

News Service 112 – Survey finds highest demand for technicians & trade workers, Oct labour market tight, Skills Ministers to lead VET reform, Apprentice consultations, SA strikes deal free TAFE training, Electrical licensing discipline actions – electric shock, RTOs to report category of 'electrical equipment', Women in trades showcase, What now? What next?, Data trends, EV skills, ETU calls for clear VET voices, Electrical laws review – on the spot fines, Asbestos awareness, Hydrogen, PV-Powered HVAC, Renewables-solar, Grid skills, Energy transition, Small businesses month

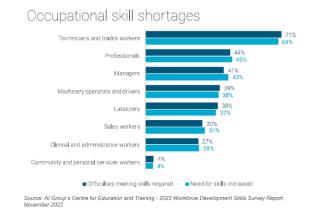
Dear Colleagues and Friends,

News Service this week covers:

- 1. AIG REPORT SHOWS DEMAND FOR TECHNICIANS AND TRADES WORKERS REACHED 69%
- 2. HIGH RECRUITMENT ACTIVITY CONTINUES IN OCTOBER 2022
- 3. JOBS & SKILLS AUSTRALIA TO STUDY CLEAN ENERGY WORKFORCE
- 4. SOUTH AUSTRALIA FIRST TO STRIKE DEAL TO OFFER FREE TAFE TRAINING
- 5. SKILLS MINISTERS AGREE TO PRIORITIES FOR COLLECTIVE NATIONAL LEADERSHIP
 - 5.1. CONSULTATION UNDERWAY ON APPRENTICESHIP SUPPORTS
- 6. OFT DISCONNECT-RECONNECT ELECTRICAL EQUIPMENT NOTICE FOR RTOS
- 7. MAE CAREERS PATHFINDERS SYDNEY SHOWCASE DAY FOR FEMALES
- 8. CHANGING SKILLS FOR CHANGING TIMES
- 9. ETU HIGHER EDUCATION REVIEW NEEDS SKILLS AND TRAINING SECTOR VOICES
- 10. <u>NSW GOVERNMENT REVIEWS UNDERWAY HAVE YOUR SAY</u>
- 11. NATIONAL CAMPAIGN WARNS HOMEOWNERS, TRADIES OF THE DANGERS OF ASBESTOS
- 12. NSW SMALL BUSINESS MONTH WHAT'S ON THIS WEEK
- 13. ELECTRICAL LICENSING DISCIPLINARY ACTION
- 14. ON-THE-SPOT FINES FOR ELECTRICAL OFFENCES
- 15. BUILDING ESSENTIAL SKILLS FOR MODERN GRID TRANSFORMATION
- **16. FIVE DATA CENTRE TRENDS TO SHAPE 2023**
- 17. PV-POWERED HVAC
- 18. IS AUSTRALIA READY FOR THE NEXT HYDROGEN PHASE?
- 19. SURVIVAL OF THE MOST ADAPTABLE A DARWINIAN ENERGY TRANSITION
- 20. SMALL-SCALE RENEWABLE ENERGY SCHEME (SRES) PRODUCT LISTING CONSULTATION
 - 20.1. CER QUARTERLY CARBON MARKET REPORT PV CAPACITY DOWN
- 21. BIGGEST GAS UNIT IN SOUTH AUSTRALIA CLOSED IN MIDDAY SUN TO HELP KEEP LIGHTS ON



1. AIG REPORT SHOWS DEMAND FOR TECHNICIANS AND TRADES WORKERS REACHED 69%



The AI Group's Centre for Education and Training released its 2022 Workforce Development Skills Survey Report, November 2022: Listening to Australian businesses on skills and workforce needs. The Survey is conducted every two years.

In terms of skill shortages, the report found "69% of businesses said their skill needs had increased in relation to Technicians and Trades Workers, 45% in relation to Professionals, 43% for Managers, 38% for

Machinery Operators and Drivers and 37% for Labourers."

"It is also clear that Technicians and Trades Workers are a particular pain point. This should be ringing policy alarm bells, as these workers are absolutely critical to a wide range of enterprises and industries. These skills take years to develop, as the figure below shows, meaning today's shortages will not be quickly or easily resolved."

Key findings in the report point to some difficulties ahead both in terms of skill shortages as well as labour shortages for the Australian economy.

- 71% of businesses reported difficulty meeting their requirements for Technicians and
 Trades Workers, showing a deep and entrenched shortage of workers in these occupations.
- 68% of businesses believed 'growth in demand' was the key driver of their skills challenges, 35% attributed it to 'supply chain challenges/disruption' both factors are likely related to the uncertain and dynamic market.
- Recruiting Technicians and Trades Workers is a particular pinch point. Businesses having difficulty filling skilled roles were having the most trouble with Technicians and Trades roles.
- The proportion of businesses intending to employ skilled migrants grew from 7% in 2021 to 44% in 2022 evidence of a widespread intention to make strong use of skilled migration channels as we emerge from COVID-19 induced restrictions.
- Improving basic digital skills is businesses' highest priority for digital training, with 29% ranking it number one and 62% ranking it in among their top three.
- Technicians and Trades Workers are a focus for digital skills training and upskilling, with 30% of businesses intending to prioritise these workers, followed by Managers (26%).
- Around a quarter (24%) of businesses reported either emerging or increased skill needs as a
 result of the transition to a clean economy. 17% of respondents reported increased skill
 needs, and this rose to 22% for large businesses.
- The need for generic capabilities increased most in relation to Managers (56%), closely followed by Technicians and Trades Workers (54%) and Professionals (44%).



- Foundation skills remain a key issue for businesses. Close to three out of four (74%) said they are affected in some way by low levels of literacy and numeracy. 17% said they were highly affected.
- There was strong support for training and development, with 82% of businesses intending to either maintain or increase the amount they spend on staff training and development in the next 12 months.
- ...
- 74% of businesses expressed interest in employing university or TAFE students as higher-level apprentices or cadets, indicating a strong appetite for new apprenticeship-style training contracts beyond the traditional trades.
- Short courses are the most preferred form of training, with 38% intending to use them over other types of education and training.
- 45% of businesses employing apprentices/ trainees plan to increase the number they employ over the coming year. 17% plan to maintain current numbers.

The Report offers an array of policy prescription priorities to address some of the critical issues. These include:

- Improve digital skills across the board
- Create a culture of lifelong learning
- Ensure apprentice/trainee incentives support consistent training pipelines over time
- Implement the recommendations of the Noonan Review of the Australian Qualifications
 Framework (AQF)
- Focus on developing leadership and management capabilities
- Work towards a more coherent and connected tertiary education system
- Ensure tertiary education funding is equitable across sectors

Actions businesses intend to take to meet their skill needs	2022	2021	% change
Re-skill existing staff on the job	68%	69%	↓-1%
Employ experienced people	68%	57%	↑ 11%
Employ skilled migrants	44%	7%	↑ 37%
Redesign jobs/create flexible conditions	29%	35%	↓-6%
Employ university graduates & interns	34%	27%	↑7%
Engage casuals/contractors	36%	22%	† 14%
Employ people with similar skills then re-skill to fit roles	39%	20%	† 19%
Employ apprentices and trainees	51%	54%	↓-3%
No action planned	1%	11%	↓ -10%

Source: Al Group's Centre for Education and Training - 2022 Workforce Development Skills Survey Report, November 2022

DOWNLOAD A COPY OF THE REPORT HERE



2. HIGH RECRUITMENT ACTIVITY CONTINUES IN OCTOBER 2022



The National Skills Commission (NSC) released on the 15th of November 2022, the findings of the Recruitment Experiences and Outlook Survey, which suggest that the labour market remained tight in October 2022, with all key indicators either remaining steady or increasing slightly over the month.

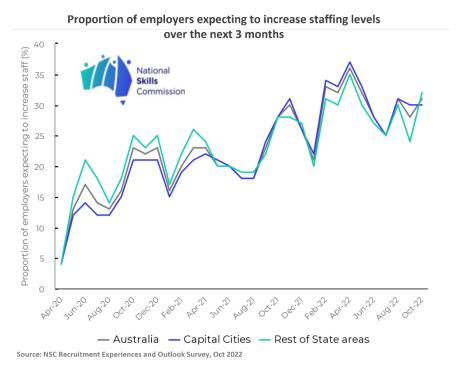
The report states, "Recruitment activity remains high, with 58% of employers recruiting in October 2022. This was the same proportion as last month, and 13 percentage points higher than a year ago.

The recruitment difficulty rate increased by 3 percentage points to 70% of recruiting employers (representing 41% of all employers). Recruitment difficulty increased more in rest of state areas (up 7 percentage points to 75%) than in capital cities (up 1 percentage point to 67%).

Employers' expectations to increase staffing levels over the next three months increased by 3 percentage points to 31%. Only 2% of employers were expecting to decrease staffing levels over the next 3 months.

The National Skills Commission surveys approximately 1,200 employers each month to find out about their experience when recruiting staff as well as whether they are expecting to increase staffing levels. This feedback provides insights about labour market conditions and to develop resources designed to help job seekers understand what employers are looking for."

DOWNLOAD SNAPSHOT VIEW of Employers' insights on the Australian labour market 2020



READ MORE HERE



3. JOBS & SKILLS AUSTRALIA TO STUDY CLEAN ENERGY WORKFORCE



In a government Media Release of 16th of November 2022, issued by the Hon Brendan O'Connor MP, Minister for Skills and Training, the Minister announced that Jobs and Skills Australia (JSA) had been formally established, after legislation passed through Parliament and received Royal Assent.

The Media Release states, "Minister for Skills and Training, the Hon Brendan O'Connor MP, said JSA will begin its important work providing independent advice to government on current and emerging workforce needs.

"JSA will have a tripartite approach with state and territory governments, employers, business peaks, unions and training providers to provide independent advice to government on current and emerging workforce needs.

"Australia faces one of its biggest economic challenges in decades – a lack of skilled workers across the labour market," Minister O'Connor said.

"We have invested an additional \$12.9 million in last month's budget to help JSA more precisely identify and anticipate skills shortages, based on the best available evidence.

"This Government is providing \$1.9 million so that JSA can get to work preparing a capacity study into Australia's clean energy workforce to provide better analysis of the skills needed to support the clean energy transition.

"JSA will also lead the development and delivery of a \$12 million study on adult literacy, numeracy and digital literacy skills, which will provide up-to-date evidence on the level of foundation skills among Australian adults.

"This is on top of our investment in 180,000 fee free TAFE and vocational education places across all States and Territories from January 2023."

The new JSA website states, "As of 16 November 2022, Jobs and Skills Australia has commenced as an Australian Government statutory body.

The Government <u>established</u> Jobs and Skills Australia (JSA) as a statutory body to provide independent advice on current, emerging, and future workforce, skills, and training needs.

Our new website is now live at <u>jobsandskills.gov.au</u>. You can also follow us on Twitter @JobsandSkillsAu and LinkedIn at Jobs and Skills Australia.

All reports and information published by the National Skills Commission will continue to remain available either on nationalskillscommission.gov.au or labourmarketinsights.gov.au."

READ MORE HERE

Note - Skilling the Clean Energy Workforce:

The Government has committed \$100 million over ten years to support 10,000 New Energy Apprenticeships, including investing \$62 million allocated over four years in this Budget to deliver the Skilling the Clean Energy Workforce, as key components of the Powering Australia Plan.

To address Australia's growing skills demands in the clean energy sector, the Skilling the Clean Energy Workforce will provide financial support, assistance and mentoring directly to New Energy Apprentices. Fit-for-purpose training pathways for new energy industry jobs will be developed through the New Energy Skills Program.

The Government will also provide funding to Jobs and Skills Australia to **undertake a Clean Energy capacity study** to provide the critical evidence and insights needed to support workforce planning, policy development and program design needed to build a strong and vibrant clean energy sector.



Source:

<u>Portfolio Budget Statements 2022 23 Budget Related Paper No. 1.6, Employment and Workplace Relations Portfolio</u>

4. SOUTH AUSTRALIA FIRST TO STRIKE DEAL TO OFFER FREE TAFE TRAINING



Julie Hare, Education Editor at the Financial Review reports in an 18 November 2022 article that the "The first deal to divvy up 180,000 free TAFE places has emerged, with South Australia claiming 12,500 spots over the coming year."

The article states, "The agreement is valued at around \$65 million. It is part of a \$1.1 billion training "blitz" promised by the Albanese government at September's Jobs and Skills Summit.

Federal skills minister Brendan O'Connor previously said placed would be allocated on a percapita basis, with **NSW and Victoria** set to receive the lion's share.

SA Skills Minister Blair Boyer said the places would bolster training in areas that are hampered by skill shortages, including building and construction, hospitality and the care sectors.

The course list will include 4000 free places in the care sector, 3000 in hospitality and tourism, 2500 in construction, 1000 each in agriculture and technology-digital skills, and 500 in "sovereign capability" fields including manufacturing.

The agreement will also include places in education, foundation skills such as literacy and numeracy, and creative industries.

The 180,000 places comprise 60,000 additional spots plus 120,000 existing TAFE places for which fees have been slashed.

The costs of the skills agreements are to be shared between the states, territories and federal government.

Under the agreements, people who come from disadvantaged backgrounds will have priority access to the places. These include Indigenous people, those under the age of 24, unemployed people, unpaid carers, women facing economic insecurity, people with disabilities, some visa holders and women who wish to gain a qualification in male-dominated areas, such as building and construction.

READ MORE HERE

5. SKILLS MINISTERS AGREE TO PRIORITIES FOR COLLECTIVE NATIONAL LEADERSHIP



Federal and State and Territory Skills and Training Ministers met on 18 November 2022 to discuss to progress a range of key vocational education and training reform and workforce matters.

In a joint 18 November 2022, Media Release, it is reported that Skills Ministers, "discussed the continued imperative for action to address skills shortages, as well as the need to re-position the VET sector to better support long-term prosperity and resilience against future challenges".



The Skills Ministers agreed priorities for collective national leadership over the next year committing to:

- immediate steps to address pressures in the economy for skilled workers;
- responding to the 'megatrends' transforming Australia's economy nationally and locally;
- building capability, capacity, and institutional leadership in the VET sector; and
- improving outcomes for priority groups.

The Media Release stated, "Throughout 2023, Skills Ministers will continue to work with the sector on reforms to improve VET quality and relevance, strengthen tripartite and cross portfolio engagement, and deliver more meaningful evidence to inform skills policy.

...

Industry Clusters from January 2023

In preparation for the establishment of the new Industry Clusters from January 2023, Skills Ministers have agreed to updates to the training package development policies to reflect the new industry engagement arrangements. Skills Ministers noted that these updates to the Training Package Organising Framework are the first steps in supporting a future qualifications model that can better respond to Australia's skills needs.

Skills Ministers will continue progressing substantial reforms to enhance the quality and relevance of VET. A number of these reforms will reach major implementation milestones in 2023, such as implementation of new Industry Clusters and an Industry Engagement Integrity Framework, a new Qualifications Framework, and VET data infrastructure reforms to improve the timeliness and quality of VET data.

Skills Ministers also canvassed opportunities to position the VET sector to better support Australia's long-term prosperity, including through a new National Skills Agreement, guided by the Vision and Principles endorsed by the National Cabinet.

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Apprenticeship Support

A discussion paper on Australian Apprenticeship Services and Support has been released for public consultation and is available on the Department of Employment and Workplace Relations website. Skills Ministers will consider the feedback from consultations in determining potential next steps."

READ MORE HERE

5.1. CONSULTATION UNDERWAY ON APPRENTICESHIP SUPPORTS

The DEWR website states, "The <u>discussion paper</u> explores the current non-financial services and supports available to seek views on how to address three key questions facing the apprenticeships system:

- What changes are needed to drive up the completion rate?
- How can apprenticeship services better encourage and support apprentices from diverse background?
- How can support services be optimised to me the current and future needs of apprentices and employers?

Consultation is open until 16 December 2022. To get involved download the discussion paper and submit your feedback. Your responses will inform future priorities within the Apprenticeship System."



6. OFT DISCONNECT-RECONNECT ELECTRICAL EQUIPMENT NOTICE FOR RTOs



A reminder for Registered Training Organisations (RTOs), that the Acting Commissioner for the Office of Fair Trading has issued a notice to RTOs in relation to the issuing of transcripts (Statements of Attainment) to persons assessed as competent in disconnecting and reconnecting electrical equipment connected to low voltage (LV) installation wiring.

RTO transcripts must formally include additional information related to the *category of* '*electrical equipment*' the qualified holder of the transcript was assessed on, in addition to the other requirements on the application form.

There is also, an additional transcript reporting requirement for RTOs related to those assessed in locating and rectifying faults in low voltage (LV) electrical equipment using set procedures associated with Air Conditioning and Refrigeration (RAC) work.

The new requirements have been brought about because of the amalgamation of a number of Disconnect and Reconnect units of competency covering a range of categories of electrical equipment into one, in the recently updated Electrotechnology Training Package (<u>UEE – now</u> Release 3.2).

In order to meet its regulatory functions in relation to affirming the *category of 'electrical equipment'* the qualified holder of an RTO transcript was assessed on, given it is no longer reported in the title of the unit of competency, OFT's Assistant Commissioner has had to formally gazette and issue a "*NOTICE OF ADDITIONAL INFORMATION*" for RTOs. The OFT notice can be downloaded <u>HERE</u>, outlining the requirements that must be reported on an RTO's transcript.

Specific units of competency are:

- <u>UEERL0004</u> Disconnect reconnect electrical equipment connected to low voltage (LV) installation wiring
- <u>UEERLO005</u> Locate and rectify faults in low voltage (LV) electrical equipment using set procedures

The Notice states, "Licence or Certificate applicants are required to provide an RTO issued digital (computer generated) transcript that includes the category of 'electrical equipment' the qualified holder of the transcript was assessed on in addition to the other requirements on the application form.

The following specialist work categories of 'electrical equipment' must be indicated on the RTO issued digital transcript. Failure to do so will result in the applicant being refused a licence or certificate.

- a) Motors
- b) Hot Water heaters
- c) Appliances
- d) Air conditioning
- e) Refrigeration"

The <u>AQF Qualifications Issuance Policy</u> requires RTOs to adhere to any government regulatory and quality assurance arrangements. Refer clauses 2.2.2 (page 71) and 2.5.3 (page 73).

The OFT website is in the process of being updated to reflect the new requirements – **LICENSING AND QUALIFICATIONS**

Download the OFT NOTICE OF ADDITIONAL INFORMATION REQUIRED OF RTOs HERE



7. MAE CAREERS PATHFINDERS SYDNEY SHOWCASE DAY FOR FEMALES



The Agrifood and Electrotechnology ITAB's will host **FREE** showcase days for Manufacturing, Agrifood and Electrotechnology (MAE) industries in partnership with the National Vegetable Protected Cropping Centre and Essential Energy.

An exclusive event for female participants aged 16-64, careers advisors & influencers. You'll see industry at work, gain hands on experience and develop a sense of the many jobs available for consideration.

SYDNEY:

Held on location, **Building S40, Horticulture Road, Hawkesbury Campus, Western Sydney University, Richmond NSW**

Attendees will have the opportunity to:

- meet and talk with female industry leaders involved in protected cropping, beekeeping, pollination, energy and electrotechnology industries
- gain hands-on experience
- access the latest career information & learn more about rewarding occupations
- ask questions and have them answered by industry experts
- register and reserve a place for obligation free opportunities to do work experience with local MAE industries
- free networking lunch

Showcase day participants numbers are limited and registrations are essential.



WHEN: Wednesday, 7 December 2022, 9:30 am to 2.00pm

Download a copy of the flyer here: MAE SYDNEY FLYER

CLICK HERE TO REGISTER FOR SYDNEY - FREE AND EXCITING EVENT

Check for bus access and support.

For more information contact Melissa by email mae@agrifooditab.com.au or call 0421830056; or visit the agrifooditab.website

8. CHANGING SKILLS FOR CHANGING TIMES



In the latest podcast of 'What now? What next? Insights into Australia's tertiary education sector' (Episode 77 - 15 November 2022), Claire Field discusses a range of issues including Renewable Energy and Electric Vehicles with <u>Arowana</u>'s Managing Director of Australasia, Michael Hui.

Arowana own a number of accredited and non-accredited education businesses (EdventureCo) offering different training solutions for



individuals, employers and even governments as they navigate the changing world of work and increased digitisation.

Arowana also owns businesses in the Renewable Energy and Electric Vehicle sectors and with the growing emphasis on skills training for these sectors, Michael also shared his insights from their operations.

In a series of episodes, Claire Field talks with leaders and experts from within the Australian tertiary education sector and across the global ed-tech sector.

LISTEN TO THE PODCAST HERE

9. ETU - HIGHER EDUCATION REVIEW NEEDS SKILLS AND TRAINING SECTOR VOICES



Editor, Sean Carroll reports in 17th of November 2022 edition of Electrical Connection that, "the Electrical Trades Union (ETU) has warned a landmark review of Australia's higher education system could fail its objectives without clear voices from the vocational skills and training sector."

The article states, "The ETU has welcomed the higher education review and its focus on VET-university collaboration.

To unlock the potential for post-secondary education, the Panel will need to engage strongly with VET industry participants.

A ministerial reference group chaired by Education Minister Jason Clare will advise the panel. Its composition will be announced before Christmas.

"This review is a great idea which, with the right stakeholder engagement, will be able to achieve meaningful collaboration between vocational and university education," ETU acting national secretary Michael Wright says.

"Rapid technological change and a major skills shortage makes collaboration between universities and vocational education and training more vital than ever.

"For that to succeed, the experiences of students navigating both of these systems needs to be central to the conversation."

READ MORE HERE

10. NSW GOVERNMENT REVIEWS UNDERWAY – HAVE YOUR SAY



The NSW Government has several reviews underway which encompass issues of electrical licencing, safe electrical work, supervision of apprentices and trades assistance, continuous profession development (CPD) for licenced occupations, updated enforcement provisions and more.

In relation to the first two below, government is seeking feedback to inform prospective legislative changes to current arrangements, from the public and stakeholders. The opportunity for you to have your say

will soon close. It is important that you consider what the proposed changes might mean to



your current work practices and what eligibility and maintenance of competency requirements will be decided with respect the classes of specialist electrical licensing.

These are:

1. REFORMING THE BUILDING LAWS IN NSW:

The review aims to create a new foundation for construction by:

- improving safety, accountability and transparency;
- ensuring high-quality design, construction and maintenance;
- modernising and simplifying building legislation.

Related documents for the review process include:

- Home Building Act (HBA) Review inc. electrical licensing and PD - CLICK HERE
- Draft supervision practice standards for the electrical industry electrical apprentices and trades assistants - CLICK HERE FOR **PRACTICE STANDARDS**

2. REVIEW OF THE GAS & ELECTRICITY ACT:

CLICK HERE FOR MORE TO DOWNLOAD DISCUSSION PAPER

The main proposals in the discussion paper include:

- changes to definitions such as electrical and gasfitting work
- expansion of the scope of the Act to capture hydrogen gas and appliances
- certification of electrical articles
- transfer of autogas installation for vehicles to the Motor Dealers and Repairers Act 2013
- introduction of the Type A and Type B framework for regulating gas appliances in NSW
- changes to notification requirements for serious electrical or gas accidents
- strengthened compliance and enforcement to improve consumer safety
- improved ways of sharing information with industry.

3. REVIEW OF SAFEWORK NSW:

Retired Supreme Court Judge to Carry out Review of SafeWork NSW -**CLICK HERE FOR MORE INFORMATION**

The Review will examine SafeWork NSW's performance of its regulatory functions (including educational functions) under the Work Health and Safety Act 2011 (NSW).

- Terms of Reference Independent Review of SafeWork NSW **CLICK HERE FOR TERMS OF REFERENCE**
- The reports will be publicly released after they are provided to the Government.

Interim Report to be provided to the responsible Minister by 31 May 2023, with a final Report to be provided by

Feedback closes

Monday, 5 December 2022.

Feedback closes Friday, 25 November 2022

29 November 2023

Your feedback is important and will help shape proposed changes that will be presented to Parliament for consideration according to the programmed parliamentary schedule.



11. NATIONAL CAMPAIGN WARNS HOMEOWNERS, TRADIES OF THE DANGERS OF ASBESTOS

DANGER
ASBESTOS
REMOVAL IN
PROGRESS

The 17th of November 2022 edition of NSCA Foundation Safe-T-Bulletin reported that November marked National Asbestos Awareness Month. In this regard Asbestos Education Committee urged homeowners, renovators and tradies to be aware of the danger of asbestos.

The article stated, "During National Asbestos Awareness Month (1–30 November), the Asbestos Education Committee aims to increase awareness of the danger of asbestos when renovating or maintaining homes, particularly amid the continued building and renovation boom and the tradie shortage. Amid the growing popularity of renovating, with homeowners gripped by interest rate hikes and the rising costs of labour, concerns are growing that homeowners are taking avoidable risks with asbestos and jeopardising their health and the health of others when carrying out DIY renovations.

Over 4000 Australians reportedly die each year from asbestos-related diseases — around 265% more than the annual national road toll. As a result, it is vital that homeowners, renovators and tradies heed the warnings and respect the dangers of asbestos. Clare Collins, Chair of the Asbestos Education Committee and director of the national campaign, said that Asbestos Awareness Month aims to reduce the incidences of avoidable asbestos exposure to prevent asbestos-related diseases by providing Australians with essential information to help save lives.

"While asbestos-containing materials remain in one-third of Australian homes, the significance of this dedicated month-long campaign to the ongoing health of Australians cannot be overstated. And with health experts predicting a continued rise in third-wave asbestos-related diseases as a result of exposure to asbestos fibres when renovating or maintaining old properties, the Australian Mesothelioma Registry data on exposure, the growing popularity of renovating and the current shortage of tradespersons, homeowners must learn to respect the serious risks posed by asbestos mismanagement to protect their health and the health of their loved ones," Collins said.

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The <u>Asbestos Awareness website</u> offers extensive information, including the types of homes that may be affected and the types of products to look for.

The online <u>Asbestos Product Database</u> provides images and locations of products likely to contain asbestos and the <u>Asbestos Awareness – 20 Point Safety Check</u> gives information on the risks and how to manage asbestos safely.

Additionally, the <u>Fact Sheets for Homeowners</u> provide instructions on how to stay safe around asbestos, while the <u>Asbestos Awareness Residential Property Checklist – A Homeowner's Guide to Identifying Asbestos-Containing Materials</u> is a useful step-by-step guide that takes homeowners through their property to help them identify where asbestos might be lurking and acts as an asbestos register of suspected asbestos locations for the ongoing safe management of asbestos-containing materials not removed during renovations."

READ MORE HERE



12. NSW SMALL BUSINESS MONTH - WHAT'S ON THIS WEEK



The latest, 17 November 2022 NSW Small Business Commission newsletter highlights the many events that are on during November NSW Small Business Month.

The newsletter states, there are "over 400 events happening during November, it's time to take advantage of

#NSWSmallBizMonth and find an event near you.

From networking with industry leaders to keynote sessions on small business trends, you're sure to find an event that interests you."

Explore the many events happening in week three of #NSWSmallBizMonth. It's time to Connect for Success - find an activity and register today."

FIND EVENTS

NSW Small Business Commission is happy to answer your questions"

Please reach out if you have any questions and email the team at smallbusiness.month@smallbusiness.nsw.gov.au.

13. ELECTRICAL LICENSING DISCIPLINARY ACTION



The Queensland Electrical Safety Office reports in its eSafe Electrical bulleting of 17 November 2022 that in October 2022, the Electrical Licensing Committee took disciplinary action against five licence holders including suspensions, fines and independent audits.

It reported:

- 1. "An electrical worker performed electrical contracting work without an electrical contractor's licence and work outside the scope of their restricted electrical worker licence.
- 2. An electrical worker failed to isolate and lockout/tagout to prevent de-energised equipment being re-energised. They also didn't adequately supervise an apprentice while installing air-conditioner equipment at a school. ...
- 3. An electrical contractor failed to implement safe systems of work in lockout/tagout and testing procedures. They also failed to ensure the correct ratio of tradespeople to apprentices. As a result, an electrical apprentice received a shock, with potential for a more serious incident. ...
- 4. An electrical worker failed to adequately supervise an apprentice and perform all mandatory testing while working on a construction site. They asked the apprentice to connect the remaining single-phase communal area power and light circuits contained in the main switchboard. While the apprentice was carrying out this work, they also connected a three-phase communal hot water circuit. ... As the plumber began work, their shoulder contacted the wires and they received a shock. ...
- 5. An electrical contractor failed to implement safe systems of work and procedures resulting in an unterminated live cable. There was no auditing to ensure correct test and isolation procedures were followed. As a result, a person received an electric shock and there was the potential for a more serious incident. ...

Commissioner for Electrical Safety and Chair of the Electrical Licensing Committee, Keith McKenzie has a message for electrical workers based on the committees review of recent cases:



- Electrical workers must only work to the requirements according to the type of licence they hold. If you have a restricted electrical work licence, no installation work can be carried out.
- If you supervise electrical apprentices, you must ensure they are competent to perform the work tasked to them and offer clear and concise instructions. Involve apprentices in the lockout/tagout of equipment process. ..."

READ MORE HERE

14. ON-THE-SPOT FINES FOR ELECTRICAL OFFENCES



Electrical Comms Data reports in its 15 November edition that new regulations will allow <u>SafeWork NSW</u> to issue on-the-spot fines for existing electrical work and asbestos offences through an amendment to the Work Health and Safety Regulation.

The articles states, "Head of SafeWork NSW Natasha Mann said the amendments will allow SafeWork inspectors to issue penalty notices for work near overhead wires with fines of \$3600 for

corporations and \$720 for individuals.

"In the past two and half years, SafeWork NSW has responded to more than 1000 workplace incidents involving workers coming into contact with electricity, two of which resulted in fatalities," Mann said.

"The most common risks associated with electrical work include contact with overhead powerlines, underground services and unsafe wiring that includes temporary wiring, installations and electrical equipment."

Electrical incidents can also result in power outages, fires, damage to infrastructure and businesses, and even road closures.

"We're urging businesses and workers undertaking electrical work to shut off mains power supply when working near electricity and under no circumstance should electrical work be done without holding a licence to do so," Mann said.

"We're also strengthening penalties to provide greater deterrents to existing offences relating to asbestos removal work in response to reoffenders within the asbestos and demolition industry."

READ MORE HERE

15. BUILDING ESSENTIAL SKILLS FOR MODERN GRID TRANSFORMATION



The 17th of November Utility Magazine's e-News looks at how Endeavour Energy is ensuring its workforce is appropriately skilled and qualified to support the modernisation of the electricity grid.

Reporter, Patricia Mae Tagabe's article takes a closer look how Endeavour Energy is addressing this need. "In a world where we are 'electrifying everything' and enabling new technology, services, markets and products, new skills will be required to develop, operate,

and maintain electrically significant infrastructure, both within traditional roles in the electricity supply industry as well as in electrical contractors working alongside the industry and on other major infrastructure projects.



The changes currently reshaping the national electricity supply industry are unprecedented, reflecting a fundamental shift in how electricity is produced, distributed, and consumed in Australia. As the race to create zero carbon economies heats up, other countries throughout the world are also experiencing similar changes to secure, not only a safe climate, but prosperity in the 21st century's global economy.

The Australian Energy Market Operator's 2022 Electricity Statement of Opportunities signals the urgent need to progress 3.4GW of new generation, storage, and transmission developments to maintain a secure, reliable, and affordable supply in the National Electricity Market when large thermal generators exit later this decade.

Add to this the New South Wales Government's significant pipeline of new energy infrastructure in the New South Wales Renewable Energy Zones (REZs) as well as transmission lines, rail networks and the growing pipeline of infrastructure required for the Western Sydney Aerotropolis.

Meeting a shifting workforce profile and its training and skills requirements will play a key role in the transformation of the existing power system, while continuing to deliver a reliable and secure system that ensures the safety of its employees as well as the public. But who is up to the challenge of educating and upskilling the workers needed in the energy and infrastructure sectors to build the new energy system and keep up with rapidly evolving technologies?

Proven training for safety, skills and compliance in the twenty first century

As an operating distribution network with more than 130 years of powering communities and businesses in New South Wales, Endeavour Energy has a strong reputation for training professionals in working safely around utility assets; with training focused on four guiding principles: skilling of workforce, safety of all personnel, safety of equipment; and continuity of supply.

More than 2,200 workers complete training each year at the company's state-of-the-art training facility at Hoxton Park, which is purpose built to enable development of practical powerline, substation, and cable jointing skills in controlled environments.

Now, in a new initiative, Endeavour Energy is partnering with leading RTO Thomson Bridge to enable ready access to essential training for safety, skills, and compliance to workforces across the energy and infrastructure sectors in New South Wales.

This collaboration now means workers and contractors involved in developing, operating, and maintaining electrically significant infrastructure can access short courses and training at Hoxton Park to gain the qualifications essential for their work.

...

Addressing industry skills shortages

Andrew Pitman, General Manager Business Services at Endeavour Energy, said the partnership seeks to address anticipated workforce skills shortages and aims to deliver a highly skilled and adaptable workforce ready for the future to maintain a safe, resilient, and affordable electricity supply essential for modern lifestyles and business success."

READ MORE HERE



16. FIVE DATA CENTRE TRENDS TO SHAPE 2023



Sandra Rossi, Editor at Climate Control News (CCN) reports in the 16 November 2022 edition how data centres will face increasing regulations in the future.

The article states, "Data centres will experience increased regulation and third-party oversight in 2023 as the world continues to grapple with the industry's rising energy and water

consumption against the backdrop of ongoing climate change.

The intensified focus on the overall environmental and community impact of the data centre is one of five industry trends for 2023 identified by the global data centre experts at Vertiv, global provider of critical digital infrastructure and continuity solutions.

Vertiv chief operating officer and president of the Americas, Giordano Albertazzi, said the data centre industry is growing rapidly as more and more applications require compute and storage, driving a corresponding rapid increase in energy and water use in data centre facilities.

"The industry has understood that pursuing energy and water efficiency aggressively is key for future success and survival," he said.

"Increased regulation is inevitable and will lead to important innovations across our industry. The process may not always be easy or linear, but it can be navigated with the help of expert data centre partners and innovative solutions that can anticipate the changes while meeting the always increasing requirements of the data centre applications."

The advances in chip design and manufacturing that limited server power consumption through the first decade and a half of the 2000s reached their limits in recent years.

According to the Uptime Institute server power consumption has increased by 266 per cent since 2017."

Expected trends include:

- Increased regulation
- Off the rack
- Fuel cells
- Higher densities
- 5G metaverse

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17. PV-POWERED HVAC



Rachel Urquhart reports in HVAC&R New, a publication of the Australian Institute of Refrigeration, Air conditioning and Heating (AIRAH) of 18 November 2022, that an Australian-Indian group of researchers is exploring the combined use of thermoelectric modules (TEMs) and rooftop photovoltaics (PV) in HVAC for buildings.

The articles states, "Using air as the thermal fluid for the rooftop PV, the scientists designed a system that uses a primary TEM wall to deliver room air conditioning.



Traditionally, TEMs have not been used in such applications due to a low coefficient of performance (COP), however, the researchers believe that combining their use with PV may increase their commercial viability.

"The TEM wall system is integrated with thermal energy storage material wall and has the primary function to heat or cool the adjacent room, store excess thermal energy and can also be optimised as a support system to enhance the efficiency of any already installed conventional AC system," researchers told PV Magazine.

"In the rooftop system, the airflow is sucked by natural convection from the bottom of the airduct below the PV modules and takes the heat away from the integrated TEM as well as the PV modules."

As well as being more environmentally friendly in terms of direct emissions than cooling systems with refrigerants that contribute to global warming, the technology's advantages include low maintenance, easy repair, low noise, and precision cooling, say developers.

READ MORE OR DOWNLOAD THE REPORT HERE

18. IS AUSTRALIA READY FOR THE NEXT HYDROGEN PHASE?



The Australian Pipeliner e-newsletter, in its 15 November 2022 edition, reports that discussions held at this year's APGA's 2022 Building Hydrogen Infrastructure Symposium contended that the pipeline and infrastructure industries are ready to take on the infrastructure challenges to come.

The report stated, "Hydrogen is seen as a key renewable energy pathway in Australia and around the globe, and

hydrogen infrastructure is known to be the lowest cost option for terrestrial energy transport and storage. As hydrogen producers gear up to take up this opportunity, the pipeline industry is in prime position to build new infrastructure today.

The Building Hydrogen Infrastructure Symposium saw experts, both local and international, on the development of new hydrogen infrastructure share their wealth of knowledge and answer key questions posed about hydrogen infrastructure development.

APGA's National Policy Manager, Jordan McCollum, said that the event was a great success.

"It was wonderful to see people engaged with what we were there to speak about; a lot of people seemed to like that it was focused on tangible current and future projects," he said.

"The Building Hydrogen Infrastructure Symposium wasn't interested in talking about the "what if's" – it was a lot more concerned with what's going to impact the future of our industry."

The experts set out to answer burning questions including why Australia should choose hydrogen and hydrogen infrastructure as it draws ever closer to its renewable energy future.

"It was great to have the people in the room who are active within the industry who are the ones developing and designing new infrastructure, or actively seeking hydrogen-ready line pipe or actively delivering hydrogen compressors worldwide," said McCollum.

"They're the people who have their boots on the ground and are focused on moving the industry toward the deployment of hydrogen infrastructure."

Chief Executive Officer of APGA Steve Davies, set the tone for the day to come through his welcome and introduction. After this McCollum, in his own speech, touched on the economics of a renewable gas transition.



"Through my talk, I tried to dispel the prevailing myth that the only way to decarbonise gas use in the home is through electrification. ..."

READ MORE HERE

19. SURVIVAL OF THE MOST ADAPTABLE – A DARWINIAN ENERGY TRANSITION



The 17th of November edition of EnergyInsider, a joint publication of Energy Networks Australia (ENA) and the Australian Energy Council (AEC), Ben Skinner submits cool headed and evidence-based decisions are needed to make sure we maintain optionality and adaptability in our energy resources as we decarbonise the whole energy system.

The article states, "Our complex energy system also has needs. We need transport, industrial and home heating and cooking, lighting etc. We use a range of resources to provide for these needs. Liquid fuels for transport, gas for industrial and home heat and cooking and electricity can provide for most.

Our energy system is in transition due to the imperative to decarbonise, the economics of renewable technologies, and the prevailing winds of customer choice. While much progress has been made in decarbonising electricity systems around the world, questions remain about the best way to transition the whole energy system. When, where and how should we transition away from coal, oil and gas resources to provide for our various energy needs? How do we decarbonise transport and industrial and home heating in a way that best serves the long-term interests of energy customers and the environment?

One common suggestion is that we should first get the carbon out of electricity, and then transition all other energy needs (such as transport and heat) to electricity as a resource. This however feels like the kind of decision that could give rise to future regrets. Reviving the analogy with the documentary series 'Alone' – it's like the kind of impulsive 'eggs in one basket' decision that usually leads to contestants going home.

Decisions amidst uncertainty

Intuition is not a very convincing or reliable tool for decision making, so let's dig down a little into what is at play here.

Our current energy system uses a range of resources that are essentially well suited to their purpose. Electricity requires a fine balance of supply and demand in real time, with the network capacity to manage peak events as well as some redundancy and flexibility in certain circumstances. It can be costly to add to the peak capacity of networks, as we all found out when air conditioning load was growing rapidly in the early noughties. Adding flexible loads to the electricity system, on the other hand, could be quite beneficial. More energy put on the system means fixed assets are better utilised. The cost is smeared across more kWh, and the cost per kWh is reduced.

This story of better utilisation of network assets is likely to play out with the electrification of flexible loads like small vehicles (assuming we get the right smart charging and pricing settings in place). The same can't be said for some of the less flexible loads, such as home heating and cooking, as well as some industrial loads. Home heating in particular is extremely seasonal and peaky. Gas network infrastructure has been well placed to handle these peaks, given the significant capacity for energy throughput on the gas system, coupled with the fact that gas is energy stored until needed (unlike the electricity system which must balance in real time). It is unclear at this stage what the full practical electricity system costs might be of electrifying this inflexible load in addition to significant flexible load. However, the Gas Vision 2050 – Delivering



<u>a Clean Energy Future</u> report shows using renewable gas like green hydrogen to decarbonise the gas system can be done at half the cost of electrification.

•••

The attractiveness of simplistic phrases like 'electrify everything' should be met with a healthy degree of scepticism, and the kind of cool headed, evidence-based decision making that keeps survivalists going in the wild."

READ MORE HERE

20. SMALL-SCALE RENEWABLE ENERGY SCHEME (SRES) PRODUCT LISTING CONSULTATION



The Clean Energy Regulator (CER) has opened a 1-month consultation on Small-scale Renewable Energy Scheme (SRES) solar product listing.

If you have an interest in the SRES, we encourage you to have your say. Information on how to make an email submission is available on the **CER consultation hub**.

Solar panel modules and inverters must be listed as approved eligible products that meet Australian standards. Products that do not meet Australian standards are not eligible for small-scale technology certificates under the SRES.

The Clean Energy Council (CEC) currently approves and maintains a list of approved eligible products. If the CER does not nominate an organisation, the CEC will continue to publish the lists of approved products.

Your feedback will help CER decide whether they should nominate an organisation to publish lists of approved solar products. If the CER does not nominate an organisation, the Clean Energy Council will continue to publish the lists of approved products.

Submissions close Tuesday 6 December 2022.

The Clean Energy Regulator (CER) is accepting of email submissions from:

- solar industry participants (registered agents, manufacturers or importers of solar products, installers and designers, and retailers)
- industry bodies
- government representatives
- owners of solar systems
- interested members of the public
- consumer advocacy groups.

If the CER decides to nominate a product listing organisation, the CER will commence a process to use its power under the Renewable Energy (Electricity) Regulations 2001 to nominate an organisation to publish solar product lists.

If the CER does not nominate a body, the Clean Energy Council will continue to publish the lists of approved products.

Email submissions to cer-sresreforms@cer.gov.au before 5pm AEDT Tuesday 6 December 2022

HAVE YOUR SAY HERE



20.1. CER QUARTERLY CARBON MARKET REPORT – PV CAPACITY DOWN

- Installed capacity in 2022 to the end of Q3 totalled 1.9 GW. While down 19% from 2021, this is an improvement from the 27% decline in the first half of 2022.
- The total capacity installed in 2022 is now estimated to be 2.7 GW, up from the original estimate of 2.3 GW.
- At the end of Q3 2022, air-source heat pump installations totalled an estimated 59,000, 44% higher than the same period in 2021.



Visit the Clean Energy Regulator (CER) website to read the latest QCMR.

21. BIGGEST GAS UNIT IN SOUTH AUSTRALIA CLOSED IN MIDDAY SUN TO HELP KEEP LIGHTS ON



Giles Parkinson founder and editor of Renew Economy, reports in the 18 November 2022 edition, that rooftop solar PV is not the only piece of equipment that has been switched off during the day time hours as authorities seek to maintain stability on South Australia's isolated grid.

The article states, "As RenewEconomy <u>has reported this week</u>, South Australia has been forced to switch off as many rooftop solar systems as it can, and encourage others to do the same.

The intention is to minimise any fallout if the grid is hit by another unexpected problem, like the storm that tore down a transmission tower last Saturday and effectively cut the state grid off from the rest of the country.

But because authorities have the power to only switch off around half the state's rooftop solar, it has now emerged that other measures have been taken to protect the grid, including shutting down the state's biggest gas units, at Pelican Point near Adelaide, and switching on smaller units, including diesel, elsewhere.

If that feels like shuffling the deck chairs, it is done with a purpose – namely to reduce the risk of a large generator tripping off and causing large amounts of rooftop solar to do the same – a situation that the Australian Energy Market Operator would struggle to contain while the grid is in its isolated state.

•••

It's not the only action AEMO has taken. RenewEconomy understands that the state's big batteries – Hornsdale, Lake Bonney and Dalrymple North – have also been deliberately curtailed in a "half full" state so they can act as shock absorbers in response to any further big disturbances in the grid."

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