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Victorian Energy Jobs Plan

Investing in our Future Workforce Today

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Master Electricians Australia (MEA) is the trade association representing electrical contractors recognised by industry, government and the community as the electrical industry's leading business partner, knowledge source and advocate. You can visit our website at www.masterelectricians.com.au

MEA believes strongly that high levels of installed Consumer Energy Resources (CER)¹ are essential for achieving Victoria's net zero emissions by 2045. Further benefits of CER are its ability in combating the cost-of-living crisis by lowering energy prices, bolstering network grid stability, and granting consumers greater independence within the National Energy Market (NEM). By empowering consumers with smart control over their energy generation, storage, and consumption, CER effectively reduces overall energy costs, thereby increasing household disposable income. Additionally, CER represents a clean and dependable alternative to fossil fuel-generated electricity, directly addressing the fact that "the main source of Victoria's emissions is burning fossil fuels ... for energy and transport"².

Australia needs a sustainable and skilled workforce for the installation and maintenance of CER to which we argue bolstering Vocational Education Training in Secondary Schools (VETSS) curriculum is the likely key solution. Streamlining and integrating VETSS with an equal weighting to Australian Tertiary Admission Rank (ATAR) will cultivate early exposure to Science, Technology, Engineering, and Math (STEM) trades, likely leading to increased interest and retention in the electrical industry, encouraging greater levels of VETSS investment.

Qs 1-7 Workforce and Education Pathways

Throughout many submissions, MEA has strongly advocated for Federal and State Governments³ to investment public funding towards streamlining and integrating VETSS with an equal weighting to ATAR.

The current schooling system primarily moulds students to fit an academic structure, leaving behind those who are unwilling or unable to conform. Secondary Schools metric of success for Government funding is primarily determined by ATAR results, which in effect pushes students towards an academic/corporate career path. The school government funding needs to be equally weighted between ATAR and VETSS for schools to cultivate learning environments which encourage students towards a STEM career path.

VETSS exposure and targeted training provides all students equal opportunities for future success by cultivating a supportive and encouraging environment and exposing a greater cohort of students to STEM careers at an earlier age. It will cultivate both soft skills that are transferable within the STEM industry and specialised skills relevant towards specific trades, which is important following the Australian Government's announcement that "increased focus on transferable skills, resilience and adaptability are viewed by stakeholders as increasingly important in a rapidly changing labour market"⁴.

Greater Attraction and Retention

NCVER's statistics provide that "fewer than half of commenced VET qualifications are completed, and around 60% of apprenticeships are completed"⁵. MEA believes that one of VETSS benefits is better equipped personnel entering the workforce, with enhanced aptitude and competency screening which in turn leads to heightened commencements and retention in the workplace through early exposure in a supportive environment. "The most common reason

¹ "Roadblocks and Solutions" *Master Electricians Australia* <<https://masterelectricians.com.au/wp-content/uploads/DER-Policy-Working-Paper.pdf>>

² "Victorian Energy Jobs Plan Consultation Paper" *Victoria State Government* (2024), at 14.

³ Chris Lehmann & Georgia Holmes, "Queensland VET Consultation – 2023" *Master Electricians Australia* <masterelectricians.com.au/wp-content/uploads/MEA-Submission-QLD-VET-Strategy-Consultation-July-2023.pdf>

⁴ Australian Treasury, "5 Filling skills needs and building our future workforce (Employment White Paper)", [2023],

⁵ Australian Government, "Annual Jobs and Skills Report 2023", [October 2023], 93.



for qualification non-completion [is] changing or commencing a new job”⁶. VETSS allows for greater matching of skills to a STEM trade which can lead to greater attraction and retention in the workforce as competency often leads to greater job satisfaction.

Investing in aptitude and competency at the school level will put many Australians on the first rung of the ladder of success in a rewarding career. All other initiatives and campaigns will potentially be limited in efficacy and become a less effective use of precious taxpayer money.

Diversity and Remote Regions

We are confident that VETSS will embed long-term systemic change towards improving diversity amongst STEM trade workforces. By exposing all students to VETSS, irrespective of their diversity – be it gender, cultural background, geographic location (including remote and rural areas), disabilities, and more – STEM careers become normalised to the same extent as ATAR careers in the high school environment. When students who are traditionally labelled as 'diverse' are granted equal access to VET education in a supportive setting, we anticipate there will be a notable shift in perceptions and stereotypes surrounding STEM careers. This naturally fosters a more inclusive environment and expands the talent pool within STEM fields.

Through integrated VETSS, all students regardless of geographical location will be exposed to VET courses which will likely lead to a larger number of students going out of their way to continue tertiary training in STEM trades, having already piqued their interest and initiated skills development in a career suited to them. The use of digital Learning Management Systems also means that content for prevocational Cert I and II courses can be delivered largely online, helping to defeat the isolation challenges of remote and regional locations.

Electrification

MEA are strong advocates for electrification through consumer energy resources (CER) and the importance of utilising private licenced electrical contractors for their installation and maintenance. As a representative body of small and medium electrical contracting businesses across urban and regional Australia, we understand that electrification is only going to add pressure to an already existing skills shortage crisis, which is why we believe VETSS is an essential solution that needs to be actioned immediately. Without a strong proactive response to existing and forecast skills shortages, we risk continued attraction and retention issues. “We need to upskill and expand our energy workforce’s capabilities rapidly. If we do not consider workforce needs now, skills shortages may mean we miss out on the benefits of the energy transitions or make achievement of our renewable energy targets more challenging”⁷. We believe VETSS provides opportunities for enhanced aptitude and competency screening to ensure all students are best matched with the correct trade for them, thereby enhancing attraction and retention rates in not only the electrical industry, but all industries.

Promoting Higher Wages

Early exposure to electrotechnology career options is a big factor in attracting potential apprentices. With schools prioritising ATAR pathways and patchy distribution of meaningful VET STEM programs in schools, the age of the average commencing apprentice is now 24. It would also be advantageous to promote the fact that the starting wage for a qualified electrician (apprenticeship wages are lower) is approximately \$90,000 which is in excess of the starting wage for most graduate degrees.

⁶ *Ibid.*

⁷ “Victorian Energy Jobs Plan Consultation Paper” *Victoria State Government* (2024), at 17.

GTO Model

Government support for the GTO model to de-risk employment of apprentices, and access to supported mentoring programs.

Teaching

MEA have suggested that older trade workers looking to transition from working on the tools, and tradespeople who have suffered a career ending industry could be funded to complete the TAE qualification. This would allow them to still contribute to the industry and utilise their experience but transition into less physically demanding work and extend their careers.

Q8. What are the key barriers for transitioning workers, and underrepresented groups, including First Nation Peoples, people with disabilities and women, accessing training pathways in the energy sector?

Listed below is a sampling of the numerous State and Federal consultations in which MEA has actively engaged to advance VETSS and enhance diversity within STEM trades. For access to the consultations we are authorised to publish on our website, please visit the following link <https://www.masterelectricians.com.au/advocacy>

First Nation People

In our response to the Federal Government's *Skills for Education and Employment (SEE) Program, Stream 2 – First Nations Delivery Draft Guidelines (Scoping and Delivery)*, we advocated for the implementation of VETSS to facilitate systemic and societal changes within First Nation Communities. VETSS has the potential to enhance the attraction and retention rates of local First Nations people in STEM apprenticeships. Furthermore, by promoting higher levels of self-determination, VETSS can bolster the capacity for economic development within First Nations communities and foster increased participation in employment and/or further education.

Disabilities

MEA provided feedback to the ACT Government's consultation on the *Disability Inclusion Bill 2024*, emphasising that VETSS holds the potential to instigate crucial systemic and societal changes, thereby enhancing disability inclusion in both education and the workforce. We explained that individuals with disabilities, when empowered to develop skills suited to their abilities within a supportive educational VETSS environment, are better equipped to pursue successful STEM careers and contribute to a thriving workforce.

Women

In response to the Federal Government's *Supporting Women to Achieve VET-Based Careers* consultation, MEA reaffirmed our policy position that VETSS is significant in actioning systemic change for sustainable improvement of female participation in the STEM sector. We asserted that by exposing more females to STEM opportunities through VETSS, employers are likely to adopt greater flexibility to accommodate women's lifestyle needs, (i.e. females are predominately the primary caregiver). This reflects the increasing flexibility observed in corporate workplaces. Furthermore, we argued that VETSS will contribute to normalising female participation in STEM, thereby reducing both the fear and reality of sexism and sexual harassment. This, in turn, creates a safer environment, making STEM fields more appealing to women.

Q9a. How can this be applied to other training initiatives, including the forthcoming Wind Worker Training Centre and Hydrogen Worker Training Centre?

The VETSS initiative suits all current and emerging industries and will develop to support emerging technologies and industries, upskill students for current demands and train soft skills adaptable across an array of industries.

Local Benefits

Q10. What can be done to ensure that local communities benefit from energy workforce opportunities in their region, including affordable local education and training, and job creation?

In MEA's response to the Federal Government's 'First Nations Clean Energy Strategy' consultation, we highlighted that VETSS will allow local groups, such as First Nations Communities, to improve local job creation. Providing exposure towards targeted VET training offers First Nations students enhanced opportunities for future success in STEM by providing a supportive and encouraging environment, better incentivising those who might otherwise be disengaged, to become proactive towards their future career. They are removed from the academic/commercial teaching structure of ATAR schooling and made to feel more included by classes which are targeted towards their VET skill set. It will allow these students the same opportunity as students developing skills towards their academic/corporate career to pursue their STEM career from a school age. VETSS further allows for better aptitude and competency screening leading to greater attraction and retention of STEM apprentices. We can expect this to build First Nations organisations' capacity and expertise in clean energy development as an influx of our First Nations younger generations develop STEM careers.

This sentiment can be extended to any local community whether it be by region (i.e. rural and remote areas) or cultural background (i.e. those with an Aboriginal or Torres Strait heritage). VETSS allows local communities to invest in themselves with the intention of developing sustainable career and business development.

Q12. How can pathways be improved to support regional education and secure employment, while also encouraging workers to stay in their home region?

MEA believe VETSS will provide better opportunity in exposing STEM to rural and remote students as it would be available within their current schooling framework, providing students within these communities an equal opportunity to those living in urban areas to work towards STEM during their schooling. Furthermore, we believe this will incentivise students to continue pursuing STEM careers during tertiary education, despite long distances to a local training facility, as they have become exposed to, and inspired, to develop a successful STEM career. This is where we can expect to see cultural and systemic change towards diversity in STEM trades, alleviating pressures on rural and remote areas in the future and allowing local communities to rely on local electrical businesses. This is a message we have been conveying in other State and Federal Government consultations, particularly regarding improving local First Nations and Aboriginal communities' electrical businesses.

We argue VETSS will position students entering tertiary education and apprenticeships to aspire to give back to their communities and therefore stay living and working locally.

Q12a. What role/s can training providers, businesses, government, and others play, including entities like the upcoming Wind Worker Training Centre and Hydrogen Worker Training Centre?

The Victorian Government is critical towards the success of VETSS. Secondary schools are funded according to their ATAR results. Government must therefore alter the core balance of secondary school curriculum and ensure funding is assessed on an equal basis between ATAR and VETSS results. Without this fundamental Government intervention, VETSS cannot be a

successful initiative to which MEA argues the electrotechnology industry will consequently never truly be equipped for a sustainable electrification transition.

Q12b. How can students, apprentices and workers be attracted to move for work on energy projects, including to regional locations?

Please refer to Q12.

Market Confidence

Q13. What policy certainty could government provide to promote investment in the energy workforce?

Government must extend its policy considerations beyond the education and training sector to achieve its objectives. Investors seek promising returns, necessitating an electrical industry with high consumer demand that incentivises investment in workforce development. “The energy transition is an opportunity to create more secure, sustainable jobs, and to ensure these jobs are shared across Victoria’s regions and amongst groups previously underrepresented in the energy workforce”⁸.

MEA advocates that the installation of consumer energy resources (CER), such as solar PV and battery energy storage systems (BESS), necessitates supportive government policies to facilitate successful and sustainable electrification. This will be essential in “achieving 95 percent renewable energy generated by 2035”⁹ This promises a robust electrical industry that attracts investment in the necessary workforce to meet consumer demand for installation and maintenance of CER.

CER includes the following:

- Solar Photovoltaic (Solar PV) panels
- Battery Energy Storage Systems (BESS)
- Home Energy Management Systems (HEMS)
- Digital Smart Meters

Benefits.

Climate Resilience and Grid Independence – CER inherently offers robust solution to the challenges posed by climate change and increasing consumer demand, which strain the stability and reliability of the grid. By enabling households to generate and store their own solar energy, CER significantly alleviates the demand pressures placed on the grid. This is particularly important for rural and remote areas as well as First Nation Communities, empowering them to achieve greater energy self-sufficiency. To enable such independence “we need a strong renewable energy workforce to meet the projected demand for renewable energy”¹⁰. This ensures that these communities and regions can autonomously install and maintain their CER infrastructure for self-reliant energy production. CER “ensures renewable energy is available to all”¹¹.

Cost Savings - A core benefit of CER for households and businesses, is its ability to reduce consumer energy bills thereby increasing household disposable income. This has wide-reaching benefits for the macro-economy.

Transmission Lines –

The majority of CER are installed on private properties and utilises pre-existing distribution lines. This substantially cuts down on government capital and operating costs associated with

⁸ “Victorian Energy Jobs Plan Consultation Paper” *Victoria State Government* (2024), at 17.

⁹ “Victorian Energy Jobs Plan” *Victoria State Government* (February 2024) <[victorian-energy-jobs-plan-consultation-paper_c566\(3\).pdf](#)>

¹⁰ “Victorian Energy Jobs Plan Consultation Paper” *Victoria State Government* (2024), at 17.

¹¹ “Victorian Energy Jobs Plan Consultation Paper” *Victoria State Government* (2024), at 14.

transmission infrastructure projects. Investment in such infrastructure will primarily focus on areas lacking existing transmission infrastructure, such as new developments in remote regions.

Recommended CER Policies

We encourage the Victorian Government to implement the following policies to champion an electrical industry worthy of investment:

1. **CER Rebates and Loan Schemes** – VIC government should initially provide \$5000 rebates to install BESS in homes and in the long-term support low interest loan schemes to alleviate up front pressures of CER capital investment. This has been shown in pilots to boost consumer demand for CER, and will consequently escalate the requirement for an electrical workforce to both install and maintain these resources. This will complement the recently released apartment residents solar panel rebates scheme.¹²
2. **EV Bi-Directional Charging** – public infrastructure needs to be upgraded to transition from the traditional one-way network, allowing consumers to export excess solar energy back to the grid in return for a rebate. This will likely encourage increased consumer demand thereby increasing the need for the electrical workforce.
3. **Time of Use (ToU) Tariffs** – introducing ToU tariffs which incentivise consumers to soak, utilise or send excess stored energy back to the grid in response to price signals allows consumers to have greater control over their energy prices thereby leading to greater disposable income. This will also likely act as an incentive to install CER thereby driving demand for the electrical industry. This policy will assist in addressing the following statement raised by the Victorian Government in this consultation paper:

“To be able to harness renewable resources, it is essential that Victoria transitions from a centralised to a distributed energy system. This will require a significant program of infrastructure projects across Victoria to improve and modernise the grid in areas where sun and wind are abundant to allow renewable energy to contribute to the system. This will prepare the grid for the unprecedented volume of renewable energy and will include upgrades to existing lines, new high voltage transmission lines, and other infrastructure to improve reliability.”¹³

Q14. How would regular energy skills and workforce data and mapping enhance investment confidence? What specific data would be most useful?

Attention should be directed towards improving the attraction and retention rates of STEM apprentices. We expect that VETSS will lead to an increase in both these metrics while reducing cancellation rates. These positive trends should inspire greater confidence in investment.

Q15. How can Victoria position itself to compete nationally and internationally, as well as with other industries, for energy sector skills and workforce?

a. Do you have any examples of this competition?

Automatic Mutual Recognition (AMR) – Australian jurisdictions have struggled to establish a nationally harmonized AMR, leading to administrative, temporal, and

¹³ “Victorian Energy Jobs Plan Consultation Paper” *Victoria State Government* (2024), at 22.

financial burdens. Licensed electrical workers face challenges operating in jurisdictions outside their home state, hindering seamless interstate electrical operations. Consequently, the State's electrical workforce resource capacity is constrained, as licensed electrical contractors are reluctant to undergo the cumbersome process of attaining interstate qualifications equivalent to those they already possess. We propose The Victorian Government work in concert with the Federal and Other State Governments to progress towards AMR in the electrical industry.

b. [How could a Wind Worker Training Centre and a Hydrogen Worker Training Centre contribute?](#)

This is beyond the scope of MEA's expertise.

[Q16. How can communication be improved between underrepresented groups and employers to ensure inclusive and equitable access to employment opportunities, including to improve jobs and skills matching?](#)

Please refer to MEA's response under Q1-7 above.

Conclusion

CER provides a resilient solution to reducing carbon emissions. As privately owned self-generating clean energy assets, they can store excess energy and be utilised in the event of power outages. Consumers gain control over the utilisation of their energy which, makes CER a powerful tool in significantly reducing consumer energy bills. A successful CER industry is driven by consumer demand which is vital to attracting investment in the electrical workforce. We advocate for the Victorian Government to action the following electrification policies in an effort to garner greater CER demand:

- \$5 000 CER rebates to support BESS in homes.
- Low interest loan schemes to support CER infrastructure.
- EV Bi-Directional Charging
- Time of Use (ToU) tariffs.

MEA emphasises the vital role licenced electrical contractors have within CER integration and maintenance. To ensure there is a sustainable pipeline of skilled workers to support CER, we strongly recommend VIC Government integrates and streamlines VETSS with an equal weighting to ATAR. This will expose STEM trades to a wider cohort, inherently increasing diversity in trades, enhancing apprentice commencement and retention rates and allow for greater aptitude and competency screening to better match the right skills with the right trade. VETSS exposes all students of all diversities to targeted trade and soft industry skills.

We expect VETSS to enhance local education and facilitate job creation in rural, remote, Aboriginal, and First Nations communities. When integrated with our proposed CER policies, VETSS becomes a powerful tool for fostering locally independent career and proprietorship creation, particularly in the installation and maintenance of electrification technology. This initiative has the potential to encourage individuals to remain in their local communities.

We have taken the opportunity to highlight the need for Automatic Mutual Recognition between Australian jurisdictions and the imposition this has created on the electrical industry. We encourage the Victorian Government to champion change in this area to become competitive in the national skills workforce. By recognising equivalent interstate standards and qualifications, Victoria can expect to see reduced pressure from the skills shortage crisis through empowering interstate workers to operate in VIC.

We strongly urge the Victorian Government to integrate and streamline VETSS curriculum with an equal weighting to ATAR. MEA looks forward to the outcome of this consultation in hopes for a successful outcome. We are available for any future discussions.