

National Electrical & Communications Association

Supplementary Submission to the Senate Inquiry into Artificial Intelligence and Data Centres

**Electrical workforce capacity, apprenticeship formation,
SME sustainability and domestic industry capability**

August 2026

**Environment and Communications References
Committee**



Purpose of this supplementary submission

NECA lodged its substantive submission to this inquiry in June 2026. That submission supported the sustainable expansion of artificial intelligence and data centre infrastructure and identified workforce capability as a core enabling requirement. It recognised that data centres depend on the same licensed electrical workforce required for housing, transmission, renewable energy, battery storage, manufacturing and electrification, and it warned that insufficient workforce capacity would create project delays, higher costs and competition between nationally important sectors. It recommended national workforce forecasting, workforce development plans for major projects, apprenticeship expansion, post-trade skills development and local contractor participation.

This supplementary submission does not repeat that work. It responds to new workforce evidence, developments in Commonwealth and state policy, and direct feedback NECA is now receiving from electrical contractors. The Committee is considering the effectiveness of existing regulatory frameworks and the impacts of AI and data centres on Australian communities and industries. NECA considers that electrical workforce formation, SME contracting capacity, apprenticeship quality and the cumulative impact of major-project labour demand now warrant specific consideration — most urgently because of the rapid disruption already emerging in residential construction and the small and medium electrical contractors that build most of Australia's homes and train most of its future electricians.

About NECA

The National Electrical and Communications Association is the peak national industry body representing more than 6,500 electrical and communications contracting businesses across Australia. NECA members design, install and maintain the electrical and communications systems that support homes, businesses, infrastructure, energy networks and critical national assets. NECA also contributes to workforce development through associated registered training organisations (RTOs) and group training organisations (GTOs), providing direct insight into electrical workforce capacity, apprenticeship delivery, training quality, training needs and employer needs.

Executive summary

NECA supports and encourages investment in AI and data centre infrastructure. Data centres are essential enabling infrastructure for the digital economy and represent a substantial opportunity for investment, productivity, skilled employment and Australian electrical contractors. NECA does not seek to slow that investment, it encourages it. The purpose of this submission is to identify an increasingly significant constraint on its successful delivery, and the challenges now becoming evident for our sector, members and the broader economy.

Australia does not have a surplus electrical workforce available to service the rapidly expanding data centre sector. Data centre investment is accelerating at the same time as Australia needs many more electricians for housing, renewable generation, transmission, battery storage, defence, manufacturing, transport and broader electrification. New evidence released since NECA's original submission shows the challenge is greater than previously understood. The Powering Skills Organisation (PSO) estimates the clean-energy transition alone may require around 42,500 additional licensed electricians by 2030, with housing, data centres, AI infrastructure and other programmes adding demand for 30,000 or more further energy-trades workers. At the same time, electrician apprenticeship commencements have fallen by about 16 per cent from their 2022 level across every state and territory, and apprentices in training have declined from recent highs.

NECA's members, industry led GTOs and RTOs are seeing strong and growing demand for electrical apprenticeships across a broad range of applicants, including school leavers, mature age candidates and women seeking to enter the trade. This reinforces that the challenge is not attracting people to an electrical career. The challenge is to ensure that enough employers have the capacity, confidence and commercial incentive to create apprenticeship positions, provide quality supervision, ensure apprentices are adequately trained and sustain them through to completion.

The most immediate concern is the speed of disruption to residential construction and SME electrical contracting. Major projects can offer wages and conditions that small and residential contractors cannot match, and NECA members are already reporting the loss of licensed electricians and of second, third and fourth-year apprentices after smaller employers have carried the substantial early cost of training. One contractor employing about 20 electricians recently lost eight to higher-paying work; another with roughly \$10 million of committed work over 12 months doubts it can staff the jobs and estimates housing labour pricing may need to rise by around 30 per cent simply to retain its people. Some experienced contractors are choosing to close their businesses and return to salaried employment, and when a contractor closes Australia loses an employer, apprentice training positions, a housing contractor, maintenance staff, a competitor and a source of future workforce formation.

Australia's future licensed workforce depends overwhelmingly on employers choosing to employ, supervise and train apprentices years before those workers are needed. Electrical contracting businesses train about 71 per cent of electrician apprentices nationally, yet only around one in three of the roughly 48,000 electrical contracting businesses currently employs an apprentice. These businesses are both the principal training engine of the trade and the largest source of latent capacity to expand the workforce. Employing an apprentice costs an estimated \$200,000 to \$250,000 over the apprenticeship, with more than half incurred in the first two years when productivity is lowest and therefore the loss of a trained apprentice, or of a training business, has consequences well beyond the individual.

Consultation with members delivering data centre projects confirms both the opportunity and the pressure. A hyperscale data centre can require roughly 100 to 250 electricians and apprentices at peak, with larger campuses requiring more across multiple stages. These projects if undertaken correctly create genuine apprenticeship opportunities and valuable specialist skills, while also intensifying competition for qualified electricians, high-voltage specialists, commissioning personnel, communications and controls workers, supervisors and project managers. The policy objective should therefore be to increase total industry capacity, not merely redistribute the existing workforce with broad adaptable skills.

Housing makes this urgent. The Housing Industry Association identifies persistent skilled-trade shortages, including electrical trades, as a major constraint on home building, and BuildSkills Australia estimates the National Housing Accord target will require about 116,700 additional workers beyond business-as-usual growth. Australia cannot meet its data centre ambitions by drawing scarce electricians and apprentices away from the contractor base required to deliver its housing ambitions. Data centre growth must expand the total workforce rather than redistribute an already constrained one.

NECA has previously advocated stronger protection against unfair contract terms, better risk allocation and nationally consistent Security of Payment protections. These issues are directly relevant to apprenticeship formation, because businesses facing unreasonable risk and uncertain cash flow are less able and willing to invest in people and training. NECA therefore recommends a National Data Centre Electrical Skills Framework based on additionality, training quality, workforce retention and SME sustainability. The central test is simple: major data centre investment should leave Australia with more electricians, better-trained electricians and a stronger electrical contracting industry than it would otherwise have had.

Commonwealth policy has moved towards a stronger national framework

The policy environment has developed materially since NECA's original submission. On 15 July 2026 the Prime Minister announced the development of Australian Standards for AI, including mandatory requirements for large data centres concerning power supply, grid-connection costs, demand management, water efficiency and location, with the intention to legislate a nationally consistent framework. The Government has expressly recognised that companies will need to invest in skills and training to support the sector, and its Data Centre Expectations require operators to develop a skilled domestic workforce, support apprenticeships and structured training pathways, and work with governments, employers, unions and training providers to address skills gaps. NECA supports that direction.

The next task is to convert a sound principle into a measurable delivery framework. If electricity generation, network capacity, water and infrastructure costs are important enough to warrant national requirements, workforce capacity should be treated the same way. A data centre cannot operate without electricity, and it cannot be built or maintained without electricians.

The scale of data centre investment changes the workforce equation

The scale of investment already emerging demonstrates the importance of this issue. Much of the current activity is concentrated in New South Wales and Victoria, but data centre development is expected to become increasingly significant nationally. In NSW, more than 60 data centres are operating or under construction, with a further 19 projects in the State Significant Development pipeline valued at \$50.3 billion. Data centre investment has grown rapidly in recent years and now represents a significant share of non-residential building investment. This illustrates both the scale of the economic opportunity and the substantial electrical workforce demand that will accompany it.

Data centres require substantial electrical construction capability, including substations, switchgear, protection systems, uninterruptible power supplies, battery systems, backup generation, high voltage infrastructure, controls, communications, testing, commissioning and ongoing maintenance. This demand does not occur in isolation. The same licensed electricians are required to deliver housing, renewable generation, transmission, battery storage, electric vehicle infrastructure, defence, manufacturing, hospitals, commercial construction and essential maintenance. The policy challenge is therefore cumulative. Australia is asking the same constrained licensed workforce to deliver an unprecedented number of national priorities at the same time.

Data centre investment is important to the electrical industry

Data centre development has become a significant component of Australia's electrical construction market and an increasingly important part of the forward pipeline for major contractors, specialist subcontractors, communications businesses, engineering firms and equipment suppliers. For a growing number of businesses it is no longer peripheral revenue; it now shapes order books, recruitment, apprenticeship decisions and investment in specialist capability. The opportunity extends well beyond initial construction. Major campuses generate recurring electrical, communications, maintenance, testing, upgrade, fit-out and asset-replacement work over many years, and accelerate advanced capability in high-voltage systems, critical power, protection, controls, communications and commissioning that is valuable across the wider economy.

This growing exposure also means a sharp or sustained contraction in data centre investment would have serious consequences. Impacts would include reduced employment, fewer apprenticeships, lower investment in specialist skills, excess capacity and the loss of capability that has taken years to build. Government should therefore avoid settings that create unnecessary uncertainty or a damaging cycle of rapid expansion followed by abrupt contraction. NECA strongly supports continued and sustainable investment. The objective is not to restrict the sector but to ensure its growth strengthens Australia's overall capacity to deliver data centres alongside housing, energy, defence, healthcare and transport.

That support should carry a reasonable expectation of contribution. Where the sector creates exceptional demand for a scarce licensed workforce, it should play an active role in expanding the workforce and training system from which it benefits. The principle is one of mutual benefit and shared responsibility. Australia supports the sector's growth because of the investment, employment and advanced capability it creates, and in return major investment contributes to expanding the workforce, supporting SME contractors and delivering training capacity. Done well, data centre investment strengthens rather than displaces the broader electrical industry.

The workforce shortage is becoming more serious

The latest research from the Powering Skills Organisation, a federally funded Jobs and Skills Council, materially strengthens the workforce case in NECA's original submission. It identifies an emerging energy supercycle driven by renewable generation, storage, transmission, housing, data centres, cleaner manufacturing and broader electrification. It estimates that the clean energy transformation alone may require around 42,500 additional licensed electricians by 2030. Closing that gap would require around 18,000 additional electrician apprentices in training, an increase of approximately 40 per cent from recent levels. Given the length of an electrical apprenticeship, those apprentices need to commence well before workforce demand reaches its peak.

The challenge is compounded by the direction of the apprenticeship pipeline. Powering Skills Organisation reports that electrician apprenticeship commencements have declined by around 16 per cent from 2022 levels, representing approximately 2,500 fewer commencements across every state and territory. The number of electrician apprentices in training has also fallen by around 6 per cent from recent highs. Australia is therefore facing rapidly increasing demand for electricians while the pipeline producing the future workforce is moving in the opposite direction.

The central problem is workforce formation, not demand

The critical policy distinction is between workforce demand and workforce formation. Large infrastructure projects can create substantial demand for electricians, but demand alone does not create skilled workers. Electrical apprenticeships depend on employers being willing and able to provide sustained employment, supervision and practical training over the life of the apprenticeship. A person cannot simply enrol and emerge as a licensed electrician without that workplace based training relationship.

Electrical contracting businesses employ around 56 per cent of Australia's licensed electricians and train about 71 per cent of electrician apprentices, yet only around one third of approximately 48,000 electrical contracting businesses currently employs an apprentice. This means much of

Australia's capacity to expand the electrical workforce already exists within the contracting sector. The challenge is creating the conditions that allow more employers to participate.

NECA's GTOs and RTOs are seeing strong demand for electrical apprenticeships, including from school leavers, mature age applicants and women seeking to enter the trade. Some members are receiving almost three times the number of applications they received two years ago. The constraint is therefore not the attractiveness of the profession. It is whether enough employers have the capacity, confidence and commercial incentive to create apprenticeship positions and sustain them through to completion.

Data centre policy must therefore focus not only on workforce demand, but on expanding the number of employers and training pathways capable of producing the electricians.

Rapid disruption to residential construction and SME electrical contracting

The workforce impacts of the data centre build-out are no longer a modelling concern for the future, they are disrupting residential construction and small and medium electrical contractors now, and at speed. This is the most urgent issue NECA asks the Committee to address, because the businesses most exposed are precisely those that build Australia's homes and train most of its future electricians.

Housing is losing the competition for the same workforce

Residential construction depends on licensed electricians at every stage. Homes cannot be completed without electrical installation, testing, connection and certification. In July 2026, the Housing Industry Association reported that skilled trade shortages remained entrenched across the residential construction market and estimated that around 83,000 additional skilled tradespeople are required to meet Australia's housing needs. It also identified growing competition for workers from transport infrastructure, energy projects and data centres.

Master Builders Australia has similarly linked construction workforce shortages to Australia's ability to meet its housing and infrastructure objectives. BuildSkills Australia estimates that achieving the National Housing Accord target will require around 116,700 additional workers beyond business as usual workforce growth. Its research also reinforces that simply moving skilled workers between sectors does not increase Australia's overall workforce capacity. Sustainable growth depends on new entrants, training and stronger workforce participation. Australia cannot meet its data centre ambitions by drawing scarce electricians away from the businesses and projects required to deliver its housing ambitions. The policy response must ensure that growth in one nationally important sector expands workforce capacity rather than simply shifting shortages into another.

Small and medium contractors are already being hollowed out

The impact on small and medium electrical contractors is immediate and, in some cases, serious. NECA has sought and received direct feedback from small, medium and large contractors, and the pattern is consistent. One contractor employing about 20 licensed electricians recently reported losing eight to higher-paying opportunities. Another, with about \$10 million of committed work over the next 12 months, advised that it may not have enough electricians to deliver that work and estimated labour pricing on some housing projects may need to rise by around 30 per cent simply to retain its workforce. Contractors delivering fixed lump-sum projects, including government contracts, report that rapid labour-cost escalation is making committed work difficult to complete commercially, and some members are considering whether to walk away from contracted work altogether.

The most concerning feedback relates to apprentices. Smaller contractors report losing second, third and fourth-year apprentices after carrying the substantial early costs of employment, supervision and training. Some businesses that have continuously employed apprentices for 20 years or more are now questioning why they should keep taking on first-year apprentices if those apprentices are likely to be recruited away once they become experienced and productive. This is occurring even as demand to become an electrician appears exceptionally strong, confirming that the constraint is not a shortage of willing entrants, but the willingness and capacity of employers to create and sustain positions. Every first-year position that is not created today is a licensed electrician Australia will not have in four years.

Contractors are exiting business ownership altogether

NECA is receiving a further, more structural form of feedback: some experienced small electrical contractors are choosing to cease operating their businesses and return to salaried employment. This should be understood as member intelligence rather than a quantified national estimate, but the commercial logic is clear. A skilled electrician, supervisor or contractor can obtain attractive remuneration on a major project with predictable wages and with much of the commercial risk transferred to the employer. By contrast, running a small contracting business means carrying responsibility for wages, superannuation, insurance, vehicles, tools, licences, safety, compliance, administration, apprentice supervision, tendering, taxation, working capital, and contractual and payment risk. As the return from ownership narrows while risk rises, leaving business ownership becomes a rational economic decision.

The public-policy implications are significant. When a small contractor closes and the owner becomes an employee, national statistics may still record one electrician, but they do not reveal what has been lost. Australia can lose an employer, an apprenticeship position, a contractor available for housing and small commercial work, local maintenance capability; a competitor in the market, and a business capable of creating future electricians. This is why the sustainability of electrical SMEs must be treated as part of workforce policy. Australia requires a diverse contracting market. SMEs are critical to housing, commercial construction, maintenance, regional communities, renewable installations and essential services, and it is estimated that 60 to 65 per cent of electricians work in SMEs or as sole operators, the largest concentration of potential apprenticeship training capacity in the country.

NECA does not seek to prevent electricians or apprentices from making lawful employment choices, nor to constrain major-project remuneration. The issue is the cumulative effect on the businesses responsible for developing the workforce, and the appropriate response is to ensure exceptional new demand is matched by additional workforce formation. NECA is undertaking further member engagement to quantify these impacts such as apprentice transfers, retention, recruitment pressures and subsequent hiring decisions and will provide the Committee with additional evidence.

Apprenticeship economics reinforce the risk

The economics of apprentice employment explain why employer confidence is decisive. Employing an electrical apprentice is estimated to cost between \$200,000 and \$250,000 across the apprenticeship. Wages account for about 54 per cent of the total, and wages and supervision together for more than 90 per cent. The first year represents about 29 per cent of total employer costs, and more than half of the total is incurred in the first two years, when productivity is lowest and supervision requirements are greatest. The business carries its largest costs before receiving the full productive benefit of the apprentice's developing capability. The national workforce therefore depends on businesses being confident enough to make that investment, and policy settings that increase the likelihood of losing an apprentice after those costs have been incurred directly weaken that confidence.

Unfair contracts and Security of Payment are workforce issues

This workforce challenge must be viewed alongside the broader commercial environment facing electrical contractors. NECA has consistently advocated reform of unfair contract terms, excessive risk transfer and Security of Payment arrangements, and has identified exploitative contract terms as risks to subcontractor financial stability, workforce retention and participation in infrastructure delivery. A contractor deciding whether to employ another apprentice weighs cash flow, contract risk, project margins, payment certainty, supervision capacity and confidence in future work. Businesses paid on time are better able to invest in equipment, apprentices, training and working capital; businesses forced to finance delivery through delayed payments or debt become less productive and more fragile. Security of Payment reform is therefore not merely a construction-law issue and fair contracting is not merely a procurement issue, both are workforce-development and business-sustainability issues. If government wants SMEs to employ more apprentices, it must ensure they have a reasonable commercial environment in which to make that investment.

Major data centre investment should also be supported by fair and commercially sustainable contracting practices throughout the supply chain. Data centre developers, owners and head contractors should not transfer unreasonable, uninsurable or disproportionate risk to electrical subcontractors, particularly where those subcontractors have limited ability to price, control or insure that risk. Contract terms should provide for fair risk allocation, reasonable liability settings, prompt and reliable payment, proportionate security requirements and transparent variation processes. These principles should apply equally to head contractors and major subcontracting arrangements so that the growth of the data centre sector strengthens capable Australian contractors rather than exposing them to commercial conditions that undermine their financial sustainability and workforce capacity.

A National Data Centre Electrical Skills Framework

NECA recommends the Commonwealth establish a National Data Centre Electrical Skills Framework as part of the broader national approach to AI and large data centres, based on four principles:

- **Additionality** — major projects should create genuinely new apprenticeship positions and expand Australia's total electrical workforce.
- **Training quality** — apprentices should receive workplace experience sufficient for broad occupational competence, together with specialist exposure relevant to data centres and critical infrastructure.
- **Retention** — policy should support progression and completion and reduce incentives for arrangements that merely transfer apprentices without expanding capacity.
- **SME sustainability** — policy should strengthen the businesses that employ and train the substantial majority of Australia's future electricians.

Workforce additionality should become a national policy principle

A project employing an apprentice is not necessarily creating one. There is a material difference between a person commencing a new apprenticeship and an existing second, third or fourth-year apprentice transferring from another contractor. Both may legitimately work on a data centre, but only one increases Australia's future workforce. Government apprenticeship targets should reflect this distinction, and a major project should not receive the same recognition for recruiting an apprentice already employed elsewhere as it does for creating a genuinely additional commencement. Workforce reporting should separately identify new commencements, transferred apprentices, year levels, retention, progression and completion. Success should be measured by the additional licensed workforce created, not the number of apprentice labour hours recorded on a project.

Workforce Development Plans for major data centres

Major developments should prepare a proportionate Workforce Development Plan through relevant approval, investment-facilitation or infrastructure-coordination processes. The plan should identify projected electrical workforce requirements across construction, commissioning and operation, including peak demand and its timing; genuine additional apprenticeship commencements; transfers of existing apprentices; engagement with contractors, RTOs and GTOs; measures supporting SMEs to create additional positions; and specialist post-trade requirements. It should establish arrangements for structured rotations and competency development and report transparently on retention, progression and completion. Where government provides material facilitation, the plan should form part of the public-interest case for that support.

Data centres can create apprentices before they are needed, and protect training quality

Workforce formation requires lead time. An apprentice should not commence only when a project reaches peak demand; models involving new apprentices commencing about 12 to 24 months before peak electrical construction warrant development, allowing foundational competence to be established before entering complex environments and reducing pressure to recruit later-year apprentices from existing employers when demand peaks. Data centre proponents should be able to satisfy part of their responsibility by supporting additional apprentices employed by SMEs or recognised GTOs; the apprentice need not be directly employed by the developer to represent a genuine contribution to workforce growth, and supporting an apprentice within an established contractor may deliver broader benefit through more diverse trade experience.

Australia does not simply require more apprentices. It requires competent, adaptable and productive licensed electricians. Data centres can provide, if properly planned, outstanding technical environments. Apprentices can be exposed to sophisticated switchgear, critical power, protection, controls, uninterruptible power supplies, batteries, high-voltage infrastructure, communications, testing and commissioning. A single major project should not become an apprentice's only substantial workplace experience. More than 85 per cent of electrician training occurs in the workplace, and housing, commercial, industrial, maintenance, fault-finding, testing and customer environments all build broad competence. NECA therefore recommends structured competency-development plans and rotations, both within major projects (to capture their considerable training value) and, where necessary, across other environments, so that no apprentice's development becomes confined to one project type or a narrow range of tasks.

Recognition of employer training investment

NECA is reviewing mechanisms to recognise the investment an employer makes when an apprentice transfers to another business. The South Australian model provides one approach worth examining. Under the South Australian Skills Commission framework, the transfer of an apprentice or trainee can give rise to a prescribed transfer fee payable by the new employer to the existing employer, with provision to reduce or waive the amount in defined circumstances. Apprentice mobility and recognition of employer investment are not mutually exclusive, and the Commonwealth should work with states and territories to examine whether a nationally consistent mechanism could preserve apprentice choice while recognising legitimate employer investment.

Supporting SMEs to create the workforce

Australia has significant latent training capacity: PSO identifies about 32,000 electrical contracting businesses with licensed electricians that do not currently employ an apprentice. Data centre proponents should be permitted to meet part of their workforce commitments by supporting genuinely additional apprenticeship positions with eligible contractors, with priority for businesses employing an apprentice for the first time or increasing an established intake. Support could contribute towards early-year wages, mature-age recruitment, supervision, formal training, tools, safety equipment, mentoring and completion support.

Industry-led Group Training Organisations are a critical delivery mechanism

Industry-led GTOs should have a central role in delivery because the model directly addresses the structural problems identified above. The GTO employs the apprentice and places them with suitable host employers, providing continuity of employment while allowing experience across different businesses, projects and environments. An apprentice could commence well before peak construction, undertake foundational training with contractors across housing, commercial, maintenance or industrial work, rotate onto a data centre project as competence develops, and rotate into further environments to complete their breadth of experience. Rotations can also operate within a large project, where a broad range of work exists across stages, packages and systems.

Rather than a small contractor investing heavily in an apprentice and then permanently losing them to a major project, a GTO provides structured access to the apprentice across host employers. The apprentice gains major-project experience while the data centre gains access to developing workers.

SMEs will then remain part of the training system without carrying the full four-year employment and commercial risk and the wider economy gains a broadly experienced apprentice. The GTO can also intervene when a host experiences a downturn, reducing the risk that the apprenticeship itself is lost, and can coordinate recruitment, screening, employment, host placements, rotations, mentoring, pastoral support and engagement with RTOs.

Given that only around one-third of the roughly 48,000 contracting businesses currently employs an apprentice, activating even part of this latent capacity is a substantial opportunity. NECA's previous Senate productivity submission identified completion rates through industry-led RTOs and GTOs above the national electrical apprenticeship completion rate, demonstrating the outcomes achievable through committed field officers, mentoring and direct apprentice support.

NECA recommends recognised industry-led GTOs form a central delivery pathway within the Framework, with proponents permitted to meet part of their obligations by funding genuinely additional apprentices employed by such GTOs.

Project funded wage support can strengthen apprenticeship formation

The wage differential between major projects and smaller contractors also warrants attention. Major projects can offer enterprise-agreement rates and allowances that many residential, commercial and small contractors cannot replicate. NECA does not suggest apprentices should receive lower wages or that major-project remuneration should be constrained. The opportunity is to use part of the economic capacity of major developments to support apprenticeship formation across the wider industry. Under a GTO model, developers could contribute towards a project-supported apprentice wage package where an apprentice undertakes a structured placement with an SME, the host pays an appropriate commercial rate while the data centre contribution funds the difference to the apprentice's supported remuneration. This lets apprentices undertake residential, commercial, service, maintenance and industrial placements without financial disadvantage, and avoids requiring SMEs to match unsustainable site rates. It should apply across all apprenticeship years and is particularly valuable for mature-age apprentices, where higher wage costs are a barrier to SMEs creating positions. Support should be directed to genuinely additional positions and defined training outcomes, following the apprentice through to progression, completion and licensing.

Training capacity must grow with apprenticeship demand

Increasing apprentice numbers will only strengthen the workforce if the training system has the capacity to support them. Additional commencements require additional trainers, classrooms, workshops, equipment, learner support and specialist capability. This is particularly important in electrotechnology, where high quality training depends on practical facilities, current equipment and appropriately qualified trainers with recent industry experience.

NECA has identified that training capacity is already constrained in parts of the system and those pressures will increase as apprenticeship numbers grow. Major project Workforce Development Plans should therefore include a Training Capacity Assessment that identifies the additional training demand created by the project, the capacity of industry led RTOs and other providers to meet that demand, and any additional investment required in trainers, facilities and specialist equipment across areas such as high voltage, critical power, uninterruptible power supply systems, battery energy storage, controls and communications.

The funding model should recognise shared responsibility. Government remains responsible for maintaining a properly funded vocational education and training system. High performing industry led RTOs should continue to play a central role in apprenticeship training. Where a major data centre creates exceptional additional demand for electricians and apprentices, it is reasonable that the project also make a proportionate contribution to the additional training capacity required.

Those contributions should be directed to demonstrable training outcomes and should supplement, not replace, Commonwealth and state investment. Investment made to meet data centre demand can also benefit the broader economy, because the same trainers, workshops and specialist equipment can support workforce development across housing, renewable energy, transmission, defence, healthcare, transport and manufacturing. Australia cannot materially increase electrical apprenticeship commencements without also expanding the system that trains and supports those apprentices.

Government-facilitated investment should produce a workforce dividend

The Committee's terms of reference expressly consider existing and future arrangements between government and global AI companies. Where a major data centre benefits from accelerated approvals, infrastructure coordination, regulatory prioritisation or other material government support, that investment should deliver a clear and measurable Australian capability benefit.

Workforce formation should form part of that benefit. NECA supports the Government's Data Centre Expectations and recommends that workforce commitments be translated into measurable outcomes. Where a project creates exceptional demand for electricians and apprentices, the proponent should make a proportionate contribution to creating the additional workforce and training capacity required to support that demand.

Australian electrical contractors must share in the opportunity

Workforce policy should also strengthen Australian industry capability. Data centre investment presents a significant opportunity for Australian electrical and communications contractors, and that opportunity should extend beyond minor packages and residual works. Capable Australian contractors should have meaningful opportunities to participate in electrical construction, communications, commissioning, maintenance and future upgrades. This should be supported by early engagement with the domestic market, transparent procurement pipelines and work packaging that enables Australian businesses to compete.

Contracting arrangements must also be commercially sustainable. Electrical subcontractors should not be expected to finance major infrastructure projects through extended payment periods, excessive security requirements or unfair risk transfer. Data centre developers, owners and head contractors should ensure that risk is allocated fairly and proportionately to the party best able to manage and insure it.

The economic opportunity also extends well beyond initial construction. Data centres can generate decades of ongoing work through preventative and corrective maintenance, capacity upgrades, testing and auditing, high voltage support, generator and uninterruptible power supply maintenance, data hall fit outs, asset replacement and energy optimisation. The skills and capability developed through this work can then support healthcare, defence, transport, energy, advanced manufacturing and other critical infrastructure sectors.

State governments are moving towards stronger frameworks

State policy has developed significantly as data centre investment has accelerated. There is growing recognition that data centres cannot be treated simply as another form of industrial development. NECA welcomes this direction. Australia should continue to attract investment while ensuring that the infrastructure, workforce and training capacity required to support that investment grows alongside demand.

The most significant recent development is the NSW Data Centre Guidelines released in August 2026. The Guidelines are built around six principles covering environmental and efficiency standards, costs to consumers and communities, additional water and energy supply, community infrastructure and amenity, future industries and local supply chains, and training and skills. They

are linked to the State Significant Development process and provide a clear mechanism for workforce commitments to be identified, assessed and monitored.

Principle 6 is particularly relevant to NECA. It requires proponents to demonstrate a commitment to training and skills. Performance Measure 17 requires proponents to demonstrate support for training workers involved in data centre construction and operation. The Guidelines also contemplate apprenticeship and learning workforce targets, partnerships with recognised training providers, new training pathways and skills and training centres of excellence.

The NSW approach to energy provides an important precedent. Principle 3 requires proponents to support additional renewable generation and storage so that major new demand contributes to additional supply. NECA considers that the same principle should apply to electrical workforce capacity. Where a project creates exceptional additional demand for electricians and apprentices, it should make a reasonable and proportionate contribution to expanding the workforce from which it draws.

This does not require arbitrary employment quotas and should not make the planning system responsible for apprenticeship or vocational education policy. The objective should be a measurable relationship between exceptional project demand and additional workforce capacity. New apprenticeship commencements should be distinguished from apprentices recruited from existing employers, and outcomes should be measured through progression, completion and licensing.

The NSW Government has also committed to an Industry Advisory Forum, improved demand forecasting, skills and training centres of excellence, further work on local content and procurement, and annual review of the Guidelines. These mechanisms provide a practical opportunity to strengthen workforce additionality as the framework develops.

Other jurisdictions are also strengthening their approach. Victoria has established a Sustainable Data Centre Action Plan that brings together infrastructure, land, connectivity, energy, water and workforce development. It also supports partnerships with TAFE and tertiary providers to build the skills pipeline. South Australia has introduced an essential infrastructure pathway that requires key electricity and water capacity issues to be addressed as part of major data centre development. Tasmania has maintained a dedicated Data Centre Action Strategy that includes collaboration with education and training providers to address skills gaps. Western Australia has focused on investment attraction through its Data Centre Prospectus, while Queensland has supported major developments and their integration with renewable energy and storage.

The next national policy step should be to move from general workforce and training commitments to measurable workforce additionality. Commonwealth leadership is necessary to establish consistent principles while allowing states and territories to apply those principles through their own planning, skills and major project frameworks.

A coordinated Commonwealth, state, territory and local response

The workforce implications of data centre development cannot be addressed by one level of government alone. The Commonwealth has a national leadership role through AI, skills, apprenticeship, industry and infrastructure policy and its engagement with major investors. States and territories hold many of the practical levers with land use, major-project assessment, infrastructure coordination, resource allocation, skills funding and development approvals. Local governments have legitimate roles in planning, infrastructure, economic development, procurement and employment. NECA recommends these responsibilities be brought together through a coordinated national approach rather than addressed independently.

For major developments, approval processes routinely consider whether sufficient land, electricity, water, transport and supporting infrastructure are available, and the cumulative impact of additional demand on those resources and other users. Skilled workforce capacity should be considered with the same discipline. A data centre may have suitable land, sufficient power and adequate water, but it still cannot be built, connected, commissioned, operated or maintained without licensed electricians and specialist electrotechnology workers. The question is not only whether the project can secure its workforce, but whether doing so will reduce the electricians available for housing, energy, infrastructure and maintenance. Human resources should be treated as a core enabling input, with the crucial difference that workforce capacity can be expanded if investment decisions are made early enough. Where a development will create exceptional demand for a workforce already in shortage, the approval and facilitation process should identify that demand early and require a credible workforce response.

The Commonwealth should establish the national principles for data centre workforce additionality, genuinely additional commencements, recognition of transferred apprentices, progression and completion, structured rotations, support for SMEs, industry-led GTO participation and transparent reporting. States and territories should determine the most effective mechanism for applying these principles within their jurisdictions, with planning and major-project approval systems warranting particular consideration. The appropriate legal mechanism will differ such as information requirements during assessment, conditions of approval, planning or development agreements, investment-facilitation arrangements or another statewide mechanism. Any mechanism should be proportionate to project scale, clearly connected to the workforce demand being addressed, and designed not to delay investment or create inconsistency between projects. The objective is certainty and additional capacity, not additional regulatory complexity.

Local government can also play a practical supporting role. Councils should not be responsible for national workforce policy, but they can help identify local workforce pressures, support industry participation and facilitate apprenticeship partnerships. Where appropriate, councils could participate as host employers through recognised industry led GTOs. This could form part of a broader partnership between data centre proponents, electrical contractors, GTOs and local government, with proponents supporting genuinely additional apprentices and GTOs coordinating placements across major projects, SMEs and suitable council operations.

Such a model would broaden apprentice experience, strengthen local training capacity and help ensure that data centre investment contributes to the workforce needed for housing, maintenance, renewable energy and community infrastructure. The Commonwealth should establish nationally consistent workforce additionality principles, while allowing states, territories and local government flexibility in how those principles are delivered.

Recommendations

Given the speed at which data centre and infrastructure demand is now disrupting residential construction and SME electrical contracting, the central task is to ensure that the projects and industries drawing on the licensed workforce also contribute to expanding and sustaining it. NECA therefore recommends that the Committee recommend the following eight actions.

Recommendation R1: A National Data Centre Electrical Skills Framework

That the Australian Government, working with state and territory governments, establish a National Data Centre Electrical Skills Framework that recognises electrical workforce capability as a core requirement for major data-centre development, built on the principles of genuine workforce additionality, maintenance of training and experience quality, investment in training capacity, and small and medium-sized enterprise sustainability, and delivered through proportionate Workforce Development Plans prepared as part of project approval or facilitation.

Recommendation R2: Data centres to contribute additional apprentice numbers

That major data centre projects contribute to genuinely additional electrical apprenticeship commencements, created sufficiently ahead of peak project demand and separately identified from transfers of existing apprentices, so that exceptional new demand expands Australia's future workforce rather than redistributing the existing workforce.

Recommendation R3: Maintenance of training and experience quality

That apprentices engaged on data-centre projects follow structured competency-development plans with rotations between small and medium contractors and major projects, so that projects capture their considerable technical training value without any apprentice's development being confined to a single project type, thereby preserving the breadth of workplace experience required to produce competent, adaptable and fully licensed electricians.

Recommendation R4: Central role for industry-led GTOs and contractors

That recognised industry-led group training organisations (GTO), registered training organisations (RTO) and electrical contractors form a central delivery pathway within the Framework, with data-centre proponents able to meet part of their commitments by funding genuinely additional apprentices employed through GTOs, and with project-funded wage support that enables SMEs to host apprentices across residential, commercial, service and maintenance work without matching unsustainable major-project rates.

Recommendation R5: Investment in training capacity

That major data centre developments include a Training Capacity Assessment and contribute proportionately to the additional training capacity required to meet the workforce demand they create. This should include additional trainers, facilities and specialist post trade capability in areas such as high voltage, critical power, uninterruptible power supply systems, battery energy storage, controls and communications. Project contributions should supplement rather than replace sustained Commonwealth and state investment in the vocational education and training system and high performing industry led RTOs.

Recommendation R6: Measurable targets and transparent reporting

That data-centre workforce commitments be governed by measurable targets and transparent public reporting on apprenticeship commencements, transfers, year levels, progression, retention, diversity, completion and licensing, so that success is measured by the additional licensed workforce created and the quality of training delivered, rather than by apprentice labour hours recorded on a project.

Recommendation R7: Recognition of employer investment and SME sustainability

That the Australian Government, working with states and territories, develop mechanisms that recognise legitimate employer investment when apprentices transfer between employers, while preserving apprentice choice and labour mobility. The South Australian framework should be considered as one model. Any national approach should strengthen employer confidence to create apprenticeship positions while ensuring apprentices retain the freedom to pursue employment and training opportunities.

Recommendation R8. Australian contractor participation and fair contracting

That major data centre developments provide capable Australian electrical and communications contractors with meaningful opportunities to compete across construction, commissioning, maintenance and future upgrades, supported by early market engagement, transparent procurement pipelines and commercially accessible work packaging. Contracting arrangements should provide prompt and reliable payment, proportionate security requirements and fair allocation of risk to the party best able to manage and insure it. Data centre developers, owners and head contractors should not impose unreasonable, uninsurable or disproportionate risk on subcontractors.

To arrange a meeting or discuss this submission further, please contact:

Kent Johns

Head of Government Relations and Regulatory Affairs

NECA National

E kent.johns@neca.asn.au

W www.neca.asn.au