

# **Transgrid and AEMO grants for battery project acceleration**

## **Mid-term evaluation**

Department of Climate Change,  
Energy, the Environment and Water

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# Acronyms

Acronym	Meaning
<b>AEMO</b>	Australian Energy Market Operator
<b>AGL</b>	Australian Gas Light Company (now known as AGL Energy Ltd)
<b>BAU</b>	Business-As-Usual
<b>BESS</b>	Battery Energy Storage System
<b>DCCEEW</b>	Department of Climate Change, Energy, the Environment and Water
<b>ECCS</b>	Energy, Climate Change and Sustainability (Group within DCCEEW)
<b>EPC</b>	Engineering, Procurement, and Construction
<b>ESOO</b>	Electricity Statement of Opportunities
<b>FTE</b>	Full-Time Equivalent
<b>FY24</b>	Financial Year 2024
<b>GPS</b>	Generator Performance Standards
<b>IRM</b>	Interim Reliability Measure
<b>KEQ</b>	Key Evaluation Question
<b>MW</b>	Megawatt
<b>MWh</b>	Megawatt-hour
<b>NEM</b>	National Electricity Market
<b>NER</b>	National Electricity Rules
<b>NSP</b>	Network Service Provider
<b>OEM</b>	Original Equipment Manufacturer
<b>PPC</b>	Plant Performance Criteria
<b>PSS/E</b>	Power System Simulator for Engineering (Siemens software for grid modelling)
<b>PSCAD</b>	Power Systems Computer Aided Design (used for electromagnetic transient studies)
<b>SIPS</b>	System Integrity Protection Scheme

# Executive summary

## Background

The 2023 Electricity Statement of Opportunities (ESOO) highlighted critical reliability concerns for the National Electricity Market (NEM), particularly in NSW, following the accelerated closure of coal-fired generation.

The objective of these grants is to ensure the timely connection of priority battery projects (proponents) targeting commissioning by 2025/26. At project launch, anticipated delays could result in shortfalls to the national Interim Reliability Measure of 177MW in 2025/26 and 271MW in 2026/27.<sup>1</sup> If a delay on just one project is avoided, this will help NSW meet the Interim Reliability Measure. These grants will enable the Australian Energy Market Operator (AEMO) and Transgrid to increase the number of technical staff working on grid connections for priority battery projects so they can better coordinate information with each other and project proponents and improve their response times compared to regulatory standards. This will reduce time and duplication in grid connections and help mitigate project delivery risks.

## Evaluation purpose and scope

The evaluation assesses the effectiveness of the grant based on three key questions (KEQs):

*Exhibit 1: Mid-term evaluation questions*

Category	Key question	Sub-questions	Topic / domain
<b>01. Funding deployed (grant activities undertaken)</b>	Were the new staff hired and deployed in the planned way?	1.1 Were staff hired?	Staffing
		1.2 Were they additional to NSW?	New ways of working
		1.3 Were they hired on time?	
		1.4 Did they have the right skills / capabilities?	
		1.5 Were they deployed on priority battery projects?	

<sup>1</sup> Subsequent to the grant, the government reached an agreement with Origin Energy to operate Eraring Power Station until at least August 2027.

Category	Key question	Sub-questions	Topic / domain
<b>02. Outputs achieved</b>	Did the new staff lead to streamlining of processes and more engaged proponents?	2.1 Was there streamlined and dedicated project management from AEMO / Transgrid? 2.2 Was there empowered and engaged proponents and OEMs? 2.3 Were priority projects progressed according to plan, to meet stated deadlines? 2.4 Were the risks monitored and managed appropriately?	New ways of working Project management
<b>03. Outcomes achieved / Design appropriateness</b>	Did the new staff lead to achievement of shorter application, registration and commissioning time?	3.1 Was the Connections process (application, registration and commissioning) shortened? 3.2 Is this a replicable strategy for new projects, and are lessons learned being adsorbed to BAU connection processes? 3.3 Is the design of the grant appropriate for the issue?	Time saving Battery commissioning Replicable process

## Evaluation design and approach

The evaluation was structured around three key evaluation questions (KEQs) designed to assess the progression from grant-funded activities to outputs and early outcomes. It drew on two primary sources of insight: a review of key documentation (including the grant agreement, management plans, progress reports, and schedules submitted by AEMO and Transgrid to DCCEE) and semi-structured interviews with departmental representatives, AEMO and Transgrid staff, and project proponents (Akaysha Energy, Origin Energy, and AGL).

The evaluation examined three categories:

- **Deployment of funding:** Assessing whether new staff were hired and deployed in line with the grant agreement.
- **Achievement of outputs:** Assessing changes to business-as-usual processes (people, process, and governance) that supported improved coordination, ways of working and subsequently time savings.
- **Achievement of early outcomes:** Assessing whether measurable time savings occurred across key connection stages (application, registration, and commissioning).

To assess time savings, actual durations for each project stage were compared against a counterfactual representing business-as-usual timelines. Four possible counterfactuals were considered, with AEMO's Connections Scorecard selected as the most robust, transparent, and defensible benchmark. While it provides a conservative estimate, reflecting typical durations across a wide range of project types rather than large-scale batteries, it aligns with AEMO's reporting approach. As such, even moderate time savings identified through the evaluation are considered strong early results.

## Key findings and lessons learned

The grant program has been effective in delivering faster grid connections for four priority battery projects. The overall assessment of key evaluation questions shows the program is on track, with dedicated staffing within AEMO and Transgrid supporting acceleration activities and driving early improvements across key connection phases.

Time savings of around three months on average per project have been observed across the connection application and registration stages. These savings were enabled through changes across people, process, and governance - including faster resolution of modelling issues and technical queries (people), better alignment of schedules between AEMO, Transgrid, and proponents (process), and clearer project prioritisation and faster review cycles (governance).

Project proponents reported more streamlined engagement and welcomed the sense of momentum and collaborative problem-solving fostered by the dedicated project teams. The allocation of dedicated project managers and technical personnel was viewed as a key enabler, facilitating faster issue resolution, streamlined negotiations, and reduced risk of delays. Technical workshops and engagement forums also supported collaborative problem-solving and a shared commitment to meeting project milestones.

Notably, all proponents have reported experiencing some form of time saving as a result of participating in the program:

- **Liddell Battery Energy Storage System (AGL):** ~5-6 months saved at the application stage due to AEMO and Transgrid’s acceptance of a conditional model.
- **Orana Battery Energy Storage System (Akaysha Energy):** ~3.5 months saved during application through faster resolution of technical issues.
- **Erating Battery Energy Storage System (Origin Energy):** ~1.1 months saved at registration owing to greater engagement and accountability from Transgrid.
- **Waratah Super Battery (Akaysha):** ~1 month saved during registration through quicker negotiation of harmonic orders; commissioning reviews were also completed 1-2 weeks faster, though it is too early to assess stage-wide impact.

The program delivers strong value for money, indicating substantial benefits for both project proponents and the government through time savings on major battery projects. For some large-scale batteries, saving even a single month can result in capex interest savings in the order of millions of dollars. Given the clear impact, there is a strong case to consider extending this approach more broadly. Sustaining these gains may require continued funding or regulatory reform, but the early results show what is possible with targeted resourcing and the right capabilities in place.

*Exhibit 2: Overall findings and lessons learned based on key evaluation questions*

Category	Key question	Overall assessment	Key findings and lessons
<b>Funding deployed (grant activities undertaken)</b>	1. Were the new staff hired and deployed in the planned way?	Transgrid and AEMO hired new staff and formed dedicated teams to work on priority batteries projects.	<ul style="list-style-type: none"> <li>• <b>Connections engineering talent was available at the time of recruitment:</b> AEMO and Transgrid successfully hired new connections engineers and deployed dedicated teams to support priority battery projects, mobilising quickly by also drawing on experienced internal staff.</li> <li>• <b>Senior engineering expertise most valuable:</b> Senior engineers offered the most value, given their deep technical knowledge and sound judgement in managing complex connections.</li> </ul>

Category	Key question	Overall assessment	Key findings and lessons
			<ul style="list-style-type: none"> <li>• <b>Targeted resourcing can deliver impact:</b> Effective outcomes do not require large teams or significant investment - a focused approach with the right skillsets is key.</li> <li>• <b>Likely underspend could be used to prioritise other projects:</b> Around 17% of grant funding is likely to remain unspent and could be considered for supporting the rollout of acceleration activities to additional projects.</li> </ul>
<b>Outputs achieved</b>	2. Did the new staff lead to streamlining of processes and more engaged proponents?	Overall, connection processes were streamlined, and proponents were more engaged.	<ul style="list-style-type: none"> <li>• Dedicated resourcing improved connections performance through three key mechanisms: <ul style="list-style-type: none"> <li>– <b>People:</b> Faster resolution of modelling issues and technical queries via proactive workshops and engagement.</li> <li>– <b>Process:</b> Aligned schedules between AEMO, Transgrid, and proponents, along with regular meetings between these parties, improved overall coordination.</li> <li>– <b>Governance:</b> Clearer project prioritisation and faster review cycles enabled timely delivery.</li> </ul> </li> </ul>

Category	Key question	Overall assessment	Key findings and lessons
			<ul style="list-style-type: none"> <li>• <b>Proponents welcomed improved momentum and coordination:</b> Proponents reported stronger collaboration and a more solutions-focused approach to resolving issues throughout the connections process when working with Transgrid and AEMO.</li> <li>• <b>Greatest gains observed in early-stage processes:</b> Staff deployments had the most noticeable impact on the application and registration phases. Commissioning has typically had smaller gains so far, however, as none of the projects have completed the commissioning phase, it is likely too early to draw definitive conclusions.</li> <li>• <b>Analysis complexity remains:</b> While staffing improves process flow, it does not resolve all underlying complexity of technical studies which require significant engineering judgement. There is potential for this to be investigated further.</li> </ul>

Category	Key question	Overall assessment	Key findings and lessons
<b>Outcomes achieved / Design appropriateness</b>	3. Did the new staff lead to the achievement of shorter application, registration, and commissioning time?	Definitive time savings, but overall impact on time to connect too early to say.	<ul style="list-style-type: none"> <li>• <b>Definitive time savings achieved:</b> Time savings of approximately three months per project were observed across application and registration stages.</li> <li>• <b>The program demonstrates strong value for money:</b> Potentially substantial benefits for both project proponents and the government through time savings on major battery projects.</li> <li>• <b>Broader rollout should be considered:</b> Given the impact, consideration should be given to extending this approach beyond these four projects.</li> <li>• Two key considerations for broader rollout: <ul style="list-style-type: none"> <li>– <b>Short-term:</b> Continued dedicated funding to maintain momentum.</li> <li>– <b>Medium-term:</b> Investigate the potential to reform the NER or funding agreements to embed faster delivery timeframes and systemic change.</li> </ul> </li> </ul>

# 1. Background context

## 1.1 Purpose of the grant

AEMO's 2023 *Electricity Statement of Opportunities* (ESOO) projected reliability shortfalls in New South Wales against the national Interim Reliability Measure (IRM) of 177 MW in 2025/26 and 271 MW in 2026/27. These shortfalls were primarily driven by the accelerated retirement of the Eraring Power Station, which at the time was scheduled for closure in August 2025.<sup>3</sup>

To address these risks, the NSW Government established the Battery Acceleration Grant Program in June 2024 as part of a broader package of reliability and grid connection reforms. The objective was to reduce delays in connecting priority large-scale battery energy storage projects and ensure their timely commissioning, particularly by 2025/26—thereby supporting system reliability and helping meet the IRM.

## 1.2 Program design and funding

The program provided targeted grants to AEMO and Transgrid to expand their capacity to manage and coordinate the connection of four selected battery projects. Funding was approved by the Expenditure Review Committee in February 2024:

- **\$3.2 million to Transgrid** to increase engineering resources and manage connection risks.
- **\$5.25 million to AEMO** to expand technical review capacity and align response times with the program's accelerated timeframes.

These funds enabled both organisations to:

- Increase dedicated technical staffing on priority battery projects.
- Improve coordination with each other and with project proponents.
- Reduce delays and duplication across the application, registration, and commissioning stages of the grid connection process.

## 1.3 Project eligibility and selection

Projects were selected based on the following eligibility criteria:

- Nameplate capacity of at least 100 MW.
- Transmission connection via the Transgrid network.
- Commercial operation date between late 2024 and 2026.
- Either AEMO 'committed' status or an executed Long-Term Energy Service Agreement.

<sup>3</sup> The Eraring Power Station is now scheduled to cease operations in August 2027. This represents a two-year extension from its originally planned closure in August 2025.

Using a ranked shortlist developed by the Department of Climate Change, Energy, the Environment and Water (DCCEEW), AEMO and Transgrid selected four high-impact projects for support. Projects were prioritised based on their potential reliability contribution (measured as firm capacity adjusted for system strength) and the estimated months of acceleration achievable.

## 1.4 Estimated time savings

At the time the program was designed, AEMO provided initial estimates of the potential time savings that could be achieved across key connections phases. However, these were preliminary figures. When the four priority battery projects joined the program, only two, Liddell BESS and Orana BESS, were still within the application phase and therefore positioned to benefit from acceleration efforts at that stage. In contrast, the Waratah Super Battery and Eraring BESS had already progressed to the registration phase. The initial time saving estimates outlined in the grant guidelines were as follows:

- **Application phase:** up to 7 months (from a typical 12-month baseline).
- **Registration phase:** up to 2 months (from a typical 6 months).
- **Commissioning phase:** up to 3 months (from a typical 9 months), though project dependent.

## 1.5 Prioritised battery projects

The following four battery projects were selected for acceleration support:

- **Liddell Battery Energy Storage System (500 MW, 1,000 MWh):** Located at the site of the former Liddell Power Station in the Hunter Valley. The project is designed to support grid stability and facilitate the integration of renewable energy into the National Electricity Market. At the time of entering the program, the project was in the application phase of the connections process and has since progressed to the registration phase. Based on the current schedule and assuming no delays, the target for completion of the registration phase is Q3 2025, with full operational output (i.e. completion of commissioning phase) targeted for Q1 2026.
- **Waratah Super Battery (850 MW, 1,680 MWh):** Located near Lake Munmorah on the Central Coast and considered one of the largest grid-forming batteries globally. The project is being developed as a dedicated System Integrity Protection Scheme (SIPS) asset to enhance system strength and inertia across the Sydney–Newcastle–Wollongong corridor. At the time of entering the program, the project was in the registration phase and has since progressed to the commissioning phase, with full operational output targeted for Q4 2025.
- **Orana Battery Energy Storage System (415 MW, 1,660 MWh):** Situated near Dubbo within the Central-West Orana Renewable Energy Zone. The project is intended to provide firming capacity and improve reliability in the region. At the time of entering the program, the project was in the application phase of the connections process and has since progressed to the registration phase. Commissioning is targeted for Q2 2026.<sup>4</sup>

<sup>4</sup> The Eraring Big Battery was not part of the original cohort selected for the grant program; however, it was included as a replacement project following complications with the Richmond Valley Battery in October 2024.

- **Eraring Battery Energy Storage System (460 MW, 2,800 MWh):** Located adjacent to the Eraring Power Station and expected to play a key role in maintaining system reliability as coal-fired generation retires. At the time of entering the program, the project was in the registration phase of the connections process and has since progressed to the commissioning phase, with full operational output targeted for Q3 2026.

## 1.6 Program delivery

The grant program runs from June 2024 to June 2026 and is overseen by the Energy, Climate Change and Sustainability (ECCS) Group within DCCEE.

The four batteries projects were to be managed according to:

1. Development of an overall project program and schedule outlining:
  - a. Key tasks across proponents, NSP and AEMO
  - b. Submission/resubmission timelines and NSP/AEMO deliverables
  - c. Task dependencies and critical milestones
2. Understanding of schedule risks and assumptions
3. Acknowledgement of project acceleration or delays as a result of any delays or quality issues in submissions or deliverables, on-site issues, construction timeframes, and any risk identifications
4. All stakeholders will work to an agreed project schedule and timelines instead of NER regulatory timelines (For example, 30 business days for NSP and 20 business days for AEMO to respond to a Connection Application submission).

## 2. Evaluation context, purpose and scope

### 2.1 Purpose

The purpose of the mid-term evaluation was to assess progress, risks, and opportunities to embed successful practices into business-as-usual (BAU) grid connection processes.

### 2.2 Key evaluation questions

The evaluation assesses the effectiveness of the grant based on three key questions (KEQs) outlined in Exhibit 3 below. The questions were designed to progress from activity-level metrics to output and outcome metrics, increasing in complexity and significance.

*Exhibit 3: Mid-term evaluation questions*

Category	Key question	Sub-questions	Topic / domain
<b>1. Funding deployed (grant activities undertaken)</b>	Were the new staff hired and deployed in the planned way?	1.1 Were staff hired?	Staffing
		1.2 Were they additional to NSW?	New ways of working
		1.3 Were they hired on time?	
		1.4 Did they have the right skills / capabilities?	
		1.5 Were they deployed on priority battery projects?	

Category	Key question	Sub-questions	Topic / domain
<b>2. Outputs achieved</b>	Did the new staff lead to streamlining of processes and more engaged proponents?	2.1 Was there streamlined and dedicated project management from AEMO / Transgrid?	New ways of working Project management
		2.2 Was there empowered and engaged proponents and OEMs?	
		2.3 Were priority projects progressed according to plan, to meet stated deadlines?	
		2.4 Were the risks monitored and managed appropriately?	
<b>3. Outcomes achieved / Design appropriateness</b>	Did the new staff lead to the achievement of shorter application, registration, and commissioning time?	3.1 Was the Connections process (application, registration and commissioning) shortened?	Time saving Battery commissioning Replicable process
		3.2 Is this a replicable strategy for new projects, and are lessons learned being adsorbed to BAU connection processes?	
		3.3 Is the design of the grant appropriate for the issue?	

## 2.3 Evaluation design and methods

The evaluation was guided by three key evaluation questions (KEQs), structured to assess the progression from grant activities to outputs and early outcomes.

Key sources of insight include:

- **Document review:** Including the grant agreement, guidelines, grant management plan, progress reports, spending forecasts, and project schedules submitted to the Department of Climate Change, Energy, the Environment and Water (DCCEEW) by AEMO and Transgrid.
- **Stakeholder interviews:** Semi-structured interviews with key departmental representatives, AEMO and Transgrid staff involved in delivery, and project proponents for the four priority battery projects (Akaysha Energy, Origin Energy, and AGL).

Approach to evaluation of key questions:

- **Deployment of funding:** The evaluation examined whether the grant funding was used as intended, in line with the grant agreement. This included a review of recruitment records and progress reports submitted to DCCEEW, alongside feedback from AEMO, Transgrid, and departmental stakeholders on the mobilisation and use of additional personnel
- **Achievement of outputs:** The evaluation assessed how the grant changed the business-as-usual connections process, focusing on changes in people, process, and governance. It identified key actions enabled by the grant that supported improved coordination and earlier engagement, contributing to time savings for the four priority battery projects. This assessment was informed by document review and feedback from project proponents, AEMO, and Transgrid.
- **Achievement of early outcomes:** The evaluation assessed whether the grant led to measurable time savings across key connection phases. This involved comparing the estimated duration of each connection phase under a business-as-usual scenario (the counterfactual) with the actual time taken for each project. Durations were reported by AEMO in program progress reports and validated through interviews and confirmation emails with project proponents.

## 2.4 Counterfactual approach

To assess the time savings achieved through the program, it was essential to identify the most accurate counterfactual timing for each connection phase, representing the expected duration without grant support. Selecting an appropriate counterfactual was critical, as it provided the baseline against which actual project timings under the grant could be compared.

As part of the evaluation, four possible counterfactuals were considered (see Exhibit 4). These included internal benchmarks used by AEMO, average durations from recent similar projects, delivery partner estimates, and the Connections Scorecard - a publicly available dataset of median connection timeframes published quarterly by AEMO. Each option was assessed for its relevance, reliability, and alignment with how connection timeframes are typically understood and communicated within the sector.

The Connections Scorecard was selected as the primary counterfactual as it was considered the most robust, transparent, and defensible benchmark for business-as-usual timelines. It also aligns with the approach AEMO is currently using to report time savings from the program to the department.

However, the Connections Scorecard presents median durations across all project types and sizes and is not tailored to the complexity of large-scale battery projects.<sup>5</sup> As such, it likely underestimates the connection timelines that would have applied to the four priority batteries in the absence of grant support. Therefore, even the moderate time savings estimated through this evaluation should be viewed as a strong result, given they are measured against a conservative baseline.

*Exhibit 4: Four potential counterfactuals for the duration of the connection phases were considered*

Counterfactual option	Pros	Cons	Decision / rationale
<b>1. Original proponent timelines:</b> Original proponent timelines to complete connections phases.	Directly sourced from proponents  May reflect realistic delivery expectations under BAU	May not be consistent across projects  Risk of optimism bias or misalignment with AEMO and Transgrid’s connection phases	Useful for project-specific comparison but lacks standardisation; best used as a sense check of counterfactual.
<b>2. Connections scorecard estimates for connection phases:</b> AEMO Connections Scorecard FY24 connections phase durations (i.e. before grant). These are the typical timeframes for each stage of the generation and storage connection process in the NEM.	Standardised across all projects  Publicly available data  AEMO is currently using this in their reporting to DCCEE	Scorecard average durations not reflective of complexity and size of big batteries projects  Benchmarks represent median, not worst-case scenarios  May not reflect complexity of fast-tracked projects	<b>This has been used as the primary counterfactual,</b> as it provides the most robust comparator for average BAU connection timelines. However, it is likely an underestimation.

<sup>5</sup> All four nominated projects are large-scale batteries exceeding 400 MW. In contrast, approximately 90% of committed and operational renewable energy and storage projects in New South Wales are below 400 MW in capacity.

Counterfactual option	Pros	Cons	Decision / rationale
<p><b>3. Grant agreement average connections phase durations:</b> Estimated timing for connections phases in BAU, provided in the grant agreement.</p>	<p>Reflects original intentions of grant agreement</p> <p>Simple to apply in comparisons</p>	<p>May not reflect actual BAU conditions or real counterfactuals</p>	<p>Should be used alongside other benchmarks (e.g. AEMO scorecard) to test whether anticipated impacts are plausible.</p>
<p><b>4. Comparable BESS projects (not grant-funded):</b> Use a similar-scale BESS project undergoing commissioning in the NEM as a real-world benchmark.</p>	<p>Real-world comparator with similar technology and regulatory process</p> <p>Reflects actual BAU experience without intervention</p>	<p>Limited sample size – there is only one grid forming BESS project which has reached full output and only two grid following BESS projects in commissioning that are too small in size for comparison</p>	<p>Sample size too small. If publicly available data on connection phase timings can be used as a sense check of counterfactual.</p>

## 3. Evaluation deliverables

### 3.1 Evaluation results

#### KEQ 1: Were the new staff hired and deployed in the planned way?

##### Key findings

Transgrid and AEMO hired new staff and formed dedicated teams to work on priority batteries projects.

- **Staff were hired/transferred successfully:** By September 2024, both organisations had hired or redeployed the required full-time equivalent (FTE) staff in line with the grant agreement. Transgrid deployed a team of seven, with the grant funding 3.5 new FTEs and the remaining covered through business-as-usual connection cost recovery across the four projects, and AEMO deployed 5.5 FTE across six roles.
- **Staff were mobilised early and on time:** All roles were filled within the early months of the program. Transgrid responded quickly by redeploying staff from its business-as-usual (BAU) team to support priority projects. AEMO also filled roles by September 2024, despite market constraints, through internal reassignment and strategic recruitment.
- **The program contributed new connections engineering capability to New South Wales:** Transgrid hired two new engineers, previously based outside of NSW, resulting in an overall uplift in the connections engineering workforce in the state. AEMO hired three new engineers - one based in NSW and two based in Victoria. An additional two engineering roles were filled through internal transfers which were backfilled in their base locations in New South Wales and Victoria.
- **Staff had the right capabilities to support acceleration activities:** Staff across both organisations brought relevant technical skills and experience in power systems engineering, grid connection processes, and project delivery.
- **Senior staff were more heavily deployed on acceleration activities:** Both AEMO and Transgrid deployed their most senior staff (Principal Engineers and Senior Engineers) more intensively on the priority battery projects. Junior and mid-level engineers were less utilised, reflecting the complexity of connection processes and the need for experienced technical judgement.
- **Transgrid expects to fully expend its grant; AEMO does not.** While Transgrid initially underspent during the first quarter, current projections indicate full expenditure by December 2025.<sup>6</sup> AEMO, by contrast, anticipates spending approximately \$3.8 million of its \$5.25 million allocation, reflecting lower utilisation of junior staff.<sup>7</sup> This reduced expenditure represents a net saving for NSW government

<sup>6</sup> The early underspend by Transgrid is attributed to a combination of the Richmond Valley Battery being inactive within the program and Transgrid not having recruited all resources for the connection squads when the program commenced.

<sup>7</sup> Forecast based on spending at the time of the mid-term evaluation (June 2025).

## Transgrid hires were made efficiently and effectively and mostly deployed on priority battery projects

Exhibit 5: Transgrid assessment based on KEQ 1

Sub question	Assessment
<b>1.1 Were the staff hired?</b>	<p><b>3.5 FTE hired/transferred into DCCEEW squads</b> (stretch target was up to 4 FTE)</p> <ul style="list-style-type: none"> <li>• 1 x Principal Engineer (0.5 FTE)</li> <li>• 4 x Senior Engineers (2 FTE)</li> <li>• 1 x Engineer (0.5 FTE)</li> <li>• 1 x Project Manager (0.5 FTE)</li> </ul>
<b>1.2 Were they additional to NSW</b>	<p><b>2 out of 6 engineers</b> in DCCEEW squads were based outside of NSW and were new hires (and therefore additional). The other 4 were internal transfers, 2 of which were backfilled by engineers previously based outside of NSW.</p>
<b>1.3 Were they hired on time</b>	<p>All hired / transferred into program by <b>October 2024</b>.</p>
<b>1.4 Did they have the right skills / capabilities?</b>	<p><b>All internal transfers and new hires had existing expertise</b> in connections engineering as either part of Transgrid's BAU connections team or within previous organisations.</p>
<b>1.5 Were they deployed on priority battery projects</b>	<p><b>Staff were deployed to support acceleration activities on priority battery projects</b>, with the Project Manager and Principal Engineer being the most heavily engaged reflecting the need for more senior engineering expertise to navigate complexities of projects</p>

Overall, Transgrid met the expectations of the grant agreement regarding hiring staff and deploying them on the priority battery projects. The organisation mobilised the required engineering and project management personnel early in the program and showed flexibility in resourcing to ensure continuity and expertise across the four battery projects. While some staff were transferred internally, Transgrid also brought in new talent from outside New South Wales, helping to build additional grid connection capability in the state. The team composition, skill level, and role utilisation reflect a focus on timely delivery, technical quality, and strategic oversight, consistent with the program's acceleration objectives.

Despite an initial underspend during the first quarter of the program (July–September 2024), Transgrid anticipates fully expending the allocated grant funding by December 2025. Based on current staffing utilisation levels for grid connection acceleration activities (as observed between January and March 2025), it is reasonable to expect that the remaining funds will be fully deployed within the program timeframe.

## 1.1 Were the staff hired?

As outlined in the grant guidelines, Transgrid was required to recruit up to 4 full-time equivalent (FTE) staff, comprising project management personnel and at least two engineers, to undertake acceleration activities. By September 2024, Transgrid had deployed 3.5 new full-time equivalents (FTE) to the DCCEEW acceleration squads, supporting the four priority battery projects. This staffing was distributed across seven roles: one Principal Engineer, four Senior Engineers, one Engineer, and one Project Manager.

## 1.2 Were they additional to NSW?<sup>8</sup>

The program resulted in two new engineers relocating to NSW and an overall uplift in the connections engineering workforce in the state. This included a Senior Engineer from Queensland (formerly with Power Systems Consultants) and a Mid-Level Engineer from Victoria (formerly with Node Energy Services). An additional Principal Engineer was initially hired to join the DCCEEW squads. However, following the replacement of Richmond Valley BESS with Eraring BESS in the program, Transgrid reassigned the existing internal Principal Engineer from the Eraring BESS team to the DCCEEW squad to maintain staff continuity.

The remaining four roles (equating to 2 new FTE) were filled through internal transfers from Transgrid's business-as-usual (BAU) connections team, which comprises approximately 30 staff. At the start of the program, three internal transfers were made to establish the delivery squads, and all positions were backfilled within the BAU team. This included two Queensland-based contract staff and a new hire to the BAU team later in the program.

## 1.3 Were they hired on time?

All required roles were filled within the early months of the program, with staffing in place by October 2024. As the four priority battery projects were already under assessment with Transgrid prior to the commencement of the program, Transgrid adopted a hybrid resourcing strategy to minimise disruption to both the priority projects and ongoing BAU projects. This involved transferring experienced staff from the BAU connections team to retain critical expertise and ensure continuity, with new hires allocated across both the priority and BAU teams.

## 1.4 Did they have the right skills/capabilities?

The new hires, including those that were back-fills for the BAU team, brought relevant experience in renewable generator and storage modelling and connection assessments, from external organisations. The internal transfers were also well qualified, having come from Transgrid's existing connections team with direct experience in managing complex grid connection projects.

## 1.5 Were they deployed on priority battery projects?

Based on reported hours by role, the Project Manager and Principal Engineer have contributed the greatest time to grid connection acceleration activities to date. This indicates that advanced engineering and project management capabilities have been most critical to delivery. In contrast, the Mid-level Engineer recorded fewer hours on these activities. Transgrid has noted that while Mid-level Engineers can make valuable contributions to technical assessments, senior engineering

<sup>8</sup> Staff have been classified as additional if they were an external hire previously based outside of NSW. This does not include staff that were backfilled to replace internal transfers.

input is essential to navigate complexity, support timely and informed decision-making, and ensure high-quality outcomes. These responsibilities typically require greater technical judgement and strategic oversight, generally provided by more experienced personnel. Transgrid anticipates that the Mid-Level Engineer will be more fully utilised across the four battery projects going forward.

**AEMO hires were made efficiently and effectively, and mostly deployed on priority battery projects**

*Exhibit 6: AEMO assessment based on KEQ 1*

Sub question	Assessment
<p><b>1.1 Were the staff hired?</b></p>	<p><b>5.5/5.5 FTE transferred/hired</b></p> <ul style="list-style-type: none"> <li>• 2 x Principal Engineers (2 FTE)</li> <li>• 1 x Senior Engineer (1 FTE)</li> <li>• 2 x Engineers (2 FTE)</li> <li>• 1 x Project Manager (0.5 FTE)</li> </ul>
<p><b>1.2 Were they additional to NSW</b></p>	<p><b>2 out of 5 engineers</b> in DCCEEW team were new hires based outside of NSW and were new hires (and therefore additional). A further 2 engineering roles were internal transfers, backfilled in their base locations of NSW and VIC.</p>
<p><b>1.3 Were they hired on time</b></p>	<p>All hired / transferred into program by <b>September 2024</b>.</p>
<p><b>1.4 Did they have the right skills / capabilities?</b></p>	<p><b>All internal transfers and new hires had existing expertise</b> in connections engineering either within AEMO or for previous firms (e.g. SPS and Hatch).</p>
<p><b>1.5 Were they deployed on priority battery projects</b></p>	<p><b>Staff were deployed to support acceleration activities on priority battery projects</b>, with the Project Manager and Principal Engineer being the most heavily engaged in these efforts.</p>

Overall, AEMO met the expectations of the grant agreement regarding hiring staff and deploying them on the priority battery projects. By September 2024, all roles had been filled, comprising two Principal Engineers, one Senior Engineer, two Engineers, and one Project Manager. Two staff were transferred from AEMO's business-as-usual connections team and backfilled in their base locations of New South Wales and Victoria, while the remaining four were sourced externally, including two engineers based outside New South Wales. AEMO encountered challenges hiring experienced staff in the current market and responded by reallocating internal engineers and drawing on internship programs. AEMO does not expect to fully expend the grant, with current forecasts indicating \$3.8 million of the allocated \$5.25 million will be spent.

## 1.1 Were the staff hired?

As outlined in the grant guidelines, AEMO was required to recruit up to 5.5 full-time equivalent (FTE) staff, comprising engineering and project management personnel, to support acceleration activities for priority battery projects. By September 2024, AEMO had deployed 5.5 FTE into DCCEEW acceleration squads. This included two Principal Engineers (2 FTE), one Senior Engineer (1 FTE), two Engineers (2 FTE), and one Project Manager (0.5 FTE).

## 1.2 Were they additional to NSW?<sup>9</sup>

Two of the five engineering roles contributed net-new expertise to New South Wales, having been sourced externally and from outside the state. The remaining three roles did not represent a net addition to the state but were important in maintaining delivery capacity. Two roles were internal transfers from AEMO's business-as-usual (BAU) connections team - a Principal Engineer and an Engineer. These positions were backfilled with new hires based in Melbourne and Sydney to maintain BAU capacity. The final role was an externally recruited Senior Engineer, based in Sydney and formerly with Hatch.

## 1.3 Were they hired on time?

All roles were filled and deployed by September 2024. AEMO faced difficulties in hiring experienced resources in the current market, particularly for engineering positions. To address this, AEMO implemented strategies such as assigning existing engineers to lead roles and recruiting from internship programs.

## 1.4 Did they have the right skills/capabilities?

All team members had relevant capabilities aligned with the program's technical and delivery requirements. The engineering roles brought strong experience in GPS negotiations, power system modelling (PSS/E and PSCAD), wide area network studies, and renewable inverter-based technologies. Recruits came from experienced consultancies including SPS, Hatch, and Aurecon, while internal redeployments came from AEMO's existing engineering delivery teams and were fully backfilled.

<sup>9</sup> Staff have been classified as additional if they were an external hire previously based outside of NSW. This does not include staff that were backfilled to replace internal transfers.

## 1.5 Were they deployed on priority battery projects?

While most resources were deployed on grid connection activities, junior engineering staff were less utilised as the acceleration activities required more senior-level expertise and engineering judgement. This suggests that Principal and Senior Engineers, along with the Project Manager, played a more critical role in advancing the grid connection process for the priority battery projects.

### KEQ 2: Did the new staff lead to streamlining of processes and more engaged proponents?

#### Key findings

- **Stronger, more consistent project management improved delivery confidence:** The grant program introduced a more coordinated and structured approach to connections management, with dedicated engineering and project management staff improving continuity, accountability, and responsiveness across AEMO, Transgrid and proponents.
- **Dedicated resourcing enabled earlier support and issue resolution:** Under the grant, proponents received more timely and expert technical support, which helped resolve issues proactively and reduce delays, marking a shift from reactive business-as-usual practices.
- **Governance changes allowed for faster decision-making and clearer prioritisation:** The program enabled AEMO and Transgrid to focus on the four priority battery projects, improving efficiency by directing resources to projects with a higher likelihood of progressing.
- **Proponents experienced more collaborative and solutions-focused engagement:** Dedicated project managers and consistent technical staff contributed to improved coordination, streamlined negotiations, and a stronger sense of shared ownership across all parties.
- **Continuity of personnel reduced rework and enabled smoother progress:** Proponents noted that consistent staffing meant they did not have to re-explain issues, helping to maintain momentum and build mutual understanding over time.
- **Value of the program recognised by proponents:** Several proponents indicated they would be willing to pay for a similar service in the future, citing the value it delivered in reducing risk and uncertainty in the grid connection process.

## 2.1 Was there streamlined and dedicated project management from AEMO / Transgrid?

The grant program introduced a more coordinated approach to managing the connections process for the four priority battery projects, with improvements observed across three areas: people, process, and governance. The assignment of dedicated engineering and project management staff improved continuity and accountability, enabling more consistent engagement with project proponents. Process improvements, including the introduction of shared project schedules and earlier technical support, helped to streamline coordination and resolve issues earlier. At a governance level, the program allowed for greater flexibility in how projects were prioritised and managed, supporting faster decision-making and clearer focus on project delivery.

### People

#### Resourcing:

- *Business-as-usual:* AEMO and Transgrid staff were typically managing between 80 and 120 projects concurrently, limiting their ability to maintain consistent personnel across individual connection projects.
- *Under the grant:* Dedicated engineering and project management resources were assigned to the four priority battery projects, improving staffing continuity and strengthening accountability for delivery. Proponents reported greater consistency in personnel, reducing the need to revisit issues with new team members.

#### Project Management:

- *Business-as-usual:* There was no single, detailed project schedule shared between AEMO, Transgrid, and project proponents, making coordination more difficult.<sup>10</sup>
- *Under the grant:* AEMO, Transgrid, and proponents jointly developed holistic project schedules for each project. This supported greater transparency, accountability, and coordination. Dedicated project managers were also appointed to oversee delivery, which proponents identified as reducing the risk of delays through more effective follow-ups.

#### Process:

#### Issue Resolution and Support

- *Business-as-usual:* Issue resolution was often reactive, with limited capacity to provide extensive technical support for projects early in the process.
- *Under the grant:* With additional staff in place, AEMO and Transgrid provided earlier technical support, helping to identify and resolve issues before they became bottlenecks. Proponents reported a more collaborative approach to problem-solving, supported by regular technical workshops and engagement meetings.

<sup>10</sup> High level project schedules exist for BAU projects, however, they are not consistently maintained or effectively tracked through a unified approach between AEMO, Transgrid and proponents.

## Governance:

### Prioritisation of projects

- *Business-as-usual:* The National Electricity Rules (NER) can be understood to suggest that AEMO and Transgrid treat all connection applications equitably, which may limit their ability to prioritise projects with a higher likelihood of success.<sup>11</sup>
- *Under the grant:* AEMO and Transgrid were able to prioritise the four battery projects, focusing dedicated resources on projects more likely to proceed. This improved efficiency and delivery confidence.

### Review timeframes

- *Business-as-usual:* Transgrid and AEMO adhere to review timeframes set out by the NER which vary based on connections phase. For example, Transgrid is required to respond to submissions within 30 business days during the connection application phase.
- *Under the grant:* AEMO, Transgrid, and proponents agreed to project-specific schedules instead of default NER timeframes. One proponent reported that key commissioning-stage reviews were completed one to two weeks faster than expected, indicating greater responsiveness. Transgrid also noted increased accountability and responsiveness from customers in meeting agreed schedules, as timely submissions and re-submissions were a prerequisite for participation in the program.

## 2.2 Were there empowered and engaged proponents and OEMs?

Proponents were actively engaged throughout the program and reported improvements in ways of working compared to the standard connection process. The allocation of dedicated project managers and technical personnel from AEMO and Transgrid was seen as a key enabler of more consistent engagement, better coordination, and reduced risk of delays. Proponents noted that, even where additional reviews were required, there was a clear sense of commitment from both organisations to support project progress.

Proponents reported that technical workshops and regular engagement forums provided opportunities for collaborative problem-solving and helped foster a shared commitment to achieving project milestones. The continuity of technical staff, particularly following entry into the grant program, was seen as a significant improvement. Proponents highlighted that this continuity reduced the need to revisit previously resolved issues and supported more streamlined negotiations.

There was also evidence of increased ownership and flexibility from AEMO and Transgrid staff. One proponent described the benefit of having dedicated personnel who helped navigate internal structures and facilitate cross-team coordination, acting informally as case managers. Others noted that the willingness to consider conditional model use reflected a more pragmatic and solutions-focused approach.

<sup>11</sup> The treatment of all proponents equitably can be interpreted from numerous clauses in the [National Electricity Rules](#) including: NER Clause 5.1A.2 states that "all Registered Participants should have the opportunity to form a connection to a network and have access to the network services provided by the networks forming part of the national grid". Additionally, Clause 5.3.7. states that on the negotiation of connection agreements must be in "good faith with which all parties with which the Connection Applicant must negotiate such a connection agreement and (if applicable) network operating agreement."

Overall, proponents viewed the program as delivering strong value in reducing the risk and uncertainty associated with the grid connection process. Several indicated that, if offered as a fee-for-service model, they would be willing to pay for similar support in the future.

### KEQ 3: Did the new staff lead to the achievement of shorter application, registration, and commissioning times?

#### Key findings

- **Dedicated staffing and continuity of personnel were key enablers of faster delivery:** Additional engineering and project management resources supported stronger continuity across project phases and reduced rework. Proponents consistently cited this as critical to progress. However, sustaining this model post-grant would require new funding or cost recovery mechanisms.
- **Joint project schedules improved transparency and accountability:** The development of holistic project schedules across AEMO, Transgrid, and proponents was identified as one of the most impactful changes. AEMO is already exploring how to embed this practice in BAU, while Transgrid noted it may require additional resourcing.
- **Early technical engagement reduced risk and helped avoid delays:** Proactive resolution of technical issues through early engagement and workshops was viewed as medium to high impact. This process helped de-risk connections but would require dedicated resources to continue.
- **Prioritisation and faster turnaround of documents drove efficiency:** The ability to focus on high-readiness projects and to turn around documentation faster than standard NER timeframes contributed to improved performance. However, both actions would require NER reforms to be embedded as standard practice.
- **Without further funding or regulatory reform, continuation of most actions is unlikely:** While several high-impact practices were identified, their long-term sustainability depends on dedicated funding (for staffing and process support) or formal changes to regulatory frameworks such as the NER.

### 3.1 Was the Connections process (application, registration, and commissioning) shortened?

The grant program contributed to measurable time savings across key stages of the connections process for priority battery projects. Evidence from proponent interviews and AEMO reporting indicates that the deployment of additional engineering and project management staff led to faster responses, improved engagement, and more flexible issue resolution, particularly during the application and registration phases.

On average, approximately three months of time savings were achieved across the four priority battery projects, with most savings occurring earlier on in the process within the Application and Registration phases. While this is lower than the approximately 9.5-month estimate in the grant agreement, the counterfactual is likely to underestimate the true delays typically faced by complex grid connection projects. This is because the counterfactual uses the FY24 Connections Scorecard

developed by AEMO, which predominantly features projects that are smaller and less technically complex than the four priority batteries projects. Additionally, even when time savings have been identified, they have at times been offset by delays outside the control of the program, for example construction delays. As such, even modest reductions in timeline are meaningful and reflect a strong early outcome from the grant.

*Exhibit 7: Assessment of the achievement of shorter application, registration, and commissioning time*

Batteries	Phase	Did AEMO/Transgrid act faster?	Did this result in a faster stage overall?
<b>Waratah</b>	Registration	<b>Yes:</b> Akaysha noted quicker negotiation of harmonic orders.	<b>Yes:</b> ~1 month time saving
	Commissioning	<b>Yes:</b> Akaysha noted expedited review times of hold point tests reports, staging test reports, and technical notes for PPC updates done 1-2 weeks faster.	Too early to say
<b>Liddell</b>	Application	<b>Yes:</b> AGL noted Transgrid and AEMO's flexibility in accepting their conditional model.	<b>Yes:</b> 5-6 months saving
	Registration	Too early to confirm	Too early to say
<b>Orana</b>	Application	<b>Yes:</b> Akaysha noted responsiveness and faster resolution of technical issues.	<b>Yes:</b> 3.5 months saving
	Registration	<b>Yes:</b> Akaysha noted registration workstreams started ahead of time.	Too early to say
<b>Eraring</b>	Registration	<b>Yes:</b> Origin noted increased engagement and accountability from Transgrid.	<b>Yes:</b> 1.1 months saving
	Commissioning	Too early to confirm, however Origin have noted increased flexibility in testing.	Too early to say

### 3.2 Is this a replicable strategy for new projects, and are lessons learned being absorbed into BAU connection processes?

Several grant-enabled actions were identified as critical in driving time savings across the four priority battery projects. These actions spanned across three key areas - people, process, and governance, and were consistently recognised by stakeholders as having a meaningful impact on accelerating connection timelines.

## People

In terms of people, the additional staff enabled by the grant enabled AEMO and Transgrid to ensure a continuity of staffing on priority battery projects, particularly by ensuring the same technical staff remained involved throughout. Proponents noted that this continuity reduced the need to revisit previously resolved technical issues, which helped avoid rework and duplication.

The grant also supported the allocation of dedicated project managers across AEMO and Transgrid who coordinated efforts for the priority battery projects. Proponents noted that the allocation of a dedicated project manager from both AEMO and Transgrid enhanced coordination and follow-up, reducing the risk of internal delays.

For Transgrid and AEMO to provide this level of resourcing to projects post-grant would require additional funding. Sources of this additional funding would require further investigation. It should be noted that Transgrid's subsidiary business, Lumea, offers additional project management and commercial support services to connection applicants after the initial connection enquiry phase. Transgrid has noted that over the past couple of years, most projects have engaged with Lumea, with only a few exceptions.

## Process:

Under the process category, the development of a joint project schedule at the beginning of the grant program, requiring AEMO, Transgrid, and project proponents to work towards a common timeline for each priority battery project, was noted as one of the most effective process changes. Most stakeholders highlighted this project schedule as an effective means to hold all parties accountable and create a level of transparency. AEMO has noted this is something they are already looking to embed in their BAU connections work and would not require additional funding, whilst Transgrid has noted this may require additional resourcing to embed in BAU.

Another process-related action was the early engagement with proponents on technical issues and proactive resolution through mechanisms such as technical workshops. This early engagement approach helped to de-risk projects and prevent delays and was noted as medium to high impact. While Transgrid currently facilitates pre-application and pre-registration engagement, doing so requires additional resourcing, resulting in increased project costs. Its ongoing implementation would require funding.

## Governance:

In terms of governance, two key actions were most impactful. First, the grant enabled AEMO and Transgrid to prioritise projects based on their readiness and likelihood to progress. While this is generally clear to AEMO and Transgrid connections teams based on indicators such as development approval status, contracts with OEMs and EPCs, the National Electricity Rules (NER) can be understood to suggest that all applicants be treated equally. In BAU, many projects will stall during or following the application phase, or there will be significant gaps in time in responses from proponents, making it challenging to efficiently resource. The grant helped focus efforts on projects with higher likelihoods of timely delivery. To continue this level of prioritisation for key projects beyond the grant may require changes to the NER to enable Transgrid and AEMO to prioritise projects, however, further investigation would be required.

Second, the grant enabled a faster turnaround of connection documentation revisions, with engineers able to process revisions faster than the standard timeframes under the NER. This was attributed to additional staffing and was also rated medium to high impact. As with project prioritisation, this action could be sustained in the long term if funding support and changes to the NER were investigated.

Overall, the evidence suggests that while the grant has been effective in accelerating connection processes, most of the identified actions would be unlikely to continue without either dedicated funding or changes to the NER.

*Exhibit 8: Sustainability of actions enabled by the grant*

Area	Actions enabled by the grant	Likely impact	Could it be sustained post-grant?	Timeframe
<b>People</b>	Improved continuity of staffing across project phases	<b>High</b>	Possibly, if funded	Medium – long term
	Dedicated project managers coordinating across agencies for priority batteries	High	Possibly, if funded	Medium – long term
<b>Process</b>	Holistic project schedule across AEMO, Transgrid, and proponents	High	Possibly, if funded <sup>12</sup>	Short term
	Proactive technical engagement and early issue resolution (e.g., technical workshops)	Medium – high	Possibly, if funded	Medium – long term
<b>Governance</b>	Prioritisation of battery projects likely to reach milestones	High	Possibly, with NER reform and funding	Long term
	Faster turnaround of revisions (e.g., faster than the 30-day NER standard)	Medium – high	Possibly, with NER reform and funding	Long term

<sup>12</sup> Transgrid have noted this more detailed holistic project schedule will require additional project management support to develop, maintain and track all current projects.

### 3.3 Is the design of the grant appropriate for the issue?

Overall, the grant was appropriate for the issue. In the short term, improvements in the timing of connections are most likely to be achieved through the provision of additional resources and appropriate engineering expertise. The grant has enabled Transgrid and AEMO to hire additional connection engineers, increasing the net-new connection engineers in NSW, which has resulted in faster completion of connection phases for each priority battery project. In the medium term, improvements in the timing of connections will need to consider reforms to incentive structures, including potential changes to the NER or funding agreement design to incentivise faster connections. The grant enabled Transgrid and AEMO to operate above and beyond their NER requirements by dedicating time and expertise to connection projects based on their readiness and likelihood to progress to commissioning.

### 3.2 Key lessons and considerations for the Department

The evaluation finds that the grant program was well targeted to address key risks and constraints in the grid connection process. By enabling the recruitment of additional skilled personnel and establishing dedicated project teams, the program strengthened the capacity of AEMO and Transgrid to more effectively manage complex technical challenges. These changes improved continuity of staffing, reduced coordination delays, and enabled faster resolution of issues, particularly during the application and registration phases. The coordinated delivery model and ability to prioritise high-readiness projects also helped to de-risk the overall connections process, providing all parties with greater confidence in meeting project milestones. While some technical complexities remain beyond the program's scope, the model has demonstrated strong early results, efficient use of funding and potentially substantial benefits based on time savings.

Given these outcomes, there is a strong case for the Department to consider a broader rollout of this approach to support the timely delivery of future priority projects. Doing so would build on the momentum of the initial four projects and enable broader benefits to NSW connections.

Key lessons and considerations for the department have been identified:

#### **1. Funding Deployed (Grant Activities Undertaken)**

The evaluation found that the grant funding was generally deployed as intended, with new staff hired and embedded in both AEMO and Transgrid to support acceleration activities. Several lessons emerged regarding how best to deploy such resourcing:

- **Connections engineering talent can be developed through targeted programs.** There are new engineering resources available, but many have limited experience in connections. This program provided a pathway for training and development, and despite challenges in hiring senior engineers, AEMO and Transgrid were able to recruit new talent to the DCCEEW teams.
- **Senior engineers were observed to deliver greater value,** given their depth of technical expertise and ability to exercise sound engineering judgment in complex settings.
- **A targeted and focused resourcing approach can deliver substantial outcomes.** Large teams or significant investments were not required to achieve outcomes, provided the right skillsets were in place.

- **Notably, some underspend was observed in the program**, suggesting that there may be opportunities to redirect unused funding to support other priority projects, or investigate other options.

## **2. Outputs Achieved**

The grant led to streamlined processes and improved engagement with proponents, with key improvements occurring across three main mechanisms:

- **People:** Dedicated staffing enabled quicker resolution of issues and more efficient review of modelling.
- **Process:** Development of shared project schedules ensured better alignment across stakeholders.
- **Governance:** The prioritisation of high-impact projects and faster review times enabled greater progress toward milestones.

These changes were most impactful in the early stages of the connections process, particularly during the application and registration phases, where the risk of delays outside of AEMO and Transgrid's control is less likely to occur. It is important to note that while additional staff improved overall process efficiency, they did not fully address the underlying complexity of the technical studies involved, or the issues that a project may face during construction of on-site testing. These studies require significant expertise and engineering judgement, however, could be subject to further investigation.

## **3. Outcomes Achieved / Design Appropriateness**

The program ultimately demonstrated strong results and value for money with a potentially high benefit-cost ratio, particularly for large-scale projects where saving even a single month can result in capex interest savings in the order of millions of dollars.

Given these results, there is a strong case for considering a broader rollout of this approach beyond the initial four projects. To support a successful rollout, the evaluation recommends a two-pronged strategy:

- **In the short term**, identify accessible funding sources to support new staffing appointments.
- **In the medium term**, consider reforms to incentive structures - including changes to the NER or funding agreement design to incentivise faster connections.

# 4. Appendix

## 4.1 Assessment of evaluation methods and evidence

### Limitations of evaluation methods and evidence:

- **Counterfactual limitations:** The evaluation uses AEMO's FY24 Connections Scorecard as the primary benchmark for estimating business-as-usual durations. While this provides a consistent and transparent reference point, the Scorecard reflects median timelines across a wide range of project types. It is therefore likely to underestimate the expected durations for large and technically complex battery projects, such as those included in this program.
- **Projects have not completed commissioning:** At the time of this evaluation, none of the four priority battery projects had completed the commissioning phase. As such, the assessment does not draw conclusions on the program's impact on overall time to connect.
- **Qualitative insights:** Several findings are based on interviews and stakeholder feedback. While these provide important insights into how the program was experienced on the ground, they are based on perception and may not fully capture the experiences of all parties.
- **Attribution challenges:** The evaluation cannot fully isolate the impact of the grant program from other contributing factors, such as the project's internal resourcing, external consultancy support, or changes in project timing and scope unrelated to the grant.
- **Potential trade-offs with other NSW connections:** The evaluation does not provide an assessment of whether the redeployment of staff to priority battery projects had any negative impacts on other connections work in NSW. While both AEMO and Transgrid reported that backfilling occurred to maintain broader delivery capacity and Transgrid deployed a hybrid resourcing strategy to ensure BAU project delivery was not impacted, the evaluation did not investigate potential trade-offs or delays to non-priority projects that may have arisen as a result of resource reallocation.