TransGrid Services – New England Connection Capacity Auction - Knowledge Sharing Report – 1

EOI Phase – 08 September 2020

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Abbreviations

1.	AEMO	Australian Energy Market Operator
2.	AEMC	Australian Energy Market Commission
3.	ARENA	Australian Renewable Energy Agency
4.	BESS	Battery Energy Storage Systems
5.	CAA	Capacity Allocation Advisor
6.	COGATI	Coordination of Generation and Transmission Investment
7.	DCA	Dedicated Connection Asset
8.	DPIE	Department of Planning, Infrastructure & Energy
9.	EOI	Expression of Interest
10.	ESB	Energy Security Board
11.	KSR	Knowledge Sharing Report
12.	KWM	King & Wood Mallesons
13.	MHC	Marchment Hill Consulting
14.	MUFG	MUFG Bank Ltd
15.	NECCA	New England Connection Capacity Auction
16.	NEM	National Electricity Market
17.	NEMDE	National Electricity Market Dispatch Engine
18.	NETI	New England Transmission Infrastructure
19.	NSW	New South Wales
20.	OCM	O'Connor Marsden & Associates
21.	PIAC	Public Interest Advocacy Centre
22.	RE	Renewable Energy
23.	REZs	Renewable Energy Zones
24.	RFC	Request for Capacity
25.	RIT-T	Regulatory Investment Test for Transmission
26.	TGS	TransGrid Services
27.	T/L	Transmission Line
28.	TNSP	Transmission Network Service Provider

1. Introduction

This is the first Knowledge Sharing Report for the New England Connection Capacity Auction (**NECCA**) (**KSR Report**) and comes at an early stage in the wider NECCA process. It addresses the knowledge and information gained during the Expression of Interest (**EOI**) phase.

Despite the interruptions created by the COVID-19 pandemic, the EOI process has now been successfully completed and the responses received are currently being assessed by the Capacity Allocation Advisor, MUFG (CAA) and the TransGrid Services Evaluation Team. The outcomes of that evaluation process will be advised to the respondents of the EOI process shortly.

This KSR Report must be considered in the context of two critical factors:

- The evaluation of EOI responses and decisions on short-listing are ongoing at the time of writing. Despite this early stage status of the NECCA, it is clear that significant and strong market interest exists for the concept being tested by the NECCA's auction process;

- TransGrid Services is subject to confidentiality obligations to all respondents to the EOI (**Participants**), which restrains the depth and detail of the information which can be shared at this stage through this KSR Report. Further information will be available after the Request for Capacity (**RFC**) stage.

1.1 Background

The response to the EOI supports a number of systemic observations that can be made about the current state of the energy market:

- The Australian electricity market is transitioning from one substantially supported by thermal generation to one which will, in future, be substantially supported by renewable energy sources. The 2020 Integrated System Plan forecasts that approximately 26 GW of new utility scale renewable generation is required by 2040 for the optimal development of the power system and this need for renewable generation is driven by customer demands, the lower comparative cost of renewable energy and supportive government policies. This demand for renewable uptake is currently unsupported by the insufficient transmission network capacity in the right locations.

  As an illustration of this demand for transmission capacity to facilitate renewable development, there are significant existing proponent enquiries for transmission connection in NSW and specifically in the area surrounding the proposed NETI infrastructure.

- Various jurisdictions, renewable energy proponents and relevant national institutions like AEMO, are seeking to explore ways to develop Renewable Energy Zones (**REZs**) because they are seen as the large scale options to enable the transition of the electricity market and mitigate the risks of unorderly renewables development. However, while the need for REZs is clear, it is currently hampered by the current regulatory framework which is based on connection to existing regulated transmission infrastructure and provide minimal scope to coordinate generation and transmission investment so that there is economically efficient access for generators (ie generators now generally connect on an individual basis and funds their connection and system security assets in a piecemeal fashion).

- The regulatory development challenge of REZs is that they are cumbersome to develop as a regulated asset because of its potential cost and size and the extensive time and processes associated with proceeding REZ projects through the Regulatory Investment Test for Transmission (**RIT-T**). In this way, REZs are slow to develop through the conventional regulatory processes because current frameworks do not adequately anticipate the scale and speed of the energy transformation at hand.

  Accordingly, there are various reform proposals designed to facilitate the development of REZs, including the COGATI and PIAC reforms, the REZ Rule Change initiated by the ESB and the AEMC led DCA Rule Change projects. In the case of COGATI, that will take years to complete in design and implementation, and its outcomes are far from certain. In the case of PIAC, this proposal is of interest but has no formal standing in the reform process, requires changes to the law, and would take 'at least 5 years to enact in the view of its developers. The various Rule Change projects are a step in the right direction to provide a regulatory mechanism within the current regulatory construct

to fast track the development of a REZ. The ISP and its associated mechanisms to execute key early developments for REZs will also assist in addressing regulatory constraints in due course.

1.2 Project Overview

To address these issues outlined above, TransGrid Services proposes to develop enabling transmission infrastructure on an existing easement, as indicated in the **Figure 1** below. This transmission infrastructure, which will be known as the New England Transmission Infrastructure (NETI), will be undertaken through the NECCA process with $995,000 in grant funding from ARENA.

The NETI involves the upgrade of an existing 66 kV easement to a 330 kV line and provide firm access rights under a new transmission investment model – creating the upgraded line as the backbone for a new energy zone which will host ~1400 MW of connected capacity. Note that this capacity can be developed in two broadly equal tranches of 700 MW without increasing overall project capital costs, if that better reflects market interest.

Access will be provided into a substation – Entry Bay Access. Step up and other connection assets would not be part of this enabling transmission infrastructure.

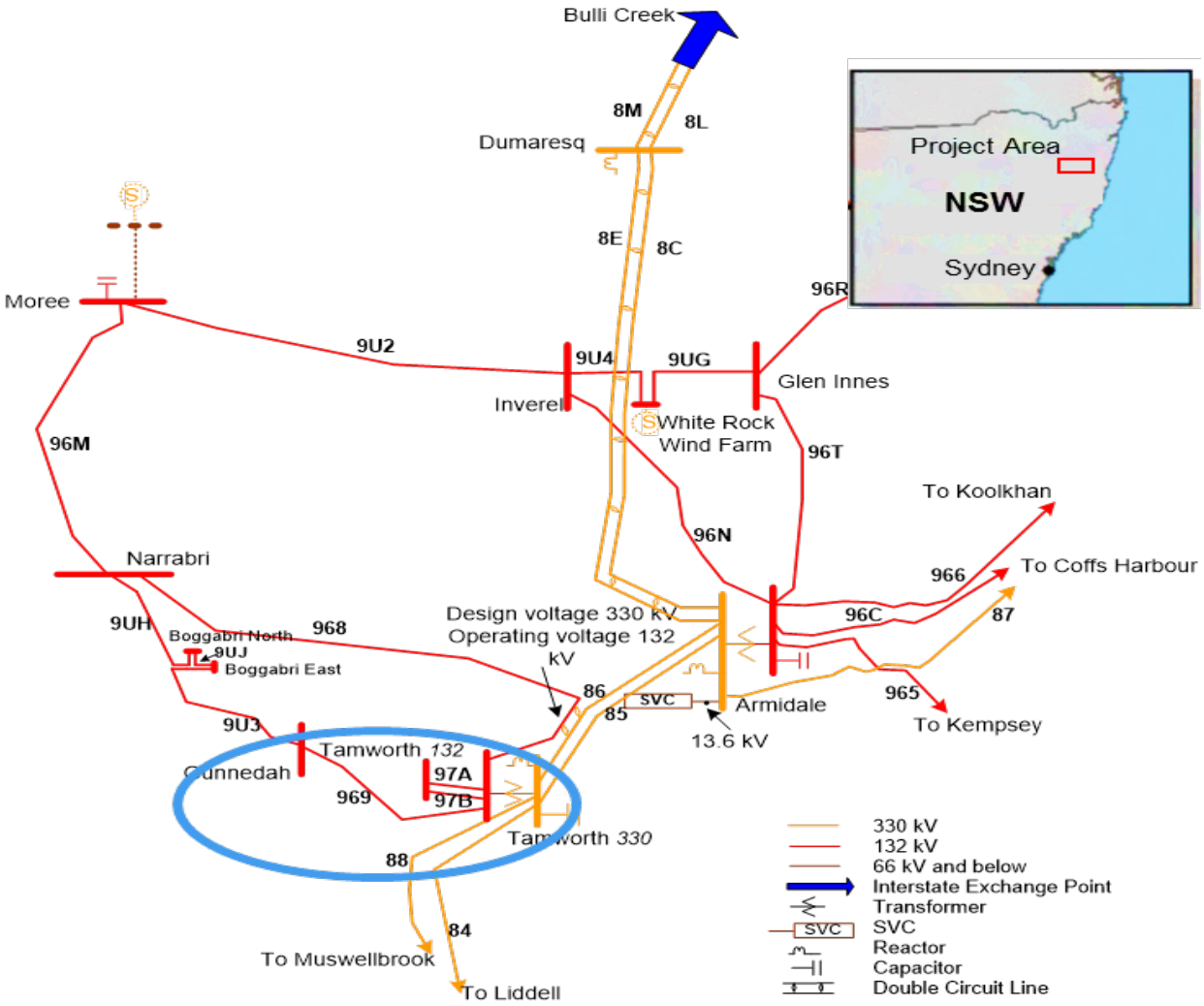

Figure 1 - New England Transmission Infrastructure (NETI)

The location of the NEZ is shown in the following Project Overview Map- **Figure 2.**

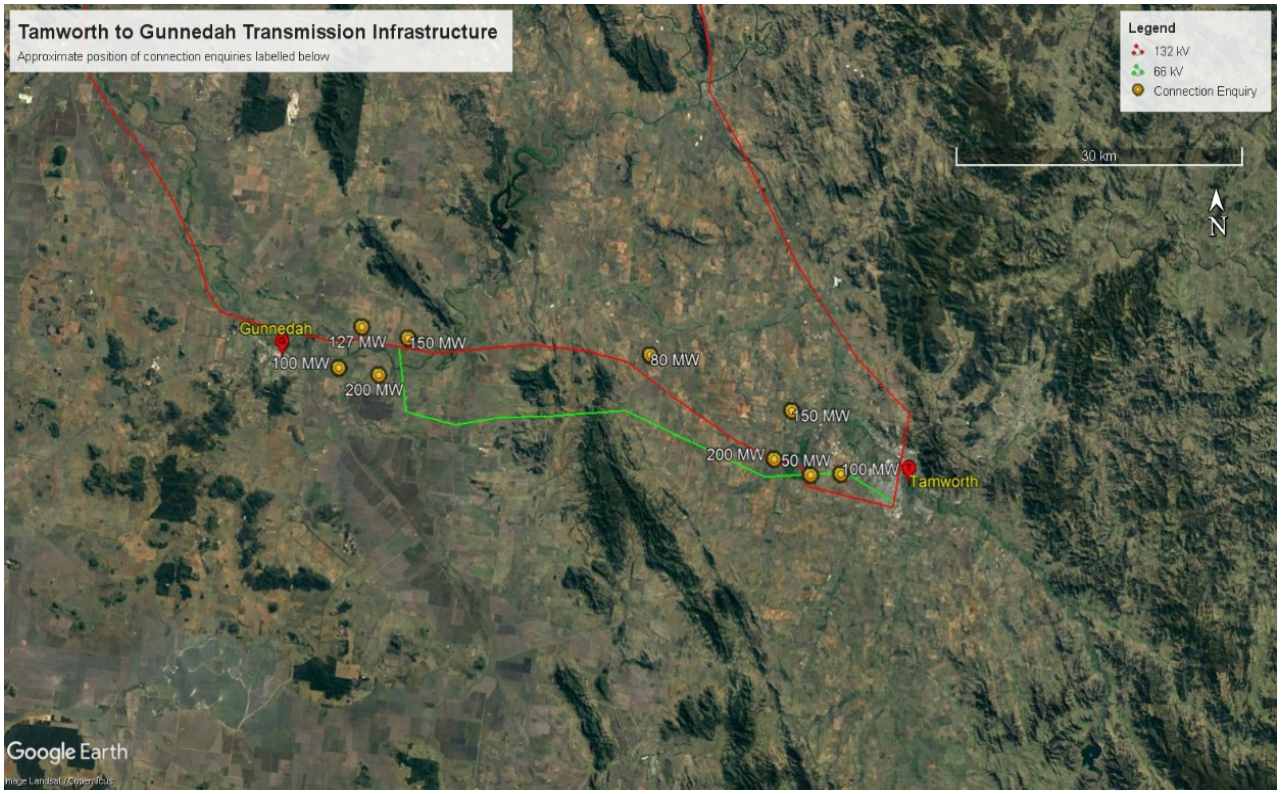

Figure 2 – Project Overview Map.

TransGrid Services proposed this innovative commercial approach as a way to resolve the challenge of securing concurrent investment decisions in transmission infrastructure and new generation capacity, both at scale.

In essence, it is a commercial model for addressing issues which are under review as part of ongoing regulatory reforms. It has the clear potential to move more quickly than those processes.

1.3 Project Objectives

TransGrid Services identified an opportunity to demonstrate a market based mechanism for the development of a REZ through NECCA. The critical elements underpinning this initiative are:

- The existence of a transmission easement effectively suitable for expansion of transmission capacity at scale, allowing up to 1400 MW of additional renewable energy generation to connect to the NEM
- An initial ~700 MW of connection capacity can be developed without limiting the longer-term full potential capacity (i.e. ~1400 MW), and without increasing overall costs
- Significant existing inquiries (in excess of 3000 MW) from renewable energy developers in the area, despite the currently limited transmission infrastructure.

This project will seek to develop and deploy a commercial model for the development of transmission infrastructure in the NEM, providing learnings and a precedent for other renewable energy zones. This will be achieved by developing, testing and verifying, through a binding market based process, an innovative commercial and contract model for the development of renewable energy zone enabling infrastructure.

The core activity will centre on qualifying, under an auction process, renewable energy proponents to financially support the development of significant additional market based (non-regulated) transmission capacity on an existing unused transmission easement (Tamworth – Gunnedah, NSW).

The NECCA process is designed to assess any clear stumbling blocks to this model and advise how those might be overcome in other renewable energy zones, and seek to develop solutions for an outcome where there is partial but not sufficient financial support to secure a clear investment decision by both the transmission and renewable energy investors. The learnings will be of direct relevance to the application of the model in other renewable energy zones.

In return for payments and operating commitments, proponents will have guaranteed access to the NETI for up to 1400 MW of new renewable generation. The allocation of these rights will be undertaken through the EOI process followed by a subsequent market based RFC that ultimately offers transmission capacity on defined terms with an independent assessment process to recommend proponents and renewable projects.

The key deliverables from the EOI and subsequent RFC phases will be executed contracts between a range of proponents and TransGrid Services, which provides confidence to all parties and stakeholders to commit investment. Securing these commitments will only be possible where there are high levels of confidence across a range of considerations including:

- Network planning, estimates & modelling
- Permitting, environmental & other approvals
- Community engagement
- Financial planning
- Regulatory Analysis
- Under-writing development
- Market engagement design, and
- Legal and contracts.

A successful outcome will inform the development of a national framework for renewable energy zones and facilitate the delivery of renewable energy projects in the New England area.

1.4 EOI Objectives

The specific objectives of the EOI stage of the process were to:

- Test whether renewable energy developers would participate in this novel commercial project for the development of associated transmission infrastructure capacity, albeit on an unpriced basis at the EOI stage;

- Identify key elements of the design of the RFC stage, including further framing of the core regulatory and contract considerations.

1.5 ARENA's support has been critical

TransGrid Services wishes to acknowledge and thank ARENA for its support of this innovative process and model for addressing the material challenges of large-scale renewable energy development in the NEM.

TransGrid Services looks forward to the continuing involvement of ARENA in this project, and to sharing the more comprehensive lessons learned from latter stages in the process.

2. Current Stage Review

2.1 Overview - The NECCA process recognises 3 core phases of activity

At the highest level, the NECCA involves three core phases of work, being:

- EOI - the subject of this KSR;
- A parallel technical development work stream, with increasing levels of granularity and detail available as the specific technical design for the enabling transmission infrastructure is developed to reflect the needs of the participating new connecting generation capacity, and
- RFC – which follows the successful completion of the EOI.

This KSR reflects the current status of the NECCA – that is, EOIs have been received, are being evaluated and a recommendation will be made shortly on parties to be invited into the RFC Stage.

2.2 Key elements of the EOI Phase design

Each of the following key elements of the EOI phase design are addressed in this report:

- Development of EOI documentation
- Approach to the evaluation of EOI responses
- Probity - Establishing protocols which deliver confidence
- Advertisement of EOI
- Dynamic Question & Answer process, and
- Industry briefing.

2.2.1 Development of EOI documentation

The CAA, on behalf of TransGrid Services, led the development of the EOI. This document was deliberately positioned at a high level and provided an overview of the:

- NETI infrastructure, and the location of the asset
- Opportunity under consideration covering the commercial offer, obligations of all parties, and regulatory treatment (pricing and allocation, access, and connection)
- Role of the New South Wales government as a key stakeholder
- EOI process including the Question & Answer process, industry briefing and timeline, and
- Requirements of an effective EOI response, including the evaluation criteria.

In addition, the CAA prepared and placed an advertisement to launch the EOI process.

2.2.2 Approach to the Evaluation of EOI Responses

Prior to the commencement of the EOI stage, an approach to the evaluation of all responses was developed and documented in an approved Evaluation Plan.
The approach to evaluation recognised:

- A set of Evaluation Criteria (see below) that were communicated to all potential Participants as part of the EOI process and did not change during the process;
- The role of the CAA in:
    - managing the full EOI process for TransGrid Services, including all interactions with Participants
    - evaluating all EOIs in conjunction with TransGrid Services, and recommending a short-list for the RFC stage

- The role of the broader project team (i.e. TransGrid Services and its specialist advisors) in reviewing, providing input and endorsing the evaluation report from the CAA, and
- The formation of an Evaluation Team within TransGrid Services to receive the final Evaluation Report from the CAA, and in turn form its own view on the Participants recommended for inclusion in the RFC stage.

Evaluation criteria

Through a series of discussions, the CAA developed the following EOI evaluation criteria, including their relative weighting.

No.	Criteria	Weighting	Description
1	Project Description		1. Technology type (wind, solar, etc.); 2. Project size (installed MW capacity); 3. Project status; 4. Expected key milestones (Development Approval, Financial Close and Commercial Operations Date); 5. Contracting strategy for both D&C and O&M including track record in Australia; 6. Experience in negotiating PPAs with off takers; 7. Financing strategy (debt, equity, other capital sources).
2	Proponent Description	Equal greatest weighting	1. Detailed description of Proponent, including business model and organisational chart; 2. Detailed description of funding sources (internal & external), and internal decision making process for project development (investment criteria and approval processes); 3. Description of local and international presence (in particular, Australian office location and number of staff); description of internal resources for project development (e.g. in-house engineering team, and use of external advisors for project development); 4. Experience in the development, construction, commissioning, and operation of renewable energy projects in Australia, and/or internationally; 5. Historical track record, specifying project name, location, size, technology type, EPC contractor used (as applicable), and date of COD; 6. List of renewable energy projects owned and operated by the Proponent.
3	Financial Capacity	Equal greatest weighting	1. Balance Sheet of Proponent over the last three financial years (and parent / other group entity to the extent internally funded); 2. Funding commitments to finance equity requirement of proposed Project.
4	Local Participation		1. Previous experience in local industry participation; 2. Plan for local industry participation on proposed Project a. Procuring labour and materials from local suppliers; b. Engaging and partnering with local businesses; c. Engaging Aboriginal and Torres Strait Islander businesses; or providing opportunity for businesses owned by other minority or disadvantaged groups (such as indigenous people, ethnic minorities, disabled people, military veterans etc.) to participate in the supply chain. 3. Plan for partnering with industry and local government bodies; 4. Plan for partnering with local schools / tertiary organisations.

2.2.3 Probity - Establishing protocols which deliver confidence

From the outset of this process, TransGrid Services has been critically concerned to ensure that all Participants could proceed on the basis that they would be treated equally, objectively and on a fair and reasonable basis.
More broadly, TransGrid strives for excellence and this includes adhering to stated principles, standards and values which demonstrate a commitment to maintaining high ethical standards and meeting the expectations of the community and the people they work with. When considering expenditure of monies, TransGrid:

- are open, transparent and accountable in their dealings;
- ensure that their dealings promote fairness and competition;
- obtain best value.

The appointment of a specialist Probity Advisor (OCM) and the development of a clear Probity Risk Framework and Plan have underpinned these undertakings. This established a Governance Structure (covering roles and responsibilities), Probity Principles and Probity Protocols, and provided a Probity Risk Assessment. Risk Mitigation strategies were developed for all key risks.

2.2.4 Advertisement of EOI (17 June 2020)

The EOI was publicly advertised in the Australian Financial Review on 17 June 2020. Further activities led to the NECCA being positively referenced in RenewEconomy and the Clean Energy Council's media activities. Initial actions by the CAA such as producing a list of known RE developers and contacting them to ensure that they were aware of the EOI was also important in securing the level of market interest observed.

The ARENA press release and associated media coverage during the course of the EOI period led to further activity and interest from the market of Participants. Below are the links for advertisement of EOI:

https://www.afr.com/companies/energy/transgrid-offers-link-into-renewables-zone-20200717-p55cx8

https://reneweconomy.com.au/transgrid-fast-tracks-first-stage-of-huge-new-england-renewable-zone-42760/

2.2.5 Dynamic Question & Answer process

From the commencement of the EOI, potential Participants were encouraged to pose questions about any aspect of the process, NETI infrastructure or supporting arrangements including any concerns or risks. This opportunity was open until 1 week before the EOI closed.

The CAA, with the support of TransGrid Services and its other advisors, responded to these questions (including any concerns or risks) through a 'questions and answers log' which was updated and provided to all registered potential Participants on a weekly basis.

Key areas of questioning by registered potential Participants

Potential Participants in the process showed strong willingness to engage through asking questions. In total, 85 questions from potential Participants were received.

Many of the questions were overlapping in their coverage, for example embracing technical and commercial considerations. However, an analysis of these questions shows that the majority of them fell into 4 primary categories as follows:

1. Technical:

- Single or double circuit?
- 700 or 1400 MW?
- Substation design and location?
- Detailed line design?
- Contestable works items and connection assets?
- Transformer specifications?
- Linkages to Essential Energy infrastructure?
- Synchronous condensers?
- Detailed route and relationship to existing shared infrastructure?
- Provision of land for project development?

2. Regulatory and Market, tied to NETI interactions with the shared network:

- Participant exposure to congestion and system strength issues?
- Exposure to dispatch by AEMO under NEMDE?
- Will the NETI design take into account thermal capacity, lack of inertia, system strength? How will these be guaranteed?
- Interactions with other limitations in the transmission network (i.e. outside NETI)?
- Seeking proposals for grid support stability support via synchronous condenses, batteries, long duration storage?

3. Commercial:

- Bonding/cash requirements for EOI?
- Period of capacity allocation – fixed / flexibility? Period of connection agreement? How will extensions be managed?
- Capex and opex split?
- Information being made available to support cost modelling and economics?
- Access to NETI for existing projects?
- Cost estimates for grid support infrastructure?
- Transmission access 24/7?
- Cost estimates for NETI?
- Treatment of proponent default?
- Timing of payments?

4. Battery energy storage systems (BESS):

- Will it be needed?
- Opportunity to offer BESS services?
- Opportunity to buy BESS services?

Other areas of questioning included timing of the project, interactions with local load, linkages to the COGATI reforms, and the relationship with the New South Wales Electricity Strategy and other significant REZ potential developments (e.g. the Central West Orana REZ).

Technical, regulatory and market considerations, as outlined under points 1 and 2 above, were the key concerns / risks identified by participants.

Key Risks

Key concerns and risks as identified during the EOI process included:

- Systems strength requirements including provision for Synchronous condensers
- Participant exposure to congestion within the shared network (beyond the NETI)
- Thermal capacity, Marginal Loss Factors (MLF), lack of inertia within the NETI and how will these be guaranteed.
- The extent of the capacity allocation period including whether it will be fixed or flexible and if extensions could be granted.
- Commercial strategy including treatment of proponent default and payment timing
- Extend of access to shared battery supporting connections to the NETI.

2.2.6 Industry briefing (01 July 2020)

A critical element of the EOI period was an open opportunity for potential Participants, and other interested parties, to receive a video and PowerPoint briefing about the NECCA process, the NETI, and the wider opportunity presented.

In total, 85 individuals participated in the industry briefing. These parties represented a reasonably diverse set of backgrounds including:

- Renewable Energy Developers – well represented, with 56 individuals
- Professional advisors and consultants – mainly technical, but some commercial; 7 individuals
- Financial Investors – 7 individuals
- 4 other Participants with allied professional interests
- NECCA project team

The CAA led the presentation process, and responded to the questions posed by Participants. The majority of questions posed by potential Participants during the industry briefing focused on technical design considerations, energy storage, regulatory and contract matters. Ensuring a more active role for TransGrid Services as NECCA's principal would occur in any future briefings.

2.3 The EOI Response – a strong response from the market

2.3.1 Timing of the key activities in the EOI phase

The key phases in the EOI process were timed as follows:

- EOI advertisement – 17 June 2020
- Dynamic Q&A process – throughout EOI phase
- Industry Briefing - 01 July 2020
- Receipt of EOIs – 28 August 2020
- Recommendation to TransGrid Services – 31 August 2020

2.3.2 Strong market interest evident across all stages of the EOI

Strong market interest has been shown across all key stages in the process:

- EOIs sent to market – 62
- Questions raised – 85
- Attendees at Industry Briefing – 85
- EOI received – 18 lodged from 23 proponents
- Capacity requested – ~6.9 GW of capacity, 5 x the full NETI capacity

Some general insights from the EOI responses are summarised below:

- Five (5) of the eighteen (18) EOI responses were submitted by multi-party consortia, representing 23 proponent organisations;
- Four (4) EOI responses proposed more than one project site;
- Two (2) responses submitted EOIs without currently having a project in the New England area;
- Two (2) respondents have commenced a grid connection process for access to the existing regulated transmission infrastructure;
- Two (2) proponents submitted an EOI to provide storage capability to the NETI, but not to secure capacity on the NETI per se.

2.3.3 Technologies represented

Reflecting the nature of the energy resources endemic to the region, solar was the dominant technology represented in Participant responses, which also featured wind, battery, pumped hydro, waste to energy and hydrogen, some of which were proposed on a co-located basis.

2.3.4 Scale of the indicative capacity requests

Across all expressions of interest and Participants, potential project sizes range between 50 and 1000 MW. The table below shows a significant number of project proposals in the 200 to 400 MW capacity band.

Requested Capacity (MW)	Number of Projects
<200 MW	8
200 – 400 MW	13
>400 MW	4

Note that some projects are recognised more than once in this table. This occurs where a project in its early stages has identified a range of potential capacity which spans the bands noted above (e.g. a project proposal listed for 150 – 250 MW is recognised in both the <200 MW and 200 – 400 MW bands).

2.3.5 Participant backgrounds and Australian experience

Both locally and internationally based Participants have lodged expressions of interest. Further, in both these cases, Participants with and without an established local project delivery track record have expressed an interest.
Players with an established local project delivery track record on average expressed an interest in larger capacity allocations than players without a local project delivery track record.

Participant Type	Participant experience in Australia	Average MW of proposed project
Local developers	Utility scale, completed Aust projects	260
Local developers	Sub-utility scale, completed Aust projects	200
Offshore developers	Utility scale, completed Aust projects	337
Offshore developers	Sub-utility scale, completed Aust projects	200

2.3.6 Battery Energy Storage

Eight (8) proponents have suggested inclusion / incorporation of storage. The average battery size is 125 MW with an average storage duration of 3 hours. (Note: not all eight proponents provided specifications for storage, so averages should be interpreted with caution).

2.3.7 Non-conforming submissions

In framing the Expression of Interest, it was anticipated that all Participants would lodge EOIs which could technically connect to the NETI. Surprisingly, four proponents provided non-conforming project based EOIs – that is, they could not connect to the NETI without first utilising at least a section of the shared grid in order to reach the new transmission infrastructure. Proponents who only submitted a non-conforming project as part of their EOI were scored accordingly during the evaluation process.

2.3.8 Varying levels of supporting project details

The EOIs received exhibited a significant degree of variability in available detail, notably across technical matters and matters associated with project execution (e.g. financing strategy and project delivery). This reflected the maturity of each Participant's project proposal, including those EOIs requesting capacity but with no local project at any stage of development.

2.4 Lessons learned from the EOI stage

Some of the lessons learned from the EOI Stage of the NECCA include that:

- The central hypothesis being tested by this innovative commercial model for the development of enabling transmission infrastructure **is proved**, albeit on an unpriced basis at this stage – that is, the market recognises the merit of a commercial process to address current challenges in project development and are willing to engage in a competitive process to secure access to enabling transmission infrastructure. The RFC and contracting phase will test the commercial viability of the model;

- Publishing the identified evaluation criteria as part of the EOI has been pivotal in allowing Participants to focus their responses to the EOI. Further, it underpinned an objective assessment of those responses;

- Unsurprisingly for an innovation of this nature, proponents posed many questions on a diversity of topics. Many of these questions will, by the very nature of this process, only become clear during the RFC stage. These questions included for example:

    - NETI technical design details
    - Regulatory and market considerations, including interactions with the shared network, and
    - Commercial arrangements

- A diversity of project Participants see merit in the approach, reflected in their backgrounds which include:

    - Some diversity of generation types proposed, although solar is the dominant technology
    - Major locally based and internationally based developers
    - Developers with significant Australian experience, and those without
    - Project proposals across the spectrum of maturity, and
    - Well credentialed Participants without a project in the area, yet seeking capacity and access to the NETI infrastructure.

- There is material interest in either providing dedicated battery energy support services to the NETI, or in securing BESS services as part of the broader NETI development.

3. Stakeholder Engagement

TransGrid Services has undertaken a number of targeted stakeholder engagement activities with identified key stakeholders including:

- Local community representatives
- Political leaders with an interest in the subject matter area and local issues
- AEMO, and
- The NSW Government (ongoing dialogue)

Supportive public comments at the time of ARENA's press release have contributed to market confidence that the NECCA process is substantive and worthy of support by potential Participants.

3.1 The Stakeholder Consultation Group

The first meeting of the Stakeholder Consultation Group was held on the 19th August. This included representatives from ARENA, AEMO and NSW Planning (DPIE). An overview of the EOI process and results was provided as well as the work currently underway to prepare for the RFC Auction stage.

The charter of the Stakeholder Consultation Group has been defined, along with key roles and responsibilities.

4. Subsequent Activity Forecast

The RFC phase will involve significant further interaction with the market as TransGrid Services and the field of short-listed proponents' progress toward the planned execution of binding commercial contracts. Of particular interest in the RFC phase of the NECCA will be the development of the commercial documents (contracts), which is the focus of this overview of future activity, and the process to secure support to commit to the NETI infrastructure build.

Initial work, which has been led by KWM, demonstrates that there are a number of critical commercial and regulatory matters which need to be addressed as part of the RFC detailed process design; these will ensure that the project contract structure applies an appropriate risk allocation between TransGrid Service and NETI users.

These commercial and regulatory considerations will include for example:

- The role of TransGrid Services in being responsible for system strength requirements under the NECCA, and managing the aggregate impact of NETI connected facilities on TransGrid's regulated transmission network;
- The question of how the NETI will provide firm access – financial or physical;
- Addressing important details about a number of issues including for example design risk, managing the technical operating envelope of the NETI, contracting limits placed on the aggregate of connecting capacity, generator performance standards, batteries and load, and whether services might be sold in tiers (e.g. firm, time of use, with or without battery support services, as and when available service);
- The treatment of dispatch constraints and interactions with AEMO; and
- Treatment of Transmission loss factors.

Of particular interest will be the eventual contract structure which must resolve the above commercial and regulatory considerations and how these concerns interacts with each of the contracting entities, each proponents' and TGS' financing and equity arrangements, TGS' and each proponents' revenue models, TGS' charges and the staging of the NETI development.

Importantly, the commercial model, and the commitment of project proponents to it and the NETI, will develop across the course of the RFC process as further details become available. At the point where key commercial and regulatory factors are sufficiently understood, proponents will be requested to post a bond or fee to secure their RFC bid.

The precise document structure to be deployed during the RFC and the timing for a fully binding capacity commitment and connection and access agreement (with finalised generator performance standards and system strength arrangements) are under development and will be subject to "market testing" with the shortlisted proponents, given the innovative and unique nature of the NECCA proposition.

5. Conclusion

At the end of the EOI Phase, the project received a very strong interest from participants. A greater number of participants in the NETI process will ensure that there is sufficient demand in the market to proceed with the investment, i.e. it serves to increase the probability of success of the NETI.

Projects have been nominated across a range of synchronous and non-synchronous technologies including wind, solar, waste-to-energy, battery storage and gas-fired plant. Respondents to the EOI process include very credible project developers with both local and international experience in the development and construction of renewable energy projects.

The shortlisting was governed by the principle to ensure the aggregate MW capacity bidding in the RFC Phase will sufficiently exceed the 1,400 MW capacity limit of the NETI.