

# National Urban Policy

## Leveraging Consumer Energy Resources

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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](http://www.masterelectricians.com.au)

MEA applauds the Federal Government in proactively seeking to achieve “net zero emissions by 2050”<sup>1</sup> through the National Urban Policy.

As the collective voice of our licensed electrical members, MEA advocate policies which facilitate equitable and efficient implementation of Consumer Energy Resources (CER). The Electrical Industry is ready to facilitate the installation and maintenance of this adaptive and resilient solution climate change.

CER offers sustainable economic and environmental benefits. With appropriate government policies to support its equitable, efficient and well-planned rollout, CER will become increasingly accessible for all households to enjoy its benefits. For further information on our position regarding CER, please use the following link: <https://masterelectricians.com.au/wp-content/uploads/DER-Policy-Working-Paper.pdf>

Australia needs a sustainable and skilled workforce for the installation and maintenance of CER. Vocational Education and Training in Secondary Schools (VETSS) curriculum is a 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 increasing attraction and retention in the electrical industry.

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<sup>1</sup> “National Urban Policy” *Australian Government* [May 2024]

# Consumer Energy Resources (CER)

MEA advocate CER is the solution towards equitable, affordable reliable, clean and efficient energy. However, the initial upfront cost can be a deterrent against successful uptake, and for some it is simply unaffordable. The complete advantages of CER can only be unlocked with widespread community adoption. Therefore, the Government must alleviate financial barriers towards to access CER, promoting broader uptake.

As the push towards electrification intensifies, a probable consequence of Government failure to offer sufficient rebates and loans is a skewed transition, potentially preventing financially disadvantaged individuals from accessing CER. This could lead to higher energy costs for those remaining on the traditional network as reliance on the National Energy Market (NEM) decreases.

Examples of CER include:

- Rooftop solar photovoltaic units (Solar PV)
- Battery Energy Storage Systems (BESS)
- Home Energy Management Systems (HEMS)
- Electric vehicle (EV) batteries

Consumers gain the ability to take control of their energy, allowing domestic, commercial and industrial (C&I) customers to enter into trading arrangements that time shift loads, using power (soaking) when it is cheapest for flexible loads (hot water, ovens, EV charging, etc) and delivering power back (sourcing) from storage sources (batteries, bi-directional EV's) when energy prices are higher. This empowers households and businesses to pro-actively reduce their overall power costs.

CER external load control should be limited to flexible loads while the traditional network should continue to be utilised for inflexible loads (i.e., fridges, life support, etc).

## CER Assets

### *Solar PV*

With over “one-third of Australian homes”<sup>2</sup> having already installed Solar PV systems, CER is evidently becoming increasingly popular amongst residential and commercial buildings thereby making it easier for Government to implement solar installation policies. We recommend such policies are introduced in concert with home battery and EV charging requirements.

Solar PV allows households and businesses to take advantage of the abundant sunlight Australia receives enabling them to become less reliant on traditional one-way transmission generated energy which can be unstable and expensive. This is particularly useful for rural and remote areas where electricity is unreliable and often at the whims of climate events.

### *Home Batteries*

Home batteries are necessary to optimise CER’s capabilities. These enable consumers to store self-generated energy (from Solar PVs) and either soak or send back to the grid during peak demand times. We recommend government increase the incentives designed to offset installation costs to better utilise the oversupply of rooftop PV.

### *Digital Smart Meters*

Digital smart meters provide consumers with measurement infrastructure, designed to promote choice and efficiency in the delivery of energy to the end point consumer. Unlike traditional meters, smart meters allow for real time measurement and control of energy use. MEA believes these are necessary for achieving Australia’s commitment towards net zero greenhouse emissions by 2050 and battling climate disasters.

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<sup>2</sup> Department of Climate Change, Energy, the Environment and Water (DCCEEW). “Electricity and Energy sector Plan Discussion Paper” *Australian Government* [2024], at 9.

### *Home Energy Management Systems (HEMS)*

Full optimisation of time-of-use tariffs can be achieved through HEMS which can make decisions to control appliances and utilise the energy most efficiently depending on the generation available. It is a powerful companion to home battery strategies to improve energy efficiency, time shift energy, and decrease emissions across Australia.

There are relatively inexpensive plug and play system that a homeowner can install, or more comprehensive solutions that can be wired to control fixed loads such as hot-water and air conditioning and integrate their use with solar production. The more comprehensive options must be installed and set-up by a licenced electrical contractor.

### *Private Asset Maintenance*

If the grid is going to become reliant on CER, there needs to be minimum standards of safety and reliability on anyone receiving Feed in Tariffs (FIT). Increased prevalence of DC isolator failures, high penetration of solar PV systems and the expected increase in the installation of home batteries and EV chargers makes it necessary to ensure these assets are safe for consumers and reliable for the stability and capacity of the grid.

MEA recommends including mandated inspections on grid connected solar and battery systems receiving FIT. Performance of these inspections should be performed by licenced electrical contractors every five years. We suggest funding of inspections is covered by levying a monthly fee on consumers' electricity bills and administered by the retailer.

## **CER Benefits Summary**

CER's innate ability to source energy independently of the National Energy Market grid yields numerous benefits including –

- *Financial* – reduced energy expenses are achieved by producing, storing, and trading surplus energy during peak demand periods. This boosts households'

disposable income, thereby fostering a sustainably strengthened macro-economy.

- *Grid Stability* - With the anticipated population growth and increase in EV adoption, the stability and reliability of the NEM grid is at risk. CER mitigates this by lowering peak grid demand and enabling consumers to supply excess energy back to the grid during periods of undersupply.
- *Climate Disaster Resilience* - CER stands as a readily accessible solution that strengthens Australia's urban areas resilience to climate events. In the face of a climate disaster disrupting grid energy supply to households and businesses, consumers can seamlessly access solar energy generation and utilise stored surplus energy.
- *Environmental* – CER holds significant potential to support Australia's net zero targets through offering an alternative to traditional fossil fuel energy sources.

## Existing State Electrification Policies

Throughout numerous consultations, MEA has consistently advocated for Federal and State Governments to offer \$5 000 rebates for the installation of solar PV and BESS systems. Government rebates will not only likely incentivise greater uptake of CER but also ensure equitable access, particularly for vulnerable households such as low-income families, tenants, and residents of apartment complexes. MEA advocate for Federal Government to partner with State and territory Governments in financially supporting this initiative.

A list of our CER submissions promoting Government subsidies that have been authorised for publication can be accessed at the following link:

<https://www.masterelectricians.com.au/advocacy>.

Some State Government subsidies currently available include:

- **VIC – Solar Panel (PV) Rebate:** “The Solar Homes Program offers eligible Victorian households solar panel (PV) rebates [of up to \$1,400] and the option of an interest-free loan, hot water rebates, and an interest-free loan for solar batteries.”<sup>3</sup>
- **QLD – Battery Booster Rebate for Householders:** Applications have recently closed. This initiative offered a \$3 000 rebate to eligible applicants with a combined annual household taxable income of \$180 000 or less, and a higher \$4 000 rebate is available for low-income households with an annual income of less than \$66 667.<sup>4</sup>
- **NT – Home and Business Battery Scheme:** “Eligible homeowners and businesses can access a grant of \$400 per kilowatt hour of useable battery system capacity, up to a maximum grant of \$5000.”<sup>5</sup>
- **FED – Household Energy Upgrades Fund:** “Under the \$1 billion Household Energy Upgrades Fund, the Clean Energy Finance Corporation (CEFC) will work with lenders to provide discounted finance products to help households upgrade their homes with battery-ready solar PV, modern appliances and other improvements. The Household Energy Upgrades Fund will help more than 110,000 households lower their energy bills, ensuring homes are warmer in winter and cooler in summer. It is also helping to fast-track the retrofit of greener, more sustainable homes Australia-wide.”<sup>6</sup>

## Proposed Electrification Policies

While all stakeholders have a crucial role in achieving a successful electrification transition, it falls upon Government to champion this change. This entails enhancing consumer confidence through the provision of financial and non-financial assistance.

<sup>3</sup> Solar Victoria “Solar Homes Program” *Victoria Government* <[solar.vic.gov.au](http://solar.vic.gov.au)>

<sup>4</sup> “Battery Booster rebate for householders” (4 March 2024) Queensland Government <[www.qld.gov.au](http://www.qld.gov.au)>

<sup>5</sup> “Home and Business Battery Scheme” NT Government <[file:///C:/Users/GeorgiaHolmes/OneDrive%20-%20Master%20Electricians%20Australia/Advisory%20Services%20Administration/Policy%20Department%20Folder/Consultations%20&%20Advocacy/FED/2024/Consumer%20Energy%20Resources%20\(CER\)/Climate%20Adaptation%20in%20Aus/National%20Adaptation%20Plan%20Issues%20.pdf](http://file:///C:/Users/GeorgiaHolmes/OneDrive%20-%20Master%20Electricians%20Australia/Advisory%20Services%20Administration/Policy%20Department%20Folder/Consultations%20&%20Advocacy/FED/2024/Consumer%20Energy%20Resources%20(CER)/Climate%20Adaptation%20in%20Aus/National%20Adaptation%20Plan%20Issues%20.pdf)>

<sup>6</sup> Department of Climate Change, Energy, the Environment and Water “Household Energy Upgrades Fund” *Australian Government* <[energy.gov.au](http://energy.gov.au)>

MEA urges Government to prioritise enhancing the following policies to provide residents and businesses with the best opportunities in combatting climate disasters-

### *Government Rebates:*

Whilst we commend existing programs listed above, we believe additional subsidy funding is necessary to support vulnerable households.

Low-income households are likely to face significant challenges with the initial capital costs of installing CER technologies. Federal Government should consider partnering with State and Territory Governments to offer \$5,000 for the installation of solar PV.

### *Electricity Everything Loans Scheme*

MEA supports Rewiring's three-year, \$2.8 billion 'Electrify Everything Loan Scheme (EELS) where "households could receive a government-backed loan that is secured on the property and ... doesn't need to be repaid until the house is sold"<sup>7</sup>. Such a scheme would benefit all households, especially those with low incomes and/or are renting. The EELS scheme removes the initial capital cost enabling greater equitable access to CER for all First Nations households.

We note the 2022-23 Federal Budget commitment of "\$1.3 billion to establish the Household Energy Upgrades Fund"<sup>8</sup> has recently commenced which provides "\$1 billion to the Clean Energy Finance Corporation"<sup>9</sup>. However, this will not necessarily facilitate the equitable access afforded through the EELS where capital investment costs are likely to be offset by capital gains at a future point.

While we acknowledge eligible some States, such as Victoria, offer interest-free electrification loans, these still entail a "monthly direct debit from [households'] account"<sup>10</sup>. Alternatively, the EELS negates any financial hardship which interest-free loans may impose upon residents.

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<sup>7</sup> "Electrify Everything for Everyone" *Rewiring Australia* < [Electrify Everything Loan Scheme \(EELS\)](#) ([rewiringaustralia.org](#))>

<sup>8</sup> Department of Climate Change, Energy, the Environment and Water "Energy future plan" *Australian Government* (10 May 2023) <[Energy future plan](#) | [energy.gov.au](#)>

<sup>9</sup> *Treasury* "Helping Australians save energy, save on energy bills" *Australian Government* [9 May 2023] < [CEFC finance drives down green car loan cost to accelerate Australia's EV uptake - Clean Energy Finance Corporation](#)>

<sup>10</sup> Solar Victoria "FAQs: Loans for Solar PVs" *Victoria Government* <[FAQs: Loans for Solar PV](#) | [solar.vic.gov.au](#)>



### *Time-of-Use Tariffs*

With the cost saving opportunities Solar PV, HEMS and BESS collaboratively provide, there will be an expectation for Government to facilitate ToU policies which provide price signals to consumers when to store, utilise or send excess energy back to the grid. During peak demand, ToU tariffs would incentivise households to send excess energy back to the grid in return for a financial rebate and simultaneously signal for consumers to utilise their stored excess solar energy as opposed to utilising grid energy. This will result in sustainable economic growth through increased household disposable income.

ToU tariffs addresses the Federal Government's acknowledgement that-

"Clear price signals will be required to incentivise investments to meeting changing energy system needs, and to provide long term revenue certainty to incentivise investment beyond 2030"<sup>11</sup>.

Ausgrid has recently announced its "two-way pricing for grid exports" initiative, due to commence from July 2025. This tariff also has a time-of-use component to it.<sup>12</sup>

We encourage government policies which incentivise all retailers and distributors to offer competitive ToU tariffs, allowing urban Australian households to maximise the benefits they derive from CER. This will likely incentivise a greater uptake of CER thereby better positioning households and businesses to become more resilient in the face of climate disasters.

The dream of changing the energy demand curve (the so called "ducks back") by taking the excess/cheap energy produced in the middle of the day, and using it during times of peak demand, thereby flattening the demand curve and stabilising electricity prices can be realised in a reasonably short time period if we make some rational, sensible decisions. The technology is here now, regulations and policies just need to catch up.

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<sup>11</sup> Department of Climate Change, Energy, the Environment and Water (DCCEEW), "Electricity and Energy sector Plan Discussion Paper" *Australian Government* [2024], at 14.

<sup>12</sup> "Two-way pricing for grid exports" *Ausgrid* < [Ausgrid Export Pricing Fact Sheet - DRAFT 8 \(aer.gov.au\)](#) >

Below is a visual representation depicting the solar power duck curve and the role of CER in redistributing energy loads throughout the day to effectively manage energy demands and prices.

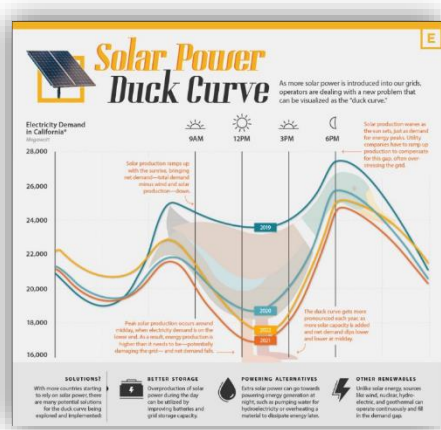


Image Source: Omri Wallach

"The Solar Power Duck Curve Explained" *ELEMENTS*

(4 April 2022) < [The Solar Power Duck Curve Explained \(visualcapitalist.com\)](https://visualcapitalist.com)>

### EV Bi-Directional Charging.

EV's could be a significant reservoir of excess solar energy storage, accessible for Australian urban households and businesses during climate disasters. EVs provide the ability for households to soak excess PV supplied energy and have the possibility of being dispatched during times of need as EVs have an average battery capacity of 72.1kWh<sup>13</sup> compared to the 5-15kWh capacity of a static home battery.<sup>14</sup>

Additionally, with the widely anticipated uptake of EVs, more energy will be required to maintain charging demands. Home rooftop Solar PV enables bi-directional charging as a solution to reduce the excessive demands EVs would place on the grid.

While there is a general sense that DNSPs are seeing EVs as primarily a threat to the grid, Horizon Powers in Western Australia, has recently commenced a 12-month trial of Vehicle-to-Grid (V2G) technology to "test the potential for EVs to draw power from the grid and feed it back into the network"<sup>15</sup>.

<sup>13</sup> "Useable battery capacity of full electric vehicles" *Electric Vehicle Database* < <https://ev-database.org/cheatsheet/useable-battery-capacity-electric-car>>

<sup>14</sup> Jarvis Robins "THE ULTIMATE GUIDE TO CHOOSING YOUR SOLAR BATTERY SIZE" *Static Electric*s (12 December 2023) < <https://www.static-electrics.com.au/electricians-blog/what-size-solar-battery-do-i-need/#:~:text=There%20are%20compact%205%20kWh,achieve%20near%20total%20energy%20independence.>>

<sup>15</sup> Department of Energy, Environment and Climate Action "Exmouth to test two-way Electric Vehicle charging potential" WA Government [23 April 2024] < [Exmouth trial to test two-way Electric Vehicle charging potential | Western Australian Government \(www.wa.gov.au\)](https://www.wa.gov.au)>

If policy and regulation caught up to the rapid uptake of EVs they would become an invaluable asset to the grid.

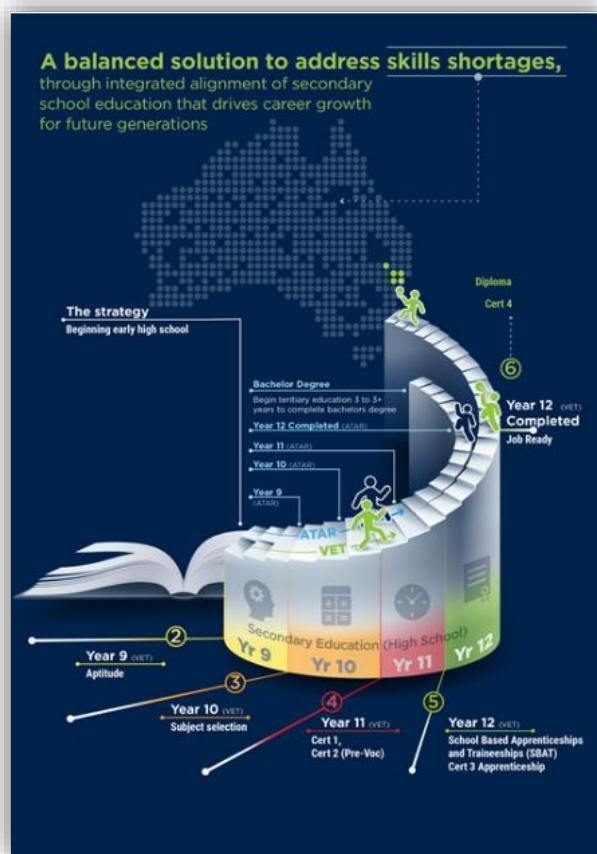
We can expect to see increased network stability through EV infrastructure installations amongst households and businesses when utilised in concert with HEMS for residential buildings and Building Management Systems (BMS) for commercial buildings.

## Vocational Education and Training in Secondary Schools (VETSS)

A skilled labour pool is essential to maintain a sustainable long-term decarbonised economy. However, Australia is currently facing a skill-shortage crisis which demands immediate attention. MEA strongly advocate that investing into our future workforce now is the solution to ensuring we have sustainable, well-resourced, and skilled electrical labour capable of handling not only the installation but also the ongoing maintenance of CER.

MEA advocates for Vocational Educational Training (VET) to be integrated and streamlined into the secondary school curriculum with an equal weighting to Australian Tertiary Admission Rank (ATAR). It is our strong belief this is the most impactful solution to addressing skills shortage issue, especially within rural and remote areas, and consequently increase attraction and retention within Science, Technology, Engineering and Math (STEM) across all diversities (i.e. rural and remote areas, gender, ethnicity, disabilities, etc.). The benefits include better equipped personnel entering the workforce, enhanced aptitude and competency screening, heightened attraction and retention and engagement by rural and remote students. MEA sees this as the pivotal role in actioning societal, structural and systemic change within rural and remote communities. This is particularly important as we rapidly enter an era of electrification.

The current schooling system moulds students to fit an academic structure, leaving behind those who are unwilling or unable to conform. Providing exposure and targeted training offers a broader range of 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 teachings 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. This will likely assist “to increase tertiary education attainment rates and meet skills shortages [through our education system becoming] responsive to evolving industrial changes, mor inclusive and accessible for all.”<sup>16</sup>.



Visual representation of the VETSS -vs- ATAR Journey

### *Diversity + Remote Regions + First Nations People*

The Australian Government recently noted concern that “diversity in the energy sector is low”.<sup>17</sup> 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 background – 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 likely expand the talent pool of First Nation people within STEM fields.

NCVER’s statistics provide that “fewer than half of commenced VET qualifications are completed, and around 60% of apprenticeships are completed”<sup>18</sup>. MEA believes that Northern Australia will benefit from VETSS through being better equipped when 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. Notably, “the most common reason for qualification non-completion [is] changing or commencing a new job”<sup>19</sup>.

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 urban residents 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.

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<sup>17</sup> Department of Climate Change, Energy, the Environment and Water (DCCEEW) “Electricity and Energy Sector Plan Discussion Paper” *Australian Government* [2024], at 9.

<sup>18</sup> “Annual Jobs and Skills Report” *Australian Government* [October 2023], at 93.

<sup>19</sup> *Ibid.*

Listed below is a sampling of the numerous State and Federal consultations in which MEA has actively engaged in 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 Clean Energy Strategy*

In our response to the Federal Government's *First Nation Clean Energy Strategy* consultation, we advocated that VETSS is necessary for First Nations People to optimise their electrification career opportunities. We believe this is a gateway for First Nation people to achieve economic self-determination, especially in areas predominately populated by First Nation communities.

We further noted that education and training for First Nations communities living in rural and remote areas can be difficult due to insufficient training resources and facilities, however, we believe VETSS and use of digital learning management systems, could address these issues through consistent exposure across all Australian students.<sup>20</sup>

### *Rural and Remote Locations*

The *Regional Development Act 2004* Review presented MEA with an opportunity to advocate the benefits VETSS has for rural and remote areas. With our advocacy for all schools to offer enhanced VET education, MEA believes there will be 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. This has the potential to 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.<sup>21</sup>

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<sup>20</sup> Chris Lehmann & Georgia Holmes "First Nations Clean Energy Strategy" *Master Electricians Australia* (06 February 2024) < <https://masterelectricians.com.au/wp-content/uploads/MEA-Submission-First-Nations-Clean-Energy-Strategy-February-2024.pdf>>

<sup>21</sup> Chris Lehmann & Georgia Holmes "REGIONAL DEVELOPMENT ACT 2004 REVIEW" *Master Electricians Australia* (January 2024) < <https://masterelectricians.com.au/wp-content/uploads/MEA-Submission-Regional-Development-Act-2004-Review-January-2024.pdf>>

### 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.<sup>22</sup>

### 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.<sup>23</sup>

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<sup>22</sup> Chris Lehmann & Georgia Holmes "Disability Inclusion Bill 2024" *Master Electricians Australia* (11 March 2024)

<sup>23</sup> Chris Lehmann & Georgia Holmes "Supporting Women to Achieve VET-Based Careers" *Master Electricians Australia* (15 December 2023) <<https://masterelectricians.com.au/wp-content/uploads/MEA-Supporting-Women-to-Achieve-VET-Based-Careers-December-2023.pdf>>

# Conclusion

Throughout this submission, MEA has described the benefits of CER and how it currently, and with further policy support, can achieve these objectives. By providing rebates and low-cost loans to support private investment in CER, the Australian Government and financial institutions can alleviate upfront capital cost pressures for households and small businesses. This would enable greater equitable access to solar PV and BESS for all households.

The stability and reliability of the NEM grid will be bolstered as traditional energy demand pressures diminish, with households and businesses becoming independent in sourcing their energy. Moreover, as more households install solar PV systems, greater energy accessibility will ensue. In the face of climate disasters, which would typically disrupt energy supply to households and businesses, there will be access to a continued energy supply and internet connection during events that interfere with transmission connections.

CER will not only mitigate carbon emissions as an alternative to traditional fossil fuel energy but will also play a role in sustainably strengthening the macro-economy by reducing consumer energy costs, thereby increasing household disposable income. Additionally, the emerging electrotechnology workforce industry will continue to foster prosperous career opportunities, providing sustainable skilled career choices.

The tools and workforce necessary to facilitate the electrification transition through CER are readily accessible. However, it is imperative for Government policy to align and promote successful, efficient, and effective electrification. MEA urges Government to promptly implement the following policies:

- Rebates - \$5 000 to households to alleviate initial capital cost of CER installation.
- Electrify Everything Loan Scheme – Electrification loans to be repaid when house is sold.



- Time of Use (ToU) tariffs – to implement price signalling mechanisms that enable consumers to reduce energy costs.
- EV Bi-Directional Charging – enabling consumers to charge their EVs at home and utilise the EV battery to store excess solar energy for later use. This will also help alleviate EV charging infrastructure capacity issues.

Public infrastructure upgrades for CER will be minimal compared to other renewable energy solutions, such as hydro-dams, as it utilises existing transmission and distribution lines. The necessary upgrades will primarily involve enabling two-way energy connections in response to ToU tariffs. However, it is important to recognise that new infrastructure will be necessary in areas where it does not already exist, such as in new residential areas. Overall, this approach will help minimise any additional energy costs that would otherwise be passed on to customers through their energy bills.

It is important that Australia has a sustainable skilled electrical workforce to not only install CER but maintain and upgrade the assets in the future. Australia's electrical industry is currently facing a skills shortage crisis which will only worsen without immediate intervention. MEA urgently stresses the importance of investing in our future workforce today through our younger generations.

To ensure there is a pipeline of skilled workers in the future to support the implementation and maintenance of CER, we strongly recommend the Australia 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.

MEA emphasises the vital role licenced electrical contractors have within CER integration. It is a ready workforce with the necessary base skills to perform a wider cohort of these functions. The electrical contracting industry will assist with

accelerating the roll-out of CER infrastructure and MEA stands ready to assist the Australia Government in addressing these challenges.

We look forward to seeing the future of the National Urban Policy and would like to be part of any future discussions regarding CER and workforce development topics.