ELECTRICAL SUPPLY

Advice to the Tertiary Education Commission for training investment in 2027

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WAIHANGA ARA RAU
Construction and Infrastructure
Workforce Development Council

ELECTRICAL SUPPLY NARRATIVE

Workforce Modelling Project

In previous advice rounds we have mentioned the lack of clear workforce and industry data for the sector.

As a result, we have worked with industry to develop a workforce forecasting model to support strategic planning in the electricity supply industry. The model estimates the current workforce using a bottom-up approach, drawing on firm-level data across generation, transmission, distribution, and retail segments. This first part helps project future workforce needs based on historical employment trends and electricity demand forecasts. The model has been refined over time but there is general expectation based on current modelling that by 2035, the core workforce is expected to grow from 8,579 to over 12,000.

It is hoped that the final outcome of the modelling can be situated within the current WIP (Workforce Information Platform) platform. Following this, it is expected the project will be transitioned to Energy Efficiency and Conservation Authority to continue the follow-on work.

Training activity outside of TEC funding

In the ESI sector, a portion of learner activity is delivered without TEC funding, through formal programmes and in-house training. This provision is fully funded by the industry. In 2024, this accounted for at least 440 learners. When combined with the 1,670 TEC-funded learners, this represents around 20% of total sector learners. This is likely a slight underestimate due to limited visibility over all training delivery.

In future the provider network may wish to consider an Investment Plan with TEC supported by industry. This approach would help reduce costs for industry and improve the visibility and recognition of training across the sector. As part of the industry-led review of what work-based training should look like for the sector, this could see an increase in the level of funding required for 2027.

Network of Work-based Learning

The SRG, supported by Waihanga Ara Rau, wants to ensure the future of work-based learning in the electricity sector is sustainable and fit for purpose. With the transition of Connexis WBL into the Infrastructure ISB by January 2026, the group is keen to reduce confusion and ensure the sector's voice is clearly heard in TEC's planning.

For 2026, the ESI-SRG supports continued funding for Connexis WBL based on current and projected learner numbers, and backs a funding application from MITA Consulting, which is now training more unfunded apprentices than those contracted through Connexis. The group also wants to be consulted before any new providers are funded for ESI training. Looking ahead, they've outlined key principles for the future network like stronger alignment of skills across the sector, investment in quality training assets, and a sustainable operating model that supports high-value, low-volume training. They're open to further discussions with TEC to shape what provision looks like from 2027 onwards.

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 interest.

2027 Investment advice baseline year

We're applying a similar approach as we did last year. **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)

The threshold is intended to ensure our advice prioritises qualifications that could materially impact current TEC funding. Qualifications below the threshold generally fall within the margins of existing funding activity and therefore do not significantly affect funding availability. It is made explicit throughout that the overall growth percentage should be applied to all relevant qualifications, regardless of whether they meet the threshold. Publishing our approach for all qualifications under our coverage also enables providers to understand the provision landscape.

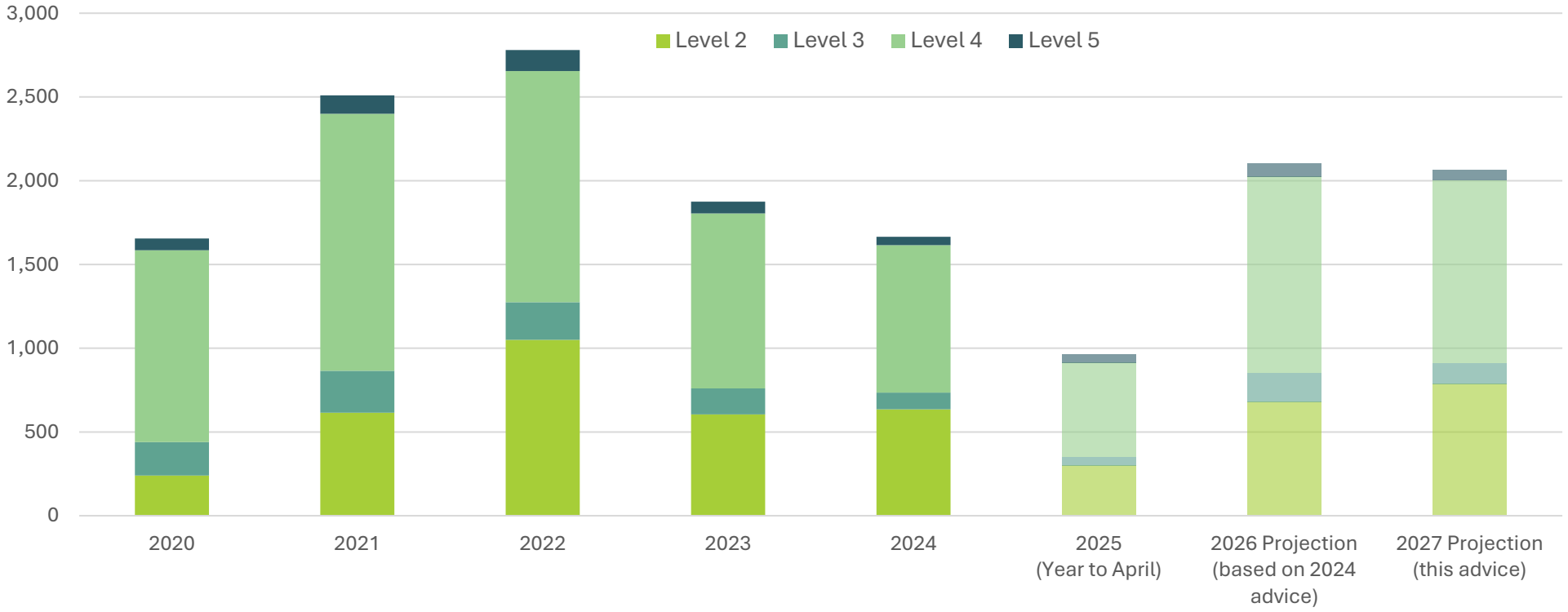
For qualifications within our scope, only those meeting the threshold are included in our formal submission to the Tertiary Education Commission (TEC). The 2027 threshold includes:

- 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.
- Qualifications where specific context and narrative are important to articulate are treated with particular attention.

This advice covers a total of **19 qualifications and credentials within Waihanga Ara Rau's Electrical Supply sector. Together, these show a projected growth of 404 learners in 2027 based on the 2024 baseline.** Of these, 13 qualifications meet the TEC advice threshold and are included in the formal advice document submitted to TEC. These account for 357 of the total projected learner growth for the sector.

Learner Trends and Projections (2020-27)

Like many parts of the C&I sector, ESI saw a significant increase in learner numbers during 2021–22, largely driven by Government interventions such as Targeted Training and Apprenticeship Fund, First Year Fees Free, and Apprenticeship Boost. With the conclusion of most of these initiatives, aside from Fees Free shifting to final years, learner volumes have returned to more 'normal' levels.



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.*
- *The 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.*
- *The 2026 figures are based on advice provided in 2024, which projected a 12% increase on 2023 learner numbers.*
- *The 2027 figures represent projected provision based on this year's advice.*

Context: Investment Advice Table

The general **growth** in provision for qualifications under the Electrical Supply sector **is 23.8%**, unless specifically stated otherwise. The qualifications that meet the threshold are shown below with additional context given to qualifications that sit outside the overall sector growth percentage:

- **2388 and 4204:**
    - 4204 and 2388 sit under Electrotechnology sectors coverage of qualifications.
    - For 4204, those who undertook the 4204 Electrical strand are included under their advice. The learners who undertook only the Electrical Supply strand are included here. For 2388, we are unable to clearly distinguish between strands to the same level and therefore all learners for this qualification have been captured under Electrotechnology.
    - 4204 is gradually replacing 2388, which had nearly 7,000 learners in 2024. The last date for enrolment in 2388 has now passed, but there will still be activity in the programme until the end of 2027. At the same time, enrolments in 4204 are expected to increase. Both programmes will need to be funded, with a combined total of approximately 8,600 learners, which includes projected growth. The last date for assessment for 2388 is 31 December 2027, after which it will be discontinued.
    - 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.
- **2705:** This qualification is currently being delivered outside of TEC funding.
- **3793 and 4261** are being reviewed. While there was minimal activity across both of these in 2024 (i.e. likely less than 5 learners), the review may have an impact on learner numbers in 2027. This may include more, or most of the activity, being soaked up by 3793 as it is the entry point for 4261.
- **4281:** There is large proportion of learner activity that is being delivered outside of TEC funding. While we don't have visibility over these numbers, industry has a reasonable expectation that this delivery will be funded in the future.
- **No activity** qualifications either had no learner activity in 2024 or data has been supressed due to low numbers (less than 5 learners). In some cases, we are aware that there is delivery of these qualifications, but this provision is not currently funded by TEC. While we don't have visibility over these numbers, industry has a reasonable expectation that this delivery will be funded in the future.

Investment Advice Table

Code	NZQA Qualification Title	2027 Total Provision	Growth on 2024 base	Meets threshold
2136	New Zealand Certificate in Electricity Supply (Introductory) (Level 2) with strands in Electrical Works, Telecommunications, and Wind Farm	787	152	*Yes*
2197	New Zealand Certificate in Electricity Supply (Line Mechanic Distribution) (Level 4) with optional strand in Live Low Voltage Lines	310	60	*Yes*
2227	New Zealand Certificate in Electricity Supply (Cable Jointing High Voltage) (Level 4) with optional strand in 33kV	168	33	*Yes*
2705	New Zealand Certificate in Electricity Supply (Transmission Line Maintenance) (Level 4) with strands in Line Mechanics, and Structure Maintenance	N/A	N/A	No
3535	New Zealand Certificate in Electricity Supply (Power Technician) (Level 5) with optional strands in Communications Systems, Generation, Metering, Transmission, and Distribution	62	12	No
3586	New Zealand Certificate in Electricity Supply (Fault Response and Switching) (Level 4) with strands in Fault Response, and Network Switching	168	33	*Yes*
3687	New Zealand Certificate in Electricity Supply (Operation) (Level 4) with optional strand in Hydro Operation	31	6	No
3721	New Zealand Certificate in Electricity Supply (Network Control) (Level 4)	44	9	No
3793	New Zealand Certificate in Wind Farm Maintenance (Level 4)	No activity	No activity	*Yes*
3988	New Zealand Certificate in Electricity Supply (Traction Line) (Level 4)	81	16	No
4182	New Zealand Certificate in Electricity Supply (Substation Maintenance) (Level 4)	No activity	No activity	*Yes*
4204	New Zealand Certificate in Electrical Trade (Level 4) with strand in Electricity Supply	291	56	*Yes*
4243	New Zealand Certificate in Electricity Supply (Utility Arboriculture) (Level 3)	106	21	*Yes*

4261	New Zealand Certificate in Wind Farm Maintenance (Level 3)	19	4	*Yes*
4281	New Zealand Certificate in Electricity Supply (Distribution Live Line Stick) (Level 4)	7	2	*Yes*
4282	New Zealand Certificate in Electricity Supply (Distribution Live Line Glove and Barrier) (Level 5)	No activity	No activity	*Yes*
4283	New Zealand Certificate in Electricity Supply (Transmission Live Line) (Level 5)	No activity	No activity	*Yes*
4747	New Zealand Certificate in Electricity Supply (Transmission Operational Switching) (Level 4)	No activity	No activity	*Yes*
4748	New Zealand Certificate in Electricity Supply (Transmission Operating Sequence Control) (Level 5)	No activity	No activity	*Yes*
	Total	**2,074**	**404**	