**Submission No 179**

# SUSTAINABILITY OF ENERGY SUPPLY AND RESOURCES IN NSW

**Organisation:** Port of Newcastle

**Date Received:** 15 September 2019

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Sunday, 15 September 2019

Mr Alex Greenwich MP
Chair
Legislative Assembly Committee on Environment and Planning
NSW Parliament House
Macquarie Street
Sydney NSW 2000

Dear Mr Greenwich

**Submission: Sustainability of Energy Supply and Resources in NSW Inquiry**

**Introduction**

Port of Newcastle is a major Australian trade gateway handling 4,600 ship movements and 166 million tonnes of cargo each year. With its annual trade worth more than $29 billion to the New South Wales economy, the Port enables businesses across the state to successfully compete in international markets.

Port of Newcastle completed a study in 2017[1] that concluded that, by facilitating the export of Hunter Valley/NSW coal, the port provides the following benefits to the community:

- $2.9 billion revenue;
- 8,243 FTE jobs;
- $812m household income; and
- $1.45 billion contribution to Gross Regional Product (GRP)

With a deepwater shipping channel operating at 50% of its capacity, significant port land available and enviable access to national rail and road infrastructure, Port of Newcastle is positioned to further underpin the prosperity of the Hunter, NSW and Australia. As custodians of the region's critical asset, Port of Newcastle is diversifying its trade as it strives to create a safe, sustainable and environmentally and socially responsible Port that realises its potential.

**Response to the Terms of Reference**

The Hunter region is a the largest regional economy and is the seventh largest urban area in Australia (Regional Development Australia, 2013). With a strong economic history, the region has been a key contributor to the economic success of NSW.[2]

[1] EconSearch: Table 4.10, page 24 https://objprod.pon.internal/id:A923473 T
[2] NSW Container and Port Policy, Deloitte Access Economics (March 2018), pg 64

The Hunter region has a strong connection to coal mining. Thousands of workers are employed in the industry. Generations of families have made a living from this resource over more than two centuries.

Coal has been an important ingredient of the region's economic success. Yet the increased recognition of climate change, the shift to cleaner energy sources and the increasing number of investors and financiers no longer prepared to fund fossil fuel related businesses presents a challenge.

Coal will remain a major export for the Hunter for some time to come, but this must be seen alongside the significant growth and impact of renewable technologies. Even those unconvinced by the climate science cannot ignore that a global transition is underway.

The debate is now about the speed at which this transition is proceeding, and the nature of the response. Ignoring the challenge is to ignore the opportunities; of which there are many. The main opportunity lies in the further diversification of the Hunter's economy. This does not happen overnight. It takes years to create the necessary momentum and decades to fully take effect.

## 1. The capacity and economic opportunities of renewable energy.

There is currently significant investment in the NSW renewable energy market. Port of Newcastle is aware of the following projects that are currently under construction or in various planning stage that will provide transport and construction employment opportunities.

| Project | Size (Turbines) | Estimated Project Start | Estimated MW |
|---|---|---|---|
| CWP - Bango | 46 | 2020 | 240 |
| CWP - Crudine Ridge | 37 | 2019 | 135 |
| CWP - Uungula | 125 | 2022 | 400 |
| Epuron - Liverpool Range | 267 | 2021 | 1,000 |
| Goldwind - White Rock Stage 2 | 48 | 2021 | 202 |
| Nexif Energy - Glen Innes | 25 | 2022 | 90 |
| Nundle | 98 | 2021 | 400 |
| Walcha | 143 | 2021 | 4,000 (incl solar and pumped hydro) |
| Biala | 31 | 2020 | 110 |
| Coppabella | 79 | 2020 | 295 |
| Flyers Creek | 35 | 2021 | 145 |
| Collector | 55 | 2020 | 226 |
| Rye Park | 92 | 2021 | 327 |
| Bowmans Creek | 75 | 2022 | 250 |

Solar projects have not been considered in the table above, as the panels are primarily containerised. The Hunter cannot gain the full benefit of this industry as the Port of Newcastle (and region) does not have a container terminal. The development of the Newcastle Container Terminal will increase the Hunter Region’s capability to service solar projects.

**2. Emerging trends in energy supply and exports, including investment and other financial arrangements.**

Banking institutions globally continue to show growing reluctance to finance carbon-intensive entities, particularly those associated with fossil fuels such as thermal coal.

The Port of Newcastle has experienced first-hand the shift in investor sentiment and in how financial institutions invest and consider an organisation's values and corporate behaviours alongside its ability to generate financial returns.

However, the Port of Newcastle is equally experiencing continued support and interest from investors in environmentally sustainable business opportunities and diversification of the Port.

The Port of Newcastle would encourage the NSW State Government to look at mechanisms to support and entice alternative energy business opportunities and investment into regions like the Hunter.

**The status of and forecasts for energy and resource markets.**

**Coal**

Port of Newcastle has completed analysis that supports moderate growth in Hunter Valley coal exports under International Energy Agency (IEA) energy scenarios. On the demand side new (high efficiency-low emission) coal fired powered stations in developing South East Asia is forecast to offset the increase in renewable generation share in existing and developed markets (eg Japan, South Korea, Taiwan).

The high quality, existing planning approvals and comparably low production costs of Hunter Valley Coal mines will enable the Hunter Valley to meet forecast export demand.

**LNG**

Gas market forecasts are for a shortage in gas supply from approximately 2022 onwards. The proposed development of the EPIK LNG project at the Port of Newcastle is designed to address this forecast shortage with the facility targeted at supplying up to 80% of NSW gas demand upon completion. The Project has been declared as Critical State Significant Infrastructure (CSSI)[3].

**3. Effects on regional communities, water security, the environment and public health.**

No comment

**4. Opportunities to support sustainable economic development in regional and other communities likely to be affected by changing energy and resource markets, including the role of government policies.**

Port of Newcastle has the land availability, channel capacity, and leading rail and road connectivity required to facilitate the development of new energy import and export opportunities.

The Port is supportive of all trade opportunities, in particular those that have the potential to create employment for the wider community and support the region's economic diversification as coal volumes decline.

[3] https://www.planning.nsw.gov.au/News/2019/Newcastle-gas-terminal-given-critical-status

The two primary renewable export alternatives that would support employment and production in local markets are:

- **Biomass/Biofuels**; The infrastructure associated with coal provides opportunities for the development of an advanced bioeconomy in the Hunter region. This includes the large underutilised buffer zones as well as post-mine rehabilitation land for growing biomass, the skilled engineering and manufacturing base and rail and road connections to the port

- **Hydrogen**; solar and wind renewable energy alternatives proximal to the Port are available to produce green ammonia or hydrogen to be transported to export markets. While the cost of production, supply chains and export market size are uncertain, Australia (the Hunter) has an opportunity to be a significant exporter to Asian markets.

Further to this, the Port has supported a number of wind energy projects in NSW by receiving and storing imported turbine components and blades (as outlined in #1)

**5. Any other related matters.**

**Opportunities at the Port of Newcastle**

Global shipping is transitioning towards larger vessels with lower per-tonne costs and a decreased environmental footprint. In the coming years, Port of Newcastle will be home to the only deepwater port in Australia able to handle ultra large vessels, regardless of whether they are carrying bulk commodities, such as coal, or containers.

As part of its diversification plans, Port of Newcastle is planning a privately-funded, fully-automated and electrified container terminal at an estimated investment of $1.8 billion. Subject to NSW Government policy change, the terminal could begin operating in 2023-24. This facility will cater for Ultra Large Container Vessels unable to be accommodated at existing ports along Australia's East Coast.

As a result, the port will need schedulers, surveyors, terminal supervisors and operators, freight and logistics managers and planners. The region will need computer programmers, freight and logistics analysts, automation electrical and mechanical engineers and programmers, remote controller operators, warehouse and distribution managers, designers, intermodal managers and operators. It is unclear from where these skills and the necessary training will come.

The education foundations for a lot of these jobs will be in science, technology, engineering and mathematics (i.e. STEM). The Port will need some of these people with these skills within five years.

That means students in year 12 this year need to be thinking about working for Newcastle Container Terminal or associated industries in the Hunter now. The port's proximity to Williamtown, the home of the Joint Strike Fighter program, means competition for similar skills. Rather than seeing other major employers as competition, employers will need to work together to create the wider and deeper talent pool required.

People with STEM skills can be sourced from other parts of Australia and overseas. But, by working collaboratively now, the Hunter has an opportunity to create its own local employment pathways.

A recent report by AlphaBeta Economics found the Hunter and Northern NSW will gain 4,600 new jobs by 2050 as a direct result of the terminal. These jobs will be created right up and down the

supply chain.[4] The study further found that the Hunter region will get a $6 billion economic uplift and benefit from $2.8 billion in lower freight costs. A copy of the report can be found here.

Our region's economy is changing, and this trend will continue. Managing such major economic transition presents a big challenge. The closure of BHP's local steelmaking operations 20 years ago, while traumatic, triggered an economic and social awakening that is still playing out today.

The closure was a major milestone in a long-term shift away from a reliance on steel manufacturing. BHP's local employment numbers reportedly peaked at over 11,000 in the mid-1960s[5] with a production peak[6] occurring in about 1975.

At the time of the steelworks closure in September 1999, BHP accounted for about 4,500 direct and indirect jobs[7]. The regional unemployment rate[8] at that time was 10.4% and there were fears that this number would surge. However, by September 2011, the Hunter's unemployment had fallen to 4.6%. The BHP closure had forced the region to diversify and is credited for putting the Hunter in good stead during the global financial crisis less than a decade later.

Newcastle is justifiably proud of this extraordinary transformation. But it did not happen automatically through the "*invisible hand*" of the market. Leading up to the BHP closure, business leaders, unions and the community worked together on a transition plan. There was a shared commitment not only to identify new employment pathways for steelworkers but also to map out future areas of competitive advantage for the region.

Changing circumstances require the region to once again prepare for another transition, this one possibly even more fundamental and far-reaching than the last.

In 2018 Port of Newcastle engaged Deloitte Access Economics to study the significant role that Port of Newcastle could play in helping to manage the current and growing freight task for NSW as well as in facilitating major economic, environmental and regional benefits to the State. The Deloitte Access Economics report can be found here.

Even from a narrow risk management point of view, the best path forward is to prepare for the worst-case scenario. And once again the region requires a coordinated approach. This may necessitate the appointment of a public authority to help manage the transition.

Done well, the Hunter could quickly become the exemplar for the entire nation, as before with the transition out of steelmaking. It will also call upon leadership and vision in local communities and business, including by the resources sector itself and related industries.

A key pillar in the region's post-steel transformation plan was the re-development of the former BHP site at Mayfield into the State's second container terminal. However, due to various reasons, some explored by ICAC, the plan was never implemented. However, this project is still needed and

[4] Global Gateway for NSW: the economic impact of a container terminal at the Port of Newcastle, AlphaBeta Strategy, December 2018, pg 35

[5] https://www.newcastleherald.com.au/story/5597971/bosss-legacy/

[6] http://www.rdahunter.rdahunterstem.org.au/wp-content/uploads/2019/03/Diversification_of_the_Hunter_Economy_Post_BHP.pdf

[7] http://www.rdahunter.rdahunterstem.org.au/wp-content/uploads/2019/03/Diversification_of_the_Hunter_Economy_Post_BHP.pdf

[8] Source: NSW Parliamentary Library Research Service - November 2011 - e-brief 16/2011 (https://www.parliament.nsw.gov.au/researchpapers/Documents/the-hunter-region-an-economic-profile/Newcastle%20and%20the%20Hunter%20GG%202.pdf)

now, more than ever, can now play a critical role in helping the region's steady transition away from coal.

As coal volumes decline over the long-term, there is an opportunity to offset the inevitable impact on the economy and jobs by bringing new economically-significant projects online. The $1.8 billion container terminal is one such critical project, capable of generating 4,600 new jobs[9] across the Hunter and Northern New South Wales by 2050.

Similarly, AGL is preparing its community for the replacement of an ageing coal-fired power station with renewable energy, offering new jobs and opportunities. The University of Newcastle has switched to solar power. Liberty OneSteel has a "green steel" model, and the CSIRO Energy Hub is working on industrial scale hydrogen for export. These examples barely scratch the surface of the possibilities.

**Conclusion**

Port of Newcastle is poised to play a major part in the Hunter's transition and in helping create new jobs in the region. As long-term custodians of the region's "*global gateway*", Port of Newcastle has a duty to facilitate current trade while pursuing new opportunities to grow and diversify.

The Port is well placed to do so. Its rail and road connections are the envy of increasingly congested capital city ports, and it has the former steelworks site at Mayfield ready for the development of a modern container terminal.

The Port's deepwater channel is operating at 50 per cent of its capacity and could make Newcastle the first and possibly only port able to accommodate the Ultra Large Container Vessels that are fast becoming the world standard for container shipping.

There are also significant prospects associated with the shift to new energy sources, such as hydrogen. All these opportunities fuel the regional NSW economy and create jobs up and down the supply chain.

We encourage the Committee to look at the Deloitte Access Economics and Alpha Beta reports referenced above which clearly outline the potential opportunities the Port of Newcastle can help deliver in jobs creation across diverse industries in the region, such as transport, manufacturing, agriculture, services and construction.

Yours sincerely

Craig Carmody
**Chief Executive**

[9] https://www.portofnewcastle.com.au/Resources/Documents/Microsoft-Word---AlphaBeta---10-December-2018---FINAL_.pdf