

2026

# Transmission Infrastructure Capability Analysis

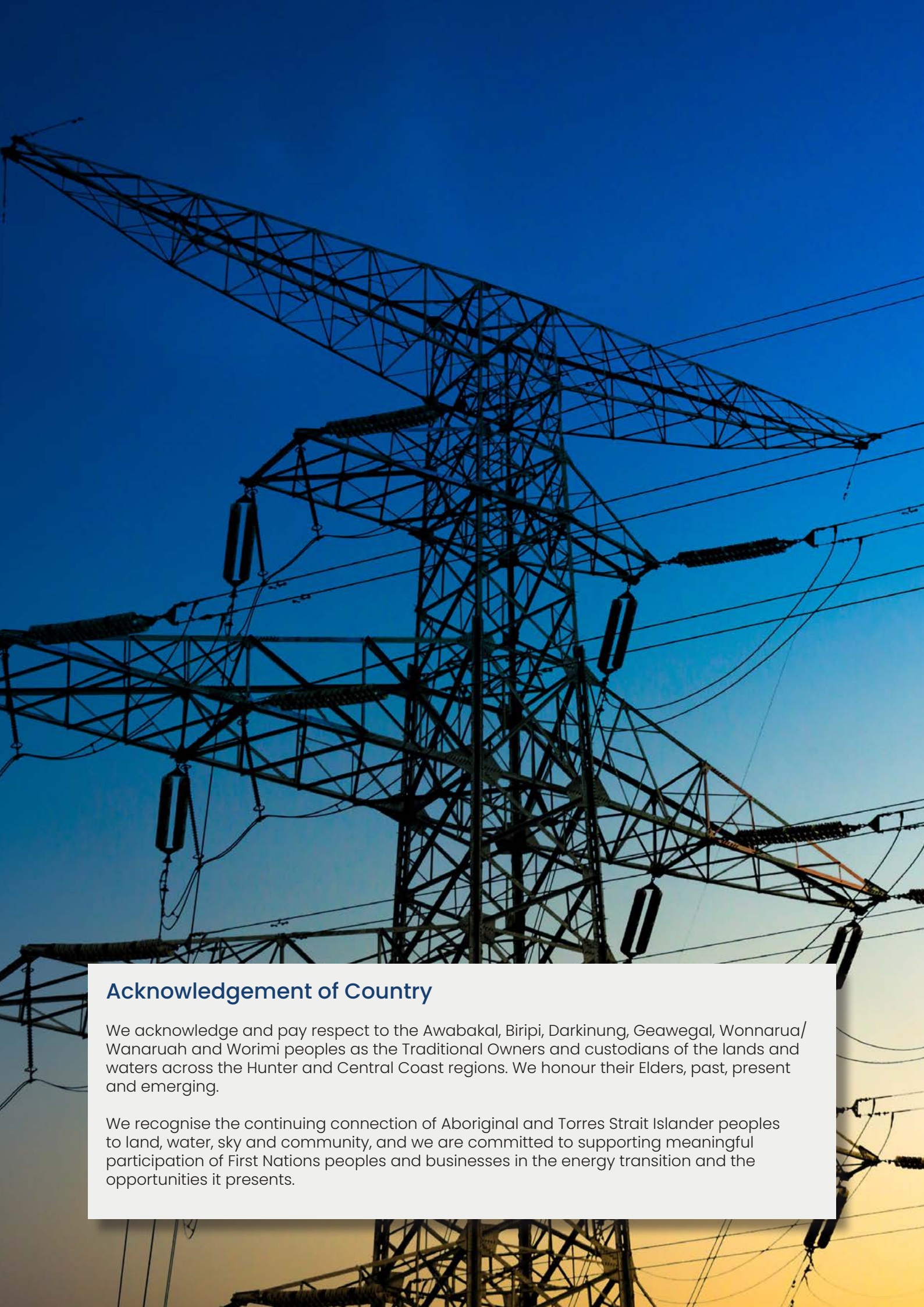
Hunter & Central Coast Regions



Net Zero  
Economy  
Authority



ICN Industry  
Capability  
Network



## Acknowledgement of Country

We acknowledge and pay respect to the Awabakal, Biripi, Darkinung, Geawegal, Wonnarua/ Wanaruah and Worimi peoples as the Traditional Owners and custodians of the lands and waters across the Hunter and Central Coast regions. We honour their Elders, past, present and emerging.

We recognise the continuing connection of Aboriginal and Torres Strait Islander peoples to land, water, sky and community, and we are committed to supporting meaningful participation of First Nations peoples and businesses in the energy transition and the opportunities it presents.



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# About ICN



Established in 1984, ICN (Industry Capability Network) is an Australian non-profit organisation committed to connecting local suppliers with major projects across every state and territory. By gathering and maintaining detailed information on local businesses, such as their size, scale, products, services, accreditations, insurance, and project history, ICN ensures the effective matching of suppliers to suitable projects and opportunities. ICN partners with major projects nationwide to connect local vendors with relevant scopes of work. ICN supports registered businesses through six core focus areas:

- 1 Industry Intelligence:** Collecting and maintaining comprehensive data on company size, products, services, accreditations, insurances, and project histories.
- 2 Procurement Support:** Publishing project details, managing vendor assessments, and compiling bid lists.
- 3 State Government Support:** Providing reliable, efficient access to capable local suppliers and services for state government departments.
- 4 Strengthening Local Supply Chains:** Promoting the capabilities of local industries and hosting industry briefings.
- 5 Supply Chain Mapping:** Connecting businesses with specific scopes of work, assessing capabilities across key industries, and identifying strengths and areas for improvement within various disciplines.
- 6 Data Analysis:** Delivering insights such as financial forecasts, sector-specific metrics, and regional breakdowns to major project proponents, government entities, and local suppliers, helping to inform decision-making and highlight local industry strengths.

Over nearly four decades, ICN has built a reputation as a vital link between Australian businesses and major projects. By fostering industry participation, ICN creates opportunities for companies to engage in significant projects, enabling growth, enhancing capabilities, and strengthening market presence.

Building on its 40-year legacy, ICN remains dedicated to empowering Australian industry, driving sustainable growth and employment, and fostering resilient and efficient supply chains through a steadfast commitment to local procurement.

# Acknowledgments

Stakeholder consultation was undertaken to understand factors influencing the transmission sector in the Hunter and Central Coast regions and the feedback informed the analysis and recommendations in this report. ICN engaged with industry bodies and industry stakeholders to capture insights into the Hunter and Central Coast regions' potential role in contributing to manufacturing, installation, and maintenance across the relevant REZ and offshore wind project areas. A number of stakeholders were contacted to contribute to this project and were selected based on their expertise and involvement in local transmission industry development. The project team acknowledges the following stakeholders for their contribution and insights into the current and future state of the Hunter and Central Coast Regions' transmission sector:

- Ausgrid
- Beyond Zero Emissions (BZE)
- Business NSW Central Coast
- Business NSW Hunter
- Department of Primary Industry & Regional Development
- EnergyCo
- HunterIF
- HunterNet
- ICN NSW
- University of Newcastle



***“This report shows businesses in the Hunter and across NSW are keen to embrace the transmission and renewables industries as new regional partners for ongoing company growth. The large companies driving Australia’s energy transition have the opportunity to help SMEs overcome the challenges of visibility, coordination and procurement processes as they grow and create a thriving ecosystem for the energy transition.”***

*Matt McKee, Chief Researcher, BZE*

# Report Scope and Limitations

## Scope

### CAPABILITY:

For this report, capability refers to a company's technical ability to perform a specific activity or piece of work. This includes the necessary skills, equipment, and expertise required to complete tasks effectively. ICN has assessed companies based on capability, as documented in their ICN profiles, websites, and/or capability statements, supported by direct confirmation of capabilities or responses to a survey completed by the companies.

### CAPACITY:

Capacity refers to a company's ability to manage its workload, including the scale of operations and resources available to meet specific project requirements. Capacity is variable and influenced by the timing and duration of demand, existing commitments and concurrent projects, and external factors such as market conditions and workforce availability. Due to this variability, capacity was not considered when assessing overall capability.

### CONTRACT CAPACITY:

This refers to the size of a contract or scope that a company is reasonably able to deliver, based on proven experience. This provides context for the company's capability and assists the reader in understanding its position within the supply chain. Companies were asked to provide this information through a survey or via direct engagement. While assumptions could be made based on revenue, ICN has only reported contract capacity as stated by the businesses themselves.

### SELECTION CRITERIA:

Company data for this report was sourced from ICN's database and publicly available information. Data was filtered to include companies with more than five employees and annual revenue greater than \$1 million. This threshold was selected to identify businesses that would reasonably be considered capable of securing contracts from project proponents or Tier 1 contractors. Sole traders and smaller Tier 3 and below entities, while potentially capable, were excluded to avoid overstating regional capability where such businesses would not typically be engaged in a direct contract to the proponent.

### GEOGRAPHIC BOUNDARIES

The project required ICN to focus on capability within the Hunter and Central Coast regions across the defined REZ and offshore wind zones. It is acknowledged that other geographic locations, which may be closer to the New England and Central West Orana REZs, have not been assessed for capability as part of this report.

### ELECTRICAL BALANCE OF PLANT

EBOP is defined as everything connected into the generating assets themselves. As such, solar panels, arrays, concentrated solar, wind farms, turbines, nacelles, blades, towers and batteries are not defined in this report.





## Limitations

ICN data is drawn from a national database developed over more than 40 years and maintained by over 100 industry consultants across Australia. The data is primarily based on information provided by businesses, supplemented by direct engagement and publicly available sources. Additional external research was undertaken to improve coverage of the transmission supply chain, however, some capable businesses may not have been identified due to incomplete ICN profiles or limited publicly available information. The quality and consistency of business provided data also vary, which may result in some capable suppliers being excluded.

ICN required data to be current as of 1 February 2026. Capability assessment was undertaken using a hierarchical approach, with priority given to Hunter and Central Coast-based businesses. Where local capability was insufficient, NSW-based businesses were considered, followed by nationally based businesses where required. At the NSW and national level, businesses were identified only to the extent necessary to demonstrate that sufficient domestic capability exists. The assessment is not representative of all capability.

Judgements regarding sufficiency of capability in the Hunter and Central Coast regions, or NSW were informed by ICN's in-house expertise and experience in major project procurement. ICN acknowledges that capability requirements vary by product, service, scale, and geography, and that market demand and specialisation differ across packages. Assumptions were therefore required as part of the assessment, and ICN recognises that these judgements may not align with all industry perspectives.

This study focused on 68 priority supply chain packages categorised into 4 high-level categories. While the broader transmission supply chain includes additional components, these were outside the scope of this report. Packages were chosen to cover the manufacture, installation and maintenance of transmission assets. Suppliers of goods were also included to reasonably showcase what could be procured locally in the event manufacturing was insufficient.

Businesses were provided the opportunity to engage in a project survey. ICN found that survey respondents often misunderstood the context of the work package and the service type associated with each, leading businesses to overstate their capabilities in many cases. Where a business has advised capability against a package of work, it can be difficult to discern whether this is not true. While ICN has taken all reasonable steps to quality-assure, validate, and exercise judgment where required, some business capabilities outlined in this report may differ from actual conditions on the ground. Inclusion in this report does not guarantee that a given business would participate in a competitive procurement process.

It was sometimes difficult to identify a primary location or head office for businesses with operations across multiple regions, particularly in the Hunter and Central Coast. This affected how ICN was able to analyse unique businesses. ICN could identify both the total number of individual businesses, such as distinct ABNs, and the total number of business locations. It could also readily identify unique businesses within a single defined region. However, where a business operated across multiple regions, LGAs, or states, that same business could be counted once in each relevant geography, even though it was only counted once within each geography regardless of how many locations it had there. For example, where a business had two locations within one region, it was counted as one unique business in that region. If that same business also had a location in another region, it was also counted as one unique business in that second region. As a result, the sum of region by region, LGA, or state based business counts may exceed the total number of unique businesses identified across the broader study area. For this reason, when comparing business activity across multiple LGAs or states, location counts provide a more accurate basis for analysis than unique business counts.

The capability matches identified reflect a point-in-time assessment as of February 2026. Capability is expected to evolve over time in response to future demand and investment in capability development.

# Methodology

This project assessed the extent of Hunter and Central Coast manufacturing, supply, installation and maintenance capability across four categories in the transmission sector. Packages were categorised into:

- Planning and site preparation
- Transmission towers
- Electrical balance of plant
- Offshore

ICN used data from the Industry Capability Network's national database, as well as online sources such as websites and capability statements, to identify supplier capability across 68 priority work packages.

In this report, the supply chain is defined as: *businesses that manufacture or supply goods or components to the sector, as well as those that provide installation and maintenance services.*

Service types are defined as follows.

**1 Manufacture** refers to the production of products or components.

**2 Supply** refers to the sourcing and distribution of materials, parts, or components.

**3 Service provision** refers to the delivery of installation or maintenance services to the transmission sector.

Packages were predefined as either product or service-based. For product packages, businesses may operate as suppliers or manufacturers. Where a company both manufactures and supplies a product, it has been classified as a manufacturer for consistency. For service packages, titles were defined to capture both installation and maintenance, with capable businesses classified as service providers.

Packages were developed based on historical procurement opportunities published on ICN Gateway, reflecting real-world requirements from comparable transmission and infrastructure projects. The final package list was selected to identify capability within the Hunter and Central Coast regions, based on scopes that project proponents or EPCM contractors would reasonably procure from the market as distinct contracts.

## Capability assessment

Supplier capability was assessed using a structured approach that included:

- 1** analysis of ICN's national database
- 2** targeted desktop research to identify businesses not captured in existing datasets
- 3** direct engagement to verify product or service offerings, categorise capabilities, and register previously uncaptured businesses

Businesses were grouped by core competencies across the 68 capability packages. Where a business demonstrated capability across multiple packages, it was classified under each relevant package.

## Survey and industry insights

An industry survey was developed with NZEA to capture data fields that are not held in the ICN database. This included questions on contract capacity, remaining workforce capacity, barriers to entry, and opportunities to increase local participation. The survey was distributed to more than 1000 businesses and shared through relevant industry bodies, supported by 3-5 follow-up emails and 2 rounds of phone calls to maximise response rates.

This enabled ICN to develop a comprehensive supply chain map of businesses capable of manufacturing, supplying, or delivering services across the 68 work packages.

## Transferable capability

The transferable capability assessment examined whether existing manufacturing capability in the Hunter and Central Coast regions could be redirected toward transmission infrastructure componentry. The assessment was conducted in two stages:

- Component screening
- Targeted industry engagement

Component screening identified which transmission components presented credible near-term opportunities for Hunter and Central Coast manufacturers. Components were assessed against demand strength, procurement patterns, and the maturity of existing domestic supply markets. Components already served by established Australian manufacturers in mature, competitive markets were excluded. Components where demand was strong, supply was largely imported, and local entry was realistic were treated as in scope.

For each in-scope component, ICN identified potential manufacturers using the ICN Gateway database, desktop research, and industry knowledge. Businesses were shortlisted based on meeting three criteria:

- 1 Strong technical alignment with the relevant component's manufacturing requirements
- 2 Little to moderate adjustment required to participate
- 3 Demonstrated or indicated interest in supplying transmission-related work.

Screening criteria were tailored to each component type to reflect specific technical requirements. These checks assessed general suitability and readiness rather than certifying compliance or serving as a substitute for detailed engineering validation.

ICN then engaged shortlisted businesses through a structured survey, inviting 171 companies across four transmission component categories. This generated 63 responses from 31 companies. The survey examined technical feasibility, required adjustments, barriers to entry, and appetite to participate in transmission supply chains.

This assessment is a point-in-time analysis. It reflects capability and interest as reported by businesses at the time of engagement. It does not constitute a guarantee of supply or an assessment of commercial viability. The findings are intended to inform procurement design and policy, not to pre-qualify suppliers.



# Key Findings

**68**  
**Total Packages**

## Packages by Region

**26**

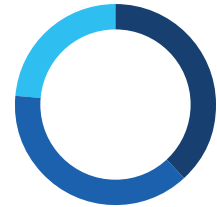
● Hunter & CC

**26**

● NSW

**16**

● Australia



## Total Report All regions



Unique Businesses

**742**



Unique First Nations

**28**



Unique Locations

**1323**



## Hunter and Central Coast Combined



Unique Businesses

**486**



Unique First Nations

**23**



Unique Locations

**898**

## Hunter

Unique Businesses

**413**

Unique First Nations

**18**

Unique Locations

**491**

## Central Coast

Unique Businesses

**73**

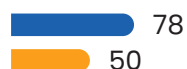
Unique First Nations

**5**

Unique Locations

**106**

Manufacture



Supply



Service Provision



● All ● Hunter-CC

## Geographic distribution

Of the 742 businesses identified, 540 were classified as service providers, 217 as suppliers, and 78 as manufacturers. Where a business could manufacture an item, alongside other service types (e.g. manufacture and supply/distribute the same product), it was classified as a manufacturer. The Hunter and Central Coast regions accounted for 65% of all businesses identified. This reflects the regions' depth of capability. It also reflects the hierarchical methodology, which prioritised identifying local businesses before expanding the search to NSW and national levels.

Most businesses identified were based in the Hunter and Central Coast (486), with a further 195 in broader NSW. In line with the hierarchical methodology, only 16 of the 68 capability packages required a national search, which identified 61 unique businesses outside NSW.

Because many national businesses operate across multiple states, the same business may be represented in more than one state. For this reason, capability outside NSW is more accurately presented by location count rather than unique business count. By location, Queensland (94), Western Australia (90), and Victoria (55) recorded the highest capability counts outside NSW.

|                    | MANUFACTURING | SUPPLY | SERVICE PROVISION | TOTAL BUSINESSES |
|--------------------|---------------|--------|-------------------|------------------|
| Central Coast      | 8             | 28     | 69                | 96               |
| Cessnock           | 1             | 2      | 14                | 16               |
| Dungog             | 0             | 1      | 2                 | 3                |
| Lake Macquarie     | 9             | 21     | 67                | 85               |
| Maitland           | 20            | 34     | 103               | 126              |
| MidCoast           | 0             | 1      | 3                 | 3                |
| Muswellbrook Shire | 1             | 5      | 22                | 25               |
| Newcastle          | 6             | 32     | 138               | 158              |
| Port Stephens      | 4             | 5      | 10                | 16               |
| Singleton          | 4             | 7      | 27                | 29               |
| Upper Hunter Shire | 0             | 2      | 0                 | 2                |

**Table 1: Total unique businesses by Hunter & Central Coast LGA and service**

Business counts by LGA should be viewed with some caution. Many businesses operate across more than one LGA, and if a business had a presence in multiple LGAs, it may have been counted once in each of those areas. While this method gives a better picture of the geographic spread of capability, it also means that adding up business counts by LGA may result in a total that is higher than the number of unique businesses identified across the wider study area.

In the same way, a business may provide different kinds of goods and services. For example, it might manufacture one product while supplying another. Because of this, a single business can appear in more than one service type category. As a result, service type totals will not add up to the total number of unique businesses.

Viewing the same data by number of locations, i.e. counting different sites of the same business separately, provides a more accurate picture of how capability is distributed, as many Hunter and Central Coast businesses operate from multiple sites across the 2 regions.

Within the Hunter and Central Coast, 486 individual businesses were identified operating from 589 locations. The Hunter region alone accounts for 413 businesses (85% of the Hunter and Central Coast total), while the Central Coast contributed 73 (15%). 3 LGAs (Newcastle (158), Maitland (126), and Lake Macquarie (85)) account for 89% of all Hunter businesses. This reflects the concentration of industrial and commercial activity in these areas.

|                    | MANUFACTURING | SUPPLY | SERVICE PROVISION | TOTAL LOCATIONS |
|--------------------|---------------|--------|-------------------|-----------------|
| Central Coast      | 8             | 36     | 71                | 106             |
| Cessnock           | 1             | 2      | 14                | 16              |
| Dungog             | 0             | 1      | 2                 | 3               |
| Lake Macquarie     | 10            | 23     | 72                | 93              |
| Maitland           | 27            | 42     | 112               | 137             |
| MidCoast           | 0             | 1      | 3                 | 3               |
| Muswellbrook Shire | 1             | 6      | 23                | 26              |
| Newcastle          | 7             | 36     | 144               | 166             |
| Port Stephens      | 4             | 5      | 10                | 16              |
| Singleton          | 4             | 8      | 27                | 30              |
| Upper Hunter Shire | 0             | 1      | 0                 | 1               |

**Table 2: Total unique locations by Hunter & Central Coast LGA and service type.**



When measured by location rather than individual business count, the distribution of capability across the Hunter and Central Coast is more dispersed than the previous section suggests. Newcastle (166 locations), Maitland (137), and Lake Macquarie (93) remain the 3 largest concentrations, but account for only 49.5% of all Hunter and Central Coast locations. The remaining 7 LGAs account for more than half of all identified locations.

A single business headquartered in Newcastle may operate depots, workshops, or project offices, for example, in Singleton, Muswellbrook, or the Central Coast. Measuring by location provides a more reliable picture of where capability can be mobilised. It also highlights that smaller LGAs such as Singleton (30 locations), Muswellbrook (26), and Port Stephens (16) contribute meaningfully despite lower individual business counts. Given the economic output of some of these LGAs, these figures may still underrepresent the true depth of local capability.

Newcastle's 166 locations (28% of Hunter and Central Coast locations) reflect its role as the region's primary commercial and industrial centre, while Maitland's 136 locations (23%) and 20 manufacturers make it the Hunter's most manufacturing-intensive LGA across the packages assessed in this report. Central Coast businesses were predominantly service providers (69) and suppliers (28), with manufacturing limited to eight businesses. The Port of Newcastle's role as a major industrial hub contributes to the concentration of industrial activity and supply chain capability in the Lower Hunter. The spread of locations into Singleton, Muswellbrook, and the Upper Hunter reflects the presence of mining services businesses that also hold transmission-relevant capability.<sup>1</sup>

## First Nations-owned businesses

A total of 27 First Nations-owned businesses were identified nationally, of which 22 were based in the Hunter and Central Coast regions. This represents 4.5% of all Hunter and Central Coast businesses. Most (25 of 27) are classified as service providers, with one manufacturer and 3 suppliers. Within the Hunter and Central Coast regions, First Nations-owned businesses are concentrated in Newcastle (9), the Central Coast (5), and Maitland (4). Capabilities were most common in civil services packages, followed by electrical and security hardware.

While First Nations participation is present across service provision, manufacturing representation is limited to a single business. There may be an opportunity for targeted programs to support First Nations-owned businesses in diversifying into manufacturing or supply roles within the transmission supply chain.



## Business size and scale

Table 3: Business size and scale per service type – All Australia

| TOTAL (ALL AUSTRALIA) |                   |               |                 |              |                |                       |                 |
|-----------------------|-------------------|---------------|-----------------|--------------|----------------|-----------------------|-----------------|
| SERVICE TYPE          | UNIQUE BUSINESSES | Business Size |                 |              | Business Scale |                       |                 |
|                       |                   | SMALL (<20)   | MEDIUM (20–199) | LARGE (≥200) | SMALL (<\$10M) | MEDIUM (\$10M–\$100M) | LARGE (>\$100M) |
| All Service Type      | 4                 | 1             | 0               | 3            | 1              | 1                     | 2               |
| Manufacturing         | 75                | 5             | 30              | 28           | 7              | 33                    | 23              |
| Service Provision     | 531               | 114           | 190             | 165          | 167            | 166                   | 132             |
| Supply                | 217               | 40            | 63              | 83           | 43             | 72                    | 70              |
| Unique Total          | 738               | 149           | 258             | 228          | 206            | 241                   | 184             |

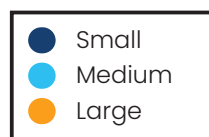
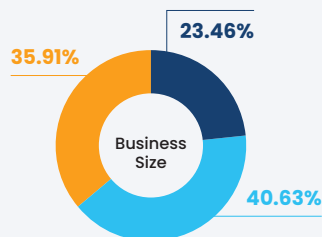


Figure 1: Business Size (Australia wide)

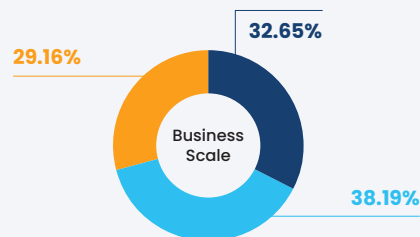


Figure 2: Business scale (Australia wide)

The 742 businesses identified span a broad range of sizes and scales. Of the 720 businesses with available data, 27.6% are small businesses with fewer than 20 employees, 38.9% are medium-sized (20 to 199 employees), and 33.5% are large businesses with 200 or more employees. By revenue, 37.4% have annual revenue below \$10 million, 35.3% fall between \$10 million and \$100 million, and 27.4% exceed \$100 million. There were more medium-sized manufacturers than in any other category, by both size and scale.

The profile of Hunter-based businesses was similar to the combined cohort, as expected, given that Hunter businesses make up 57% of all businesses identified.

The Central Coast has a different profile. Of its 72 businesses, 40.3% are small-scale with revenue under \$10 million, compared to 37.4% across the full dataset. Given the predominance of smaller businesses, many may face challenges participating in large-scale transmission procurement. This is supported by survey feedback and stakeholder interviews, as explored further in this report.



## Hunter and Central Coast



### SERVICE TYPE

Of the 26 packages where Hunter and Central Coast capability was sufficient, nine were product-based (supply or manufacture) and 17 were service-based. Service provision was the largest service type across the regions, accounting for 399 of 486 businesses (82%). Suppliers accounted for 108 (22.2%), while 50 manufacturers (10.3%) were identified. Most of this capability sat across planning and site preparation, reflecting the region's established base in construction and engineering, associated with activities such as mining.

Hunter and Central Coast manufacturing totalled 50 of the 78 manufacturers identified in this report (64.1%), which is significant. Though compared to the number of suppliers (217), the picture looks different. The Hunter has historically been a centre for heavy industry and manufacturing, but much of this capability is oriented toward mining, defence, and heavy industrial services rather than transmission-specific products. These companies can provide services to support the transmission sector, such as fabrication, machining, and metal processing, but many were not included in this report because the packages focused more on electrical components. The assessment of transferable capability explores these opportunities further in this report.



### STRENGTHS

This project identified several areas of strength for the Hunter and Central Coast regions. Planning and site preparation was well represented, particularly across civil services packages such as civil works (98), machinery and equipment hire (70), concreting (61), and road construction (51), as well as engineering and design services (34).

Hunter and Central Coast manufacturing capability was strongest in switchboards and distribution boards, and precast concrete, with 18 manufacturers each. The next highest was SCADA and control systems (3). There are manufacturers of note in the region, namely Ampcontrol, Nepean Power, and PBE Rutherford, who each have complex capabilities in the engineering and manufacture of electrical equipment and componentry, including switch room modules, surge arrestors, and transformers.

Hunter and Central Coast businesses are also well represented in onshore electrical services (HV and LV) with 29 and 25 local service providers respectively, 28 crane hire businesses, and 26 in transmission tower foundations. Hunter and Central Coast suppliers were most capable in aggregate and road base (26), earthing system components (19), SCADA and control systems (19), and concrete supply (17).

***Stakeholder feedback highlighted that wind OEMs such as Siemens and Vestas have indicated they would move manufacturing to Australia if pipelines of 1 GW of capacity construction per year for over 10 years could be guaranteed.***



ICN found insufficient Hunter and Central Coast capability in 42 of 68 packages. Across product-based packages (29), Hunter-based manufacturing capability was low compared to the number of suppliers (108). Though when comparing overall manufacturing capability across all product-based packages in this report, the disparity is consistent and suppliers far outnumber manufacturers. Due to the economies of scale involved in electrical component manufacturing and the size of Australia's market on a global scale, there may not be a viable business case for manufacturing many of these products domestically. This is explored further in the transferable capability section.

The largest gaps were in the offshore packages. This is somewhat expected, given that offshore wind is an immature industry in Australia. There is relevant capability in marine services associated with the oil and gas industry, though NSW's ban on oil and gas exploration limits its development in the state. Stakeholder feedback highlighted that wind OEMs such as Siemens and Vestas have indicated they would move manufacturing to Australia if pipelines of 1 GW of capacity construction per year for over 10 years could be guaranteed, though this has not eventuated.<sup>2</sup> The reduction of the Hunter Offshore Wind Zone from 10 GW to 5 GW also led to Equinor withdrawing from the Novacastrian Offshore Wind Farm project due to the corresponding economics.<sup>3</sup> Both of these factors further hinder offshore capability development in the state.

National gaps were found in transmission tower structural testing (0), dynamic riser systems (6), subsea mooring and anchor systems (17), wave traps (5), and offshore substation fabrication (7). The actual gaps may be larger than ICN was able to identify, as it is difficult to determine how much Australian based content a multinational company can provide in its delivery of products or services.

For transmission towers, the primary gap relates specifically to full scale prototype structural testing. While Australian companies can undertake inspection, materials verification, coating and galvanising inspection, and erection quality assurance,

there is no known domestic capability to perform full scale structural load testing of high voltage lattice tower designs. As a result, prototype testing is typically undertaken overseas, most commonly in China or India, or supported through advanced modelling and verification of existing tower families.

While outside the primary scope of this report, work previously undertaken by ICN Victoria also identified a national gap in the galvanisation of transmission tower components.<sup>4</sup> Transmission lattice structures are generally galvanised as individual members or components, however some larger or longer components may not fit within the bath sizes currently available in Australia. While dipping one end of a component and then the other may be technically possible, stakeholder feedback indicates this approach is generally not accepted by industry for these applications.<sup>5</sup>

ICN found 12 companies with capability relevant to transmission tower fabrication. However, stakeholder engagement highlighted that current local suppliers may not have the scale, throughput or production speed required to supply new build transmission projects at the rate needed by major project schedules. This does not necessarily indicate a lack of technical capability, but rather a lack of current production scale. Stakeholders noted that the Australian Energy Regulator's expenditure framework focuses primarily on price rather than local content.<sup>6</sup> Lead times, uncertain pipelines, and delayed decisions on order sizes do not give local businesses the confidence or commercial justification to invest in additional capability and capacity, often resulting in procurement from established overseas manufacturers in locations such as China and Türkiye.

Towers account for approximately 21% of total transmission line expenditure, making them the most cost sensitive component of transmission projects.<sup>7</sup> While the absence of domestic prototype structural testing and large scale galvanising capability presents a constraint, stakeholder feedback suggests that commercial factors, particularly price competitiveness, pipeline certainty, and procurement settings, remain the primary barriers to establishing a competitive local manufacturing base.<sup>8</sup>

# Survey Results and Stakeholder Feedback

## Respondent summary

| GROUP           | RESPONDENTS | % OF TOTAL |
|-----------------|-------------|------------|
| All Respondents | 318         | 100%       |
| Hunter          | 132         | 41.5%      |
| Central Coast   | 19          | 6.0%       |
| NSW (Non-H&CC)  | 106         | 33.3%      |
| National        | 61          | 19.2%      |

*Table 4: Survey responses per group*

An industry survey was developed with NZEA to capture insights not typically held within the ICN database. 360 businesses completed the survey, though 42 respondents were found to be either not capable or outside the geographic area associated with the capabilities assessed, such as Civil Works, which was reserved for Hunter and Central Coast-based businesses. 318 respondents were confirmed to have relevant capability. The survey summary below refers to both totals where relevant. Of the 318 capable respondents, 151 were from the Hunter and Central Coast (132 Hunter, 19 Central Coast) and 167 from outside the regions (106 NSW, 61 nationally).

**Hunter survey respondents by LGA (132)**

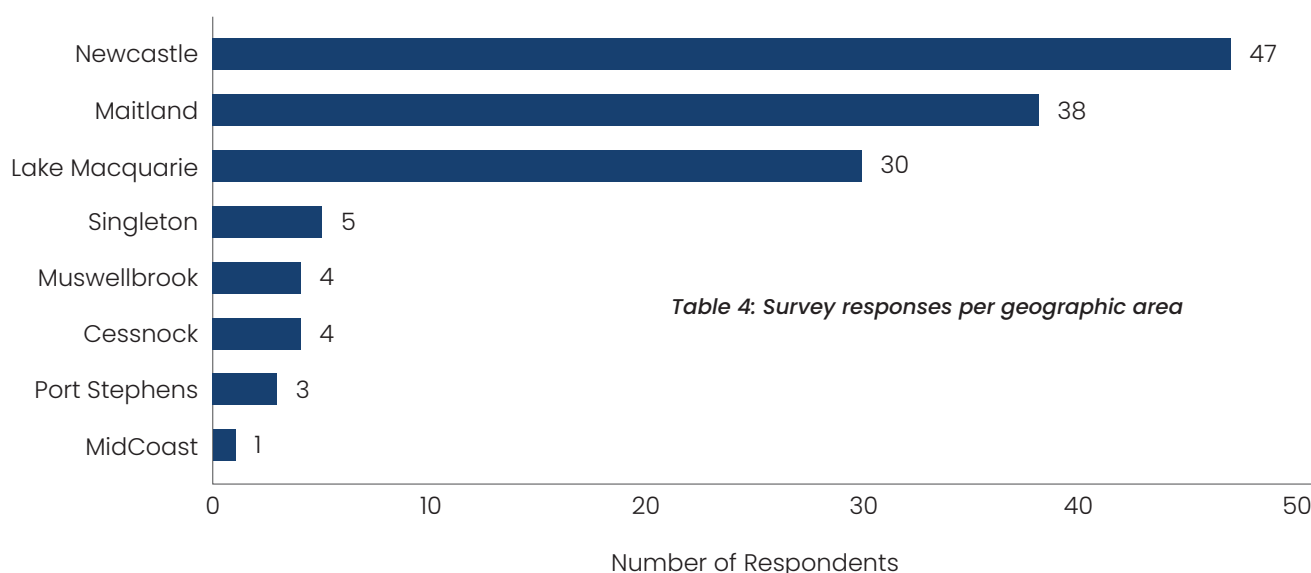


*Table 4: Survey responses per geographic area*

*Figure 3: Hunter Survey Respondents by LGA*

## Contract capacity

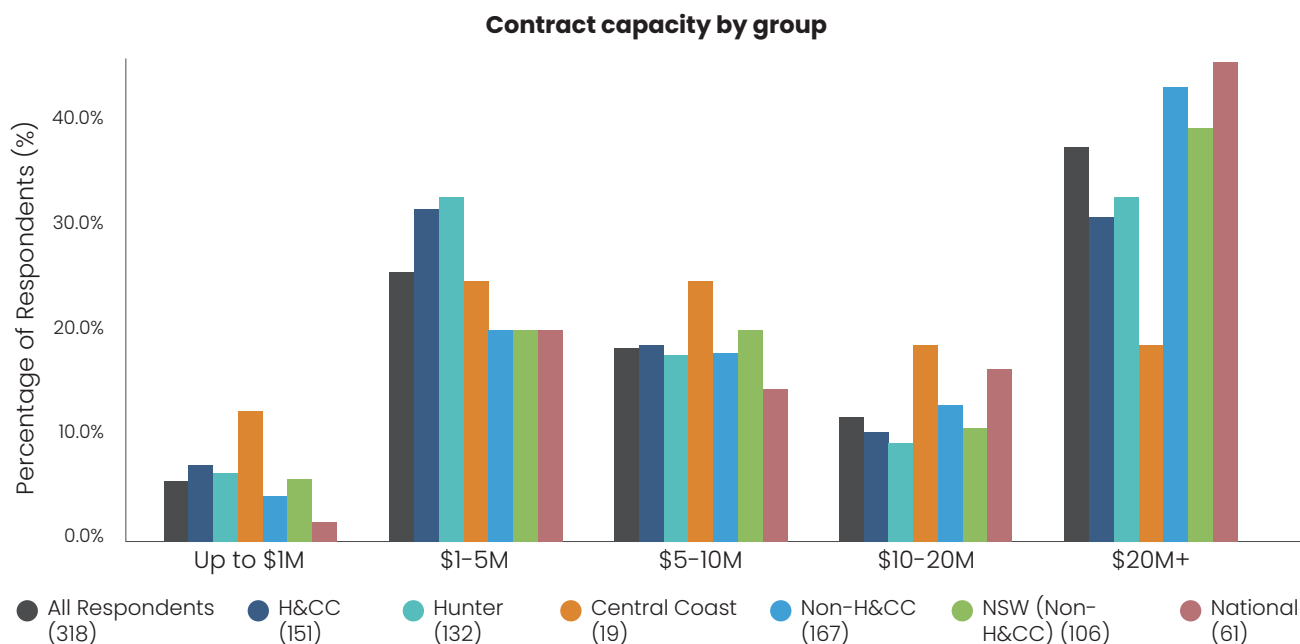


Figure 4: Contract capacity by group

Of the 318 capable respondents, 259 provided their contract capacity, which is the size contracts the business can reasonably handle. Most Hunter and Central Coast businesses indicated their comfortable contract size was in the \$1-5 million range (31.9%), but 31.1% also indicated capacity above \$20 million. This suggests capability in the regions is comprehensive across both direct contracting and subcontracting levels.

Non-Hunter and Central Coast businesses answered differently. 43.8% indicated capacity for contracts over \$20 million, compared to 31.1% for Hunter and Central Coast businesses. The nature of this study, being transmission-specific and Hunter-focused, may have meant it only attracted larger interstate businesses with existing capability in the sector.

### CONTRACT CAPACITY – % OF ANSWERED

| GROUP           | TOTAL SURVEY RESPONSES | UP TO \$1M | \$1-5M | \$5-10M | \$10-20M | \$20M+ | ANSWERED |
|-----------------|------------------------|------------|--------|---------|----------|--------|----------|
| All Respondents | 318                    | 5.8%       | 25.9%  | 18.5%   | 12.0%    | 37.8%  | 259      |
| Hunter          | 132                    | 6.6%       | 33.0%  | 17.9%   | 9.4%     | 33.0%  | 106      |
| Central Coast   | 19                     | 12.5%      | 25.0%  | 25.0%   | 18.8%    | 18.8%  | 16       |
| NSW (Non-H&CC)  | 106                    | 6.0%       | 20.5%  | 20.5%   | 10.8%    | 42.2%  | 83       |

Table 5: Contract capacity per group by percentage

## Workforce capacity

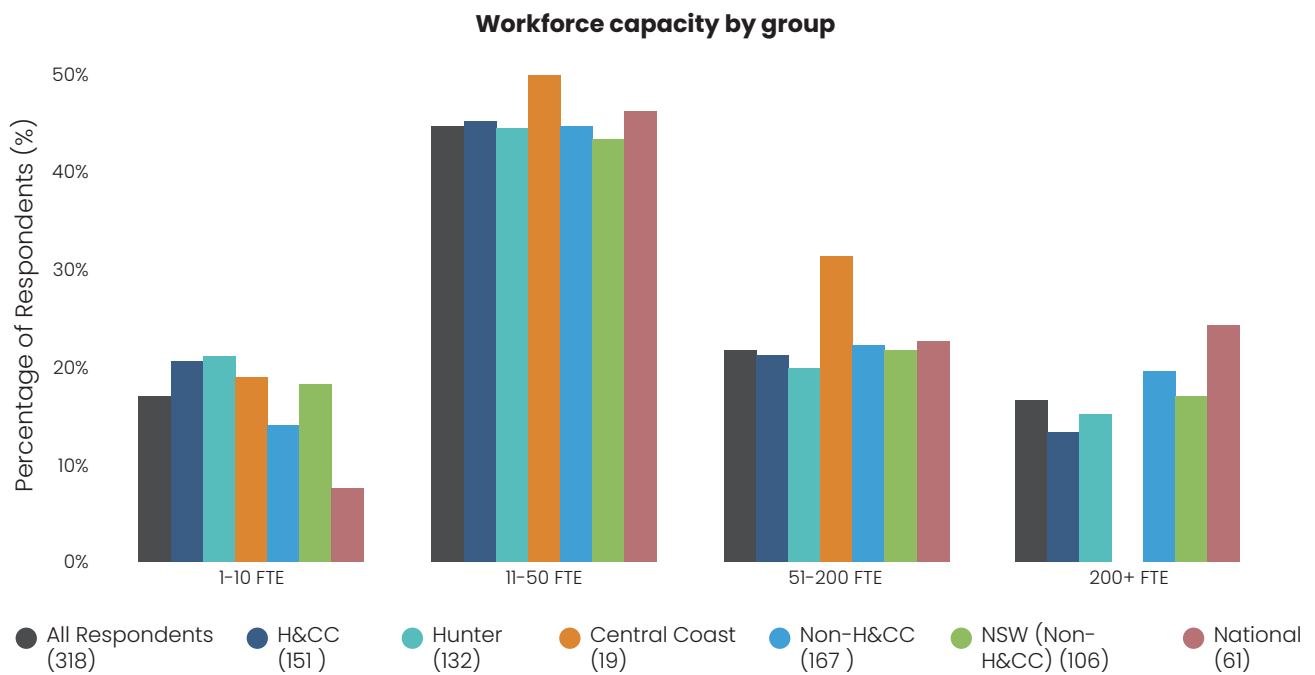


Figure 5: Workforce capacity by group



## WORKFORCE CAPACITY — % OF ANSWERED

| GROUP           | N   | 1–10 FTE | 11–50 FTE | 51–200 FTE | 200+ FTE | ANSWERED |
|-----------------|-----|----------|-----------|------------|----------|----------|
| All Respondents | 318 | 17.0%    | 44.8%     | 21.6%      | 16.6%    | 259      |
| Hunter          | 132 | 20.8%    | 44.3%     | 19.8%      | 15.1%    | 106      |
| Central Coast   | 19  | 18.8%    | 50.0%     | 31.3%      | 0.0%     | 16       |
| NSW (Non-H&CC)  | 106 | 18.1%    | 43.4%     | 21.7%      | 16.9%    | 83       |
| National        | 61  | 7.4%     | 46.3%     | 22.2%      | 24.1%    | 54       |

**Table 6: Workforce capacity per group by percentage**

Of the 318 capable respondents, 244 indicated their remaining workforce capacity for transmission projects. Most Hunter and Central Coast respondents (45.1%) stated capacity of 11 to 50 full-time equivalent (FTE) employees, consistent with a supply chain dominated by small and medium enterprises. 13.1% of Hunter and Central Coast respondents indicated 200 or more FTE, compared to 19.7% for non-Hunter and Central Coast respondents. No Central Coast respondents reported capacity in the 200+ FTE category, suggesting the region's transmission-capable business base is composed of smaller operators.

It should be noted that while the question asked for remaining workforce capacity for transmission projects, some respondents may have interpreted this as total employees. The figures above should therefore be treated as indicative.

## Barriers to entry

| BARRIERS BY REGION (COUNTS) |     |            |              |        |             |              |              |         |           |       |          |
|-----------------------------|-----|------------|--------------|--------|-------------|--------------|--------------|---------|-----------|-------|----------|
| Group                       | n   | Visibility | Consultation | Tender | Procurement | Package Size | Mobilisation | Finance | Workplace | Other | Answered |
| All Respondents             | 318 | 151        | 112          | 95     | 89          | 40           | 24           | 11      | 12        | 19    | 241      |
| Hunter                      | 132 | 57         | 48           | 42     | 34          | 21           | 8            | 6       | 6         | 4     | 99       |
| Central Coast               | 19  | 10         | 6            | 5      | 8           | 2            | 0            | 1       | 0         | 0     | 15       |
| NSW (Non-H&CC)              | 106 | 50         | 34           | 27     | 29          | 11           | 6            | 3       | 5         | 10    | 75       |
| National                    | 61  | 34         | 24           | 21     | 18          | 6            | 10           | 1       | 1         | 5     | 52       |
| National                    | 61  | 34         | 24           | 21     | 18          | 6            | 10           | 1       | 1         | 5     | 52       |

Table 7: Barriers to entry by region

### Barriers to entry - regional comparison

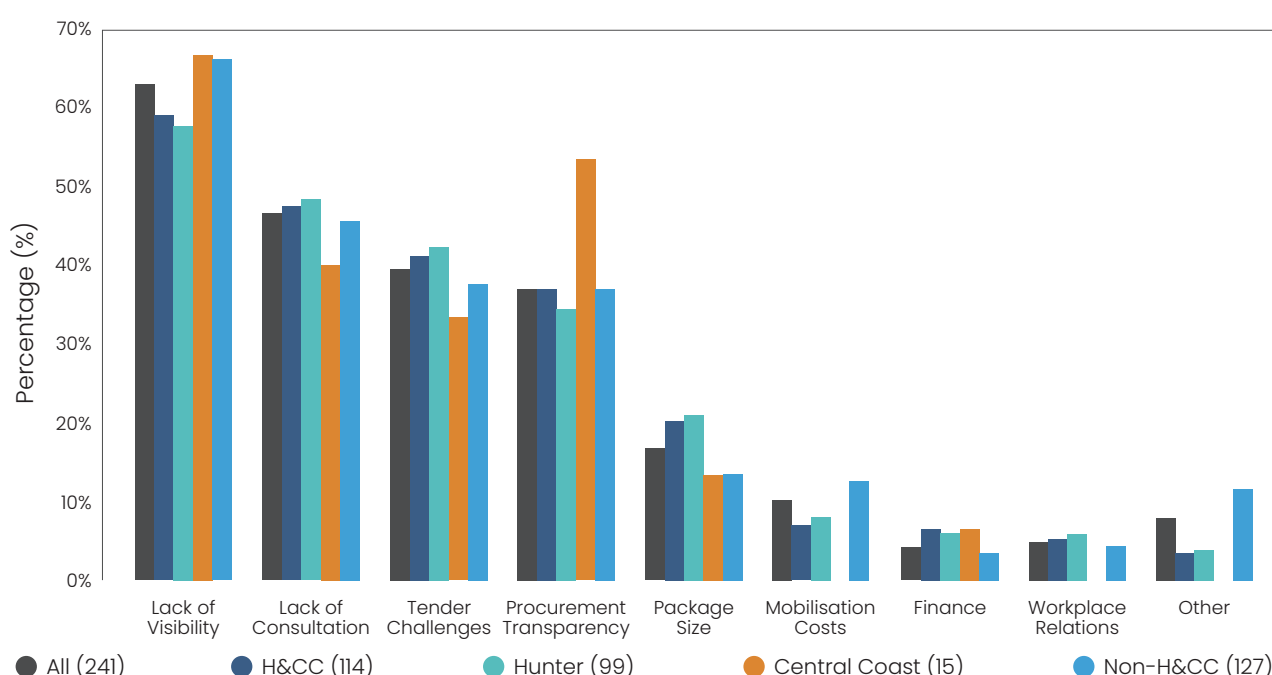


Figure 6: Barriers to entry by group

Of the 318 capable respondents, 241 answered the barriers question. Lack of visibility was the most cited barrier (62.7%), followed by lack of consultation or engagement with developers (46.5%). These 2 barriers, both relating to information and access, significantly outweigh financial or regulatory barriers.

Among Hunter businesses specifically, package size (21.2%) was more frequently cited than by non-Hunter and Central Coast respondents (13.4%). This suggests that the way transmission contracts are packaged, typically as large bundled scopes to EPCM contractors, disproportionately affects local SMEs. Central Coast respondents cited procurement transparency as important (53.3%), higher than any other group. This aligns with feedback from the survey, which raised concerns that the Central Coast risks being subsumed under the broader Hunter transition framework, with opportunities primarily communicated through Hunter or Sydney-based channels rather than reaching Central Coast businesses directly.

Non-Hunter and Central Coast businesses show higher mobilisation cost concerns (12.6%, rising to 19.2% for national respondents, compared to 7.0% for Hunter and Central Coast respondents). This should be expected, given the additional cost of servicing remote project sites from interstate locations and is consistent with stakeholder feedback identifying distance and logistics as factors that erode the competitiveness of otherwise capable businesses.

## HUNTER

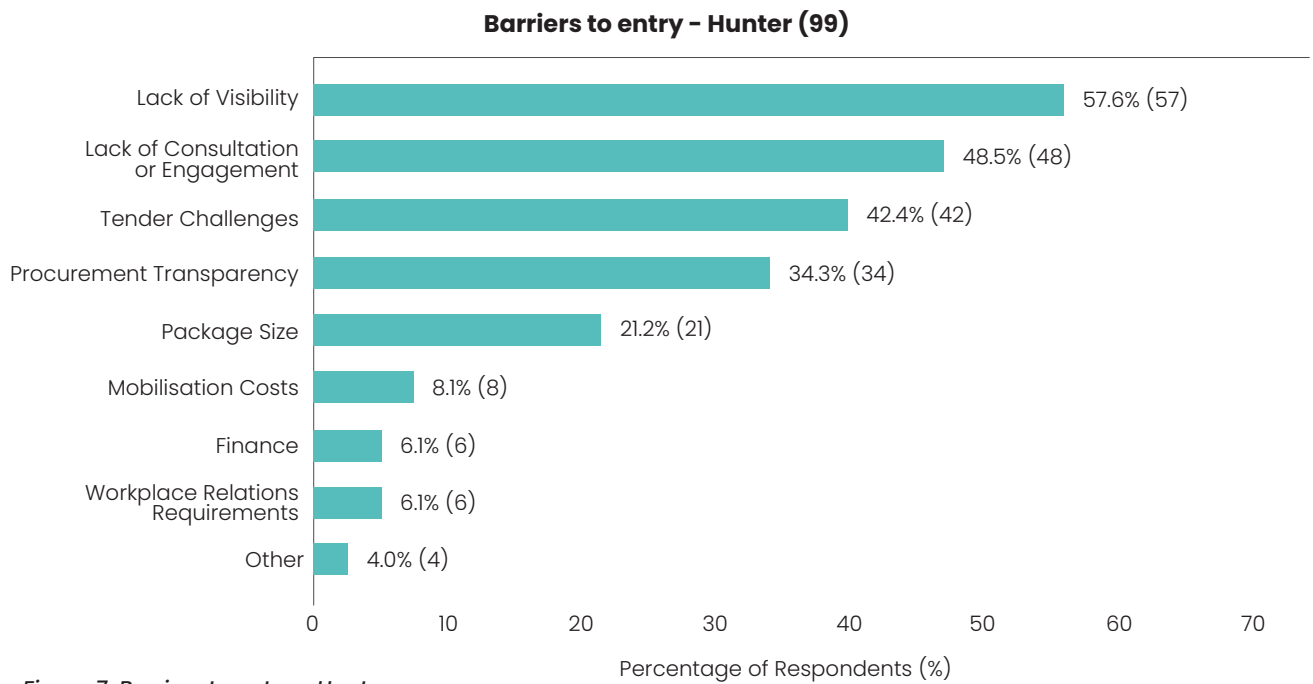


Figure 7: Barriers to entry – Hunter

## CENTRAL COAST

Central Coast respondents placed lack of visibility (67%) and procurement transparency (53%) as top barriers, with procurement transparency notably higher than in other groups. This may reflect a more engaged but information-constrained cohort.

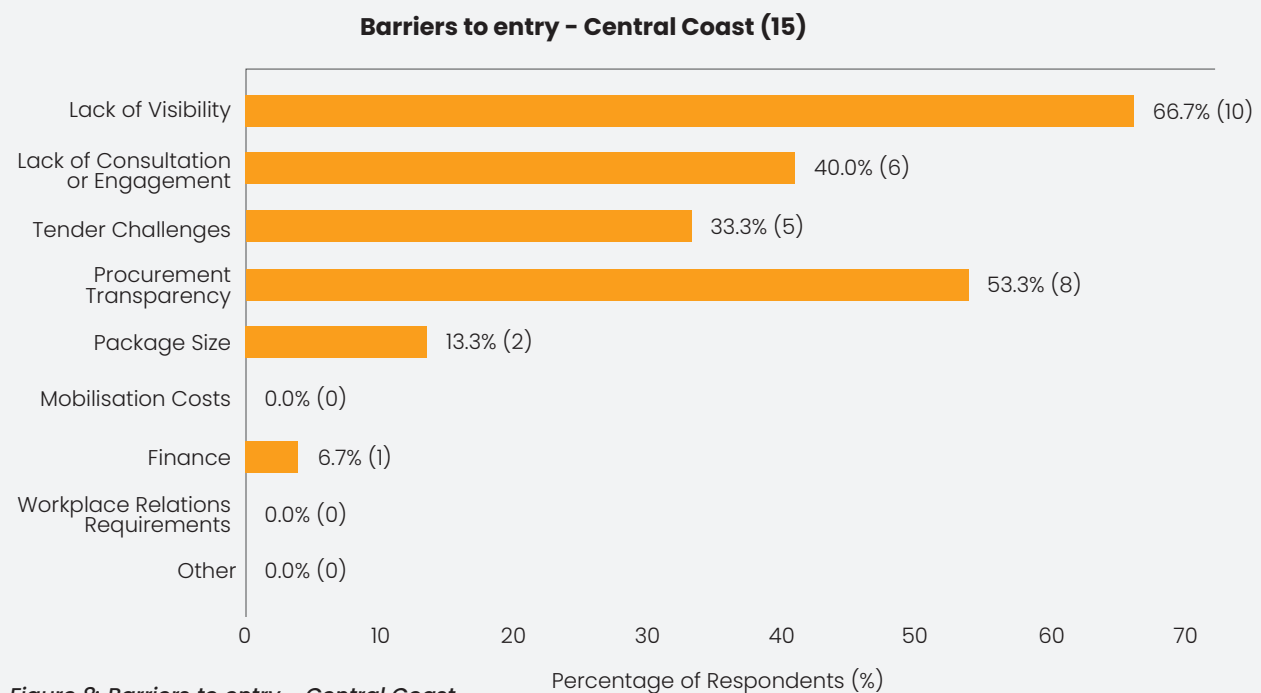


Figure 8: Barriers to entry – Central Coast

## Maximise opportunities for participation

Survey respondents were asked how contract opportunities could be maximised for their business. Of the 286 who answered, 275 provided usable feedback. These were disseminated into 9 themes, presented below in descending order of frequency. The themes are consistent with both the barriers identified in the survey and the feedback from stakeholder consultations, reinforcing the idea that information, access, and procurement design are primary levers for increasing local participation.

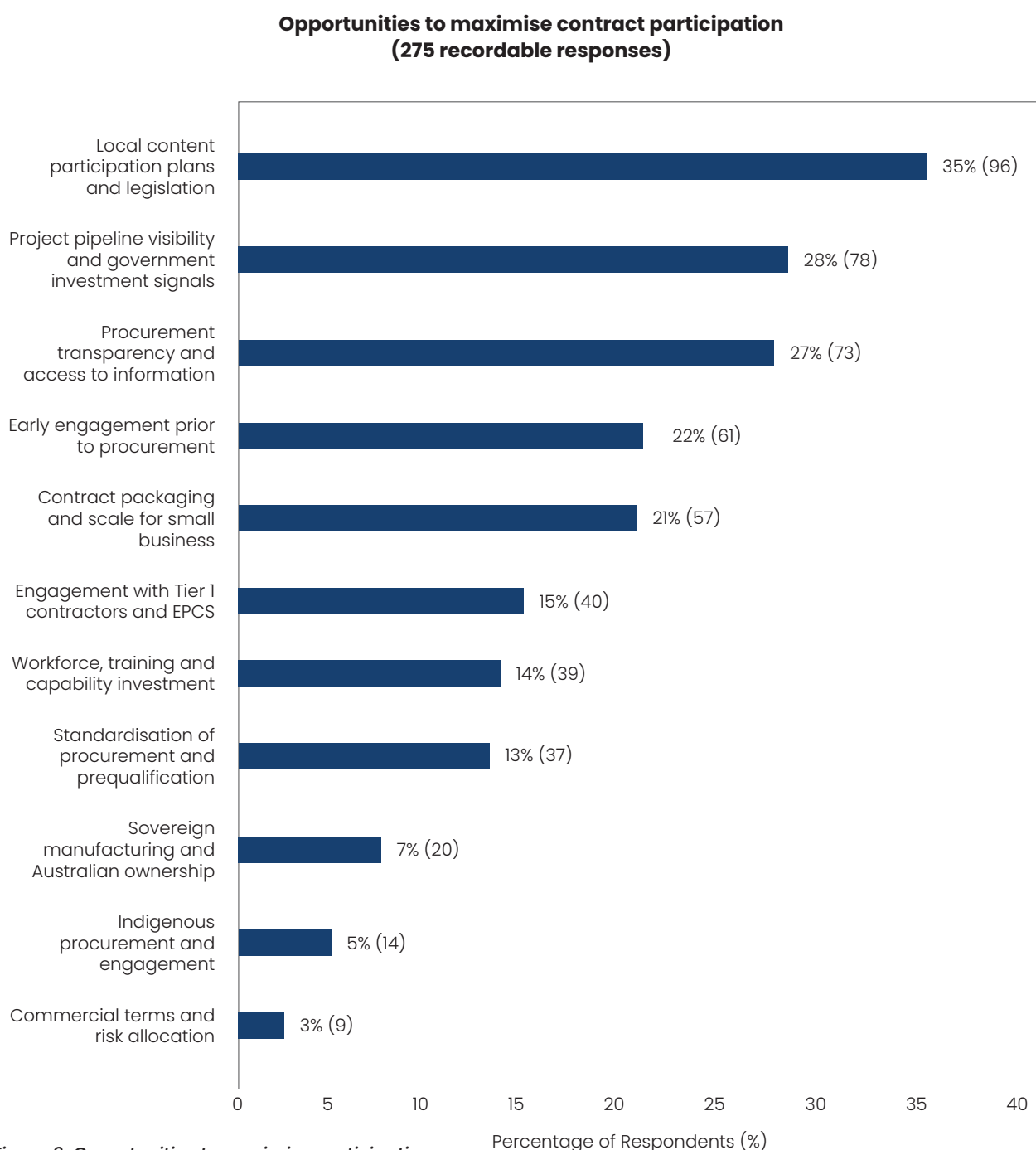


Figure 9: Opportunities to maximise participation

## LOCAL CONTENT PARTICIPATION PLANS AND LEGISLATION

Local content was the most frequently raised theme. Businesses called for enforceable local content commitments, clearer definitions of what constitutes local content, and legislation that holds project proponents accountable to participation targets. Respondents consistently noted that without binding requirements, procurement decisions default to established overseas supply chains. Feedback confirmed that the AER's expenditure framework does not incentivise local content or broader economic outcomes.

## PROJECT PIPELINE VISIBILITY AND GOVERNMENT INVESTMENT SIGNALS

Without forward certainty of project timing, funding, and scope, businesses reported they cannot justify investment in workforce, equipment, or capability development. This was a consistent theme across stakeholder consultations, which noted that modelling of future skills and project requirements would give SMEs the confidence to invest, and that regional businesses are reluctant to commit capital without assurance of sustained work.

## PROCUREMENT TRANSPARENCY AND ACCESS TO INFORMATION

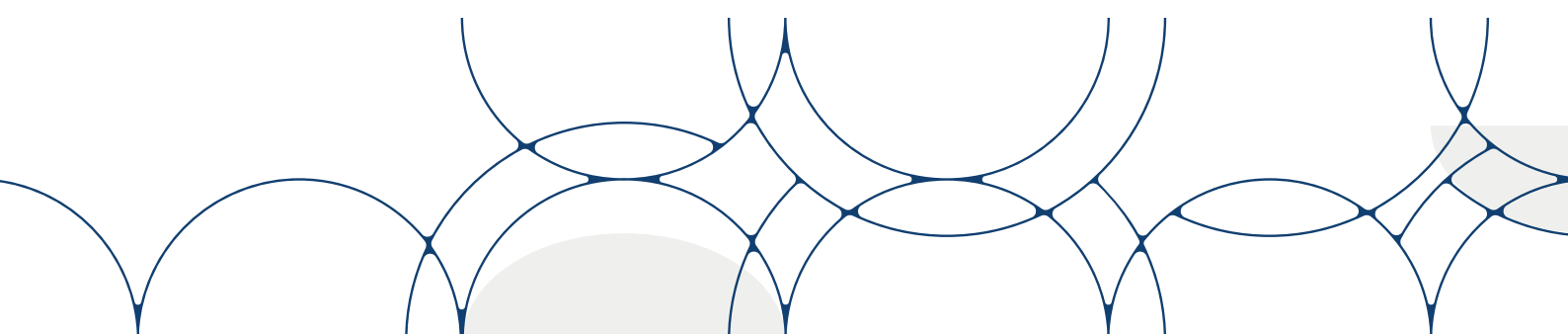
Businesses reported that opportunities are often not well advertised, procurement processes lack clarity, and access to decision-makers is limited. Respondents raised the need for a central source of contract information, transparent evaluation criteria, and consistent notification of upcoming opportunities. Without directly referencing it, respondents described the core functions of ICN's Gateway platform, suggesting the platform is not visible enough to the businesses it is designed to serve in the regions. Stakeholder feedback also noted that industry briefings in the Central West failed to translate into meaningful engagement, contributing to distrust among regional businesses.

## EARLY ENGAGEMENT PRIOR TO PROCUREMENT

Respondents noted that engagement typically occurs too late for local businesses to meaningfully contribute. Businesses sought pre-tender access to documents, early contractor involvement during feasibility and planning stages, and engagement before key procurement decisions are made. There was a call for a shift from one-off tendering to ongoing dialogue and planning with local industry, and noted instances where local manufacturers were unable to participate in tenders due to late or insufficient information about project specifications.

## CONTRACT PACKAGING AND SCALE FOR SMALL BUSINESS

Large, bundled contracts tend to favour Tier 1 contractors and exclude capable SMEs. Respondents called for the debundling of these scopes into smaller, more realistic sized packages for the local market, and for procurement models that encourage consortium or joint venture arrangements. Some stakeholders also pointed to the defence prime contractor model as a possible framework for enabling smaller businesses to participate in large scale projects while still giving project owners confidence in delivery.



## ENGAGEMENT WITH TIER 1 CONTRACTORS AND EPCMS

Businesses reported that major contractors control access to most opportunities, often default to existing overseas supply chains, and engage local suppliers too late in the procurement process. Stakeholders highlighted that local manufacturers were frustrated when the Hunter Transmission Project sourced towers from Türkiye without offering local tenders, despite local companies expressing the ability to supply the required components. Others raised similar concerns, noting that procurement teams default to overseas suppliers based on assumptions about local capability rather than consultation.

## WORKFORCE, TRAINING AND CAPABILITY INVESTMENT

Businesses reported they cannot invest in training or accreditation without certainty of work. Stakeholders identified electrical engineers and basic electrical trades as the most in-demand occupations and noted that regional access to upskilling is limited, often requiring travel. Multiple stakeholders also agreed on the need for reskilling the existing workforce rather than reliance on new labour supply, with education responses including TAFE partnerships, micro-credentials, and improved university pathways.

## STANDARDISATION OF PROCUREMENT AND PREQUALIFICATION

Inconsistent requirements across agencies and projects create unnecessary overhead, and costly and repetitive prequalification processes disadvantage smaller firms. Respondents sought standardised technical specifications, simplified tender templates, and clearer panel access pathways. This aligns with broader stakeholder feedback about the lack of coordination between government entities, with stakeholders advocating for a centralised approach to project delivery and procurement standards.

## COMMERCIAL TERMS AND RISK ALLOCATION

A smaller group of respondents raised concerns about unrealistic risk transfer to contractors, compressed tender timelines, and payment terms that strain SME cash flow. Respondents described contractual conditions that deter capable Australian firms from participating despite a stated willingness to engage them. While this was the least cited theme by count, the severity of its impact when it does apply suggests it warrants attention in procurement design.



## **Additional Survey Feedback**

Three issues arose beyond the previous survey themes and warrant separate consideration.

## **Workforce and Skills**

Significant shortages were identified in electrical trades and logistics, with no centralised, data-driven approach to forecasting labour demand. The clean energy transition requires reskilling the existing workforce rather than reliance on new labour supply. An example reinforced during stakeholder consultations was that HunterNet's Career Connections group training organisation has placed more than 2,000 apprentices across the region, providing an existing framework for workforce development.

## **Project Pipeline Coordination and Workforce Modelling**

The importance of understanding project pipelines at a national level, and undertaking proper workforce modelling to assess demand in each region relative to the expected works, was also raised. The Hunter is currently delivering large transport infrastructure projects that offer businesses considerably more certainty than the transmission pipeline. Without coordinated modelling across sectors, businesses will commit resources to the work that provides the clearest forward pipeline, which at present is not transmission. This is something proponents and governments will need to account for in both project planning and procurement design.

## **Central Coast Identity**

Concerns were raised that the Central Coast risks being subsumed under the broader Hunter transition framework. The region could lose its distinct identity and miss targeted transition support. Central Coast businesses do not view Hunter-based transmission work as relevant to their region, and many are unaware of how existing capabilities, particularly those developed through the energy and resources sector, can transfer into renewable energy supply chains. The data supports this concern, the Central Coast's 72 businesses are predominantly small-scale, and procurement transparency was the highest-cited barrier among Central Coast survey respondents (53.3%), higher than any other group.

# Transferable Capability

This section examines where Hunter and Central Coast manufacturers could increase participation in Australia's electricity transmission supply chain.

**Part A** looks at technical and market factors to identify where there's credible participation potential for manufacturers in the regions.

**Part B** then presents findings from direct industry engagement, testing feasibility, interest, and the barriers to participation.

## PART A: SCOPE & screening

### SECTION 1

#### Regional manufacturing capabilities intersection with electrical transmission components

### Purpose

Hunter and Central Coast manufacturers have real potential to participate more in Australia's transmission supply chain. The regions' industrial strengths help identify which electrical transmission components local manufacturers could feasibly produce. Subsequently, potential manufacturing opportunities based on technical and process alignment are highlighted. To support credibility, the assessment draws on regional economic and manufacturing reports, as well as a manufacturing expert familiar with the Hunter and Central Coast.

#### 1.1 HUNTER MANUFACTURING BASE – REGIONAL PROFILING

The Hunter and Central Coast have long established industrial and manufacturing base servicing mining, defence, rail, shipbuilding, steel, and energy industries.<sup>9</sup> Mining is the largest industry by value in the Hunter, contributing 30% of regional output. Additionally, construction is a major employer, and defence has a significant presence.<sup>10</sup> Defence contributes over \$1 billion annually to the regional economy, employing several thousand people, signalling developed supply chains.<sup>11</sup>

Manufacturing across these sectors tends to be centred on heavy metal processing and industrial production. More specifically, steelmaking, aluminium smelting, mining equipment, rolling stock, and shipbuilding.<sup>12</sup> The presence of major facilities such as Tomago Aluminium Smelter further reinforces the presence of large-scale metals processing in the regions.<sup>13</sup> Although manufacturing employment declined between 2011 and 2021, the Hunter and Central Coast continue to house a substantial base of industrial firms and engineering contractors.<sup>14</sup>

NSW's Manufacturing TAFE Centres of Excellence plan identifies the Hunter and Central Coast as one of three NSW locations used to deliver the skills needed for manufacturing capability in NSW. This crucial workforce training plan aligns with mechanical trades, metal fabrication, welding, and advanced manufacturing.<sup>15</sup> Notably, however, the plan has no mention or prioritisation of electrical manufacturing skills. The skills base aligns with other regional profiling that circles around fabrication, machining, and industrial assembly.

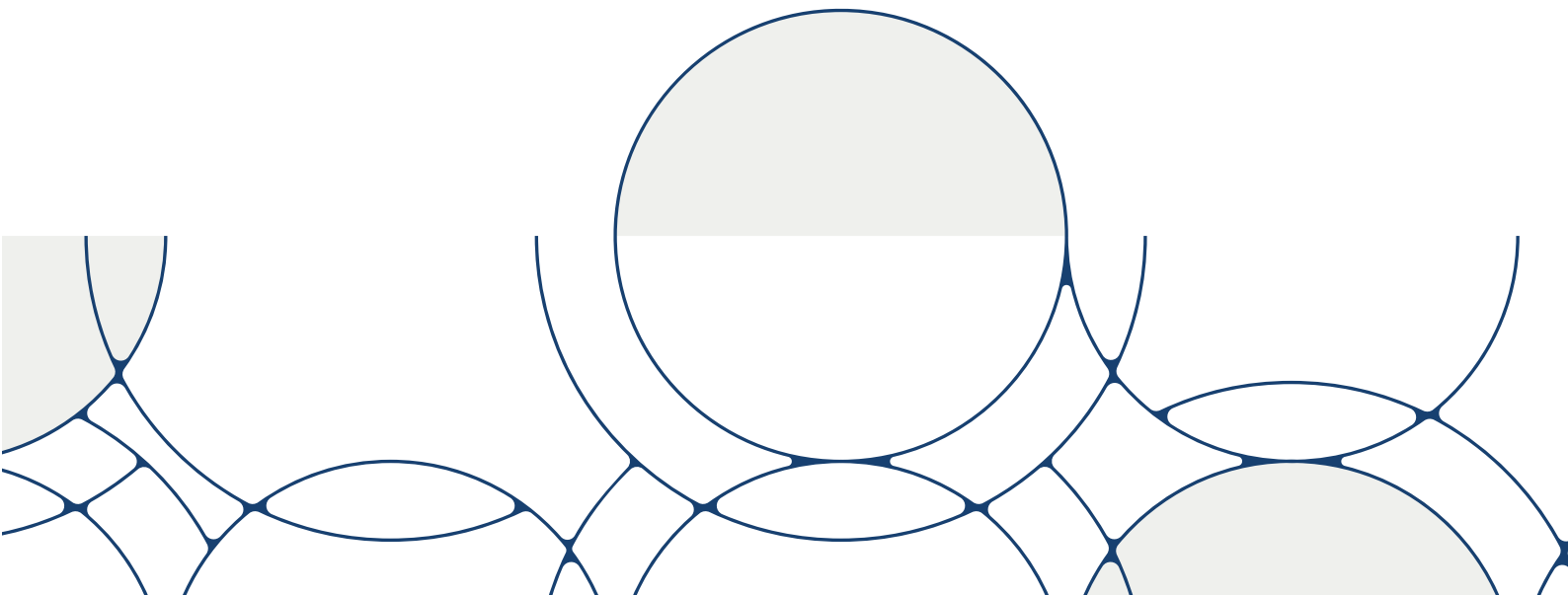
# Expert Validation

These findings were tested through consultation with Dusko Bajic, an Industry Capability Network (ICN) industry advisor with extensive experience across Hunter and Central Coast manufacturing.<sup>16</sup> Bajic confirmed that structural steel fabrication and precision machining are clear regional strengths. Dozens of companies operate modern 3-, 4-, and 5-axis CNC machining centres. Many incorporate robotics and automated production systems. Examples include suppliers producing defence-grade, high-tolerance components that feed into the F-35 supply chain.

In contrast, both desktop research and industry consultation indicate that electrical manufacturing capability in the Hunter and Central Coast is limited. Where it exists, it is concentrated within a small pool of companies rather than being broadly distributed across the regions. This is particularly evident in:

- |                                                   |                                                                  |
|---------------------------------------------------|------------------------------------------------------------------|
| 1 High-voltage electrical equipment manufacturing | 2 Transformer or switchgear factories                            |
| 3 Cable extrusion or armouring plants             | 4 Semiconductor or power electronics manufacturing <sup>17</sup> |

Taken together, the evidence shows a clear pattern in the region’s manufacturing base. The regions have deep, transferable capability in heavy fabrication, precision machining, and industrial metal processing. Specialised electrical product manufacturing, however, remains narrow and concentrated. These findings are the basis for the inferred capabilities outlined in the following sections.



## 1.2 INFERRED MANUFACTURING EQUIPMENT AND PROCESSES

Drawing on industry activity in the regions, we can reasonably infer the types of manufacturing equipment and processes present in the regions. These inferences are grounded in what is used today in mining, heavy engineering, defence, rail, and metals processing.

The Hunter and Central Coast regions clearly support large scale structural fabrication and heavy metal processing. These are consistent with the regions' long-standing role servicing mining, rail, marine, and infrastructure projects. The fabrication workshops are typically equipped with CNC plasma or laser cutters, plate rolls, press brakes, and large welding bays.<sup>18</sup> These assets enable the production of substantial steel assemblies, from mining structures to all sorts of rail and ship components. Overhead cranes are also standard in these facilities, allowing large sections to be lifted and positioned for assembly. These processes are all characteristic of heavy mechanical manufacturing.

The presence of primary metal processing further reinforces this profile. Tomago Aluminium Smelter operates large-scale smelting, casting, and materials handling systems.<sup>19</sup> While not directly linked to transmission components, this demonstrates regional familiarity with capital-intensive metal processing environments and complex industrial operations.

The regions also exhibit strong capability in precision machining and advanced metal manufacturing. This is particularly evident for defence, aerospace, and high-specification applications. Businesses operate modern multi-axis CNC machining centres (3-, 4-, and 5-axis) capable of producing complex, high-tolerance components.

A Hunter-based manufacturer, Nupress, is an example of these capabilities. The company supplies precision-machined components into the global F-35 fighter jet supply chain, demonstrating compliance with high-grade tolerances, materials, and quality systems.<sup>20</sup> These facilities employ digital manufacturing systems, offline operation, and automated tool management.<sup>21</sup> Together, this confirms that the regions possess strong capability in precision metalworking, where repeatability and dimensional accuracy are critical.

Manufacturing activity in the Hunter and Central Coast extends beyond part fabrication into large scale mechanical assembly and refurbishment. Mining-focused manufacturers fabricate and overhaul major machinery using heavy assembly bays, large weld stations, and on-site machining.<sup>22</sup> Similarly, the Hunter and Central Coast's rail and marine engineering base supports rolling stock assembly, maintenance, and heavy structural fabrication.<sup>23</sup> Facilities involved include long assembly halls, heavy lifting systems, and surface treatment facilities. Overall, these environments are optimised for large mechanical systems.





## ELECTRICAL MANUFACTURING CAPABILITY

Electrical manufacturing capability does exist in the Hunter and Central Coast, but is specialised rather than broad. A small number of businesses assemble electrical systems, primarily for mining and infrastructure. For example, Ampcontrol manufactures transportable substations, switchrooms, and custom transformers. These products involve electrical assembly and integration, testing, and other advanced electrical manufacturing.<sup>24</sup> Notably, these activities rely on specialised electrical test bays and facilities.

However, this capability is not representative of manufacturing capabilities across the regions. Profiling does not show region-wide HV electrical manufacturing, cable extrusion plants or transformer factories. This is reinforced by workforce policy. The net zero manufacturing TAFE Centre of Excellence for the Hunter focuses on metal fabrication, welding, mechanical fitting, and advanced manufacturing. Electrotechnology training is integrated, however it is geared toward installation and maintenance rather than manufacturing.<sup>25</sup>

Overall, the Hunter and Central Coast's manufacturing processes and assets are aligned with heavy steel fabrication and welding, precision CNC machining, and large-scale mechanical assembly and refurbishment.<sup>26</sup> These capabilities provide the technical basis for Section 1.3.

### 1.3 MAPPING MANUFACTURING CAPABILITIES TO ELECTRICAL TRANSMISSION COMPONENTS

Building on the inferred equipment and processes outlined in Section 1.2, this section assesses which electrical transmission components align with the Hunter and Central Coast's manufacturing base.

Components are grouped based on core manufacturing processes required for their production. Components are included or excluded from further analysis based on whether local processes and assets match their requirements.

## Components considered in scope

The following transmission components are dominated by heavy steel fabrication, precision machining, coating, and mechanical assembly. All of these are well-established, region-wide capabilities in the Hunter and Central Coast.

- 1 TRANSMISSION TOWERS (LATTICE AND MONOPOLE STRUCTURES)**  
Manufactured through steel cutting, drilling, welding/bolting, and corrosion protection (e.g. galvanising or coating), using heavy fabrication workshops and lifting infrastructure.<sup>27</sup>
- 2 TRANSMISSION LINE HARDWARE AND CONDUCTOR FITTINGS**  
Produced through forging, casting, machining, drilling, and galvanising of steel or aluminium components.<sup>28</sup>
- 3 STEEL REINFORCEMENT AND FOUNDATIONS (ANCHOR CAGES)**  
Fabricated using rebar cutting, welding, plate fabrication, and mechanical assembly processes aligned with civil and mining fabrication practices.<sup>29</sup>
- 4 CLAMPS, BRACKETS, EARTHING COMPONENTS, AND FITTINGS**  
Manufactured through casting or forging followed by CNC machining and threading, requiring tight tolerances.<sup>30</sup>
- 5 SWITCHROOM AND KIOSK ENCLOSURES (STRUCTURAL SHELL ONLY)**  
Produced through sheet-metal fabrication, welding, surface finishing, and coating.<sup>31</sup>

In addition to transmission assets, the Hunter and Central Coast manufacturing base has technical alignment with wind energy infrastructure components. This is based on overlapping fabrication processes, materials, and production assets.

- 1 WIND TURBINE TOWER SECTIONS**  
Manufactured through steel plate cutting and rolling, welding, and fabrication. Wind towers are produced using heavy structural steel fabrication processes, aligned with large-module capability.<sup>32</sup>
- 2 OFFSHORE WIND PLATFORM SUBSTATIONS**  
Comprising large steel decks, frames, and topside structures, manufactured through fabrication, welding, machining, and assembly.<sup>33</sup>

These components are therefore considered technically within the scope of the regions' manufacturing capabilities.

## Components considered out of scope

The following components are excluded because their manufacture relies on specialised electrical engineering, insulation systems, continuous-process production, and/or high-voltage testing infrastructure. These capabilities are not evidenced across the regions.

### ELECTRICAL ASSEMBLY AND SYSTEM INTEGRATION:

- **Switchboards**
- **UPS Systems**
- **Inverters**
- **SCADA Panels**

These products require advanced electrical system design, wiring, functional testing, and compliance certification. While some capability exists, this is not representative of the broader regional manufacturing base.<sup>34</sup>

### HIGH-VOLTAGE ELECTRICAL EQUIPMENT:

- **Power Transformers**
- **HV Switchgear (AIS/GIS)**
- **Instrument Transformers (CTs, VTs)**
- **Surge Arresters**
- **Wave Traps**
- **Line Traps**

The manufacture of these components relies on very specialised coil winding, insulation systems, and high-voltage testing facilities.<sup>35</sup> These manufacturing environments are capital-intensive and not identified as region-wide capabilities in the Hunter or Central Coast. This is despite the presence of one or two specialised companies with these capabilities.

### CABLE MANUFACTURING:

- **HV, MV, and LV Power Cables**
- **Subsea Cables**
- **Fibre-Optic Cables**

Cable production requires continuous extrusion lines, stranding machines, armouring systems, and very large purpose-built facilities.<sup>36</sup> There is no evidence of such infrastructure operating in the Hunter or Central Coast regions.

## Summary of transmission capabilities

Section 1 establishes technical transferability, identifying which transmission components align with the regions processes, equipment, and industrial strengths. However, technical feasibility does not imply a viable business opportunity. The market also needs to support local competition. Section 2, therefore, applies a screening process to the technically in-scope components. This narrows the list to those where demand, supply depth, and procurement suggest local participation is plausible, in current or adjustable conditions.

## SECTION 2

### Market & business case assessment

The previous section identified electrical transmission components within technical reach of the Hunter and Central Coast's manufacturing base. This section simply asks whether those components also present a credible market opportunity. It looks at demand, how procurement currently fulfils this demand, and how competitive the local supplier base is.

#### 2.1 DEMAND OUTLOOK

Australia's energy transition requires a substantial expansion of the transmission network.<sup>37</sup> AEMO forecasts approximately 5,000 km of new transmission over the next decade, and approximately 10,000 km by 2050. While the Integrated System Plan (ISP) does not provide component level breakdowns of materials, construction at this scale implies significant and repeated demand for key transmission inputs.

This expansion sits within the national infrastructure uplift. Infrastructure Australia reported in 2025 that utilities projects, including energy transmission, are leading the growth in the national infrastructure pipeline.<sup>38</sup> Investment is projected to more than double to \$36 billion over the next five years. Infrastructure Australia's CEO stated that governments are "doubling down on energy transmission projects", reflecting a clear emphasis on transmission infrastructure.

Furthermore, Infrastructure Australia estimates that solar, wind, and pumped hydro (on top of transmission lines) will total approximately \$163 billion over the next five years. Not only this, but a significant share is expected to flow into regional Australia. This reinforces that electrical transmission demand is only set to increase with the coming energy transition.

NSW specific projects identified in the ISP provide near to medium term demand for transmission infrastructure in the Hunter and broader NSW network. These include the Hunter Central Coast REZ Network Infrastructure Project, identified by AEMO as an actionable NSW project, and Sydney Ring North, also referred to as the Hunter Transmission Project. The Hunter Transmission Project will increase transfer capacity into the Sydney, Newcastle and Wollongong load centres, including by enabling additional power flows from the Central West Orana, New England and Hunter Central Coast REZs. While the ISP does not provide component level quantities, these projects provide a clear regional demand signal. Given the Hunter's proximity to major REZs and NSW transmission corridors, the region is directly exposed to this activity.



*Some components were screened out based on the grounds of insufficient demand.*

Although Section 1 and demand projections identify several components as feasible, not all exhibit sufficient demand to justify supply-side analysis.

Monopole towers can be manufactured using processes similar to lattice towers and wind tower sections. However, their application in transmission projects is more limited.<sup>40</sup> Transmission infrastructure varies by voltage class, terrain, and corridor constraints. Within this, lattice towers and steel poles appear to be alternative design solutions rather than interchangeable solutions.

Steel monopoles are more commonly used in distribution networks or constrained urban environments rather than in long-span, high-voltage transmission lines that dominate Australia's major network. As a result, demand for monopole structures within the transmission buildout is materially lower than for conventional lattice towers. Given their limited application and lack of system-wide demand at the transmission level, monopole towers are excluded from further supply-side analysis.

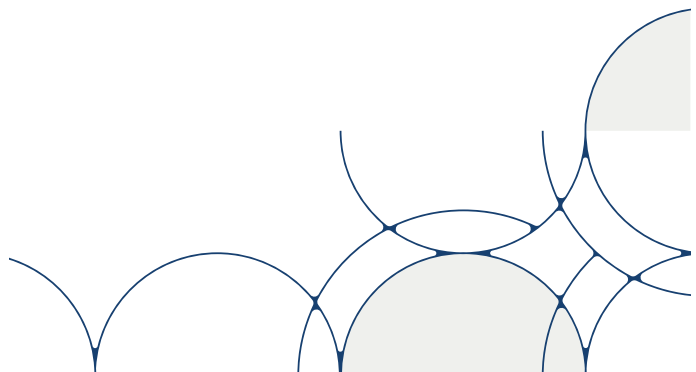
Section 1 also identified some wind-related components as technically aligned with the Hunter and Central Coast's manufacturing base. These include the structural scope of wind turbine tower sections and offshore wind platform substations. However, near-term domestic demand for these components is limited.

Australia does not yet have an established offshore wind industry. Commonwealth and state activity to date has focused on feasibility licensing and early-stage project development.<sup>41</sup> This is as opposed to committed construction programs capable of generating repeat demand. While offshore wind zones have been declared, feasibility licences can precede final investment decisions by several years. This, therefore, does not imply construction certainty.

Recent delays to Victoria's first offshore wind auction, along with deferred projects, reinforce the market uncertainty.<sup>42</sup> As a result, there is currently no confirmed demand timeline to support domestic manufacturing. In the absence of material domestic demand, these wind-related components are screened out at the demand stage. This avoids analysing areas where demand alone limits the opportunity for local entry.

Taken together, the transmission build-out creates a large, sustained, source of demand for a subset of transmission components that align with the Hunter and Central Coast's existing manufacturing capabilities. However, demand strength varies by component.

Components exhibiting strong demand are carried forward to supply-side and procurement analysis. This includes lattice transmission towers, line hardware, conductor fittings, busbars, foundations, and switchroom enclosures. Components with limited demand are excluded from further assessment at this stage. This concerns monopole towers and wind-related components. Again, this ensures analysis focuses only where demand conditions do not already rule out local participation.



## 2.2 DOMESTIC MANUFACTURING COMPETITION

Section 2.1 established that demand for a number of transmission components is large, sustained, and geographically relevant to the Hunter.

This subsection shifts from demand to the supply side. It examines how many Australian manufacturers currently produce each component, and what that indicates about market saturation.

Competition levels are classified based on the number of domestic manufacturers. The thresholds are designed to distinguish niche capability from broadly contestable markets.

| COMPONENT GROUP                          | MANUFACTURERS IN NSW | MANUFACTURERS IN AUSTRALIA | OVERALL COMPETITION LEVEL |
|------------------------------------------|----------------------|----------------------------|---------------------------|
| Line hardware & conductor fittings       | 2                    | 3                          | Low                       |
| Busbars                                  | 0                    | 1                          | Low                       |
| Transmission towers                      | 3                    | 8                          | Moderate                  |
| Tower foundations (steel cages / frames) | 20+                  | 100+                       | Very High                 |
| Switchroom / kiosk enclosures            | 20+                  | 100+                       | Very High                 |

*Table 8: Manufacturer saturation among transmission components*

Competition levels differ noticeably across the work packages. For line hardware, conductor fittings and busbars, domestic competition is low. Having only one to three manufacturers does not represent a competitive market. Capability exists in Australia, but it is concentrated in a very small number of companies. This means supply depth is limited, and there are few backup options if demand increases or a supplier encounters delays. In short, the capability is there, but it is thin.

Transmission towers sit in a moderate category. Domestic manufacturing is clearly established and not limited to a single provider, with around eight manufacturers offering some level of choice and competition. However, this is still a relatively small group and does not represent broadly distributed capability across the industry. Competition exists, but it is not deep.

Tower foundations (steel cages and frames) and switchroom or kiosk enclosures are treated as highly competitive domestically. In these areas, capability is widespread and not confined to a small number of companies. With a large pool of potential suppliers, the work is readily substitutable between companies. As a result, supply is not constrained by capability, and competition is strong.

## Overall competition analysis

The supply structure varies significantly across component groups. Some markets are thin, with capability concentrated in a handful of firms. Others are saturated, with widespread and interchangeable domestic suppliers.

However, this domestic view does not account for international competition. International competition is substantial in the sector and may already be meeting most project demand. Furthermore, domestic competition alone does not tell us whether an opportunity exists. This underscores the need to examine how components are procured in practice, which is addressed in Section 2.3.

### 2.3 PROCUREMENT STRUCTURE

This subsection examines the extent to which Australian manufacturing currently supplies domestic transmission procurement. Publicly available, component-level procurement practice information is limited for most transmission inputs. As a result, direct evidence of sourcing outcomes is uneven across component types. To address this limitation, a structured and conservative inference approach is used to assess procurement behaviour.

Where domestic demand for a transmission item is large, and domestic manufacturing capacity is limited to a small number of companies, procurement is likely to rely on international suppliers. Conversely, where domestic manufacturing capability is widespread and closely integrated with local construction activities, procurement is more likely to lean toward local suppliers. However, this second condition is less directly indicative of actual procurement practice, as widespread capability does not guarantee local sourcing.

These inferences are working assumptions to guide screening and prioritisation. They are not final conclusions. They provide a consistent way to assess components where direct procurement data is limited.



## Transmission towers

Transmission towers are the most well-documented transmission component in procurement reporting. Existing evidence indicates that transmission towers have predominantly been procured from overseas suppliers, particularly from China.<sup>43</sup> The published analysis attributes this reliance on imports to several structural factors. These include the presence of purpose-built plants overseas, lower labour and energy costs, and stronger economies of scale.

Industry consultation confirms that domestic procurement is constrained by the absence of a few more factors. These include the lack of destructive tower-testing facilities in Australia and limitations in local galvanising capacity for large lattice tower sections. These constraints are amplified by the fact that transmission towers are among the most cost-sensitive line items in transmission projects. More specifically, towers account for approximately 21% of total transmission line expenditure.<sup>44</sup>

As a result, despite a small number of domestic tower manufacturers, transmission tower procurement is predominantly import-based.

## Line hardware, conductor fittings, and busbars

Line hardware, conductor fittings, and busbars are required in very large quantities across transmission projects. Section 2.2 identifies only one to three Australian manufacturers nationally across each of these component groups, indicating very limited domestic supply depth.

Given the scale and repeatability of demand implied by the transmission build-out, a domestic manufacturing base of this size is unlikely to meet national demand. In the absence of evidence of broad-based local sourcing, procurement for these components is treated as likely import-sourced.

This is an inference based on the mismatch between demand and domestic production capacity, rather than a definitive statement.

## Tower foundations and switchroom/kiosk enclosures

Tower foundations (reinforcing steel cages and frames) and switchroom/kiosk enclosures likely share similar procurement characteristics. Both are fabricated steel components with widespread domestic manufacturing capability. Both are typically delivered as part of integrated work packages.

Section 2.2 identifies hundreds of Australian businesses capable of fabricating reinforcing steel assemblies and sheet-metal enclosures. This level of domestic capability indicates that supply is not constrained by capacity. Fabrication skills are broadly distributed across the general fabrication market.

Additionally, in both cases, one can reason that procurement is likely linked tightly to construction sequencing, site logistics, and coordination with installation activities. Importing bulky steel components would likely incur significant transport cost, schedule risk, and coordination complexity. These would come without a clear technical advantage in sourcing from overseas manufacturers for low complexity items.

While component-level procurement data is limited, these components possess a combination of deep domestic capability, widespread supplier substitutability, and integration within local construction packages. These features make local procurement of tower foundations and switchroom/kiosk enclosures feasible.

Together, these components are likely characterised by mature and saturated domestic supply conditions. While local procurement is likely already occurring, they do not represent priority opportunities for new manufacturing entry.

## 2.4 OVERALL FEASIBILITY & OPPORTUNITY RATINGS

This subsection brings together the earlier screening factors to assess the relative strength of each opportunity for Hunter and Central Coast manufacturers. It draws on the combined effect of technical fit, demand, procurement structure, domestic competition, and the broader strategic attractiveness of the work for the regions. To support consistency, the overall opportunity ratings are interpreted as follows.

A strong opportunity rating requires most of the main conditions to align.

A medium opportunity rating reflects a more mixed position. In these cases, some of the market conditions are present, but the opportunity is moderated by the other factors that weaken the case for broader regional participation.

A weak opportunity rating does not mean participation is impossible. Rather, it indicates that the broader opportunity appears limited. This may be because the market is already mature, widely supplied, or less strategically attractive for the regions.

This is also influenced by regional context. The regions have notable capability in higher-value industrial manufacturing, including mining, rail, defence, and advanced manufacturing. As a result, lower-margin or more saturated component areas contribute to a weaker strategic opportunity for regional manufacturers, even where participation may remain commercially possible.

| COMPONENT GROUP                          | TECHNICAL FIT | DEMAND OUTLOOK | OBSERVED PROCUREMENT STRUCTURE | DOMESTIC COMPETITION | OVERALL BUSINESS CASE |
|------------------------------------------|---------------|----------------|--------------------------------|----------------------|-----------------------|
| Transmission towers (lattice)            | High          | High           | Import-dominated               | Moderate             | Possible              |
| Line hardware & conductor fittings       | High          | High           | Likely import-dominated        | Low                  | Possible-Weak         |
| Busbars                                  | High          | Moderate-High  | Likely import-dominated        | Low                  | Possible-Weak         |
| Tower foundations (steel cages / frames) | High          | High           | Likely procured locally        | Very High            | Weak                  |
| Switchroom / kiosk enclosures            | High          | Moderate-High  | Likely procured locally        | Very High            | Weak                  |

Table 9: Component-level business case interpretation

### Transmission towers (lattice) – Possible

Transmission towers sit in a distinct position relative to the other components assessed. They combine high demand, technical alignment, and a base of local manufacturers that directly evidence feasibility.

The domestic market is not saturated and appears to have room for new entrants. It also involves more technical and consequently higher-margin work, unlike tower foundations and enclosures. Additionally, the market is characterised by some level of demand for domestic fabrication, unlike line hardware and busbars. There is an established manufacturing base that appears to be supported by sufficient market demand. This implies, but does not guarantee, a stronger market feasibility.

This combination of strong demand and capability implies a more credible market opportunity relative to the other components assessed.

## Line hardware, conductor fittings, and busbars

### Possible–Weak

These components also show strong demand and technical fit. However, the supply side profile is contrastingly different.

Domestic manufacturing depth is extremely shallow. One to three firms nationally cannot realistically service the scale of transmission expansion. This creates a different dynamic from towers. Rather than a modest domestic base competing with imports, these segments appear almost entirely import-reliant. Entry would likely require more direct competition with established international production. It also signals a tough market for local companies to enter.

As a result, while technically feasible, the commercial hurdle is likely higher and the business case weaker.

## Tower foundations and switchroom / kiosk enclosures

### Weak

These components exhibit strong demand and technical alignment, but the constraint is the opposite problem.

Domestic capability is deep and widely distributed. Hundreds of Australian fabricators can produce these items. Procurement is likely already embedded within local civil and construction packages. In other words, these markets are not underserved. They are mature and competitive. Entry does not solve a supply constraint and would likely result in displacement within a saturated, low margin segment. This limitation is exacerbated by the Hunter and Central Coast already contributing to high-margin work in defence, aerospace, mining and more.

For that reason, they do not represent a priority opportunity for new manufacturing activity.

## Outcomes and next steps

This assessment has screened transmission components based on demand strength, procurement reality, and domestic market saturation. This helps determine where local manufacturing in the Hunter and/or Central Coast may be worth pursuing further.

Based on this screening, transmission towers, line hardware, and busbars are treated as in scope for the Hunter and Central Coast regions. These components face strong and sustained demand, appear to be serviced through international supply chains, and do not yet have deep or mature domestic manufacturing markets. While this does not imply guaranteed viability, conditions do not obviously prohibit entry by local businesses. Therefore, further investigation is justified.

By contrast, tower foundations and switchroom / kiosk enclosures are treated as out of scope for the regions. These items are already widely manufactured in Australia. Procurement is likely local, and supplier markets are mature, saturated, and low margin. As a result, they present limited opportunity for expanded manufacturing activity in the Hunter and Central Coast. This assessment has not determined company-level profitability or investment viability. Those considerations depend on business-specific cost structures, scale, and procurement terms. These are factors best assessed by manufacturers themselves. The purpose of this screening is to help guide where conditions appear most favourable.

The components identified as in scope form the basis for the next stage of work, where targeted engagement with Hunter and Central Coast-based manufacturers tests feasibility. This builds an understanding of the appetite for regional businesses to increasingly supply transmission markets.

## PART B: INDUSTRY ENGAGEMENT & FINDINGS

### SECTION 3

#### Identification and shortlisting of potential manufacturers

##### 3.1 IDENTIFICATION OF POTENTIAL MANUFACTURERS

From the final list of in-scope transmission components, potential manufacturers in the Hunter and Central Coast were identified. Sources for the companies included the ICN Gateway database, desktop research, and industry experts.

The objective was to establish a broad but credible initial pool of manufacturers. Companies were considered credible where their operations aligned with the technical requirements of in-scope components.

##### 3.2 SHORTLISTING CRITERIA

**Companies were progressed from the initial pool to a final shortlist where they met three core criteria:**

- 1 Strong technical alignment with the manufacturing requirements of the relevant transmission component
- 2 Little to moderate change or investment required to participate (i.e. feasibility without major retooling)
- 3 Indicated interest in supplying transmission-related work

This shortlisting approach was intentionally conservative. The focus was on companies with strong near-term participation potential.

These checks were high-level and focused on basic suitability and readiness. They were not intended to replace detailed engineering validation.

Shortlisted companies are presented in the showcase profiles and the accompanying dataset produced as part of this report. Next, the following section presents the findings from this industry engagement, drawing on survey responses and feedback.

**As part of the technical alignment criteria, screening was tailored to each component type:**

Transmission towers were screened for heavy structural steel fabrication experience, capability to handle long and heavy components, quality assurance, and repeatable industrial-scale production.

Transmission line hardware and fittings were screened for precision CNC machining capability and repeatable production at scale. This reflects the small, and specification-sensitive nature of these components, as well as the need for economies of scale in small, standardised items.

Aluminium clamps and connectors were screened for aluminium-specific machining and fabrication capability, precision machining, and inspection.

Substation busbars were screened based on aluminium fabrication capability, the ability to handle long or heavy sections, and accuracy, rather than high-volume mass production.

## SECTION 4

### Findings from industry outreach: Transferable manufacturing capability in transmission

Industry outreach tested the screening results in practice. It examined feasibility, required adjustments, and barriers to entry among shortlisted businesses.

A total of 171 companies were invited across four transmission component areas. This generated 63 survey responses from 31 companies, with as many expressing interest in multiple components. This produced a credible evidence base, based on capability, feasibility, barriers, and appetite.

The findings show that capability itself is not the main constraint. Instead, participation is shaped by how clearly the opportunity is communicated, how risk is allocated, and how procurement pathways operate.

#### 4.1 CORE INSIGHTS & BUSINESS FEEDBACK

Industry responses indicate that most interested businesses are close to ready. Across the 63 responses, feasibility outcomes were strongly skewed toward near-term participation:

37

Responses indicated feasibility with minor adjustments

18

Responses indicated feasibility with moderate investment

1

Response required major investment

1

Response was not feasible under current operations

For the components assessed, the opportunity sits in slight adaptation rather than building new capabilities. The participation challenge is not technical feasibility but converting capability into actual supply.



Access to technical information emerged as one of the strongest and most consistent themes. Survey responses provide strong signals that access to information is a prerequisite for further feasibility assessment. Across all responses, the most frequently cited barriers and enablers were:

Access to Designs / IP

**38** Mentions

Long Term Demand Certainty

**37** Mentions

Partnerships with OEMs / Primes

**26** Mentions

Capital Investment

**19** Mentions

Skilled Workforce Availability

**13** Mentions

Access to Materials / Supply Chain Inputs:

**13** Mentions

Access to Fabrication-Relevant Testing or Certification:

**9** Mentions

Without drawings, specifications, and expectations, companies have their hands tied. They cannot accurately assess technical feasibility, estimate process changes or develop credible costings. Nor can they accurately determine whether to invest in the opportunity. Overall, limited access to information is a major barrier.

Long-term demand certainty was cited as often as access to designs. Many manufacturers said they will not invest without confidence that work will extend beyond a single project. Tooling upgrades, workforce expansion, and qualification costs involve upfront costs for businesses. These costs require repeatable demand to become profitable over time. When future volumes are unclear, companies hesitate because the opportunity is not justifiable or actionable.

Market access and buyer relationships also shape participation decisions. Companies consistently highlighted the importance of market access in their feasibility assessments. Responses frequently referenced the enablers of partnerships with OEMs and EPCs, as well as visibility into how suppliers are selected. Technically capable companies express hesitation where procurement pathways are unclear. Credible routes to market are needed. Companies are more likely to engage when they believe there is a realistic pathway to winning work.

Capital investment requirements, while relevant, appear to be a secondary barrier. These barriers were cited less frequently than information access or demand certainty. Where investment was required, it was typically incremental (e.g. additional tooling, fixtures, or QA processes), or contingent on clearer demand signals. Therefore, capital appears to be less of a barrier than one might expect, which is a positive sign for increasing opportunities. Companies are more concerned with demand, specifications, and procurement, which are factors in which government tend to have more influence.



## **4.2 OPPORTUNITIES TO INCREASE PARTICIPATION IN TRANSFERABLE MANUFACTURING OPPORTUNITIES**

Overall, increasing participation requires shaping conditions that allow capable companies to commit. Industry feedback suggests that firms respond most strongly to clarity, predictability, and credible routes to market. The following considerations reflect where those conditions could be strengthened.

Demand certainty emerges as the primary lever. Manufacturers are more likely to invest when they can see reliable, repeatable demand. Therefore, participation should increase where projects provide clear signals on volumes, timing, and localisation. Government influence may be strongest where it improves predictability.

Early access to transmission component designs and specifications from asset owners or EPC contractors, ideally during concept or early design stages, also plays an important role. Providing this information to potential local manufacturers enables them to assess tooling requirements, production methods, and unit costs. This reduces uncertainty and allows manufacturers to make detailed assessments about the feasibility of participation.

Commercial viability should be tested before significant investment is made. Once designs are available, firm-level costing should be used to understand pricing at different production scales. These cost signals can then be tested with asset owners, developers, and EPCs. This would gauge appetite for local sourcing at those price points. This ensures procurement levers are applied selectively, only where local supply is commercially viable.

Reducing first-mover risk may also accelerate participation. Many manufacturers may be hesitant to commit resources without evidence that early production will lead to ongoing work. Participation could be accelerated through staged contract awards or limited initial production runs. Limited production runs would also allow companies to demonstrate capability before scaling. Such mechanisms lower risk for businesses while allowing them to build experience and confidence in a new market.

Qualification and testing requirements can create additional friction. Even capable manufacturers could be delayed by prequalification, testing, and documentation requirements. Government could potentially help reduce this friction. Examples include helping enable access to accredited testing and facilitating early engagement to clarify compliance pathways.

Finally, prioritising near-ready companies should increase program effectiveness. To maximise near-term participation, initial effort could focus on companies with strongest technical alignment, minor adjustment needs, and clear interest. Early successes help build confidence among buyers and suppliers alike, creating momentum for deeper localisation.

### 4.3 CONCLUSION

Overall, the assessment indicates that manufacturing transferability presents a realistic opportunity for the Hunter and Central Coast within Australia's transmission build-out. The regions possess well-established industrial capability that aligns with transmission components being required at scale. Additionally, these are mere extensions of what companies already do today.

The assessment reflects a deliberately conservative screening process. Components were ruled in based on process alignment and market dynamics. Industry feedback then tested feasibility, required adjustments, and appetite. The remaining opportunities have passed multiple filters. This indicates that transferability is realistic for the Hunter and Central Coast regions.

Industry engagement reinforces this finding. Most interested manufacturers are near-ready, requiring adaptation and scale rather than fundamental transformation. There is a clear and genuine interest among manufacturers to pivot or expand into transmission supply chains, provided the opportunity is credible. Manufacturers consistently signal that capability is not the limiting factor. Rather, participation depends on clearer indicators from the market.

The issue is not capability. It is linking capable firms to real demand. With improved coordination between government and industry, the Hunter and Central Coast appear well-positioned for the energy transition.



# Disclaimer

The Industry Capability Network (ICN) has carefully prepared this report to map and assess the capability of the national rolling stock supply chain. This is a point in time report based on information supplied up to February 2026.

ICN makes no guarantees regarding the accuracy of the information provided and accepts no liability for any loss or damage arising from reliance on the data, regardless of any potential errors, omissions, or negligence by ICN or its representatives, contractors, or affiliates. Subject to applicable laws, ICN disclaims all warranties concerning the accuracy, quality, merchantability, or fitness for a specific purpose of any content, linked materials, products, or services mentioned in this report.

## Further Information Required?



### ICN

Contact your local ICN office for assistance identifying capable Australian businesses that meet your specific project requirements.

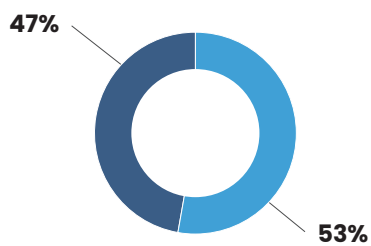


# Appendices

**DATA SOURCE: INDUSTRY SURVEY (318 RESPONDENTS) | STAKEHOLDER CONSULTATIONS (8 ORGANISATIONS)**

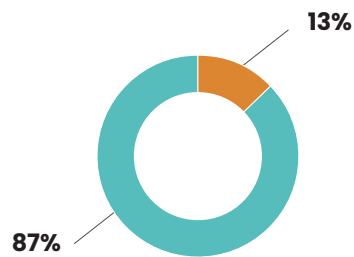
## Overview

### Survey Respondents (318)



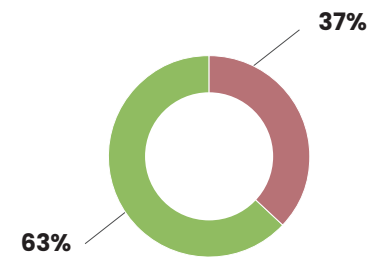
- Hunter & Central Coast (151)
- Non-H&CC (167)

### H&CC Breakdown (151)



- Hunter (132)
- Central Coast (19)

### Non-H&CC Breakdown (167)



- National (61)
- NSW (Non-H&CC) (106)

Figure 10: Survey responses by group



## 1. Contract Capacity

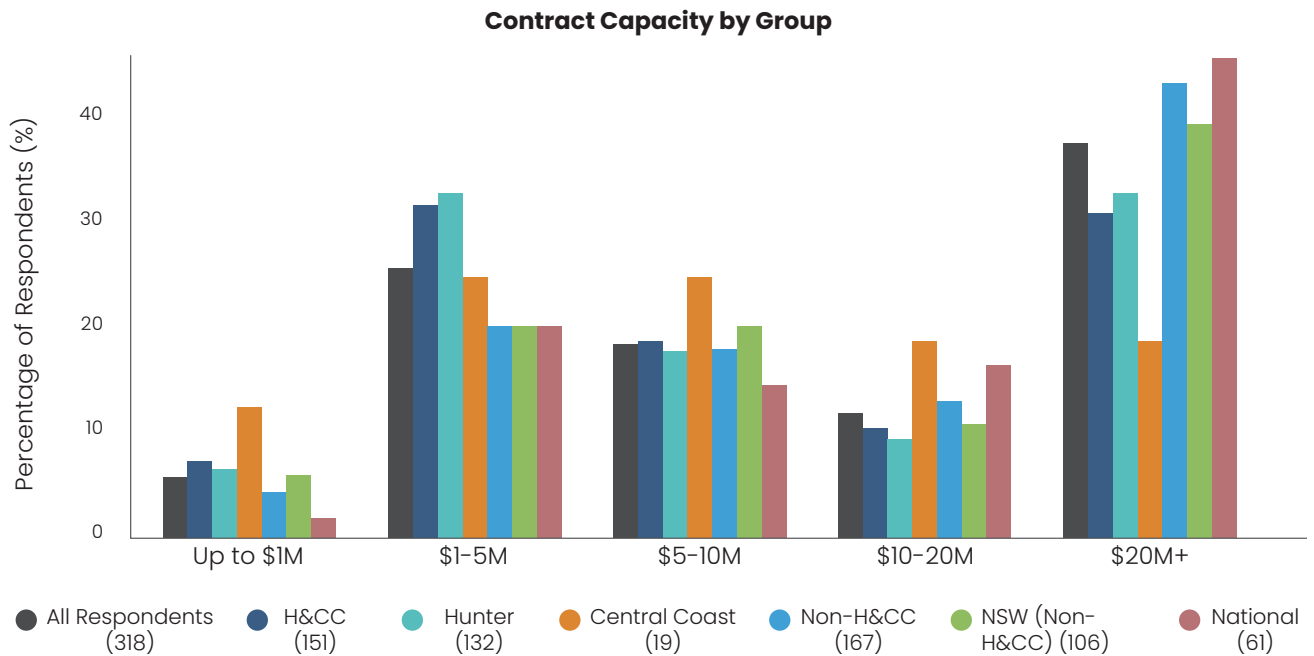


**Figure 11: Contract capacity by group**

Among H&CC respondents, the \$1–5 million range was the most commonly selected (32.0%), with a further 33.0% of Hunter businesses also indicating capacity at \$1–5 million. Non-H&CC respondents demonstrated a higher concentration at the \$20M+ tier (43.8%), with national businesses the highest at 46.3%. Central Coast respondents showed a more even distribution across contract tiers.

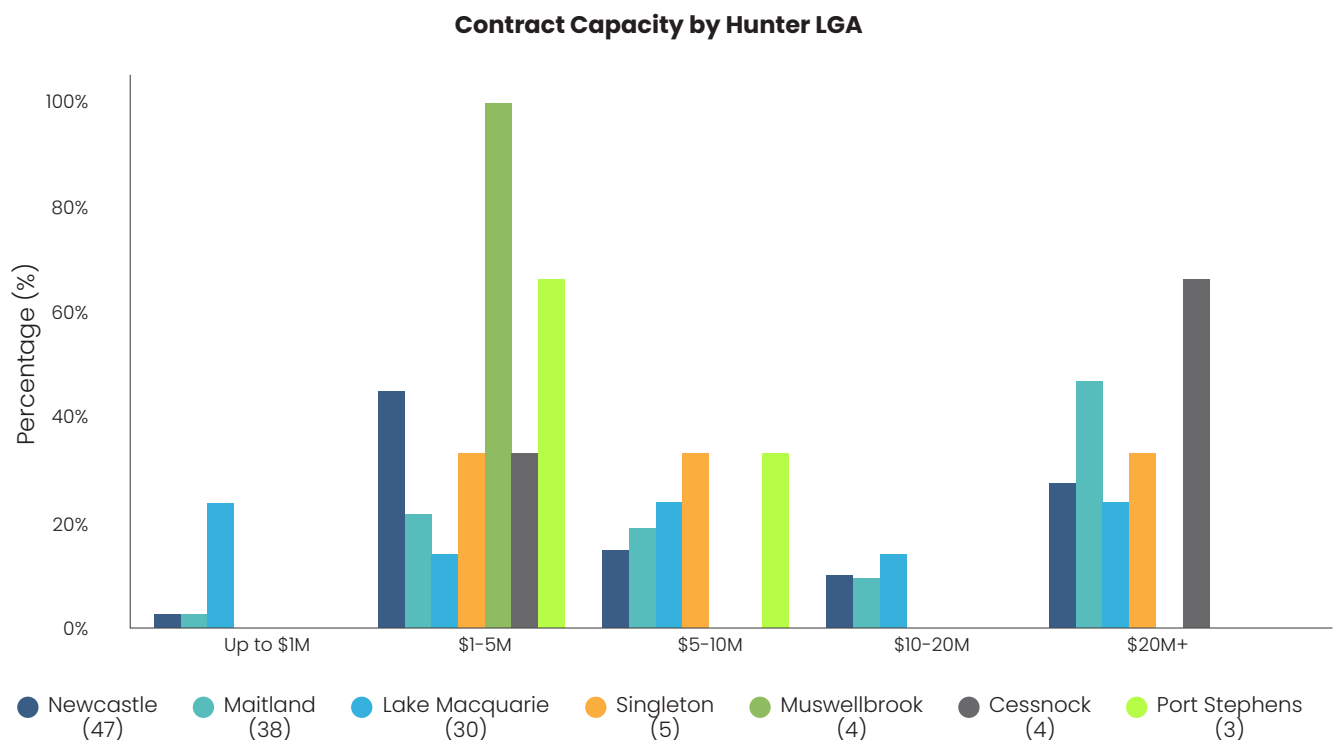


**Figure 12: Contract capacity by Hunter LGA**

## 2. Workforce Capacity

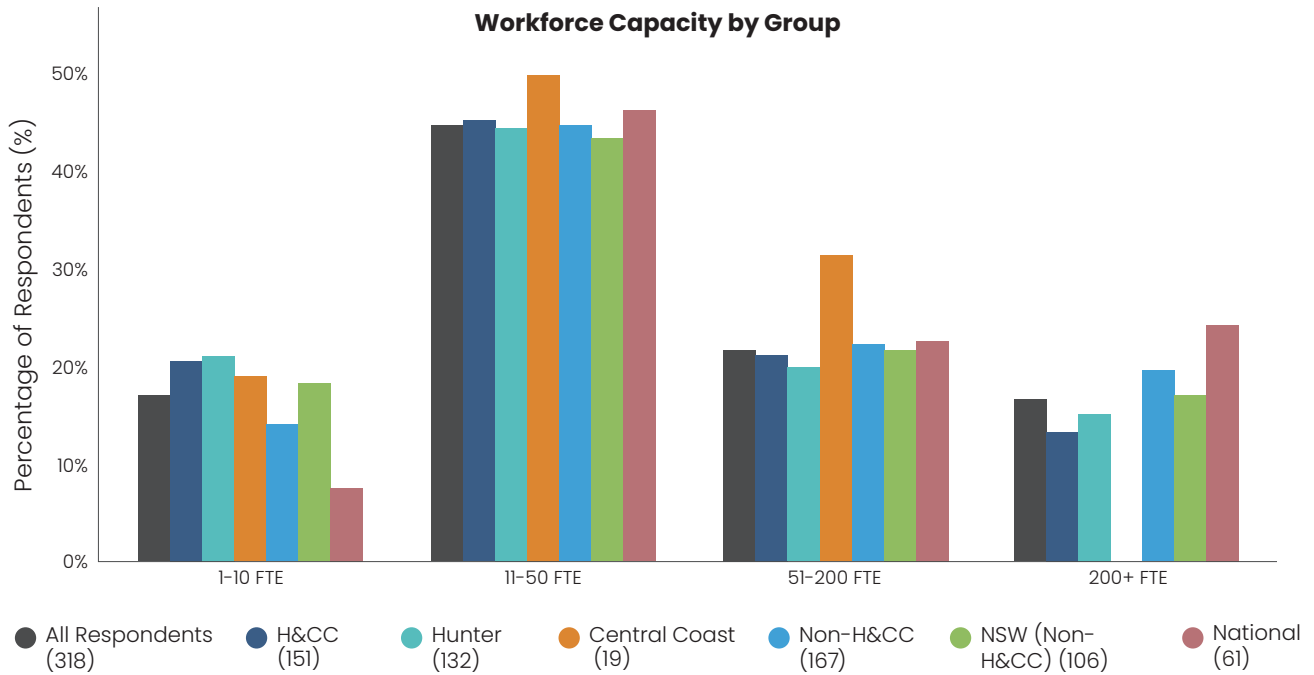


Figure 13: Workforce capacity by group

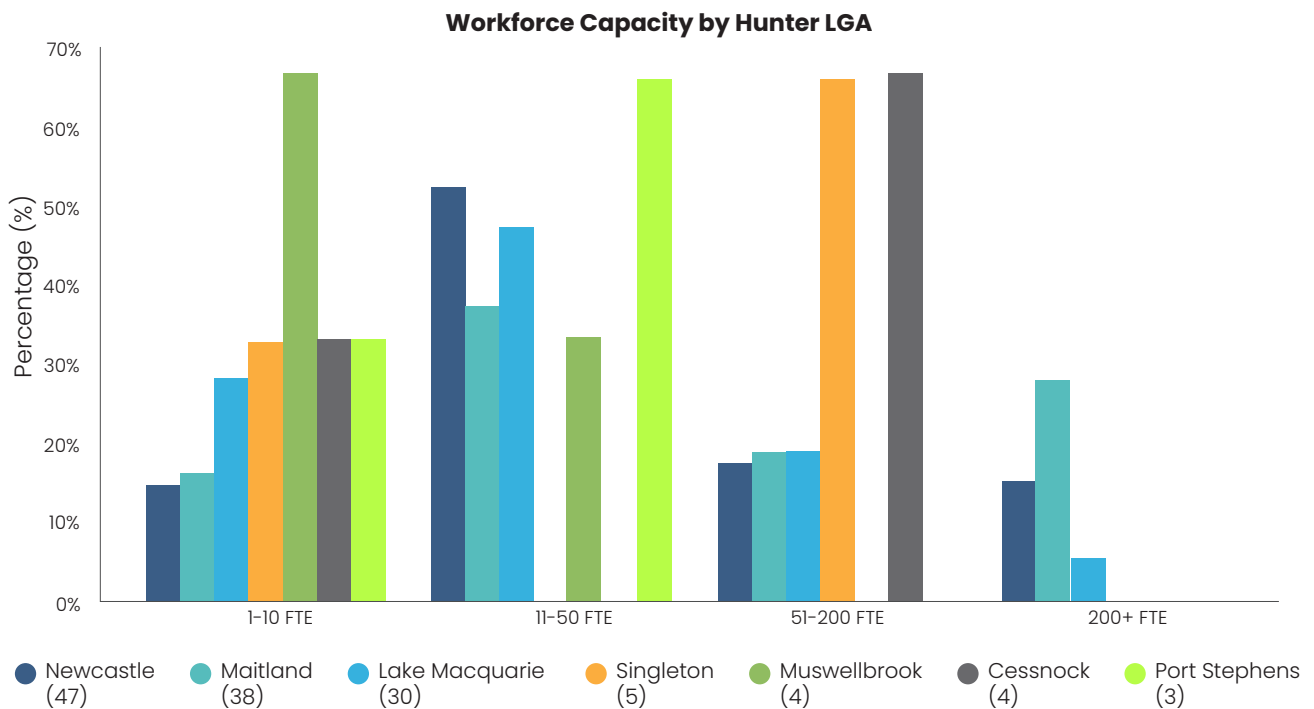


Figure 14: Workforce capacity by Hunter LGA

### 3. Barriers to Entry

#### 3.1 ALL RESPONDENTS

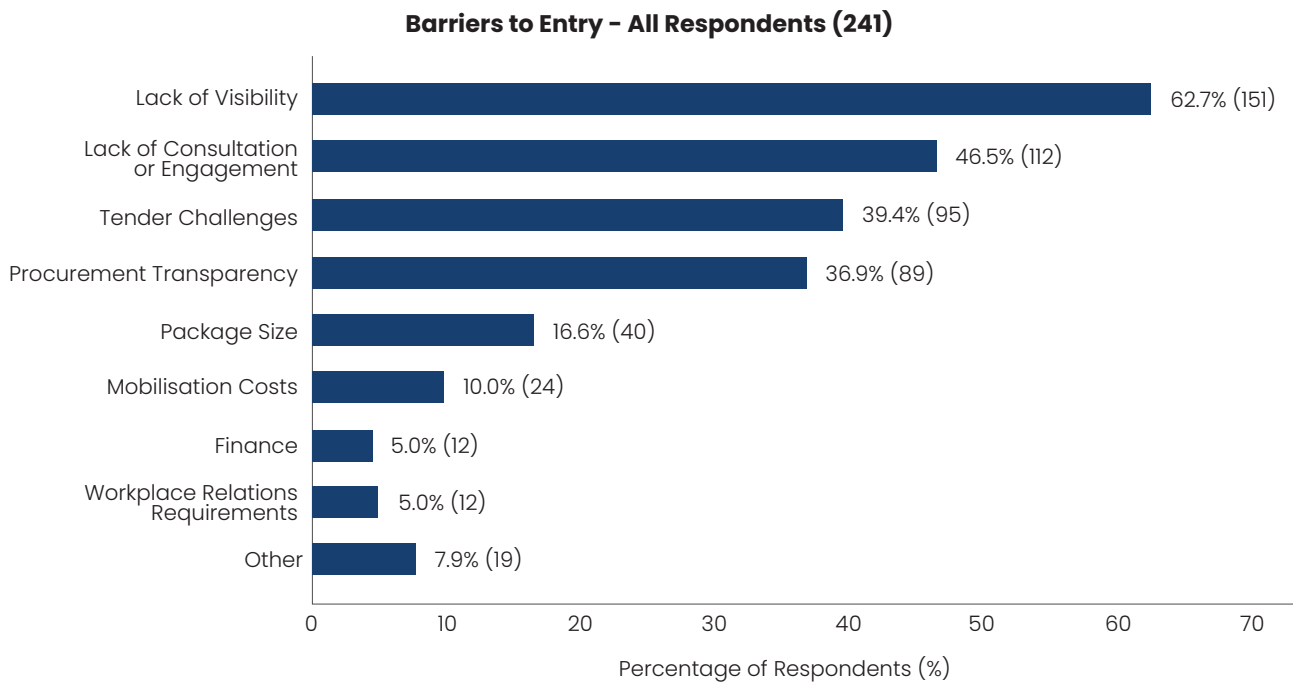


Figure 15: Barriers to entry – all respondents

#### 3.2 HUNTER & CENTRAL COAST COMBINED

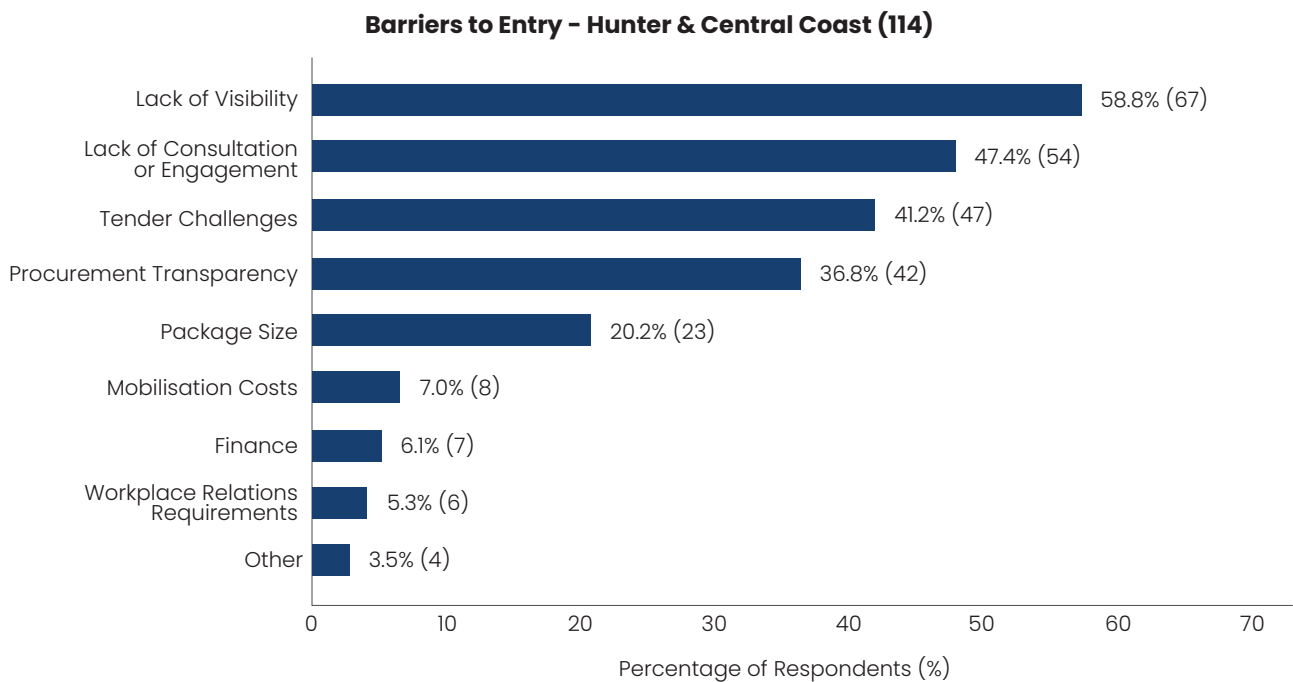


Figure 16: Barriers to entry – Hunter and Central Coast





# Citations

- <sup>1</sup> Port of Newcastle, *Economic Impact Report 2016/17* (Newcastle: Port of Newcastle, 2017), 2.
- <sup>2</sup> Beyond Zero Emissions, stakeholder consultation conducted by ICN, November 2025.
- <sup>3</sup> Beyond Zero Emissions, stakeholder consultation conducted by ICN, November 2025.
- <sup>4</sup> Industry Capability Network Victoria, *Sector Capability Review. Power Transmission*, updated November 2024, accessed February 2026.
- <sup>5</sup> Industry Capability Network Victoria, *Sector Capability Review. Power Transmission*.
- <sup>6</sup> Ausgrid, stakeholder consultation conducted by ICN, November 2025.
- <sup>7</sup> NSW Department of Planning, Industry and Environment, *Supply Chain Analysis Report: NSW Electricity Infrastructure* (2021), [energy.nsw.gov.au/sites/default/files/2022-09/supply-chain-analysis-report-nsw-electricity-infrastructure.pdf](https://energy.nsw.gov.au/sites/default/files/2022-09/supply-chain-analysis-report-nsw-electricity-infrastructure.pdf), accessed February 2026.
- <sup>8</sup> Industry Capability Network Victoria, *Sector Capability Review. Power Transmission*.
- <sup>9</sup> Hunter Defence, Hunter Investment Prospectus (Newcastle: Hunter Defence, 2024), [hunterdefence.org.au/wp-content/uploads/2024/05/2024-Hunter-Investment-Prospectus-Online.pdf](https://hunterdefence.org.au/wp-content/uploads/2024/05/2024-Hunter-Investment-Prospectus-Online.pdf), accessed February 2026; Net Zero Economy Authority, Hunter Regional Profile (Canberra: NZEA, June 2025), [netzero.gov.au/sites/default/files/documents/2025-09/Hunter\\_Regional\\_Profile\\_v7ACC.pdf](https://netzero.gov.au/sites/default/files/documents/2025-09/Hunter_Regional_Profile_v7ACC.pdf), accessed February 2026.
- <sup>10</sup> Net Zero Economy Authority, *Hunter Regional Profile*.
- <sup>11</sup> Astrolabe Group, The Hunter Advantage (2021), [hccdc.nsw.gov.au/sites/default/files/2022-06/The%20Hunter%20Advantage%2020210219%20.pdf](https://hccdc.nsw.gov.au/sites/default/files/2022-06/The%20Hunter%20Advantage%2020210219%20.pdf), accessed February 2026.
- <sup>12</sup> Net Zero Economy Authority, *Hunter Regional Profile*.
- <sup>13</sup> Tomago Aluminium, 'About Aluminium', accessed February 2026, [tomago.com.au/about-aluminium](https://tomago.com.au/about-aluminium).
- <sup>14</sup> Hunter Defence, *Hunter Investment Prospectus*.
- <sup>15</sup> TAFE NSW, *NSW Manufacturing TAFE Centres of Excellence Plan* (Sydney: TAFE NSW, August 2024), [federalfinancialrelations.gov.au/sites/federalfinancialrelations.gov.au/files/2024-12/NSW%20-%20Manufacturing%20TAFE%20CoE%20-%20Implementation%20Plan.pdf](https://federalfinancialrelations.gov.au/sites/federalfinancialrelations.gov.au/files/2024-12/NSW%20-%20Manufacturing%20TAFE%20CoE%20-%20Implementation%20Plan.pdf), accessed February 2026.
- <sup>16</sup> Dusko Bajic, industry consultation conducted by ICN, December 2025.
- <sup>17</sup> Net Zero Economy Authority, *Hunter Regional Profile*; TAFE NSW, *NSW Manufacturing TAFE Centres of Excellence Plan*; Bajic, industry consultation; Hunter Defence, *Hunter Investment Prospectus*.
- <sup>18</sup> Gauer Fabrication Department, '9 Types of Fabrication Machines Every Metal Shop Should Have', November 2024, [gauermetal.com/9-types-of-fabrication-machines-every-metal-shop-should-have](https://gauermetal.com/9-types-of-fabrication-machines-every-metal-shop-should-have), accessed February 2026; Caldera, 'What Machinery Is Used in Metal Fabrication?', October 2021, [calderamfg.com/resources/blog/metal-fabrication-machinery](https://calderamfg.com/resources/blog/metal-fabrication-machinery), accessed February 2026; CR Mining, 'Mining Equipment Fabrication in Australia', accessed February 2026, [crmining.com/steel-fabrication-australia](https://crmining.com/steel-fabrication-australia); TW Woods, 'Marine Construction', accessed February 2026, [twwoods.com.au/industries/marine-construction](https://twwoods.com.au/industries/marine-construction).
- <sup>19</sup> Tomago Aluminium, 'About Aluminium'.
- <sup>20</sup> *Manufacturers' Monthly*, 'Local Companies Share in F-35 Contracts', October 2019, [manmonthly.com.au/local-companies-share-f-35-contracts](https://manmonthly.com.au/local-companies-share-f-35-contracts), accessed February 2026.
- <sup>21</sup> Bajic, industry consultation.
- <sup>22</sup> CR Mining, 'Mining Equipment Fabrication in Australia'; Berkeley Engineering, 'Metal Fabrication in Mining: Strengthening Equipment Durability', December 2024, [berkeleyengineering.com.au/news/metal-fabrication-in-mining-strengthening-equipment-durability](https://berkeleyengineering.com.au/news/metal-fabrication-in-mining-strengthening-equipment-durability), accessed February 2026.

- <sup>23</sup> Wikipedia contributors, 'UGL Rail', *Wikipedia*, last modified February 2026, accessed February 2026, [en.wikipedia.org/wiki/UGL\\_Rail](https://en.wikipedia.org/wiki/UGL_Rail); TW Woods, 'Marine Construction'; CR Mining, 'Mining Equipment Fabrication in Australia'.
- <sup>24</sup> Hunter New Energy, 'Site Visit: A Look Behind the Doors at Ampcontrol', June 2025, [hunternewenergy.com.au/events/site-visit-a-look-behind-the-doors-at-ampcontrol](https://hunternewenergy.com.au/events/site-visit-a-look-behind-the-doors-at-ampcontrol), accessed February 2026.
- <sup>25</sup> TAFE NSW, NSW Manufacturing TAFE Centres of Excellence Plan.
- <sup>26</sup> Net Zero Economy Authority, Hunter Regional Profile; TAFE NSW, *NSW Manufacturing TAFE Centres of Excellence Plan*; Hunter Defence, *Hunter Investment Prospectus*.
- <sup>27</sup> Towerist, 'Constructing Power Transmission Towers: A Step-by-Step Guide', accessed February 2026, [tower-ist.com/constructing-power-transmission-towers](https://tower-ist.com/constructing-power-transmission-towers); Ficep, 'The Complete Solution for Transmission Towers', accessed February 2026, [ficepgroup.com/en/expertises/transmission-towers](https://ficepgroup.com/en/expertises/transmission-towers); Mecon Limited, *Techno Economic Feasibility Transmission Line Tower (TLT) Manufacturing Complex* (July 2014), 7–8, [environmentclearance.nic.in/writereaddata/Online/TOR/23\\_Jun\\_2016\\_181510687F9RDH2QEAnnexure-Pre-feasibilityReport\(PFR\)File.pdf](https://environmentclearance.nic.in/writereaddata/Online/TOR/23_Jun_2016_181510687F9RDH2QEAnnexure-Pre-feasibilityReport(PFR)File.pdf), accessed February 2026.
- <sup>28</sup> Boberry Mach, *Precision Cast Line Fittings*, accessed February 2026, [boberry-mach.com/precision-cast-line-fittings](https://boberry-mach.com/precision-cast-line-fittings); ElectraNet, *Transmission Line General Requirements Including Typical Overhead Line Structures* (July 2024), [electranet.com.au/wp-content/uploads/2024/12/1-03-FR-09-Transmission-Line-General-Requirements-Including-Typical-Overhead-Line-Structures.pdf](https://electranet.com.au/wp-content/uploads/2024/12/1-03-FR-09-Transmission-Line-General-Requirements-Including-Typical-Overhead-Line-Structures.pdf), accessed February 2026; Donlouco, 'Power Transmission & Distribution: Galvanized Forged and Cast Parts', 2025, [donlouco.ie/utilitysector](https://donlouco.ie/utilitysector), accessed February 2026; Preformed Line Products, *Transmission Hardware Datasheet* (December 2016), [plp.com/au/images/pdfs/Energy/Transmission/Transmission-HardwareFittings.pdf](https://plp.com/au/images/pdfs/Energy/Transmission/Transmission-HardwareFittings.pdf), accessed February 2026.
- <sup>29</sup> Wikipedia contributors, 'Rebar', *Wikipedia*, last modified February 2026, accessed February 2026, [en.wikipedia.org/wiki/Rebar](https://en.wikipedia.org/wiki/Rebar); Neumann Steel, 'Prefabricated Steel Reinforcement Cages', April 2024, [neumannsteel.com.au/prefabricated-steel-reinforcement-cages-a-key-to-on-site-productivity](https://neumannsteel.com.au/prefabricated-steel-reinforcement-cages-a-key-to-on-site-productivity), accessed February 2026; Star Reo, 'Benefits of Prefabricated Steel Reinforcement for Commercial Builds', accessed February 2026, [starreo.com.au/benefits-of-prefabricated-steel-reinforcement-for-commercial-builds](https://starreo.com.au/benefits-of-prefabricated-steel-reinforcement-for-commercial-builds).
- <sup>30</sup> Bahra Earthing Systems, *Earthing & Lightning Protection System*, 14–31, [bahra-electric.com/Downloads/BahraEarthingCatalogue\\_Ver1\\_LowRes.pdf](https://bahra-electric.com/Downloads/BahraEarthingCatalogue_Ver1_LowRes.pdf), accessed February 2026; Conex Casting, *Aluminum Hotline Clamps*, 2025, [conex-casting.com/aluminum-hotline-clamps](https://conex-casting.com/aluminum-hotline-clamps), accessed February 2026.
- <sup>31</sup> KDM Steel, 'Electrical Enclosure Manufacturing Process: The Step by Step Guide,' October 2021, accessed February 2026, [kdmsteel.com/electrical-enclosure-manufacturing-process](https://kdmsteel.com/electrical-enclosure-manufacturing-process); Doho Electric, 'Electrical Enclosure Manufacturing: How Are Enclosures Made?', August 2022, [dohoelectric.com/electrical-enclosure-manufacturing-how-are-enclosures-made](https://dohoelectric.com/electrical-enclosure-manufacturing-how-are-enclosures-made), accessed February 2026.
- <sup>32</sup> Phil Toner, *An Industrial Strategy for Domestic Manufacturing of Onshore and Offshore Wind Energy Towers and Equipment* (Sydney: The Centre for Future Work, The Australia Institute, October 2024), 23–30, [futurework.org.au/wp-content/uploads/sites/2/2024/10/Wind-Tower-Report-FINAL-OCT24-1.pdf](https://futurework.org.au/wp-content/uploads/sites/2/2024/10/Wind-Tower-Report-FINAL-OCT24-1.pdf), accessed February 2026.
- <sup>33</sup> Energinet, *Offshore Substation: Materials & Fabrication of Steel for Topside and Sub-Structure*, scribd.com/document/167049405/44974-09-ETS-21-Materials-and-Fabrication-Topside-Structures, accessed February 2026.
- <sup>34</sup> ABB, *Guidelines to the Construction of a Low-Voltage Assembly Complying with the Standards IEC 61439 Part 1 and Part 2* (2013), [library.e.abb.com/public/105430996deb410f9afccfd479126026/ISDC007110G0202.pdf](https://library.e.abb.com/public/105430996deb410f9afccfd479126026/ISDC007110G0202.pdf), accessed February 2026; Mitsubishi Electric, 'UPS Testing, Startup and Commissioning', accessed February 2026, [mitsubishicritical.com/critical-power-services/ups/testing](https://mitsubishicritical.com/critical-power-services/ups/testing); TÜV SÜD Certification and Testing China, *Safety of Power Converter for Use in Photovoltaic Power Systems: Part 1: General Requirements* (April 2019), [allenergyhq.com.au/wp-content/uploads/2018/06/efsh14071714-ie-01-101.pdf](https://allenergyhq.com.au/wp-content/uploads/2018/06/efsh14071714-ie-01-101.pdf), accessed February 2026.
- <sup>35</sup> Daelim Transformer, 'Steps in Power Transformer Manufacturing Process', September 2024, [daelimtransformer.com/transformer-manufacturing-process.html](https://daelimtransformer.com/transformer-manufacturing-process.html), accessed February 2026; Ritz, *Line Traps Air-Core, Dry-Type up to 1100kV*, p. 2, [ritzusa.com/wp-content/uploads/2021/10/Line-Trap-Brochure.pdf](https://ritzusa.com/wp-content/uploads/2021/10/Line-Trap-Brochure.pdf), accessed February 2026; Hitachi Energy, 'A Close Look at the High-Voltage Manufacturing Process', July 2024, [hitachienergy.com/br/pt/news-and-events/blogs/2024/07/a-close-look-at-the-high-voltage-manufacturing-process](https://hitachienergy.com/br/pt/news-and-events/blogs/2024/07/a-close-look-at-the-high-voltage-manufacturing-process), accessed February 2026; Dowe Electric, 'Surge Arrester Routine Tests', accessed February 2026, [dowe-electric.com/technical/93.html](https://dowe-electric.com/technical/93.html).

<sup>36</sup> Taihan, *Extra-High Voltage XLPE Cables*, 2022, taihan.com/en/business/product/productDetail?idx=2, accessed February 2026; GEM Cable Solutions, 'Navigating the Seas: A Deep Dive into Submarine Cable Manufacturing', November 2023, gemcable.co.uk/knowledge-hub/navigating-the-seas-a-deep-dive-into-sub-marine-cable-manufacturing, accessed February 2026; Owire, 'Fiber Optic Cable Manufacturing Process', September 2024, owiregroup.com/fiber-optic-cable-manufacturing-process, accessed February 2026; YIT, 'Prysmian Sky Project, Kirkkonummi', accessed February 2026, yit.fi/en/projects/prysmian-sky-project-en.

<sup>37</sup> Australian Energy Market Operator, *2024 Integrated System Plan* (June 2024), aemo.com.au/-/media/files/major-publications/isp/2024/2024-integrated-system-plan-isp.pdf, accessed February 2026.

<sup>38</sup> Australian Energy Market Operator, *2024 Integrated System Plan*.

<sup>39</sup> Infrastructure Australia, 'Billions Injected into National Infrastructure Pipeline as Governments Target Energy and Housing Growth', media release, 13 November 2025, infrastructureaustralia.gov.au/listing/media-release/billions-injected-national-infrastructure-pipeline-governments-target-energy-and-housing-growth, accessed February 2026.

<sup>40</sup> C. Briggs et al., *Employment, Skills and Supply Chains: Renewable Energy in NSW: Final Report* (Sydney: University of Technology Sydney and SGS Economics and Planning, 2022), energy.nsw.gov.au/sites/default/files/2022-09/employment-skills-and-supply-chains-renewable-energy-in-nsw-final-report.pdf, accessed February 2026.

<sup>41</sup> Department of Climate Change, Energy, the Environment and Water, 'Next Steps for Offshore Wind', January 2026, dcceew.gov.au/about/news/next-steps-offshore-wind, accessed February 2026; NOPSEMA, 'Australia's First Offshore Wind Area Now Open for Feasibility Licence Applications', January 2023, nopsema.gov.au/blogs/australias-first-offshore-wind-area-now-open-feasibility-licence-applications, accessed February 2026.

<sup>42</sup> Christine Chen, 'Australia Delays First Offshore Wind Auction as Global Investment Retreats', Reuters, 16 September 2025, reuters.com/sustainability/climate-energy/australia-delays-first-offshore-wind-auction-global-investment-retreats-2025-09-16, accessed February 2026.

<sup>43</sup> NSW Department of Planning, Industry and Environment, *Supply Chain Analysis Report: NSW Electricity Infrastructure (2021)*.

<sup>44</sup> NSW Department of Planning, Industry and Environment, *Supply Chain Analysis Report: NSW Electricity Infrastructure*.

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