ELECTROTECHNOLOGY

Advice to the Tertiary Education Commission for training investment in 2027

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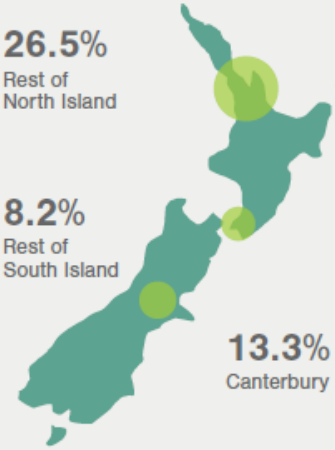
WAIHANGA ARA RAU
Construction and Infrastructure
Workforce Development Council

ELECTROTECHNOLOGY SECTOR

EMPLOYMENT BY REGION[1]

2023



- 26.5% Rest of North Island
- 40.7% Auckland
- 8.2% Rest of South Island
- 11.2% Wellington
- 13.3% Canterbury

GENDER[2]

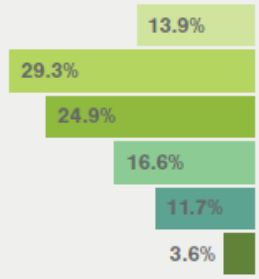
2023

77% Men

23% Women

AGE[3]

2023



10,130

TOTAL NUMBER OF BUSINESSES[7]

2023

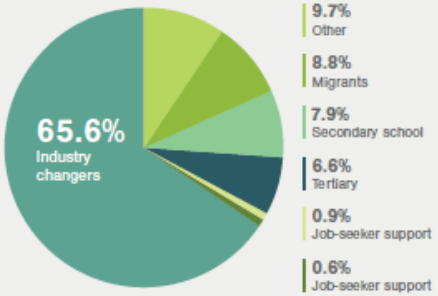
636

TOTAL NUMBER OF SOLE TRADERS[8]

2023

NEWCOMERS BY ORIGIN[4]

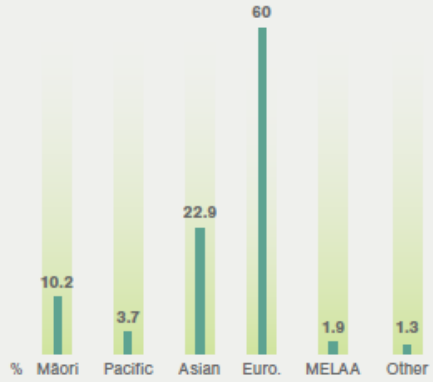
2023



20.1% of employees have been in the industry for less than a year.[6]

ETHNICITY[5]

2023



BUSINESS OWNERSHIP BY ETHNICITY[9]

2023

This data is extracted from StatsNZ IDI and IRD and displayed in the Workforce Information Platform. Figures are defined by those who work for or own a business with a relevant ANZSIC (industry) code. The infographic can be found at *workforce.nz*

ELECTROTECHNOLOGY NARRATIVE

The Electrotechnology Strategic Reference Group (SRG) has played a pivotal role in shaping this advice, ensuring it reflects industry needs. There was consensus across the SRG to apply the 11.8% growth assumption for construction sectors, even though other SRGs have taken differing positions. Available data support at least this level of growth by 2027.

Micro-credentials

Two micro-credentials, Grid-connected PV Systems, Design and Install (Level 4) and Grid-connected Battery Storage Systems, Design and Install (Level 4), were recently approved by the Electrical Workers Registration Board and highlighted in our investment advice table. This means that electrical workers registered as electricians, electrical inspectors, or electrical engineers will be able to meet the registration requirements to work on mains parallel generation systems if they have earned the two micro-credentials and have been registered for at least two years.

There is also the Supervision of Prescribed Electrical Work (Micro-credential), which has been submitted to NZQA for approval, with providers' intention to develop programmes.

Broader investment and policy advice | Transition to ISB and future implications

In 2026, the sector will transition into a standalone ISB, incorporating electrotechnology, IT, and converging digital/creative industries. The sector plays a major role in New Zealand's economy, valued at $30.7B (7.3% of GDP) with 156,915 workers and approximately 32,660 apprentices/trainees[1]. This means it outpaces many other industries in scale and growth potential. Like many across the C&I sector, it faces urgent workforce pressures, including a shortage of over 6,000 electricians and 20% annual retirement rates, reinforcing the need for immediate investment in qualifications that meet current demand.

The investment advice table outlines specific qualification recommendations for those currently covered under the Electrotechnology coverage. As highlighted in our overall narrative, it is important for industry and/or ISBs to revisit this advice in 2026, prior to final funding and contracting decisions, if there are any significant changes. This is even more pressing given the changes that will occur for Electrotechnology in 2026.

The sector also wants to highlight broader funding and policy needs:

1. **Baseline funding uplift:** Ensure ISBs are resourced and funded to support expanded coverage and the future qualification pipeline. The shift into the ISB significantly expands the scope and scale of responsibility, requiring new investment in Governance capacity, Qualification development, and Workforce pathways.

[1] Data and information comes from Infometrics which categorises the Electrotechnology sector differently to Waihanga Ara Rau.

2. **Targeted development funding:** While some qualifications are mature and stable (e.g., electrical and HVAC), others are conceptual and require substantial investment, such as degree-level apprenticeships, smart systems, and digital/creative convergence. Acknowledging that the industry also needs to put pressure on providers to prioritise funding towards the development of key industry programmes.
3. **Future-focused alignment:** Recognising that current growth forecasts understate true demand, especially from 2026–27. Even "low growth" forecasts underestimate actual demand, especially as new programmes launch in 2026–27. Without increased TEC investment, the sector risks:
    i. Fragmentation of qualifications across ISBs
    ii. Training is lagging 2–5 years behind technology adoption
    iii. Worsening workforce shortages
    iv. Under-representation of emerging industries (AI, renewables, biomedical, creative tech)
4. **Transition funding:** To avoid fragmentation and ensure continuity as WBL providers and regional ITP models evolve.

Sector readiness and co-investment

As part of the most recent VET reform, ISBs have the opportunity to explore alternative funding mechanisms to support their core functions. The industry is prepared to co-invest through levy and supplier models and has already formed the Electrical Industry Advisory Council (eIAC) and Trade Master to support CPD and training delivery.

INVESTMENT ADVICE

Overarching narrative

This document should be read alongside the overarching narrative document, which provides the introduction and overarching assumptions for Waihanga Ara Rau's 2025 investment advice to the Tertiary Education Commission (TEC), focused on training provision for 2027.

The sector versions outline our approach to qualifications relevant to each sector, regardless of whether they meet TEC's investment threshold. This ensures that all stakeholders, from policymakers to industry leaders, can engage with advice that aligns with their areas of influence.

2027 Investment advice baseline year

We're applying a similar approach to last year's. **The baseline year is 2024,** which provides the most recent full year of training data. All active learners across the 2024 calendar year set the minimum level of provision we expect in 2027, with any recommended growth, reduction, or no change based on that starting point.

Investment advice threshold (for 2027 delivery)

For qualifications within our scope, only those meeting the threshold are included in our formal submission to the Tertiary Education Commission (TEC). The 2027 threshold includes:

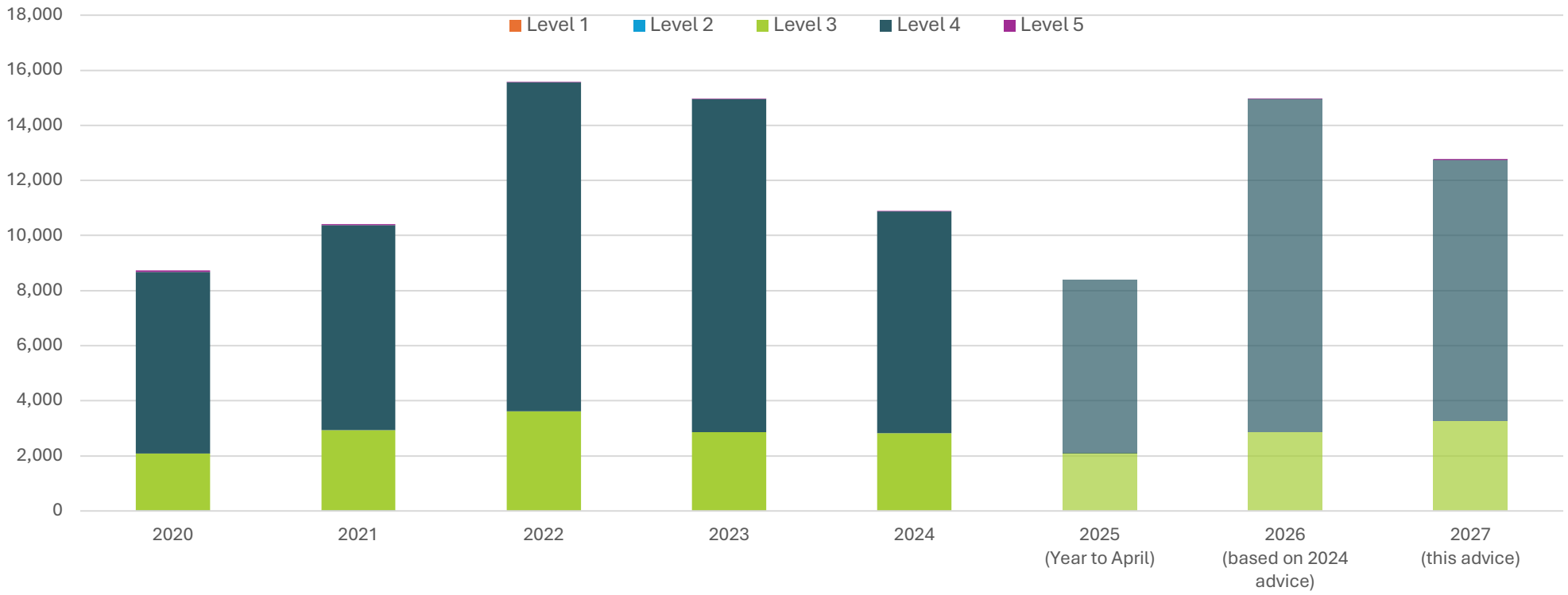
- growth or reduction of more than 20 learners compared to the 2024 baseline.
- not registered or not TEC-funded learners in 2024, but expected activity in 2027.
- fewer than 20 learners in 2024, with projected growth that more than doubles by 2027.

The threshold is designed to ensure our advice focuses on qualifications that could significantly impact current TEC funding. Qualifications that fall below this threshold typically sit within the margins of existing funding activity and therefore do not materially affect funding availability

This advice covers 24 qualifications and programmes within Waihanga Ara Rau's Electrotechnology sector. Together, these show a projected growth of 1,842 learners in 2027 based on the 2024 baseline. Of these, 14 qualifications meet the TEC advice threshold and are included in the formal advice document submitted to TEC. These account for 1,783 of the total projected learner growth.

Learner trends and projections (2020-27)

Like many parts of the C&I sector, Electrotechnology saw a significant increase in learner numbers during 2021–23, largely driven by Government interventions such as Targeted Training and Apprenticeship Fund, First Year Fees Free, and Apprenticeship Boost. With most initiatives concluded except for Fees Free shifting to final years, learner volumes have returned to pre-intervention levels. However, the sector anticipates increased provision to meet industry needs for 2026-27.



Notes:

- Learner data is sourced from TEC's Ngā Kete as of April 2025. It includes all active TEC-funded learners within a calendar year and excludes non-TEC funded training.
- **2025** data reflects learner numbers as of April. Based on sector conversations, end-of-year figures are expected to be similar to 2024 levels or slightly lower.
- **2026** figures are based on advice provided in 2024, which projected no growth on 2023 learner numbers.
- **2027** figures represent projected provision based on this year's advice.

Context: Investment advice table

Electrotechnology hasn't changed the foundational **growth assumption of 11.8%**. The qualifications that meet the threshold are shown below, with additional context given to qualifications that sit outside the overall sector growth percentage:

- **2387 and 4316:** 2387 expired this year and was replaced by 4316. The learner activity in 2387 has been transferred and included in 4316.
- 2388 and 4204:
    - 4204 is gradually replacing 2388, which had nearly 7,000 learners in 2024.
    - Learners who undertook the 4204 Electrical Supply strand are included under their advice. For 2388, we are unable to clearly distinguish between strands to the same level and therefore all learners for this qualification have been captured here.
    - The last date for enrolment in 2388 was the end of 2024, but there will still be activity in the programme until the end of 2027 for existing learners. At the same time, enrolments in 4204 are expected to increase. The last date for assessment for 2388 is 31 December 2027, after which it will be discontinued.
    - Both programmes will need to be funded, with a combined total of approximately 8,600 learners, which includes projected growth. The advice provision for this is captured under 4204.
    - We expect to see high uptake of 4204 in 2028 once 2388 expires, though at this stage, it's unclear whether it will match the current combined total.
- **2769:** The programme for this qualification was launched in 2024, so the 15 learners listed in the table represent only year one of a three-year apprenticeship. Assuming all continue on and new learners join the programme each year, that leaves about 60 learners by 2027.
- **3614:** There was no usage in 2024, or at least not TEC-funded activities
- **3767**: We expect the level of activity to increase over the next few years, given that it is on the Green List. It's important to note that the baseline provision is based on actual funded activity, as the data may not have fully captured this.
- **3970**: We are holding on to our advice from last year.
- **4555**: Now meets the Electrical Workers Registration Board's qualifications requirements, so we should see an uptake of the credential.
- **4556**: The 2024 numbers are unknown, but the credential now meets the Electrical Workers Registration Board's qualifications requirements, so we should see an uptake of the credential.
- **5057**: The programme was launched at the end of 2024. Consultation with industry on demand for this programme suggests an uptake of 75 each year from 2026.
- **Supervision of Prescribed Electrical Work (Micro-credential):** Submitted to NZQA and awaiting approval, at which time a NZQF code will be assigned. The provision is based on consultation with industry and the makeup of the electrical workforce who may undertake the programme.
- **Two programmes with '–' in the code column:** There are some concerns about the activity, as we would expect it to be slightly higher. It's important to note that the baseline provision is based on actual funded activity in 2024, with the growth then applied to that figure.

Investment advice table

Code	NZQA Qualification Title	2027 Total Provision	Growth on 2024 base	Meets threshold
2251	New Zealand Certificate in Industrial Measurement and Control (Practice) (Level 4)	129	14	No
2252	New Zealand Certificate in Industrial Measurement and Control (Theory) (Level 4)	140	15	No
2253	New Zealand Certificate in Industrial Measurement and Control (Level 5)	22	2	No
2387	New Zealand Certificate in Electrical Engineering Theory (Level 3) *– expired and replaced by 4316*	N/A	N/A	Yes
2388	New Zealand Certificate in Electrical Engineering Theory and Practice (Trade) (Level 4 (replaced by 4204 by the end of 2027, last date for entry passed at end of 2024)	N/A	N/A	Yes
2565	New Zealand Certificate in Electrical Engineering (Electromechanical Maintenance and Repair) (Level 4) with optional strand in Electrical Service Technician (EST)	17	2	No
2767	New Zealand Certificate in Electrotechnology (Level 3) with strands in Installation, and Service	341	36	Yes
2769	New Zealand Certificate in Customer Premises Systems (Level 4) with strands in Structured Cabling, Control and Automation, Signal Reception and Distribution, and Wireless Systems	60	45	Yes
2981	New Zealand Certificate in Electronic Engineering (Level 4)	95	10	No
3470	New Zealand Certificate in Electrical Engineering (Switchgear Fitting) (Level 4) with optional strand in Electrical Installer	22	2	No
3614	New Zealand Certificate in Electrical Equipment in Explosive Atmospheres (Level 4)	No activity	No activity	No
3767	New Zealand Certificate in Telecommunications (Level 3) with strands in Copper Network Maintenance, Optical Fibre Network, and Transmission	20	10	Yes
3818	New Zealand Certificate in Electronic Security (Level 4) with optional strands in Electrical Appliance Serviceperson (Endorsed), and Electrical Installer	68	8	No
3970	New Zealand Certificate in Telecommunications (Level 4)	20	20	Yes
4204	New Zealand Certificate in Electrical Trade (Level 4) with strands in General Electrical *(replacing 2388 fully by the end of 2027)*	8,369	884	Yes

4261	New Zealand Certificate in Wind Farm Maintenance (Level 3)	17	2	No
4316	New Zealand Certificate in Electrical Pre-Trade (Level 3) – *replacing 2317*	2,762	477	Yes
4555	Grid-connected PV Systems, Design and Install (Micro-credential)	150	25	Yes
4556	Grid-connected Battery Storage Systems, Design and Install (Micro-credential)	150	150	Yes
5057	New Zealand Certificate in Data Cabling	75	75	Yes
5459	Supervision of Prescribed Electrical Work (Micro-Credential)	30	30	Yes
-	Programme: Electrical Competence Programme (Level 4)	269	29	Yes
-	Programme: Electrical Inspector (Level 5)	17	2	No
-	Programme: RESTRICTED ELECTRICAL 'A' & 'B'	45	5	No
	Total	12,788	1,812	

Products in development

Reference	Title	Type	Status	Likely Year
TBC	Rail Signalling	TBC	Developing Idea	TBC