Transgrid

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Waratah Super Battery – Priority Transmission Infrastructure Project ("WSB PTIP")

Contracting & Procurement Strategy

7 December 2022, Revision 0

Endorsement and Approval Flow

Based on the information provided in this Preliminary Contracts & Procurement Strategy the following people have reviewed, endorsed and/or approved the procurement activities outlined in this document, and the activities identified can commence, subject to all required approvals for individual sourcing activities.

Role	Name	Position Title
Author	[redacted]	Procurement Manager
Endorse	[redacted]	Supply Chain Improvement and Systems Manager
Endorse	[redacted]	Project Director - Network Augmentations
Approve	[redacted]	General Manager of Supply Chain
Approve	[redacted]	General Manager of Infrastructure Delivery
Approve	[redacted]	Executive General Manager Delivery

Definitions and Abbreviations

Capitalised terms or abbreviations, where not defined in the body of the document are defined in Appendix 3 of this of the document.

Summary of Key Decisions & Actions

The following is a summary of the key decisions and actions to be undertaken as provided in this Contracting & Procurement Strategy ("C&PS"). The project is still technically transitioning into Concept Phase; however, early procurement activities are required, and this C&PS is issued to capture these activities. Updated C&PS will be submitted by early January 2023 to align with the advancements and confirmation of information required to complete the remaining activities for the WSB Project. in the project.

The Waratah Super Battery ("WSB") Project is a time critical project. The Minister's direction published on 14 October 2022, confirmed all required by dates for the activities and works to be completed, including a submission to the Regulator for a determination by 31 March 2023. The dates in the direction are based on Schedule 2 of the direction, the "Transgrid WSB Delivery Plan". A copy of the Minister's direction, including the Transgrid WBS Delivery Plan is provided in Appendix 1 for reference. The Transgrid Regulatory Approval Team will require all information by 7 February 2023 to meet the date for submission to the Regulator.

The Ministerial direction's timing is clear, and those dates are firm. Transgrid must meet these dates, or the potential outcome is network instability, reputational risk, potential legislative penalties or impact on the Transgrids Network Operator Licence and/or EnergyCo enforcing liquidated damages for delay.

To obtain sufficient information to provide a validated price to the Regulator, and to facilitate an RFx process for the D&C Contract, Transgrid must complete the design, pricing, and scoping of Transgrid's works for the WSB Project, to a sufficient level to allow pricing on a D&C basis. At this point the Project Team have concluded the OFS and are preparing the Options Evaluation Report. The following needs to be undertaken prior to 7 February 2023:

- Complete the inspection and assurance requirements of existing assets.
- Scoping completed
- Preliminary Design brought to the level of Concept Design for pricing (or as near as possible)
- Contingency pricing to a level where it can be reasonably evidenced or accepted by the Regulator
- Outage schedule confirmed where possible (future planning)

Initially the strategy that was considered the best solution to ensure Transgrid meet the timeline provided in the Ministerial direction and ensure a competitive, substantiated price for submission to the Regulator, was to utilise the existing Construction Services Panel Contract (the "Construction Panel") for an Early Contractor Involvement ("ECI") process. Due to the Contractor's having been qualified through the Construction Panel process, the existing Construction Panel specifically covering Transmission Lines and Substations, and an existing pre-agreed set of terms and conditions being in place, it was considered that this would provide a streamlined ECI and RFx process, and still provide Transgrid with a good outcome for the project. The Construction Panel consists of four Contractors, and all four were approached with a reduced EOI based on questions regarding availability, schedule, and some resourcing specific questions.

The EOI process was conducted at the beginning of November 2022, The responses were as follows:

Panel	Response	ECI ?
[redacted]	[redacted]	No
		No
		No
		Yes

[redacted] however, this will not be discussed further in this section as the works are still subject to agreements with EnergyCo.

[redacted] position was considered by Transgrid, however, any decision to agree with [redacted] position would:

- Conflict with the purpose of the ECI process.
- Require a selection process to be undertaken prior to the ECI works commencing and would leave Transgrid in a position where the timeframe for submissions to the Regulator were at risk.
- Prevent Transgrid from undertaking a competitive process with any other Contractor or have a solution if [redacted] did not perform during the ECI.

Transgrid responded to [redacted] confirming the reasons for undertaking the ECI process and confirming the ECI process must stand. [redacted] withdrew on this basis.

Transgrid selected [redacted] to proceed on the ECI and made the decision to identify and approach alternate Contractors to undertake all or part of an ECI process. It is noted that [redacted] have conducted similar transmission line work for the QNI project, including providing transmission line design that meets the requirements of AS7000 and required temperature ratings that are necessitated for Transgrid's WSB Project Works. [redacted] have completed multiple substation packages for Transgrid, and the substation package is deemed low risk in terms of tendering and design, due to Transgrid having the capability to self-perform these works if required and the design being mostly asset replacement.

It is intended that the Project Team will commence the ECI process with [redacted] under an ECI Agreement for the project immediately, to ensure the submission dates to the Regulator are not jeopardised.

Transgrid have identified potential Contractors to complete the ECI with [redacted] from the RP3 Construction Services Framework EOI submissions. Four Contractors have been contacted in regard to the ECI and Transgrid's WSB Project Works and (as of 8 December 2022) the following responses are recorded for ease of reference:

Contractor	Response and current status
[redacted]	

The number of packages the RP3 Contractors are selected to participate in for an ECI, will impact the timing required to complete the ECI. For the submissions to meet the required by date of 7 February 2023 it is anticipated that the RP3 Contractors may not be able to achieve the ECI objectives for both packages of work (Substations and Transmission Lines). Two Contactors will be selected on this basis that the packages will be separated between them (substations to one, Transmission lines to another), to ensure that the ECI objectives are achievable. Selection will be made based on the Contractor's capability, previous experience, available resources and fit for each package. Transgrid will also consider a contingency plan whereby the Contractor's other works in the areas, the timing of those works, and possibility of utilising crews across the two work fronts, presents a cost saving opportunity in terms of reduced downtime, reduced preliminary costs, and provides an advantage for maintaining the project schedule. This activity would have to be closely monitored and risk assessed, and would remain contingency only.

In conjunction with the ECI process an RFx event will be undertaken for awarding the D&C Contract. The RFx process will require issue of the draft D&C Construction Contract (based on Construction Panel for [redacted], Pricing Schedule, Deliverables for the ECI (reviewed and approved under the ECI Agreement), and any other additional schedules (for e.g., target for industry participation plan). Full details of all items to be released in the RFx will be provided in the RFx Packaging Plan, required for approval to release the RFx. All parties in the ECI must be made aware of each other, or the potential for others to be added to the ECI, and specific no exclusivity clauses are provided in the ECI Agreement for coverage.

Transgrid's strategy in terms of ordering equipment and materials, is based on Transgrid purchasing stock standard or catalogued items and providing these Free Issue to the Contractor for the D&C Works. This is to ensure items comply to Transgrid standards and no issues with integration with Transgrid's networks are encountered. Items to be ordered during the ECI process include substation equipment and materials provided in the table below. Technical details of Free Issue items will be required to be provided to the Contractor prior to the conclusion of the ECI process. The Contractor will be required to ensure that the design allows for any specific item of equipment or materials, that are Free Issued by Transgrid, and confirm this for the D&C Contract (if awarded). Procurement will validate the relevant Project Packaging Plan ("PPP"), for lead times and availability as soon as the Packaging Plan is made available to the nominated Procurement contact. The Packaging Plan will be provided in the updated C&PS as an Addendum.

Scope of works	Number
Circuit breaker replacement	6
CT replacement	8
Line trap replacement	14
Disconnector replacement	53
Earth switch replacement	47
Overhead bus replacement	11
Dropper replacement	19

Scope of works	Number
Bay conductor replacement	7
Secondary modifications (TL line ends)	31

In addition, Transgrid are self-performing the SIPS scope of work and equipment and materials identified through the design process for SIPS will also be required to be procured ahead of the completion of the ECI process.

The Transmission Line materials and equipment will be formalised during the ECI period. Transmission Poles will remain the responsibility of the D&C Contractor regardless of the outcome of the ECI process, this is due to the design of the poles being solely the responsibility of the Contractor, and Transgrid wanting the risk for design and procurement to reside with the Contractor. The poles are considered a long lead item, based on a check of lead times in market for forecast delivery times (45 weeks) with the QNI design poles used as a basis for the market check. Full requirements for the Transmission Lines, equipment and materials are unable to be confirmed until the Concept Design has been finalised, which forms part of the ECI Deliverables. The identified equipment and materials will be included in the updated Contracting and Procurement Strategy once confirmed. Where there are no standardised items, or Transgrid does not request a standard item to be incorporated into the design, the Contractor shall be responsible for ordering all Transmission line equipment and materials.

Recommendation

To proceed with the following sourcing and procurement activities, noting all required governance and assurance will be undertaken prior to any sourcing or award or purchase of services, works, goods, materials, or the like.

1. Commence the ECI process and on-board the ECI Contractor ([redacted] as soon as possible.
2. Award the ECI Contractor ([redacted] the ECI work to be completed via the ECI Agreement
3. Procure equipment and materials for long lead items or standard items as provided in this document.
4. To issue the RFx package for the D&C Contract, with the requirement that the completion of the ECI Deliverables form part of the submission, and that award of a D&C Contract is subject to internal approvals and award. Where items cannot be requested immediately in the RFx, the RFx will be run with progressive issue of documents and staggered submission dates, linked to dependencies.

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1. Project Overview

The NSW Government, through the Energy Corporation of NSW ("EnergyCo"), is developing the 'Waratah Super Battery', dedicated to ensuring a reliable energy future for NSW as coal-fired power stations, such as Eraring, bring forward their retirement dates.

The Waratah Super Battery Project ("WSB Project") will include:

- a System Integrity Protection Scheme ("SIPS"), designed to reserve and deploy standby battery power to support the NSW electricity grid when required due to a contingency event
- an approximate 700-megawatt (MW) battery energy storage system ("BESS")
- transmission and related infrastructure to connect the BESS to the existing grid
- other ancillary infrastructure and services required for the WSB Project.

Designed to provide 24/7 reserve transmission capacity, the WSB Project will assist network stability and discharge based on network conditions as determined by the Network Operator (Transgrid). The WSB Project is designed to provide reserve transmission capacity and stability, rather than additional electricity storage capacity. In this regard, the Waratah Super Battery Project will allow consumers to access more energy from existing electricity generators while maintaining network security. The project was granted Critical State Significant Infrastructure status earlier this year (2022).

On 14 October 2022, the NSW Minister for Energy directed Transgrid (as the Network Operator) to carry out the WSB Project, which is classified as a Priority Transmission Infrastructure Project (PTIP).

The aim of the WSB Project is to increase power transfer capacity on transmission lines that connect generation in the northern and southern regions of NSW to load centres in the Sydney/ Newcastle/ Wollongong (SNW) region. The battery will operate as part of a broader System Integrity Protection Scheme (SIPS). The SIPS is designed to monitor transmission lines and enable the battery to act as a 'shock absorber' in the event of any sudden fault on the transmission system. The WSB Project comprises the following four elements:

- SIPS battery service (Contestable)
- Paired generation services (Contestable)
- SIPS control system (Non-Contestable)
- Network augmentations (Non-Contestable)

Transgrid is undertaking the Non-Contestable Elements of the WSB Project listed above, with the inclusion of the connection of the BESS to the network at Munmorah Substation ("WSB TG Works"). EnergyCo are providing the Contestable Elements of the work for the WSB Project listed above.

Construction is expected to begin in early 2023, pending approval, and to be completed by mid-2025 in advance of Eraring's earliest closure date.

2. Project Status – EnergyCo

2.1. EnergyCo Agreements

EnergyCo and Transgrid have executed the required EnergyCo Agreements, being the Network Operator Deed, Project Development Deed and SIPS Service Agreement on 17 October 2022. These items are referenced in the Ministerial direction of the 14 October 2022 (Appendix 1).

2.2. EnergyCo WSB Project Works

EnergyCo, as the Infrastructure Planner for the WSB project, recently completed a competitive assessment process to select a service provider for the SIPS battery service. Akaysha Energy will be responsible for the construction and operation of a battery that is capable of providing a guaranteed continuous active power capacity of at least 700 MW, and a guaranteed useable energy storage capacity of at least 1400 MWh. Transgrid is required under the Ministerial direction to enter into a contractual arrangement to procure the SIPS battery service from Akaysha Energy.

EnergyCo has not completed the competitive assessment process regarding the paired generation services as at the date of this Contracting and Procurement Strategy (C&P Strategy).

Transgrid will be required to enter into an agreement with both providers above for the supply of services in regard to the SIPS battery and the paired generation services.

3. Transgrid - Scope, Schedule and Budget

3.1. General

The Ministerial direction sets out Transgrid's general scope of work for the WSB Project. The formulation of the project scope has not been typical of the usual Transgrid process due to the nature of the WSB Project. The intention, however, is to attempt to meet the steps for project identification, scope of work, and implementation wherever possible. Broadly, at this point, the project has completed its relevant OFSs and an Options Evaluation Report is under preparation to formalise the requirements of the Ministerial direction.

3.2. Summary

The WSB Project TG Works consist of several components for Transgrid to complete:

1. Design and Implementation of a System Integrity Protection Scheme (SIPS).
2. Uprating of 4 transmission lines.
3. Uprating of HV equipment in substations (potentially 13).
4. Modification of secondary systems in substations (potentially 15).
5. Connection of the WSB BESS to the network (non-contestable portion only)

Note: Item 1 above is impacted by the final Paired Generator Services and the SIPS BESS Service, these items are being procured by EnergyCo and Transgrid will be required to enter contracts for services once procurement is completed. EnergyCo have awarded the SIPS BESS Services to Akaysha Energy, however a competitive tender process for the Pairing Generator Services has not been completed by EnergyCo at this time.

3.3. Scope of Work – Anticipated

The following is the current anticipated Project Scope of Work, as at the conclusion of the Options Feasibility Study (OFS):

3.3.1. Network Augmentations

Network Augmentations consist of Transmission Lines and Substations as provided in section 3.2.1.1 and section 3.2.1.2 below.

3.3.1.1. Transmission Lines

Transmission lines require the mitigation of low spans caused by the increased temperature rating of the lines. The various mitigations are summarised below:

Table 3.3.1.1 – Transmission Line Scope and Quantities

Scope of works	TL-3L/4	TL-5	TL-39	Total
Number of D-String installations (single phase)	106	137	28	271
Number of locations (structures) with proposed D-string installations	56	50	15	121
Number of V-String installations (single phase)	11	13	4	28
Number of locations (structures) with proposed V-string installations	11	6	4	21
Number of low spans proposed to be managed by landscaping mitigations	3	2	1	6
Number of existing towers requiring strengthening	52	45	11	108
Number of suspension structure replacements	13	11	0	24
Number of tension structure replacements	1	1	0	2
Number of new mid-span suspension structures proposed	1	0	2	3
Number of new mid-span light strain structures proposed	0	0	1	1

3.3.1.2. Substations

At present, the scope of work associated with network augmentations spreads across 15 substations involving 17 transmission lines with a summary of activities as follows:

Table 3.3.1.2 – Substations Scope and Quantities

Scope of works	Number
Circuit breaker replacement	6
CT replacement	8
Line trap replacement	14
Disconnector replacement	53
Earth switch replacement	47
Overhead bus replacement	11
Dropper replacement	19
Bay conductor replacement	7
Secondary modifications (TL line ends)	31

The substations range in location from Upper Tumut in the south of New South Wales to Dumaresq in the north.

3.3.2. SIPS

The SIPS will involve the design, construction and implementation of a Transmission Line monitoring system and connection to a number of monitoring sites covering the transmission network, Waratah Super Battery, and Paired Generators. The exact number and location of Paired Generators is yet to be finalised.

The deployment of the SIPS across the network requires installation of SPS panels at various locations across Transgrid's network. A summary of the types, quantities, and functions of the required SPS panels considered in the OFS are summarised below:

Table 3.3.2 – SIPS Scope and Quantities

Type	Qty	Function
Central Logic Unit	1	Central data concentrator and logical controller for all remote ends.
Core Network Monitoring Sites	18	Sites required to monitor and detect line overloads and/or cutset flows for SIPS arming.
WSB Battery Interface Sites	1	Sites required to communicate dispatch signalling to WSB BESS facility.
Paired Generator Interface Sites	10	Sites required to communicate runback signalling to WSB Paired Generator facilities.

NOTE: (1) Quantity is per site, identified during OFS **(2)** These panels will sometimes be housed in existing buildings but sometimes will require either new buildings or air-conditioned outdoor cubicles to contain them. Items marked with

3.4. Connection of WSB BESS at Munmorah Substation

The WSB BESS will be connected to the network at Munmorah Substation in Bays 3 and 4 which previously connected the now demolished Munmorah Power Station Units 3 and 4 to the network. Transgrid will design, construct and commission the necessary switchbay infrastructure to accommodate the two 330kV circuits to be connected to the BESS. The BESS owner/operator will be conducting al contestable portions of the connection with Transgrid's responsibility being the non-contestable portions only. This item will need to be finalised with EnergyCo and will be considered further in the next revision of the full Contracting and Procurement Strategy.

3.5. Equipment and Material Management (including Free Issue Materials)

Items to be procured include items identified in *sub-section 3.3.1.2 Substation Scope and Quantities* and the SIPS equipment discussed in *sub-section 3.3.2 SIPS*.

The Project Packaging Plan will be developed during the ECI period for items to be Free Issued to the Contactor during the D&C works.

Once all relevant technical specifications and associated documents are compiled for each item in the PPP, and Required on Site dates have been populated, the items will be provided to a nominated contact in Procurement who will be responsible for managing the procurement activities, including sourcing request approvals, RFx events, and any approval documents for issue of purchase orders or award of contracts. Where possible, items will be sourced from known vendors or through panel arrangements that are already in place. The PPP will include procurement activity dates to allow tracking for all items and to ensure any items that may impact the schedule is recorded or accelerated where possible, and the Project Team have full overview and insight into potential delays. Tracking will also allow visibility of any overdue activities where escalation may be required.

Materials and equipment for the Transmission Lines portion of the D&C Works are to be confirmed during the ECI period subject to finalising the Concept Design. These items will be considered in any updated Contracting and Procurement Strategy. At this point, the Contractor will be responsible for procuring the materials and equipment for the Transmission Line scope.

Materials management and warehousing will be considered by the Project Team for the Materials Management Plan to be developed during the ECI period. Consideration must be provided for ring fencing of ordered items for the project and any warranty or preservation requirements. This C&PS acknowledges this item but does not provide any formal strategy for materials management at this stage.

3.6. Schedule – Project

The current indicative key dates for the WSB TG Works are provided in Table 3.6. These align with the dates provided in the Transgrid WSB Delivery Plan, referred to in Appendix 1. **This is a time critical project**, and procurement activities must commence immediately and without delay. Any delay to achieving completion by the Practical Completion date, will have implications for the network, potential implications for Transgrid's operating licence, cause reputational harm or be subject to liquidated damages under the EnergyCo Agreements.

Table 3.6 – Indicative Key Dates

Description	Date
Ministerial Direction	Mid-October 2022
Transgrid Board approval for initial expenditure	October 2022
ECI Contractor engagement	November 2022
Initial procurement of SIPS equipment	November 2022
D&C contract preparation	Nov - Dec 2022
Commence environmental approvals work	December 2022
Procure long lead items – substations (Transgrid)	February 2023
ECI contractor submissions	Early February 2023
Engage contractor from ECI process (LNTP)	March 2023
Procure long lead items – transmission lines (Contractor)	March 2023
Non-Contestable submission to Regulator	End March 2023
Determination on non-contestable submission	End September 2023
Full NTP for contractor	End September 2023
Complete Northern Substations, TL 39 (including associated substations) and SIPS Control	1 November 2024
Complete TLs 3L, 4 and 5 and southern substations	1 August 2025

4. ECI Contractor – Proposed Scope of Work

Scope and deliverables with the ECI Contractor will need to be issued to the ECI Contractor at a level sufficient to identify the ultimate aim of the ECI process, and the mandatory items or steps required to achieve the aim of the ECI. Additional scope or deliverables may be required to be developed during the ECI period, as the ECI Contractor works through the information supplied to them as part of the ECI process, they will be required to provide a list of activities and deliverables to be completed, estimate of hours associated with the task and a schedule for completing the tasks. Acceptance of the estimate will form part of the ECI Agreement Contract Sum, which is a capped value under the ECI Agreement.

Any Contractor or Transgrid requested activities and deliverables to be added to the ECI Agreement, will follow the same process as above. Work performed without formal agreement will be at the Contractors own risk. Initial scoping indicated the following items to be undertaken, however, this will be finalised after

the ECI Contractor has reviewed all the information, and the schedule, activity and deliverable list and estimate of hours/costs (capped) is received.

ECI proposed scope activities to be issued:

- Transmission Lines
  - Confirmation of design of transmission line works outlined above to allow the uprating of:
  - TLs 3L (Yass to Collector), 4 (Collector to Marulan) and 5 (Yass to Marulan) to 85°C
  - TL 39 (Bannaby to Sydney West) to 120°C
  - Agreement of a technical specification including a Division of Responsibility to complete the identified work
  - Site visits/inspections to verify the work required.
  - Pricing of the confirmed works as a design and construct contract to complete the work.
- Substations and SIPS
  - Confirmation of design of HV terminal equipment modifications required to meet the specified ratings of all associated transmission lines.
  - Agreement of a technical specification including a Division of Responsibility to complete the identified work
  - Erection of SPS Panels at various sites.
  - Identification of requirements for SPS Panels for each site, e.g., can the project requirements be fulfilled inside existing panels and buildings?
  - Design of new panels, cubicles or buildings as necessary to accommodate project requirements.
  - Agreement of a technical specification including a Division of Responsibility to complete the identified work
  - Site visits/inspections to verify the work required.
  - Pricing of the confirmed works as a design and construct contract to complete the work.
- BESS Network Connection at Munmorah Substation
  - Design of two switchbay to enable the connection of the WSB BESS (via two 330 kV circuits) to Munmorah Substation
  - Agreement of a technical specification including a Division of Responsibility to complete the identified work
  - Pricing of the confirmed works as a design and construct contract to complete the work.
  - Site visits/inspections to verify the work required.

5. Procurement Activities Completed

5.1. Overview

The following sets out the procurement activities, processes, investigations for the WSB Project. The summary also provides supporting information for the reasons behind the decisions made. The following should be read in conjunction with the information already supplied in section *"Summary of Key Decisions and Actions"* at the beginning of this document.

5.2. Contract Delivery and Model and Route to Market

A procurement strategy workshop was held on Friday, 21st October 2022. The relevant personnel who participated in the evaluation are recorded below.

Table 5.2 – Procurement Strategy Workshop Evaluation Team

Name	Position Title	Role	Area of Focus
[redacted]	Procurement & Sourcing Manager	Chair	Overall and Probity
[redacted]	Senior Project Manager	Evaluator	Scope and Technical
[redacted]	Construction Manager	Evaluator	Constructability and Scope
[redacted]	Project Development Engineer	Evaluator	Technical and Design
[redacted]	Procurement Manager	Evaluator	Procurement/ Contracts

The Evaluators in the workshop established through aggregate scoring that the strategy for the WSB in terms of delivery model, contract model and route to market for the project are as follows:

- **Delivery Model – Early Contractor Involvement**
  - the best solution was to undertake an ECI process, utilising two contractors to ensure Transgrid obtained the best solution to the design, competitive pricing, scoping solutions, and scheduling opportunities. to select the best solution for reducing schedule risk, and competitive pricing. The D&C Contract award would be based on a weighted evaluation of scope, schedule, cost, risk, and commercials. The ECI would allow Transgrid to achieve the level of scope, price, design by the required by dates. price, scope, and design to concept level by the required by dates and allow the contractors to take ownership of the design and the construction and familiarise with the work early.
- **Contract Model – Hybrid – Lump Sum for Design and Schedule of Unit Rates for Construction**
  - Although design was not discussed during the workshop, the Project Team later regarded Lump Sum pricing for design the safest option, as the Contractor would have full responsibility for price and final solution (to Transgrid standards and specifications), and would allow for a firm, fixed price at the date of the submission for the Regulator. Contractor risk for items of information that may not be available prior to submission of the D&C Contract Sum but would ordinarily be provided to a D&C Contractor as a basis of their tender submission and pricing, will be identified between the parties and the risk priced a Preliminary Price in the D&C Contract. An example of this would be geotechnical information that may not be supplied prior to the final tender submission, Geotech may be undertaken prior to Detailed Design and remove this risk or the risk may not be realised. By using the Preliminary Pricing, Transgrid retains the value of the risk if it does not eventuate. Careful consideration will need to be placed on the full potential of the impact under these items, however, the intention is that the buckets under the Preliminary Pricing would equally have pain or gain and sufficiently cover any eventual risk. Risks not identified and included as Preliminary Pricing, will be priced within the rates at the Contractor's discretion, and for the Contractor's contingency.
  - Schedule of Unit Rates to be used for the construction works, with Lump Sum pricing selected for items such as preliminaries, which would be paid pro-rata each month during the construction phase. Benefits of pricing with Schedule of Unit Rates, is that typical variation items recognised from other projects, can be requested up front or added to the pricing schedule to allow for easier, up-front valuation of Variations. This work can even continue after the D&C Contract execution, by Variation to the D&C Contract, therefore Transgrid do not have to accelerate this part of the pricing. Emergent work with Brownfields work can also cause new rates to be required. It is easier to review and agree individual work items and the sequence of works, materials and hours can be assessed analogously by someone who is familiar with the work process. Schedule of Rates will be provided for labour for use in rate build ups and materials and other items can be valued at cost plus an agreed percentage, or average rate as a one-off assessment of the rate to be included. If a rate only causes increase to one part of a rate, all that would be required is an extra over rate, to the existing rate. Schedule of Unit Rates can therefore be more manageable for change. Transgrid surveillance personnel must be

available to record and maintain contemporaneous records for reviewing changes to work, and any claims or variation requests follow strict notice provisions. The procurement evaluators strongly suggested a Quantity Surveyor is utilised to manage this work, even if employed in a hybrid Contractor Manager/Quantity Surveyor position and relying on some surveillance work in the field by others. The hybrid role may negate additional resourcing in the organisation chart.

- **Route to Market – Straight to ECI, and RFT for D&C Contract**
  - Full market engagement or surveillance prior to the ECI would not be required as the Construction Services Panel provides established, pre-qualified Contractors, capable of performing the works. The additional benefit of the Construction Panel is that the D&C Contract is already agreed with minimal room for departures.
  - Although no EOI was agreed in this process, subsequent to the Procurement Strategy Workshop, Procurement ran a reduced EOI engagement with the Construction Panel, rather than straight to issue of an RFP for the preferred two ECI Contractors. The EOI contained only questions regarding resourcing and availability, and to confirm appetite for the works. The EOI provided options to also confirm interest for either Substations or Transmission Lines as Separable Portions, or both packages. The result of the EOI was that only one ECI Contractor from the Panel was available.

5.3. Construction Services Panel – EOI and ECI

Further to the details already provided in the *"Summary of Key Decisions and Actions"* at the beginning of this document. After approaching the four Contractors from the Construction Services Panel, [redacted] was the only remaining Contractor available to participate in the ECI from the Construction Panel.

[redacted] has been selected to undertake the ECI, as one of the two ECI Contractors required for performance of the works. Due to time constraints, [redacted] are required to immediately commence works for the ECI process, if Transgrid is to meet the submission dates for the Regulator.

[redacted]

5.4. RP3 Contractors – EOI and ECI

Based on the Construction Services Panel only yielding one Contractor for the ECI process, Transgrid needed to select an additional ECI Contractor. The RP3 Construction Framework Panel ("RP3 Panel") provided access to substantial information on each Contractor through the EOI submissions for the RP3 Panel. The RP3 Panel is intended to replace the current Construction Panel (and includes all four members of that Panel). The Project Team selected four Contractors from the RP3 Panel, based on the EOI

information submitted, size and capability of the Contractor, and previous experience with the type of work to be undertaken. A questionnaire asking for availability, appetite and resource availability was issued to the four Contractor's selected. This also provided the chance to give the Contractors some information to digest regarding the package while provided responses. Substation and Transmission Lines were offered, with preferences requested. The four Contractors approached were [redacted] and Table 5.4 provides current status of the Contractors who have confirmed.

Table 5.4 – RP3 EOI for WSB ECI

Company	Preference		EOI Qs Returned	Meeting Project Overview	Participation Confirmed	Transgrid to consider?
	Subs	TLs				
[redacted]	Y	Y	Y	Completed 2/12/22r	Yes	Yes
[redacted]	N	Y	Y	Completed – 7/12/22	Confirming internally	Yes
[redacted]	Y	N	Y	Due – proposed 8/12/22	TBC	TBC

Selection will be finalised after the last meeting with [redacted] and confirmation made once the final Contractor has confirmed whether they are definitely interested in consideration. Selection will be based on available resources, skill and experience of the resources and capability to undertake the works. Consideration will also be made to other possible benefits may come from using a particular Contractor, especially around time and cost. At this point the ECI is really part of the broader RFx event for the D&C Contract. The main evaluation of the Contractors will be required at the submission of the RFT for the D&C.

The Project Team are aiming to complete selection and invite by 13 December 2022. The ECI Contractor will have to be in a position to onboard immediately upon confirmation, and project documents will need to be in order and ready to issue for commencement.

[redacted]

6. Procurement Activities Outstanding

6.1. Overview

The following sections provide the activities to be commenced and to be completed in order to issue the RFT for the D&C Contract and execute the ECI Agreement with selected Contractors.

6.2. Project Risks

A high-level table of risks is provided in Appendix 2. The Project Team are currently compiling the Risk Register for the project which will provide clear actions and nominated personnel responsible for those actions. The ECI Contractor will also participate in preparing a project specific Risk Register for the D&C Works. This will be an obligation of the D&C Contract.

6.2.1. ECI Process

An ECI Agreement has completed review with Transgrid's Legal representative and insurance team. The ECI requires issue for agreement with [redacted] to complete the ECI process. Ahead of agreeing the ECI Agreement, Transgrid may issue a PO to commence the ECI early scoping works to confirm and additional deliverables for the ECI phase.

The ECI process will form part of the RFT, with deliverables being progressively submitted during the ECI period for the final RFT submission

Returnable documents will include (but not limited to):

- Design confirmation and development to Concept level
- Associated design confirmations
- Statement for IPP
- Assurance Review participation
- Inspection Records
- Risks Register
- Pricing – including Provisional Sums
- Schedule
- Project Execution Plan (to draft level)
- Quality Records
- Project Scope
- Annexure A and the D&C Contract

Submission and completion dates will be based on what is required to complete the submission for the Regulatory Team by 7 February 2023.

Reimbursement during the ECI period will be for the reasonable costs for any design and scoping works, site asset condition inspections, and any work outside of the RFT process. The ECI will have a capped value for reimbursement. All costs will be required to be agreed upfront and the ECI Contractor will be required to submit weekly timesheets and forecast of following weeks hours for review and approval. All other activities are deemed to be included in normal tendering activities and part of the [redacted] internal tendering costs. Some additional costs may be associated with work over the holiday period as may be required due to the timeframe to complete the works (at the moment, most likely only [redacted] will need to do this).

6.2.2. D&C RFT Award Process

RFT evaluation will be based on weighted evaluation of the RFT submission, as provided in Appendix 4. To ensure probity in the evaluations, it is preferred two personnel undertake the evaluation for each section. The proposed review panel is provided in the Appendix 4. Probity may need to be reviewed prior to confirming the reviewers. If there is any question around the possibility of a compliance/conflict or other issue surrounding probity in regard to a reviewer, a Probity Advisor will be nominated to determine solution and to agree an alternate reviewer. Confirmed evaluations strategy will be provided in the RFx approval. Award is indicatively required prior to early April 2023.

6.2.3. Social Procurement

During negotiations and prior to executing the EnergyCo Agreements the NSW Government published the “NSW Renewable Energy Sector Board’s Plan”. The plan requires Transgrid to commit to targets for locally procured resources, equipment, materials, and other goods, and for targets of participation with First Nations People. Under the EnergyCo Agreements, Transgrid will be required to set targets for participation and to locally source where permissible and available. Contractor(s) will need to agree to these targets and reporting in any sourcing activities they undertake, and evaluation of whether they undertake or meet these requirements will be part of the final RFT evaluation decision.

Plans to be produced in the EnergyCo Agreement include:

- Industry Participation Plan (“IPP”)

- Australian Industry Participation Plan ("AIPP")
- First Nations People Participation Plan ("FNNP")

As the inclusions of the IPP cover the requirements of an AIPP, these are not seen as separate plans. The FNNP is included in any reference to an IPP within this document. A draft will be produced with targets and any information that can be reasonably attained as this time; however, sourcing activities cannot be confirmed for the IPP until the concept design and scoping is completed and materials, equipment and contracting lists have been established. The Project Team are aiming to complete a first draft before the end of January 2023, and will work closely with ECI Contractors, to ensure targets set can be met or exceeded.

6.3. Form of Contract

6.3.1. ECI Contract

ECI Agreement from [redacted] will be utilised for the ECI work to be undertaken. Review has been completed by Legal and insurance review has also been provided. The ECI Agreement is ready to be issued to the ECI Contractor – [redacted] Adjustments to scope to allow for individual package completion by the RP3 Contractors has been commenced, for issue the week of 12 December 2022.

6.3.2. D&C Contract

It is proposed that the following be issued for the D&C Contact:

- [redacted] - Construction Services Panel Contract – General Conditions of Contract ("GCoC"), with Separable Portions issued via an RFP (as per Panel Framework)
- RP3 Panel Contractors - Annexure A and GCOC to be sent with the RFT, GCOC. The GCOC will have the package of works agreed, but still include the other works as information. Potential to vary the contract will be provided in case the Contractor may be called upon to assist with the other package of works during the construction phase should the other Contractor selected not be performing (at fault, or at no fault). These options are selected as contingency, and the outcome of the RFT Evaluation and Award process will decide the final contract selected.

Due to the ECI phase including the scoping, pricing, and schedule formulation, it is impossible to include all items for the formal D&C Contract at this stage of commencing the ECI. Staggered issue and submission dates will be provided, and this will be outlined clearly in the RFx Plan approval for issuing the ECI and D&C Contract.

The D&C Contract will be issued with Separable Portions (SP) for Design and Procurement, Substation Work, and Transmission Line Work. Packages will need to record Milestone or PC Dates to match the EnergyCo Agreement dates. Proceeding with any SP will require a Notice to Proceed, and any SP with construction works will be subject to Conditions Precedent (for approvals, Regulator determination etc). A sunset clause provision may need to be included in the D&C Contract, if the Regulator approvals or other issues prevent the construction work commencing within 6 months of the estimated date. This will be subject to approval and review by Transgrids Legal Business Unit

6.4. Long Lead Items/Free Issue Items

Once the items are provided in the Equipment and Material Schedules, and all information is received the items will be risk assessed and investigated by the Procurement Representative. A packaging plan will be prepared for determining what category the items fall into and how they should be managed, this shall be approved by the Project Director and a senior procurement representative, to confirm approach is correct, prior to commencing any sourcing activities (which will all follow Transgrid's normal approval processes). The Packaging Plan will utilise the following for procuring Equipment and Materials.

1. Where existing contracts are in place, these will be leveraged where possible/suitable
2. Purchase Order/Goods Contract to be used based on risk, value, quantity and specification and timing. Items will be reviewed on a case-by-case basis. Installation or site services to be considered for contract selection.
3. Selection of suppliers and potential suppliers for Goods/Equipment/Materials must regard the requirements of the IPP. Where the IPP cannot be achieved for valid reasons, the reasons must be recorded and provided under any reporting or notification obligations to EnergyCo.

Appendix 1 – Ministerial Direction & Transgrid WSB Delivery Plan

Transgrid WSB Delivery Plan is contained in Schedule 2 of the Ministerial direction.

Appendix 2 – Risks and Mitigations

The following is an interim risk and mitigation table. Full risks and mitigations with assigned owners is currently being populated.

Item/Scenario	Possible Risks	Mitigations
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]

Item/Scenario	Possible Risks	Mitigations

Appendix 3 – Definitions and Abbreviations

For the purpose of this document the following abbreviations and defined terms have been adopted.

Definition	Meaning
BESS	Battery Energy Storage System
D&C Contract	Means the contract to be awarded after completion of the ECI process. The contract is provided in the Construction Services Panel (the "General Conditions of Contract"), as amended for the WSB Project.
D&C Contractor	The Contractor(s) awarded the D&C Contract to undertake the WSB Project works.
D&C Works	Means the works to be completed under the D&C Contract
Contestable Elements	means the following contestable elements of the Waratah Super Battery Project: (a) the procurement and administration of the SIPS Service; and (b) the procurement and administration of the Paired Generation Services. As set out further in the Ministerial direction. For the avoidance of doubt, the Contestable Elements include the construction by the SIPS Service Provider of a battery energy storage system located at the former Munmorah Power Station site at 301 Scenic Drive Colongra within the Central Coast local government area (Munmorah Site) that is capable of providing a guaranteed continuous active power capacity of at least 700 MW and a guaranteed useable energy storage capacity of at least 1400 MWh for the purposes of providing the SIPS Service to Transgrid.
Contractor	Refers to any Construction Contractor to be potentially selected by Transgrid to undertake an ECI and/or complete the D&C Works.
ECI	Early Contractor Involvement
ECI Contractor	Refers to the selected Panel Contractors who participate in the ECI.
EnergyCo	Means the Energy Corporation of NSW (EnergyCo), which is a statutory authority established under the *Energy and Utilities Administration Act 1987* and is responsible for leading the delivery of Renewable Energy Zones (REZs) as part of the NSW Government's Electricity Infrastructure Roadmap. EnergyCo is the Infrastructure Planner for the WSB Project and is responsible for the Contestable Elements of the WSB Project.
EnergyCo Agreements	Refers collectively to the WSB – SIPS Service Agreement, the WSB Network Operator Deed and the Project Development Deed, and any other subsequent contracting arrangements that may be further required.
FIM	Free Issue Materials. Items/Materials/Consumables that Transgrid will purchase and pay for and provide for the D&C Contractor to use for free.
Ministerial direction	Refers to the direction by the Minister for Energy as published in the Government Gazette of the State of New South Wales, Number 473– Electricity and Water, dated Friday, 14 October 2022, titled "Priority Transmission Infrastructure Project Direction (Waratah Super Battery Project) Order 2022" available at the following link: https://gazette.legislation.nsw.gov.au/so/download.w3p?id=Gazette_2022_2022-473.pdf
Network Operator	means the owner, controller, or operator of an electricity network (for the purposes of this document, Transgrid will be the Network Operator)
Non-contestable Elements	means the SIPS Control and the Network Augmentations to be carried out by Transgrid, as set out further in the Ministerial direction. For the avoidance of doubt, the Non-contestable Elements include Transgrid entering into a contract

Definition	Meaning
	for services, to be provided by the paired generator services provider, and for the SIPS battery services, and any other ancillary items deemed to be the responsibility of Transgrid under any of the EnergyCo Agreements.
Panel Contractor	Any Contractor who is a panel member for the Construction Services Panel Agreement. In this document Panel Contractor or Contractor may be used interchangeably.
Project Packaging Plan or PPP	Is the schedule of equipment and materials populated during the early design phases to identify items to be ordered, estimated cost, and suggested vendors/suppliers. The items will be packaged where this is deemed the best procurement solution and added to a procurement packaging schedule for tracking purposes.
C&PS	Means this Preliminary Contracting and Procurement Strategy document, that proceeds the final Contracting and Procurement to be completed for the project.
Project Team	Refers to the team of personnel working for, in support of, or on behalf of Transgrid in an assigned role on the Organisational Chart for the WSB Project TG Works
ROS	Required on Site – last date items can comfortably reach the project site for works.
SIPS	System Integrity Protection Scheme
SNW Region	Sydney, Newcastle, Wollongong collectively.
WSB Delivery Plan	As included in the Ministerial direction and included in Appendix 1 of this document.
WSB Project	The Waratah Super Battery Project means the priority transmission infrastructure project that comprises: i. the Contestable Elements; and ii. the Non-Contestable Elements.
WSB PTIP	Means the status of the WSB as a “Priority Transmission Infrastructure Project”, as confirmed in the Ministerial direction.
WSB TG Works	Reference in the document used to refer to the Non-Contestable works Transgrid will undertake as part of the WSB Project.

Appendix 4 – D&C Evaluation Weightings and Review Panel

INDICATIVE - Selection Criteria – Assessed by Weighted Criteria	Weight
[redacted]	

Indicative Evaluation Panel (subject to review for probity)

Name	Position	Criteria
[redacted]	Senior Project Manager	Technical/Schedule/Cost
[redacted]	Construction Manager	Technical/Schedule
[redacted]	Project Developer	Technical
[redacted]	Scheduler	Schedule
[redacted]	To be determined.	Cost
[redacted]	Procurement Manager	Contracts/Procurement