

Electricity Infrastructure Jobs Advocate's second report to the Minister for Energy

June 2023

Acknowledgment of Country

The Electricity Infrastructure Jobs Advocate and secretariat acknowledge that Aboriginal and Torres Strait Islander peoples are the First Peoples and Traditional Custodians of Australia, and the oldest continuing culture in human history.

We pay respect to Elders past and present and commit to respecting the lands we walk on, and the communities we walk with.

We celebrate the deep and enduring connection of Aboriginal and Torres Strait Islander peoples to Country and acknowledge their continuing custodianship of the land, seas and sky.

We acknowledge the ongoing stewardship of Aboriginal and Torres Strait Islander peoples, and the important contribution they make to our communities and economies.

We reflect on the continuing impact of government policies and practices, and recognise our responsibility to work together with and for Aboriginal and Torres Strait Islander peoples, families and communities, towards improved economic, social and cultural outcomes.

Artwork:

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The Electricity Infrastructure Jobs Advocate's role in the Electricity Infrastructure Roadmap

The NSW Electricity Infrastructure Roadmap (the Roadmap) is the NSW Government's plan to transform our electricity system into one that is cheap, clean and reliable.

The Electricity Infrastructure Jobs Advocate (Jobs Advocate) is an independent statutory office established under section 10 of the *Electricity Infrastructure Investment Act 2020* (the Act). The Jobs Advocate's role is to advise the Minister for Energy on:

- strategies and incentives to encourage investment, development, workforce development, employment and education and training opportunities in the energy sector in NSW including in the Hunter, Central Coast, Illawarra, Far West, South West, New England and the Central West regions of NSW
- rail, road and port infrastructure that is needed in NSW and the regions specified above to promote export opportunities for generation, storage and network technology
- other matters requested by the Minister.

The Jobs Advocate may also:

- support implementation of actions in the Renewable Energy Sector Board's plan, especially those relating to skills development and training
- sit on boards, committees and working groups as relevant to the role.

The Jobs Advocate works alongside other key Roadmap entities such as Energy Corporation of NSW (EnergyCo) and AEMO Services Limited (AEMO Services), and works closely with other Government agencies such as the Department of Education and the Department of Regional NSW.

About the Jobs Advocate

Dr Mark Apthorpe was appointed as the first NSW Jobs Advocate on 14 February 2022.

Dr Apthorpe is based in the Hunter and is the current chair of the Hunter Plant Operator Training School Ltd and the Hunter section of the Chartered Institute of Logistics and Transport. He has also held senior executive roles in energy and logistics businesses.

Dr Apthorpe's most recent role was as a lecturer in management at the University of Newcastle. He brings to the role strong networks in industry, education, vocational training, unions and a range of relevant industry groups.



Figure 1: Mark Apthorpe, the Electricity Infrastructure Jobs Advocate

Introduction

The Jobs Advocate must provide a report on his activities to the Minister for Energy once a year. This is the second report on the Jobs Advocate's activities.

This report:

- offers six recommendations to the Minister for Energy and the NSW Government to assist with the successful delivery of the Roadmap in regards to skills, training and jobs. Some of these recommendations can be implemented quickly to provide immediate benefits to regional communities and renewable energy projects.
- provides contextual background for the above recommendations based on the Jobs Advocate's activities and consultations
- provides an update on the Jobs Advocate's activities from his first year.

The views in this report are those of the Jobs Advocate.

Recommendations to the Minister for Energy

The Jobs Advocate makes the following recommendations to the Minister for Energy and the NSW Government.

These recommendations are informed by research and consultations undertaken by the Jobs Advocate across industry, government and communities in the renewable energy zones (REZs) in the first year of his appointment. These recommendations are intended to ensure the successful delivery of the Roadmap, especially the Central-West Orana (CWO) REZ, which will be the first REZ delivered.

Recommendations

1. Establish a body to assist with achieving the minimum requirements in the Renewable Energy Sector Board's plan for all renewable energy projects in NSW in relation to skills, training and jobs.
2. Create REZ Local Jobs Coordinator roles to maximise opportunities for local workers for skills, training and jobs.
3. Appoint REZ Jobs Coaches focussed solely on helping unemployed, underemployed and underrepresented workers in each REZ to gain employment on REZ projects
4. Sponsor a campaign, starting in the REZs and then expanding state-wide, to increase awareness amongst school students and the general public of the many and varied careers in renewable energy.
5. Institute a TAFE Roadmap Support Initiative to improve workers' ability to gain necessary qualifications for careers in the clean energy industry.
6. Implement a Group Training Organisation model in REZs to provide ongoing employment across a range of REZ projects while participants complete training.

Analysis

Recommendation 1: Establish a body to assist with achieving the minimum requirements in the Renewable Energy Sector Board's plan for all renewable energy projects in NSW in relation to skills, training and jobs

The problem

The current structure of how renewable energy projects are administered in NSW is unlikely to consistently deliver the social benefits envisaged, especially in relation to skills, training and jobs. Through consultations with regional communities, project developers, EPC contractors, regional contractors, unions and other stakeholders, it has become evident that achieving the minimum requirements set out in the Renewable Energy Sector Board's (the Sector Board's) plan, especially in relation to skills, training and jobs, will require the Government's special attention.

The Jobs Advocate has observed that the way many contracts are carried out on major electrical infrastructure projects could be described as pyramid contracting. Pyramid contracting is when a project developer sub-contracts out parcels of work for a major project, which in turn is then sub-contracted to a specialist company, then a local contractor, and so on.

In this process a divergence may emerge between "the bid and the build" – that is, what is committed to in a tender differs from what unfolds on the ground. The Jobs Advocate has also heard that some renewable energy project developers are splitting contracts that would have ordinarily been administered by one contractor to multiple contractors to address workforce shortages. This can complicate the contract ownership structure and make it difficult to determine who is responsible for delivering workforce requirements for the project as a whole.

This is further complicated by the fact that renewable energy projects in NSW are administered and managed by a variety of entities which could lead to inconsistent application of the Sector Board's plan or the plan not being applicable at all.

- EnergyCo: is the Infrastructure Planner for the REZs. EnergyCo is responsible for administering tenders for REZ network infrastructure projects and managing contracts with successful proponents for transmission construction but not generation and storage projects. Energy Co are required to consider the Sector Board's plan in their tenders.
- AEMO Services: is the Consumer Trustee for NSW. AEMO Services is responsible for administering tenders for Long Term Energy Service Agreements (LTESAs) and Access Agreements for generation, firming, and long-duration storage projects. AEMO Services are required to consider the Sector Board's plan in their tenders which they have included as Merit Criteria.
- Scheme Financial Vehicle (SFV): the SFV serves as the independent counterparty to LTESAs and Access Agreements with the successful bidders for Roadmap generation, firming and storage projects. The SFV is also responsible for monitoring and compliance of the commitments made in

tender documentation for Roadmap projects although they are not involved in the negotiation of those commitments. This adds to the concern about the divergence that can emerge between “the bid and the build” on both sides of the contract.

- There are also a significant number of renewable generation and storage projects to be built in NSW that are not connected to the Sector Board’s plan as they do not have any contracts with AEMO Services, EnergyCo or the SFV. In NSW all large-scale renewable energy projects require Department of Planning and Environment approval but there is no requirement for the Sector Board’s plan to be considered in granting approval. The May 2023 report from the Energy Data and Analytics team shows that the majority of renewable generation and storage projects being built, approved and in planning in NSW are located outside the five REZs. Currently there is nothing in place to link these projects to the Sector Board’s plan or any similar minimum requirements. Additionally, there are renewable energy projects being constructed that sit inside a REZ that opt to have no involvement with LTESA’s or Access Agreements and so are not linked to the Sector Board’s plan by contractual arrangements.

The above points indicate the potential for an “uneven playing field” to develop with some projects being required to address the Sector Board’s plan while a possible large proportion of projects have no similar requirement. This could lead to uneven delivery of the social benefits envisaged, especially regarding skills, training and jobs, which could negatively impact support in REZ communities for renewable energy projects. The issue of an “uneven playing field” has been raised by some project developers as a concern.

The solution

The Jobs Advocate recommends establishing a new body, or modifying an existing entity, to assist with consistently achieving the minimum requirements in the Sector Board’s plan across all renewable energy projects in NSW. This body would:

- increase awareness of the minimum requirements in the Sector Board’s plan and advocate for increased participation for local workers and businesses
- provide tailored support to projects in the first instance to help them achieve those requirements
- actively monitor the performance and progress of projects in achieving Sector Board minimum requirements
- manage compliance, including through enforcement if necessary.

The Jobs Advocate encourages proactive engagement with industry and key renewable energy stakeholders to build awareness of the minimum requirements in the Sector Board’s plan as a first step.

The body envisaged would be focussed solely on the skills, training and jobs outcomes in line with the Sector Boards plan across all renewable energy projects in NSW. Such a focus would be difficult for Energy Co and AEMO Services given their current structures and responsibilities. However, this body could fit within other government departments such as Energy and Climate Change, Planning and Environment or Industry.

The Jobs Advocate believes that the Victorian Local Jobs First Commissioner's model could provide a helpful guide for meeting the minimum requirements of the Sector Board's plan. This model has four

key priority areas: Advocate, Engage, Comply and Monitor¹. The model is attractive as it emphasises Advocate and Engage. The new body envisaged would have helping projects as its first priority. That is, helping projects by advocating and engaging with projects to achieve the minimum requirements for skills, training and jobs as set out in the Sector Board’s plan. This body would ensure all renewable energy projects understood the requirements but more importantly would proactively provide the “scaffolding” to help projects meet the requirements. However, it would be expected such a body would also require the authority to insist on compliance and be able to monitor compliance.

The outcomes from the actions of such a body would be expected to contribute to building support in local communities for renewable energy projects.

Recommendation 2: Create REZ Local Jobs Coordinator roles to maximise opportunities for local workers for skills, training and jobs

The problem

Currently each developer in a REZ is having to identify and connect with all the possible stakeholders in that REZ, including First Nations groups, training providers and possible workers. This creates waste, duplication and frustration for all which can be avoided through local coordination. The creation of REZ Local Jobs Coordinator roles is an initiative that can be implemented almost immediately and provide benefits to local communities and renewable energy projects. Each REZ has unique characteristics and challenges for delivering major infrastructure projects and there will be a range of different developers operating in each REZ. Achieving positive outcomes for workers in these REZ’s will require a coordinated approach that links all the projects stakeholders and workers.

The Sector Board’s plan includes minimum requirements to increase diversity and opportunities for apprentices and learning workers across electrical infrastructure projects in NSW². The plan is designed to drive cultural changes across the renewable energy industry, as the Infrastructure Skills Legacy Program (ISLP) is designed to do in the construction sector³. The minimum requirements in the Sector Board’s plan go further than those in the ISLP in that they extend to the operations and maintenance phase. Additionally, the plan provides stretch goals to represent ambition and future direction over time, and to signal to industry that further ambition will be rewarded in tenders for Roadmap projects.

The solution

¹ *About*, Victorian Local Jobs First Commissioner, <https://localjobsfirst.vic.gov.au/commissioner/about>

² Recommendation 3: Merit and value for money assessments, *The NSW Renewable Energy Sector Board’s plan*, pp. 31-41, <https://www.energy.nsw.gov.au/sites/default/files/2022-09/nsw-renewable-energy-sector-board-plan.pdf>

³ *The Infrastructure Skills Legacy Program*, <https://www.nsw.gov.au/education-and-training/vocational/vet-programs/infrastructure-skills>

The Jobs Advocate recommends establishing REZ Local Jobs Coordinator roles in each REZ to connect projects, training organisations, employment service providers, First Nations groups and local communities in each REZ. The purpose of these coordinators will be to maximise opportunities for local workers for skills, training and employment in Roadmap projects.

In larger REZs such as Central-West Orana, New England and the South West, this may require additional coordinators in each subregion. The local coordinators should live and work in their communities, and ideally have existing connections to those communities to maximise trust and positive relationships with those they will be serving.

Benefits for local communities will be optimised through Coordinators who assist project developers and contractors to:

- maximise the use of workers in the communities where projects are located
- connect with other industry partners and local contractors
- provide opportunities for local, regional and diverse suppliers including Aboriginal businesses, and social and disability enterprises to access project supply chains
- support capability building of local suppliers to better position them to respond to tenders
- coordinate with Government agencies such as the NSW Department of Education, Department of Regional NSW, Infrastructure NSW and Workforce Australia to leverage existing programs and suggest improvements
- coordinate with TAFE and other training providers to understand the availability and suitability of local training for renewable energy projects.

The Jobs Advocate sees merit in the model adopted by the NSW Government under the ISLP. For example, for the Sydney Metro, the NSW Department of Education funded an Infrastructure Skills Legacy Project Officer role embedded with the project's delivery team in the pilot phase to build momentum and drive behaviour with the major contractor and the sub-contractors. A similar Project Officer role was also embedded within multiple other major ISLP projects.

These Project Officers supported the delivery of the ISLP through providing expert advice and guidance to the project and contractors about available funding and support programs. Project Officers:

- drive the implementation and coordination of workforce skilling and pre-employment programs and initiatives
- assist project developers and contractors access services, information and funding
- deliver workforce development initiatives and programs to increase employment of underrepresented and disadvantaged groups
- provide continuous advice and guidance relating to available Government funding
- analyse quantitative and qualitative data for reports and case study development.

Head contractors for ISLP projects have acknowledged the importance of integrated Project Officers in achieving the targets set out in the ISLP⁴.

The Jobs Advocate encourages the NSW Government to build off the ISLP Project Officer model for the Roadmap by establishing REZ Local Jobs Coordinator roles

The value of establishing local coordination has been raised by a range of stakeholders in several REZ's including some of the project developers in the CWO REZ.

A similar concept was also put forward by Energy Co as a possible initiative at the CWO REZ Skills & Workforce Interagency Group Meeting. As mentioned above this initiative could be implemented almost immediately and provide benefits to both the local communities and the renewable energy projects. This initiative would be expected to help build support for renewable energy projects in regional communities.

Recommendation 3: Appoint REZ Jobs Coaches focussed solely on helping unemployed, underemployed and underrepresented workers in each REZ to gain employment on REZ projects

The problem

Unemployment is at record low levels in all REZs and yet there are still pockets of high unemployment and underemployment reported in all five REZ's⁵. Additionally, certain groups, such as women and First Nations people, are underrepresented in the occupations involved in renewable energy projects. Providing direct help to individuals in these groups will benefit the individuals and provide much needed workers for the REZ projects. This initiative can also be implemented almost immediately and provide benefits to local communities and renewable energy projects.

Some of the barriers facing underemployed, unemployed and underrepresented workers include:

- mature-aged workers may be overlooked for work opportunities due to their age
- some workers may not have the necessary qualifications or knowledge of the training sector needed to work on renewable energy projects
- workers from First Nations and migrant backgrounds may not have access to the same support services as other workers, or may require additional culturally sensitive support
- long-term unemployed workers may have disengaged from the job market or may be overlooked due to resume gaps

⁴ *Infrastructure Skills Legacy Pilot Program*, Sydney Metro, p. 3, https://www.sydneymetro.info/sites/default/files/20039-CS%20SM%20Infrastructure%20skill%20legacy%20pilot%20program%20CS_WEB.pdf

⁵ *Electricity Infrastructure Jobs Advocate's first report to the Minister for Energy*, <https://www.energy.nsw.gov.au/sites/default/files/2022-11/electricity-infrastructure-jobs-advocates-first-report-to-minister-for-energy-for-publication.pdf>

- some workers may have additional caring responsibilities
- some workers lack sufficient funds and access to transport to attend job interviews and worksites.

The solution

The government should create the role of REZ Jobs Coaches to help unemployed, underemployed, and underrepresented workers in each REZ gain employment on REZ projects. Jobs Coaches would provide one-on-one culturally appropriate assistance with eligible candidates to:

- help individuals understand the types of jobs that are available on renewable energy projects
- identify suitable jobs and career pathways
- complete necessary documentation to gain employment, such as birth certificates, driver licences, tax file numbers and visa applications
- obtain additional qualifications (where required)
- complete resumes and application forms
- provide coaching for job interviews.

REZ Jobs Coaches would have the cultural competency skills to work with the groups they serve, including those of different languages, religions and cultural customs. These coaches should live and work in the REZs to ensure they can build strong relationships with the workers and provide more effective support.

These Jobs Coaches would focus solely on renewable energy projects in REZs and develop deep knowledge of the local renewable energy jobs market. They would develop relationships with project proponents and share their knowledge to help participants find jobs in the renewable energy industry.

These coaches should also work with project proponents to identify what structural barriers can be addressed to increase participation of underrepresented groups in their projects. This could include:

- instituting flexible working conditions which are more suitable for those with caring responsibilities
- introducing cultural safety training for employers
- creating campaigns to promote and normalise diverse leaders in the sector
- creating resources for workers with English as a second language
- installing appropriate facilities for female workers and workers living with a disability
- encouraging flexibility on police checks and criminal records for those with demonstrated intention to work
- providing free personal protective equipment and transport options to worksites to increase social mobility.

The REZ Jobs Coaches would be expected to work closely with the REZ Local Jobs Coordinator but the establishment of REZ Jobs Coaches is not dependent on the establishment of REZ Local Jobs Coordinator and vice versa. As mentioned above this initiative could be implemented almost

immediately and provide benefits to both the local communities and the renewable energy projects. This initiative would be expected to help build support for renewable energy projects in regional communities.

Recommendation 4: Sponsor a campaign, starting in the REZs and then expanding state-wide, to increase awareness amongst school students and the general public of the many and varied careers in renewable energy

The Problem

The saying “you can’t be what you can’t see” describes the current situation with regards to renewable energy careers. It was found consulting across all REZ’s that there is little understanding in the community, especially amongst school students, of the great career opportunities that the transition to renewables will provide. A campaign to change this situation is seen as critical to building the pipeline of workers needed.

The workforce shortage across NSW creates a risk for delivering the renewable energy, firming, storage and transmission projects under the Roadmap. However, it also creates an opportunity for a new generation of young people to prepare and train for careers in the renewable energy industry.

Stakeholders in all regions, including employers, education and training professionals and employment service providers have highlighted the need for information about careers in renewable energy.

There are a range of programs and initiatives in place across NSW to make students aware of career opportunities. These include:

- the NSW Department of Education’s careers programs for public schools, including the Educational Pathways Program⁶ and Regional Industry Education Partnerships (RIEP)⁷
- myfuture⁸, a free Australian Government-funded website providing resources to explore career pathways and tools to develop self-knowledge to help with career decision-making
- careers programs offered by the Association of Independent Schools NSW, including School Industry Partnerships⁹
- a range of private careers services providers, including

⁶ <https://education.nsw.gov.au/public-schools/career-and-study-pathways/educational-pathways-program/about-the-pilot>

⁷ <https://www.nsw.gov.au/education-and-training/vocational/vet-programs/regional-schools-industry>

⁸ <https://myfuture.edu.au/>

⁹ Australian Association of Independent Schools, *School Industry Partnerships*, pp. 13-14, [https://www.aisnsw.edu.au/Resources/WAL%204%20\[Open%20Access\]/School%20Industry%20Partnerships%20-%20All%20Case%20Studies.pdf](https://www.aisnsw.edu.au/Resources/WAL%204%20[Open%20Access]/School%20Industry%20Partnerships%20-%20All%20Case%20Studies.pdf)

- Generation Australia¹⁰, a non-profit organization that helps people find jobs by providing training, support, and connections to employers
- Grandshake¹¹, an EdTech startup offering a range of services to help students develop the skills and experience for careers after school
- Year13¹², a digital enterprise providing resources for young Australians to make informed decisions about their future.

However, none of these provide clear and easy to find information on renewable energy jobs. The Jobs Advocate has seen a consistent lack of awareness of renewable energy careers among students, education providers and the general public across NSW

A study commissioned in 2022 by Youth Committee for the Hunter¹³ found that 63% of young people felt there would be opportunities to work in the emerging Net Zero and clean energy economy, however 72% were not aware of opportunities for them to do this. Additionally, a majority stated they did not know where to seek advice on these career options.

This is due to a lack of information available about the renewable energy sector, including:

- the types of jobs available in the sector
- where and when the jobs in NSW's renewable energy industry are predicted to be located
- the necessary qualifications to work in the renewable energy sector.

The Solution

The Jobs Advocate recommends the Government work with industry (the Clean Energy Council are a potential participant) to develop a communications strategy about career opportunities in the NSW renewable energy sector. This strategy should use a variety of channels to reach its target audience including online resources, public advertising and careers days in each REZ. It should build on the existing channels highlighted above as well as identifying new channels.

The strategy should be designed to be engaging and informative for young people initially and provide clear and concise information about the many and varied career opportunities in renewable energy. It could then be expanded to a more general audience, especially those looking to change careers into clean energy.

The strategy should focus on the CWO REZ as this will be the first to be delivered, followed by priority transmission projects and other REZs, before being expanded state-wide. The strategy should begin with a focus on high school students as a few high schools in the CWO REZ have expressed interest, and then progress to communicating to wider audiences

This initiative could be commenced relatively quickly and would be expected to help build community support for renewable energy projects, both in regional communities and state-wide.

¹⁰ <https://australia.generation.org/>

¹¹ <https://www.grandshake.co/>

¹² <https://year13.com.au/>

¹³ Youth Committee for the Hunter, *Youth Voice 2022: Priorities for young people in the Hunter*, p. 15, <https://hunter.org.au/wp-content/uploads/2022/04/20220429-Youth-Voice-Hunter-2022.pdf>

Recommendation 5: Institute a TAFE Roadmap Support Initiative to improve workers' ability to gain clean energy qualifications

The problem

The Jobs Advocate has noted a number of initiatives from TAFE to support the Roadmap such as the appointment of Industry Innovation Specialists, including one for Electrotechnology and Renewable Power Generation. However, there is no overall state-wide strategy observed that supports the Roadmap. It is highly likely TAFE will be required to provide the majority of training and skill upgrades to achieve Roadmap goals and so a state-wide Roadmap Support Initiative is recommended as the most effective way to coordinate support for the Roadmap.

The feedback to the Jobs Advocate from stakeholders is that there is a lack of TAFE courses relevant to the Roadmap in many regions. Where there are TAFE facilities, these may not offer the necessary qualifications for clean energy careers.

For example, in the New England REZ, qualifications in renewable energy are not available at TAFE Armidale, TAFE Inverell or the New England Training School. This forces local workers to travel to Tamworth, Newcastle or Sydney to get the training they need¹⁴.

In October 2022, the Jobs Advocate visited the new Hay TAFE connected learning centre in the South West REZ. This is a world-class training facility with capacity to host a wide variety of in-demand courses and mobile training units where necessary. This centre is currently being underutilised, and Hay Shire Council has expressed interest in expanding the connected learning centre's offerings to include training relevant to the REZ¹⁵.

The Jobs Advocate has also consistently heard that there is a lack of teachers, which contributes to a lack of course offerings and class times. Additionally, the equipment available in NSW TAFE is often out of date and therefore those learning on these tools are not being exposed to industry-best standards for training purposes.

The solution

The Jobs Advocate recommends instituting a TAFE Roadmap Support Initiative which would include:

- a state-wide strategy to include initiatives to support the specific need of each REZ
- increasing the number of teachers to maximise availability of class times and course offerings
- providing access to the latest technology equipment to ensure students are learning using industry best-standards

¹⁴ *Electricity Infrastructure Jobs Advocate: New England REZ Region Report*, April 2022, available on request

¹⁵ *Electricity Infrastructure Jobs Advocate: South West Region Report*, February 2023, available on request

- better utilising the large number of under-used existing TAFE facilities, especially in REZ regions
- increase access to mobile training units for the more remote REZ sub-regions.

This program can avoid building new training facilities through leveraging and unlocking the latent potential of NSW's established network of underutilised training infrastructure.

This initiative would demonstrate support and expansion of TAFE in regional communities which would be expected to help build community support for renewable energy projects in those regional communities.

Recommendation 6: Implement a Group Training Organisation model in REZs to provide ongoing employment across a range of REZ projects while participants complete training

The problem

From consultations the Jobs Advocate has found that the Group Training Organisation (GTO) model is rarely used in renewable energy projects, and yet an expanded GTO model can be seen to offer many benefits to such projects, especially in REZ's.

Many renewable energy projects have short durations (6 to 18 months), while trades qualifications typically take 4 years to complete. This contributes to the skills shortage in the renewable energy sector, as there are not enough trained workers to meet the demand.

A GTO provides security of employment to the apprentice/trainee while completing their qualification and at the same time relieves businesses of the administration as well as the burden of ensuring a worker has the continuity of employment needed to complete their qualification. GTOs are commonly used in the electrical, carpentry and construction sectors (amongst others) and offer benefits to both businesses and trainees.

Some regions do not have any GTOs, or not enough to support the number of trades needed. Additionally, skilled and trained people are needed on renewable energy projects for more than just trade occupations, but there are no GTO pathways for these positions.

There is a shortage of qualified and skilled operators/drivers in the civil construction, crane and transport industries but there are no structured career pathways in these industries. Typically, a worker will obtain an operator qualification for smaller, simpler equipment and as they gain work experience they complete further training to obtain operator qualifications for larger more complex equipment. This can take at least 3 to 4 years but as these industries are project-based, workers are often out of work before they can complete the next level of qualification. There are no GTO structures in place to support operators/drivers to reach the higher level of qualifications which industry desperately needs, especially for renewable energy construction projects.

There is also a shortage of qualified and experienced engineers and project managers. In some industries cadetships provide a pathway where workers complete a degree while working and

building on-the-job skills. The intermittent project nature of renewable energy construction projects limits the ability of businesses working in this space to have such cadetships. A GTO that provides employment over the course of a part-time degree could provide an equivalent cadetship model that would provide industry with engineers and project managers who are qualified and have significant on-the-job work experience.

The solution

GTOs offer an excellent solution for renewable energy projects to ensure a pipeline of suitable workers while dealing with the stop/start project nature of the industry. Businesses can access a pool of skilled and trained workers, reduced training costs and increased productivity through tapping into a motivated workforce of apprentices and trainees. GTOs also offer benefits to workers through access to high-quality, on-the-job learning and career pathways in the renewable energy sector. Greater use of GTOs for renewable energy projects will also provide benefits to regional communities by increasing opportunities to enter skill-based careers.

Industry seeks workers with experience, not just qualifications. GTOs could employ operators or drivers for 3 to 4 years, allowing them to reach higher levels of qualifications as they move from one REZ project to another. This would allow GTO-sponsored workers to gain both experience and qualifications.

For example, over 3 to 4 years, civil equipment operators could move from operating small backhoes to larger civil equipment such as excavators, front-end-loaders and graders. Crane operators could move from doggers and operators of small 20-tonne cranes, through to advanced riggers and operators of 100-tonne-plus cranes. Truck drivers could move from driving small rigid trucks to heavy combination trucks, such as semi-trailers.

GTO-sponsored degree workers could start with entry-level jobs on projects and then progress to more specialised and complex tasks as they complete their studies part-time. By the time they graduate, they would have the skills and qualifications to move into engineering or management roles.

Workers would have the security of being part of a GTO, the opportunity to work on a variety of projects and businesses, and the potential to gain significant experience while completing their degree. Additionally, industry would have a source of degree-qualified workers with significant on-the-job experience.

The Jobs Advocate recommends the following:

- identify existing GTOs that are interested in participating in REZ projects
- provide support to the expansion of these GTOs or the establishment of new GTOs in REZ regions where a gap exists
- develop policy that supports the establishment of GTOs for non-trade qualifications (such as civil equipment operation, crane and truck driving) and university qualifications (such as engineering and management)
- work with project developers to ensure that GTOs are included in the planning and execution of renewable energy projects.

An enhanced and expanded GTO model would provide much wider benefits to regional communities than simply supporting renewable energy projects which would be expected to help build community support for renewable energy projects in those regional communities.

Activities since the first report to the Minister

The Jobs Advocate role involves continuing engagement with an ever-widening group of stakeholders which provides new and deeper understanding of the many nuanced issues involved in optimising jobs in the transition to renewables.

It is worth noting in this report that there has been increasing feedback in the REZ's that talk about renewable energy projects bringing many jobs to a region is being seen as a negative not a positive. There are three main issues raised: -

- Local businesses express their concern that they will lose employees to renewable energy projects as they will not be able to compete with the pay rates. In a tight labour market this concern is amplified as many businesses in the REZ's say they are already unable to recruit enough workers. One example was given in the South West REZ where an electrical contracting business was forced to close as they lost their entire workforce of 12 employees when they were offered higher rates of pay by contractors delivering a major electricity infrastructure project underway in the region.
- The issue of a housing shortage has been raised in all five REZ's. There is concern that the number of workers coming into a region for renewable energy projects will have a negative impact on locals by increasing the cost to both rent and buy housing as well as making it difficult to access housing. It was reported that in the Uralla Shire Council area the cost of housing had doubled since renewable energy projects had commenced construction.
- Although not raised as often as the above two issues there was also concern raised about the impact on general community infrastructure by a large number of additional people coming into a region. The impact on medical/health facilities, regional waste facilities and roads were the most common issues raised as REZ locals believed these were already under strain.

The Jobs Advocate has increased his collaboration with the Sector Board. He now has a regular standing item at all Sector Board meetings where he presents on his activities and findings.

In addition, the Jobs Advocate is involved with the following panels, committees, and working groups:

- the Employment Purpose Advisory Committee
- the Renewable Manufacturing Fund Advisory Panel
- the Far West Orana Local Jobs Program Infrastructure Working Group
- the Far West Orana Local Jobs Program Skills Taskforce
- the Eraring Power Station Community Forum.
- the CWO REZ Skills and Workforce Working Group and the CWO REZ Skills and Workforce Interagency Group

The Jobs Advocate visited the Liddell, Bayswater and Eraring power stations to learn about the companies' transition plans and the impacts of plant closures on workers. He has also met large contractors from both the Liddell and Eraring sites. The Jobs Advocate is currently satisfied with how the power station owners have considered the impacts on the workers, both those hired directly and those engaged by contractors. The closures will undoubtedly have an impact on upstream suppliers, such as coal mines and suppliers of parts and spares. However, these businesses have been given sufficient lead times and each have diversified customer bases.

The Jobs Advocate contributed to the Department of Education's Renewable Energy Skills Audit through the Agency Reference Group. The Skills Audit provides valuable insight into the job opportunities and qualification requirements in the NSW renewable energy sector.

The Jobs Advocate participated in the Upper Hunter Renewables Roundtable (the Roundtable) in Muswellbrook on 1 December 2022. The Roundtable is a forum for industry, government, and other stakeholders to discuss and develop strategies for workforce development in the Upper Hunter region. The Jobs Advocate shared his insights on the challenges and opportunities facing the region and committed to working with other members of the Roundtable to implement the actions that were agreed upon at the meeting.

The Jobs Advocate established the CWO REZ Skills and Workforce Working Group (Working Group) in April 2023. The purpose of this group is to:

- provide a forum for renewable energy industry and stakeholders to raise and resolve issues relating to skills, training and workforce development in the CWO REZ
- coordinate the implementation of actions across stakeholders in response to increasing demand for skills, training and workforce development needs in the CWO REZ.

The establishment of the working group aligns with recommendations from the Sector Board's plan and the Renewable Energy Skills Audit. It will meet every two months.

In addition to the Working Group, EnergyCo has established the CWO REZ Skills and Workforce Interagency Group (Interagency Group). The Interagency Group includes the Jobs Advocate, Department of Regional NSW, EnergyCo and the Department of Education and is responsible for implementing NSW Government actions, agreeing funding arrangements and overseeing the delivery of NSW Government initiatives. The Interagency Group will meet following each Working Group meeting and the Jobs Advocate will participate on an ongoing basis.

The Jobs Advocate is currently engaging with stakeholders in the manufacturing sector to identify opportunities for building local supply chain capacity for the renewable energy sector, however this is still in its early stages. This is a developing industry, and as it matures, the Jobs Advocate will provide advice on road, rail, and port infrastructure that is needed to support export opportunities for generation, storage, and network technology.

The Jobs Advocate role has also become that of a communicator and connector supporting the Roadmap. A communicator through giving presentations to a wide range of industry and stakeholder groups on the Roadmap and the Jobs Advocate role. A connector through linking the many stakeholders the Jobs Advocate engages with to provide immediate benefits to the roll-out of the Roadmap.