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20/06/2025

Alistair Parker
Chief Executive Officer
VicGrid
GPO Box 527
MELBOURNE VIC 3000

Dear Mr Parker,

RE: VTA Submission into the Draft 2025 Victorian Transmission Plan

The Victorian TAFE Association (VTA) welcomes the opportunity to provide input into the Draft 2025 Victorian Transmission Plan (VTP). We continue to support the Victorian Government's commitment to net-zero emissions by 2045, as emphasised in our recent submission into the Climate Change Strategy (Attachment A). We commend VicGrid's plan for transmission and Renewable Energy Zone (REZ) development and its innovative planning approach which integrates community and stakeholder engagement from the outset.

The VTA is the peak body for the Victorian TAFE sector, comprising Victoria's 12 TAFE Institutes, four dual sector universities and AMES Australia. We proudly champion public vocational education with a focus on sustainability, quality, and successful outcomes for learners, industry and community.

As Victoria's government-owned training and skills capability, the TAFE Network[1] is an integral part of the public education system and economy, able to make decisions driven by public benefit, not profit. TAFE is uniquely positioned to advance Victoria's economic and skills priorities while also delivering social benefits and is a strategic and democratic public service that gives back to society.

Any major infrastructure project must be underpinned by a clear delivery strategy. This should include who will build, operate and maintain it, where and when they will be trained, how that training will occur, and who will be responsible for designing and delivering this training.

The VTP clearly sets out what renewable energy technologies and transmission should be built, when, where, and in what capacity to meet Victoria's energy needs. The VTP's ambitious targets through to 2040 underscore the scale of this undertaking – including integrating new onshore and offshore wind (5.8 and 9 GW respectively), 2.7 GW of new utility-scale solar, and 3.4GW of new short and long duration storage capacity, while also upgrading 430km of existing transmission lines and constructing 380km of new lines.

However, the VTP does not specifically or comprehensively address how this infrastructure will be delivered, nor the significant workforce requirements needed for such a large-scale infrastructure project. It also does not acknowledge the workforce challenges facing regional Victoria, where much of the

[1] In this letter, 'TAFE' and 'the TAFE Network' are used inclusively to refer to both Victoria's 12 TAFE Institutes and four dual-sector universities.

infrastructure will be located and where skills shortages are acute. Without a clear and coordinated workforce plan, there is a risk of project delays, under delivery, inefficient use of public resources, and the VTP remaining aspirational rather than actionable.

We make three recommendations to strengthen the VTP by ensuring a skilled workforce is in place, reducing implementation risk and maximising long-term community and economic benefits:

1. Explicitly recognise the critical need for workforce and skills development, with a specific action plan supported by workforce forecasts, that addresses workforce demand challenges and aligns with the Victorian Skills Plan, the Clean Economy Workforce Development Strategy, 2023-2033. the Victorian Energy Jobs Plan (yet to be released) and existing regional demand studies.

2. Embed TAFE as the first choice and principal provider of education and training, tasked with working with VicGrid and industry to deliver the workforce required for the renewable energy transition.

3. Include workforce and training investment as a core component of funding allocations and nominate TAFE as the first-choice partner for this investment.

Explicitly recognise workforce and skills development in the VTP, supported by workforce forecasts

Despite the VTP's strong commitment to shaping Victoria's renewable energy future, it is notably silent on the detailed planning for the workforce required for this infrastructure to be delivered and the current workforce challenges facing Victoria, particularly in regional communities. For the VTP to succeed, it must articulate a clear vision for building a pipeline of skilled workers across Victoria.

A well-prepared and highly skilled workforce is essential to achieve the transition to renewable energy generation and achieve the Victorian Government's ambitious target of net-zero emissions by 2045. This will require the rapid development of a newly trained workforce specialising in renewable energy generation skills, as well as managing a just transition for existing workers, communities, and industries.

Increases in renewable energy infrastructure will increase demand for specialist workforces across Victoria, particularly in regional communities where REZs are located. Thousands of new and existing workers will be needed to build, install, operate, maintain, and repair large-scale renewable energy generation infrastructure over its entire life span. Victoria's clean economy transition is expected to need 10,000 new workers each year until 2030[2]. At the same time, this shift is transforming existing jobs, introducing new technologies and changing skills requirements across multiple industries. By 2030, upskilling initiatives are expected for nearly 500,000 workers[3].

This task is made more complex given that much of the workforce demand will be concentrated in regional areas already experiencing skills shortages across multiple sectors. There is also the challenge of attracting enough students into the qualifications that can pathway into renewable energy jobs, where many of the qualification pathways already exist. To build a workforce at the scale required, we must think beyond school leavers to also engage people already in the workforce, including those considering career changes, seeking to upskill, or transition from declining industries.

The VTP must acknowledge the complexity and size of this challenge and outline specific measures to address regional workforce shortages and encourage potential students and existing workers into renewable energy pathways – many of which already have available qualifications that are fit for purpose.

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[2] https://www.vic.gov.au/sites/default/files/2023-06/VSA-CleanEconomyWorkforceDevelopmentStrategy2023-2033.pdf
[3] https://vta.vic.edu.au/wp-content/uploads/2024/05/TAFE-Value-and-Perception-Challenge-Research-Report.pdf

The VTP will necessitate a broad spectrum of specialised occupations and skills. These include, but are not limited to, the key occupations and qualification examples set out in Table 1 overleaf, ranging from Certificate and Diploma level courses up to a Master of Energy Efficient and Sustainable Building.

Table 1: Occupations and example qualifications

Occupation	Qualification examples
Electricians with specialisations in grid connection and high voltage (HV) work	UEE30820 Certificate III in Electrotechnology Electrician with supplementary HV units 22682VIC Certificate II in Electrotechnology (Pre-vocational)
Electrical linespersons for transmission and distribution and engineers involved in production and distribution	UET30821 Certificate III in Electricity Supply Industry (ESI) – Transmission Overhead UET30821 Certificate III in ESI – Distribution Overhead UEEC2122 Advanced Diploma of Engineering Technology – Electrical
HV cable jointers	UET30821 Certificate III in ESI – Distribution Underground
Substation technicians and protection and control technicians/engineers	UET40521 Certificate IV in ESI – Power Systems Substations UEE40420 Certificate IV in Electrical – Instrumentation UET50221 Diploma of ESI – Power Systems
Engineers	22479VIC Advanced Diploma of Engineering Technology (Civil Engineering Design) MEM60122 Advanced Diploma of Engineering (Mechanical) Degree Apprenticeship in Mechanical Engineering
Project managers with energy infrastructure expertise	BSB50820 Diploma of Project Management BSB50820 Diploma of Project Management (specialising in Construction) 22569VIC Diploma of Electrotechnology Project Management
Construction workers	RII30920 Certificate III in Civil Construction RII30820 Certificate III in Civil Construction Plant Operations RII40720 Certificate IV in Civil Construction CPC50220 Diploma of Building and Construction (Building) CONISS012 Prepare to Work Safely in the Construction Industry
Wind turbine technicians	Global Wind Organisation (GWO) certifications MEM11119 Certificate III in Engineering - Composites for blade repair 22686VIC Course in Wind Sector Safety 22687VIC Course in Wind Turbine Technician
Solar installers	22515VIC for Working Safely in Solar
Sustainable design, manufacturing and industrial processes	Associate Degree of Engineering (Manufacturing) Master of Energy Efficient and Sustainable Building
Digital	UEE60220 Advanced Diploma of Electronics and Communications Engineering

Victoria will also need electrical fitters, power system engineers, and civil/structural engineers, as well as plant operators and emerging roles like wind and solar farm technicians. It will also be crucial that the workforce has cross-cutting skills in HV operations, safety certifications (White Card, Elevating Work Platform (EWP), First Aid, Confined Space, Working at Heights), digital literacy, and environmental compliance. Indigenous cultural investigators, archaeologists, and communications specialists will also likely be required to ensure a smooth and just transition for communities.

While many existing qualifications will continue to play a role, new specialisations, skill sets, and adjustments in delivery and curriculum focus will be essential to ensure training remains relevant and responsive to industry demand. This includes adapting training to reflect new technologies, and industry and regulatory standards.

The VTA propose there is an opportunity to capture, identify, and make more visible the progress being made across Victoria (including by the Victorian TAFE Network, industry, and Government) to support the workforce development required for this transition. This should be supported by a specific workforce action plan to ensure visible and appropriate progress over the life of the VTP, building on established foundations and providing the long-term certainty required. Critically, it must acknowledge the substantial workforce demand forecasts and the increasing pressure this will have for TAFE and employers to scale up and respond effectively.

The VTP should also reference the Victorian Skills Plan and Clean Economy Workforce Development Strategy 2023-2033, which supports the delivery of Government priorities including the renewable energy transition. The Skills Plan and Clean Economy Strategy helps the Victorian Government develop workforce strategies and undertake workforce planning, and the VTP should both align with and leverage this. It should draw on existing regional workforce planning and modelling, like The Gippsland Clean Energy Workforce Development Framework, commissioned by TAFE Gippsland[4]. Once released, it should also link closely with the Victorian Energy Jobs Plan.

TAFE as the first choice and principal provider of education and training

The VTP and Victorian Government's renewable energy generation goals are dependent on a highly skilled workforce with expertise in renewable energy technologies. We strongly recommend that the VTP acknowledge that, as the state-owned training provider, TAFE should be the first choice and principal provider of the training required to support this transition and embed TAFE as the key delivery partner for VicGrid and the Victorian Government in developing this workforce.

TAFE Institutes are centrally positioned to equip Victoria's workforce with the education and training required to drive the state's renewable energy transition. With over 80 physical campuses located across the state, many in or near the *draft* proposed REZs, TAFE has a significant footprint in the communities where the VTP will be delivered. This presence makes TAFE a local and practical source of workforce development. TAFEs can provide in-house training that uplifts individuals within and near REZ communities, enabling them to contribute to local infrastructure development and secure employment in the renewable energy and clean economy sector.

TAFE's strong alignment with Government priorities, public interest outcomes, and their focus on high-quality education and training make them an obvious and effective delivery partner. The TAFE Network's wide footprint across metropolitan, regional, and rural Victoria supports equitable access to education and training for all Victorians, including First Peoples and Traditional Owners.

The Victorian TAFE Network plays a critical role in supplying skilled workers and upskilling existing workers crucial for planning, constructing, operating, and maintaining the infrastructure necessary for renewable energy. New specialist occupations including blade and wind technician, solar farm electrical technician, and hydropower electrical technician within areas such as wind, solar, and renewable hydrogen are all attainable now via a TAFE education. The Victorian TAFE Network already offers a comprehensive suite of qualifications from the UEE (Electrotechnology), UET (Electricity Supply Industry), CPC (Construction), MEM (Engineering), and BSB (Business Services) training packages that directly map to these needs.

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[4] TAFE Gippsland commissioned Deloitte to develop this Framework. It is designed to estimate demand for labour across Gippsland clean energy projects and identify relevant courses and gaps in existing training delivery associated with this demand profile, including consideration of new and emerging skilling needs. This work is not publicly available but could be shared with VicGrid to support the VTP.

Victorian TAFEs are currently playing a critical role in the future of renewable energy. Examples include:

- Federation University's Asia Pacific Renewable Energy Training Centre (APRETC) is the southern hemisphere's first wind turbine training centre. APRETC provides students with hands-on, industry-relevant experience that builds job readiness and ensures a pipeline of skilled worker for growing the renewable energy sector. You can see more about APRETC at https://internal.federation.edu.au/connect/partnerships/centres-and-groups/apretc.

- TAFE Gippsland's Clean Energy Centre is a new training centre that will deliver world-class training in clean and sustainable energy technologies, including the expansion and maintenance of wind power to cater for onshore and offshore energy systems and smart grid technologies. Construction of the Clean Energy Centre is expected to be complete in early 2026 and the new centre will have capacity for 200 students in its first year. TAFE Gippsland is also developing a Skills Lab for Offshore Wind Skills, to define the skills relevant to Victoria's offshore wind energy sector and develop training to support it.

- Through the Clean Economy Workforce Capacity Building Fund, RMIT has developed three new industry-informed skill sets in sustainable building design, addressing the construction sector's emissions and waste. Designed for both students and workers, the skill sets have been piloted with industry and will be available from Semester 2, 2025, forming the basis of a proposed Certificate IV.

- Chisholm Institute delivers several innovative programs through the Casey Tech School that create direct pathways into the electrical industry and renewable energy sector. Chisholm is also developing professional development opportunities to licensed electricians in various clean energy skill sets, to create a comprehensive training continuum from secondary education through to advanced professional development in the renewable energy sector. Current programs include:

    - The Sustainable Housing Program, where students explore sustainable and eco-friendly housing design, analysing the impact of passive solar design elements on energy efficiency, and considering variables like insulation materials, glazing, and thermal mass.

    - The Cool House, Warm Climate Program, where students design and build their own model houses, gaining hands-on experience in energy-efficient construction methods, using the industry experience of Earthshack and STELR equipment to test passive housing designs.

- Holmesglen Institute's Futuretech campus (a collaboration with the Electrical Trades Union) and its Renewable Energy Centre of Excellence are key hubs for advanced electrical and specialised ESI qualifications (e.g. UET30621 Certificate III in ESI - Distribution Overhead and UET30821 Certificate III in ESI - Distribution Underground), and renewable energy training, including solar, battery, and electric vehicle charging.

- Melbourne Polytechnic's Green Skills Centre focuses on integrating sustainability into trades and engineering, including solar and Building Management Systems.

- South West TAFE is upgrading facilities to enhance training in several areas aligned with the needs of the South West REZ, including solar, battery storage, and hydrogen fuel cells, leveraging the TAFE Clean Energy Fund.

- Box Hill Institute offers the specialised 22557VIC Course in Safe Working Practices for Testing Low and High Voltage Distribution Power Cables.

- Victoria University and Wodonga TAFE are among other providers offering targeted skill sets in solar and battery storage installation and design.

Given the requirement for developing and upskilling the workforce, the VTP should embed a partnership with TAFE and acknowledge TAFE as the principal provider of education and training required for the delivery of the renewable energy transition.

Investment in workforce and training including infrastructure, curriculum and TAFE teachers

Significant investment is planned for renewable energy generation, transmission, and storage infrastructure. However, there is no explicit and detailed investment outlined in the VTP for the workforce that will construct, operate, and maintain these assets over their lifespan, nor does it address the education and training required to develop that workforce.

The workforce data cited above demonstrates the significant increase in demand for skilled workers to support Victoria's renewable energy transition. Meeting this demand will require the Victorian TAFE Network to expand its existing capacity and capability to train new learners and upskill the existing workforce in line with emerging industry needs. This will include developing new training materials and skills sets to support new and changing workforces and industries, and expanding infrastructure, including industry-standard high-voltage equipment, simulated substation environments, and renewable energy training apparatus.

For the VTP to succeed, Victoria must have a workforce with the right skills, qualifications, and industry readiness. This requires training on industry relevant equipment and programs delivered by a teaching workforce with up-to-date skills and real-world experience. TAFE is already delivering on this need and is well positioned to do so at scale. With campuses in or near the proposed REZs, TAFE is embedded where workforce demand will be highest. Flexible delivery modes, including online learning and potentially mobile training units for remote REZs, will also be important.

Victoria will also need a skilled and well-supported TAFE teaching workforce, as many of the programs essential to supporting the renewable energy transition involve new and emerging technologies. To upskill existing educators and attract new teaching staff with specialised industry experience, we will need additional, targeted investment. Strengthening the capability of TAFEs teaching workforce is critical to ensure training is high-quality and industry aligned.

The current TAFE funding model creates challenges for TAFE to expand and innovate beyond its current delivery. To ensure crucial skill needs and workforce requirements are met, targeted investment for clean economy innovation at TAFE should be a priority. Investment that builds on the existing and growing capacity of TAFE in training for the clean economy and that actively promotes innovation with industry partners can only strengthen the VTP and the Government's commitment to net-zero by 2045 and drive its success. This includes supporting trainer development programs to ensure a pipeline of qualified TAFE educators for specialised ESI and renewable energy courses.

We recommend that VicGrid expand their funding scope to include investment in education and training to enable TAFEs to develop the training required to support the renewable energy transition. This funding should support upskilling existing educators and attracting new staff, innovative training development, cutting-edge and industry-relevant equipment, and applied research. Consideration should also be given to formalising pathways for university engineering graduates to acquire specific UET qualifications or critical ESI skill sets through accelerated TAFE programs.

Next steps

The VTA supports many of the objectives in the VTP. To ensure its success, our three recommendations seek to address the current gap in workforce planning, which is critical to enabling the delivery of the required infrastructure. We urge VicGrid to consider and incorporate these recommendations to maximise the VTP's effectiveness, ensure its timely delivery, and realise the full social and economic potential of Victoria's renewable energy transition.

We look forward to working with VicGrid as the VTP is finalised. We invite you to meet with Victorian TAFE CEOs to discuss this partnership opportunity and further collaboration opportunities. To organise this meeting, please contact me directly on [redacted] or [redacted].

Yours sincerely,

[redacted]

Dugald Murray
CEO, Victorian TAFE Association

Attachments

Attachment A: VTA Submission into Victorian Climate Change Strategy