



8 October 2021

Ms Leanne Caelers
Director Renewable Energy Zones
Department of Energy and Public Works
1 William Street
Brisbane, Queensland
Via: Lodgement online

Dear Ms Caelers

Local benefits in Queensland Renewable Energy Zones

The Clean Energy Council is pleased to provide a submission in response to the Queensland Government's (**the Government**) community consultation paper, *Local benefits in Queensland Renewable Energy Zones*.

The Clean Energy Council (**CEC**) is the peak body for the clean energy industry in Australia. We represent and work with over 900 of the leading businesses operating in renewable energy, energy storage and renewable hydrogen. We are committed to accelerating Australia's clean energy transformation.

We commend the Government for its commitment to a 50 per cent renewable energy target for Queensland by 2030 and see the development of Renewable Energy Zones (**REZs**) as a scale-efficient approach to deliver this new renewable energy generation. The development of additional renewable energy generation capacity in REZs will continue to place downward pressure on electricity prices, make a material contribution to meeting the state's emissions reduction goals and stimulate thousands of jobs as well as economic activity across regional communities.

It is appropriate that the Government is commencing early consultation to consider the range of benefits that should be supported through the REZ development, such as local employment and skills programs, initiatives to support opportunities for local supply chains and regional benefit sharing schemes, keeping in mind that such schemes will also need to balance the requirement for delivering competitively priced electricity for consumers.

Australia's regional and rural communities play a vital role in the deployment of renewable energy in Australia, and this role will only grow in significance over time. It is therefore critical that proponents work in partnership with local communities in the delivery of new projects within the REZs. In this context, the CEC makes the following comments on the community consultation paper below.

Principle 1: Genuine and ongoing engagement

The CEC supports the emphasis by the Queensland Government on genuine and open engagement as the first among four principles. REZs will result in increased development of some Queensland regions, and it is essential that host communities are provided with clear information from the early stages of planning about what this means, and how they will be involved in shaping the future of that development.

The Queensland Government has a critical role to play in establishing and communicating the overarching vision for the REZs in regional communities. It is essential that the Government invest heavily in community information and engagement programs to build awareness of the rationale for these REZs, provide assurance that the infrastructure build will be planned and delivered in consultation with communities, and to communicate the Government's commitments to maximising the economic, employment and quality of life benefits for communities, as a result of this landmark investment.

While the Government must lay the foundations for community engagement, proponents too must reflect this in their individual project development. As a reflection of the commitment by our sector to genuine engagement and benefit sharing with communities, over 50 companies have committed to the CEC's [Best Practice Charter for Renewable Energy Projects](#). The first two commitments of the Charter reflect the Queensland Government's prioritisation of genuine engagement:

1. We will engage respectfully with the local community, including Traditional Owners of the land, to seek their views and input before submitting a development application and finalising the design of the project.
2. We will provide timely information and be accessible and responsive in addressing the local community's feedback and concerns throughout the life of the project.

An important aspect of building large-scale projects is engagement with local Aboriginal and Torres Strait Islander communities. The CEC has recently commenced engagement in this area and is looking to develop best practice on including these communities in the project, not only through preliminary consultation and cultural heritage assessments but through community benefit sharing initiatives (Principle 2) and the creation of local jobs (Principle 4).

Principle two: Shared benefits with communities

Benefit sharing is an important and increasingly commonplace feature of renewable energy projects. In addition to the approximately \$80 million estimated to flow annually to landholders who host renewable energy projects – many of whom are farmers – and the millions channelled into regional communities in the form of rates payments to local councils,¹ we estimate that in 2020 at least a further \$10 million was distributed to local community groups and initiatives through dedicated 'community enhancement funds' and other voluntary community benefit initiatives currently in place. This number will continue to grow as new renewable energy projects come online each year.

The CEC actively promotes the inclusion of benefit sharing programs in all utility-scale projects, and recognises that initiatives should reflect the project context and community needs. In 2019 we released a [Guide to Benefit Sharing Options for Renewable Energy Development](#) which outlines a wide range of models and options for benefit sharing that could be considered by communities and proponents. These include initiatives such as community enhancement funds, neighbour benefit programs, sponsorships and grants, local employment and procurement programs, and community co-investment or co-ownership.

¹ Source: CEC & Australian Wind Alliance, as at end 2019.

To ensure that benefits are maximised across various types of communities, mechanisms should remain flexible with the ability to be responsive. Complementary - rather than competitive - programs between projects would optimise the outcomes for communities. The Government might consider providing a coordination role with voluntary opt-in for renewable energy entities that would like to collaborate for synergistic community outcomes. This would allow some projects to provide innovative benefits sharing solutions that are tailored to the needs of the specific community while also providing an option for a larger, coordinated approach. Ruling out the former option would stymie progress in this area. We would be happy to discuss this in further detail.

Principle 3: Buy local, build local

REZs provide an opportunity to strengthen long-term employment opportunities and supply chain development by providing greater concentration of skilled workers and suppliers. Unfortunately, a turbulent policy environment in Australia for renewable energy over the past two decades has meant that some of the early opportunities for local manufacturing have been eroded or lost. Strong ambition and clear, stable policy will be essential to increase local investment in supply chain capabilities, such as manufacturing of components required for renewable energy projects.

This capability will not be available overnight and it also requires significant planning, investment and policy signals to gradually build up the capability. Any employment and local content policies and targets should take a long-term perspective, beginning with obligations that are achievable and minimise costs for energy consumers, increasing gradually and predictably over time to reflect the increasing maturity of local business and industry capabilities, and the seriousness of energy and climate policy settings. It is also important to consider the entire supply chain enabled by QREZ, such as renewable energy projects that assist in producing renewable hydrogen. For example, a QREZ program that supported the development of a green hydrogen project will have additional employment benefits compared with a project that simply provided power to the NEM.

With the right policy and government support, Queensland has an opportunity to service not just the needs of the clean energy transition in Australia, in which we must deploy between 26-50 GW of new variable renewable energy capacity and supporting energy storage by 2040 to replace retiring thermal assets, but also an opportunity to become a leader in renewable energy export and green commodities.

Supporting local businesses is about ensuring that local businesses are aware of the opportunities; that they are equipped for and capable of engaging with the tender process; that the terms of the proposed contracting arrangements are workable for small businesses; and that there are systems in place to manage grievances. The Queensland Government's Procurement Policy addresses many of these criteria and is a good starting point. The Government might also consider providing assistance in the form of:

- Offering specific training for local businesses on how the renewable industry operates and how best to engage with a tender process;
- Providing grants to local businesses that may need to strengthen their safety or ESG standards to be able to engage with a renewable energy project;
- Undertaking a localised study of supply chain capabilities in Queensland to:
 - Produce directories of local businesses that developers and Engineering, Procurement and Construction contractors (EPCs) can use to identify and contact appropriate local subcontractors; and
 - Determine the most appropriate form of industry policy and assistance to boost local supply chain capability.

- Setting local supply chain merit criteria that allow broad and collaborative economic development within a region rather than competitive narrowly scoped projects by individual entities.

The definition of 'local' for supply chain purposes must be flexible and broad (i.e. national) or reflect a tiered approach depending on the component or material. This is because there may not be local availability of supply, or development that supply may not be cost competitive unless at larger scale. Suppliers that focus on small local markets are not likely to have the capacity to meet the collective demands, in terms of quantity and timing, of several clean energy projects within a REZ. A tiered approach might start at the local economic region to regional zone, then the wider regional area, regional Queensland, whole of Queensland, and then Australia and New Zealand. This approach would need to be well matched to an analysis of supply, and reviewed regularly.

Principle 4: Local jobs and secure work

Clean energy projects that engage local workers are better integrated into the community and better able to identify opportunities or deal with challenges. It is a priority for the clean energy sector to offer local employment opportunities where possible. Local employment can occur through various avenues:

1. Direct employment in the construction of a project by the project proponents (often the EPC);
2. Direct employment in the operation and maintenance of a project by the project proponents (often the asset manager);
3. Indirect employment through local subcontractors (Principle 3 addresses some of this);
4. Induced employment through the expenditure of construction workers in the region;
5. Employment enabled through renewable energy generation, such as green hydrogen, green steel or clean manufacturing; and
6. Employment in the reuse, recycling, or end-of-life management of components and equipment.

Clean energy projects employ several hundred people during the construction phase. A solar farm takes around a year to build, and a wind farm takes one-to-two years to construct. However, many of the roles and tasks that are available during that construction phase are only a few weeks or months. It is thus the nature of clean energy projects that there is mainly short-term employment available during the construction period. There exists a structural tension between local jobs and secure work.

Yet secure work is a key consideration for clean energy proponents. Workers with job security have better productivity and safety outcomes. Where the work requires highly skilled individuals, such as those operating in an electrical environment in solar or wind, it is best when these roles are ongoing and filled with experienced workers. For an electrician in utility-scale renewable energy, secure work often requires travelling to different project sites.

Nonetheless, there are several construction roles that can be filled by local workers, and through the QREZs there are ways that the Queensland Government can maximise this type of local employment while supporting secure employment outcomes. Central to this is facilitating a pipeline of jobs, rather than one-off opportunities. The Queensland Government can support this by, for example:

- Creating a register of employers and employees by QREZ;
- Supporting a harmonisation of skills requirements across solar and across wind so that workers can move easily between employers and projects;
- Undertaking local workforce capability profiling to assist project proponents and RTOs in ensuring that relevant training can be provided; and
- Offering grants and other forms of support to local RTOs for teaching and equipment.

The CEC’s working group on Clean Energy Workforce has identified several barriers to the employment and retention Aboriginal and Torres Strait Islander employees, including duration of jobs and succession planning, as well as remote locations causing difficulties for training and upskilling opportunities. The Government could address some of these barriers by providing mobile training facilities in these remote locations, as well as opportunities for indigenous apprenticeships.

The operation and maintenance of a solar or wind farm requires far fewer employees but is secure, sustainable, and skilled employment. Wind technicians, both turbine and blade technicians, are in short supply and demand for them is increasing. The Queensland Government can assist in addressing this skills shortage by providing support to incentivise individuals embarking on a technical career in wind power.

A sizeable workforce could exist in the upstream and downstream operations of renewable energy – that is, the supply chain (addressed in Principle 3) and the demand for renewable energy in such processes as hydrogen or green steel. Currently, little of the clean energy supply chain is manufactured in Australia. This is a missed opportunity.

As shown in the table below, extracted from research commissioned by the CEC in 2020, for every megawatt of installed wind power 1.7 job-years are created in supply chain, yet only 0.4 of these job-years are based in Australia. For utility-scale solar, 4.4 job-years support each installed megawatt, yet only 0.1 of these job-years are in Australia. As noted in the previous section (Principle 3), targeted industry policy and government support is needed to address this. The manufacturing of clean energy componentry is economically feasible at scale, which underlines the importance of the QREZs and strong support for downstream industries such as renewable hydrogen and green steel.

Table 2 Employment factors

	Construction/ installation	Manufacturing		Operations & maintenance
		All	Onshore	
Job-years/MW				
Wind	2.8 ⁽¹⁾	1.7 ⁽³⁾	0.4	0.2 ⁽¹⁾
Utility Solar	2.3 ⁽¹⁾	4.4 ⁽³⁾	0.1	0.1 ⁽¹⁾
Rooftop PV	5.8 ⁽¹⁾	4.4 ⁽³⁾	0.2	0.2 ⁽¹⁾
Utility batteries	4.7 ⁽¹⁾	6.6 ⁽¹⁾	0.3 ⁽⁴⁾	1.2 ⁽¹⁾
Distributed batteries	5.6 ⁽¹⁾	6.6 ⁽¹⁾	0.3 ⁽⁴⁾	0.3 ⁽¹⁾
Hydro	7.4 ⁽²⁾	3.5 ⁽²⁾	0.7 ⁽⁵⁾	0.1 ⁽¹⁾
Pumped hydro	11.1 ⁽¹⁾	3.5 ⁽²⁾	0.7 ⁽⁵⁾	0.2 ⁽¹⁾
Job-years/ system				
Solar water heating	0.015	n/a	0.0021 ⁽⁶⁾	-

Note 1: Factor derived in this study
 Note 2: Factor from Rutovitz et al, 2015.
 Note 3: Factor from IRENA 2017 & 2017a
 Note 4: Assumed 5% occurs on shore.
 Note 5: Assumed 20% occurs onshore.
 Note 6: ABS, 2019

If the QREZs were also planned to support a renewable hydrogen industry, this would provide meaningful demand for skills currently deployed in the resources sector in Queensland, which is essential to ensuring that there is a planned transition for those employees.

Again, it is important to maintain flexibility around what ‘local’ means in relation to jobs and training. Renewable energy EPCs involved in the construction of renewable energy projects, and renewable energy asset managers have adopted a definition of local employment as being within 70km to 75km.

This is often based around safety drivers and an attempt to minimise travel time that can add to worker fatigue. However, employers also recognise that the distance set for this definition should consider practical factors such as the condition of the local roads, whether a daily shuttle can be provided for workers, local services, and population size.

In regards to training, clean energy projects require a mix of unskilled workers and workers with civil, mechanical, or electrical skills. Often, local registered training organisations (RTOs) do not have the requisite trainers, skills, and equipment to have a large range of offerings on scope. To justify the investment into trainers, skills and equipment, RTOs must be able to attract a sizeable cohort of students. If the term 'local' is considered too narrowly, it may split that cohort and remove any potential economies of scale. For the purposes of training, a definition of local at the regional Queensland level could be effective. With this definition, when project proponents profile the region to understand which skills are likely to be most transferable to other local projects (rail, infrastructure etc) they are likely to capture a larger range of projects and therefore support broader upskilling within communities.

Finally, the Queensland Government could begin developing a workforce to support the reuse, recycling, and decommissioning of wind and solar equipment. Again, for these operations to be economically feasible, they need to be carried out at scale. There may not be capacity for more than one such effort in Australia. Queensland could lead the nation while benefitting from the jobs and economic growth that result. The CEC has working groups working on recycling solutions for both the solar and wind industry and would be happy to assist the Queensland Government with questions on what is needed in this area.

We hope that these high-level responses to the consultation process are useful and again thank you for the opportunity to comment. We would be happy to expand on any of these points or provide more detailed advice if you would like to discuss our submission further.

Yours sincerely



Anita Talberg
Policy Director, Workforce Development