Boards (ISBs) will be set up to set training standards, endorse programmes, and moderate assessments.
- Apprentices and trainees currently with Te Pūkenga will move to the ISBs for up to two years.
- New students will enrol directly with new work-based learning private providers, polytechnics, or Wānanga.
- ISBs will be able to enrol new learners until other providers are set up to deliver work-based learning.



VET Redesign - Current Consultation

Number and coverage of Industry Skills Boards

- Automotive industries
- Construction industries
- Infrastructure industries
- Food and fibre industries
- Service industries
- Manufacturing and technology industries
- Social and community industries.



VET Redesign - Current Consultation

Infrastructure Industries

- Electricity Supply
- Wind Farm
- Telecommunications
- Civil Engineering
- Surveying
- Road construction and traffic management.





VET Redesign

What do you want to know?





VET Redesign

Connexis Commitment





He Karakía Whakakapí

Ka whakairia te tapu

Kia wātia ai te ara

Kia tūruki whakataha ai

Kia Tūruki whakataha ai

Hui ē! Tāiki ē

Restrictions are moved aside

So the pathway is clear

To return to every day activities

To return to everyday activities

Enriched, unified and blessed



Natasya Jones



Robbie Skerten



Irene Clausse



Mark Keller



Mark Adams





Vikki Roadley



Billie McNamee



Greg McBain



Grant Brown



Sue Roberts