MASTER ELECTRICIANS AUSTRALIA

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NSW Innovation Blueprint

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Ideas: How can we increase the rate at which new ideas and insights emerge and create new products and businesses?

What are the biggest opportunities and barriers in this area?

Opportunities

CER - Consumer Energy Resources (CER) in the form of Rooftop Solar in concert with Battery Energy Storage Systems (BESS), Electric Vehicle Charging (EVC), and Home Energy Management Systems (HEMS) offer significant innovation potential for NSW[1]. There are potential extensive advantages such as reduced consumer energy costs resulting in higher household disposable income, improved grid stability in the NEM, lower peak demand resulting in lower wholesale electricity prices and reduced carbon emissions. By placing strategic focus on CER advancement, NSW can anticipate a growing electrotechnology labour market, yielding higher tax revenues for the government and fostering substantial economic growth within the region. Furthermore, as consumer demand for CER increases, we can expect to see greater market competition and business investment as entrepreneurs develop products for the CER market segment.

Problems

EQUITIABILE INSTALLATION OF CER - Vulnerable households, including low-income households, renters, and those residing in apartment complexes, often face barriers in accessing the benefits of Consumer Energy Resources (CER). To address this disparity, we propose that initially the NSW Government provide $5 000 household rebates for CER installations, moving towards supporting a coordinated national low-cost loan scheme for electrification, as suggested by Rewiring Australia[2]. This initiative aims to ensure that all households have equal opportunity to access and enjoy the advantages offered by CER, promoting equity and inclusivity across the community.

LABOUR MARKET - Australia is currently facing a skills shortage crisis. MEA advocate that Vocational Educational and Training in Secondary Schools (VETSS) with an equal weighting to Australian Tertiary Admission Rank (ATAR) rankings is one of the key solutions to improve both diversity and skills shortages issues. The current schooling system moulds students to fit an academic structure, leaving behind those who are unwilling or unable to conform. Providing wider exposure to VET pathways and targeted training provides all students equal opportunities for future success by providing a supportive and encouraging environment.

The benefits of VET secondary school courses include better equipped personnel entering the workforce, enhanced aptitude and competency screening, increased commencements and completions, and greater diversity in the workplace through early exposure to VET STEM careers to non-traditional cohorts in a supportive environment. MEA sees this as a pivotal tool in supporting societal, structural and systemic change with regards to non-traditional cohorts entering trades. There are well established pathways in VET to attain higher qualifications at Diploma and Advanced Diploma level, satisfying pre-requisites and RPL for Tertiary Degree qualifications.

What should the NSW Government focus its efforts on?

Improving CER installation and benefits:

1. Installation improvements – provide $5000 rebates to households to alleviate pressures of capital costs and incentivise installation for Solar, BESS, EVC and HEMS.
2. Optimise benefits –

[1] "Roadblocks and Solutions" *Master Electricians Australia* <DER-Policy-Working-Paper.pdf (masterelectricians.com.au)>
[2] Jason Greber "Could 'HECS-for-solar' slash power bills and save climate goal?" *FINANCIAL REVIEW* <https://www.afr.com/policy/energy-and-climate/could-hecs-for-solar-slash-power-bills-and-save-climate-goal-20240312-p5fbrk >

a. Electric Vehicle (EV) Bi-directional charging: changing regulation to allow consumers to utilise their EV batteries as a reservoir for excess solar power allows consumers to save energy costs by drawing from the stored energy at times of peak demand. This would significantly add dispatchable storage capacity to the grid that would dwarf home BESS in its capacity, and reduce evening peak demand, therefore significantly reducing the peak wholesale price of electricity.

b. Time-of-Use (ToU) Tariffs - implementing ToU tariffs as a default sends price signals to consumers when to store excess energy and when to utilise and/or send excess energy back to the grid. During the minimum demand window, ToU charges would deter consumers from sending excess energy back to the grid, preventing an oversupply of energy on the network. Then, during the peak demand window when energy rates are at their highest, ToU tariffs would provide consumers with rebates, encouraging excess energy to be supplied to the grid leading to sustainable economic growth thereby increasing disposable household income.

Who should the NSW Government partner with?

CER: Work in partnership with Federal Government and the electrical industry.
VETSS: work in partnership with Federal Government, RTOs and industry.

Which initiative should the NSW Government do first?

Both initiatives should be given equal priority. With the aggressive targets being established at State and Federal levels, Government needs to prioritise CER implementation to support carbon reduction targets. To ensure there is a sustainable and skilled workforce for CER, government needs to invest in its future workforce today, starting with our youngest generation.