

2022-23 Budget – Business Case

Proposal Name: ACT Distributed Large Scale Battery Storage System – Stream 1 (Large Grid Connected Batteries)

Brief Description: The proposal enables the Territory to proceed to the second half of a two-stage procurement for the delivery of 250 megawatts (MW) of large-scale battery storage under Stream 1 of the Big Canberra Battery project (PAGA Item A1(v)). It seeks to replace provisioned capital funding with provisioned expense and revenue based on the commercial models that the market has supported during the first stage of the procurement. It leaves \$14.308 million in provisioned capital for Streams 2 and 3 which will be the subject of a future business case.

Lead Minister: Barr

Portfolio: Climate Action

Supporting Ministers (and related Portfolio/s): N/A

Minister's recommendation

This business case seeks agreement to the policy change/s listed below:

- a. Agreement to replace provisioned capital funding of \$80,788,000 with provisioned expense funding of \$41,903,000 and provisioned revenue of \$45,971,000 to reflect the policy direction approved by Cabinet of securing contracts for output instead of direct build and ownership of Stream 1 battery(s).
- b. Agreement to proceed to the second stage of a two-stage procurement being a Request for Proposals (RFP) for Stream 1 of the Big Canberra Battery. The RFP will seek contracts for output for one or more large-scale battery storage systems.
- c. For the RFP; agreement to increase the Territory share from around 50% to 'up to 70%' to put downward pressure on price as outlined in section 4.
- d. For the RFP; agreement to increase the duration of proposals from around 10 years to 'up to 20 years' to put downward pressure on price as outlined in section 4.
- e. Agreement that after the RFP is concluded, a later business case will be brought to the Expenditure Review Committee of Cabinet (ERC) seeking the release of this provisioned expense funding to allow contracts to be signed with preferred supplier(s).

This business case also seeks funding for the program/s listed below:

- a. Funding to engage a financial and commercial advisor to provide support to the RFP process.
- b. Ongoing payments for accounting for the revenue and/or payments for Stream 1.

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Lead Agency: Chief Minister, Treasury and Economic Development Directorate

Supporting Agencies: Environment, Planning and Sustainable Development Directorate

Electorate: All

Alignment with the ACT Aboriginal and Torres Strait Islander Agreement 2019-2028:

☒ Yes ☐ No

Alignment with the ACT Women's Plan 2016-26:

☒ Yes ☐ No

Wellbeing domain 1: Environment and climate

Wellbeing domain 2: Economy

Priority Target Group(s):

- | | | | |
|---|--|--|---|
| ☐ Older Canberrans | ☐ Women | ☐ LGBTIQ+ | ☐ Carers |
| ☐ Culturally and Linguistically diverse people | ☐ Children and Young people | ☐ Aboriginal and Torres Strait Islander Peoples | ☐ People with disability |

Funding Category: Parliamentary and Governing Agreement

Existing Program(s): This program was established in the 2020-21 Budget, with funding provided for project administration and funding provisioned for delivery of the batteries. A business case in 2021-22 (Cab 21/779) sought to release provisioned funds to support the work of project team to implement the whole project as well as to release \$692,000 capital for the first tranche of Stream 2 batteries (batteries at government sites).

Year to cease funding or ongoing: Project procurements will cease in 2024-25, although resources will be required for a longer period for contract management and reporting. The Stream 1 revenue and expenses that would be incurred if contracts are signed would cease between 2033-2043 in line with contracts for output for up to 20 years.

Link to Budget consultation: No

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Aggregate Financial Impacts Summary (Preferred Option)	2021-22 \$'000	2022-23 \$'000	2023-24 \$'000	2024-25 \$'000	2025-26 \$'000	Total \$'000
Capital Impacts						
Capital injection		-	-	-	-	-
Capital inflows		-	-	-	-	-
Capital offset – Existing provision ^(a)	(-14,308)	(-25,000)	(-16,692)	(-24,788)	-	(-80,788)
Expense Impacts						
Expenses (operational)		-850	-30	-30	-30	-940
Expenses (provision)		-	-13,891	-13,891	-13,891	-41,674
Expenses – Offsets		-	-	-	-	-
Expenses – Offsets – existing provision ^(a)		-	-	-	-	-
Depreciation		-	-	-	-	-
Revenue (provision)		-	16,430	15,702	13,839	45,971
Commonwealth contribution						
Savings		-	-	-	-	-
Staffing Impact		2022-23	2023-24	2024-25	2025-26	
Total Additional FTEs (number)		0	0	0	0	

(a) Existing provision from 2020-21 Budget (CMTEDD E21) and 2021-22 Budget (CAB21/779). Brackets to show that existing capital provision for Stream 1 is no longer required and is replaced by Expenses and Revenue provisions.

Breakdown of operational expenses in this Business Case

Expenses (\$000)	2022-23	2023-24	2024-25	2025-26	Total
Employee Expenses	-	-	-	-	-
Fair value consultancy	-	30	30	30	90
Financial and Commercial Adviser	850	-	-	-	850
TOTAL	850	30	30	30	940

Calculation of remaining capital provision for Streams 2 and 3 of the Big Canberra Battery

Breakdown of Capital (\$000)	2021-22	2022-23	2023-24	2024-25	2025-26	Total
Capital Provision included in 2020-21 budget (CMTEDD E21) for all Streams	15,000	25,000	30,000	25,788	0	95,788
Capital Provision included in 2020-21 budget for Stream 1 only	14,308	25,000	16,692	24,788	0	80,788
Remaining Capital Provision for Streams 2 and 3	692*		13,308**	1,000**	0	15,000

* CAB21/779 ** Will be the subject of a future business case

Part A – The Business Case

1. Background

Action A1(v) of the Parliamentary and Governing Agreement (PAGA) specifies a commitment to deliver at least 250 MW of new 'large-scale' battery storage distributed across the ACT (the Big Canberra Battery Project). The 2020-21 Budget provided capital funding to deliver this initiative. Expense funding for 2020-21 and 2021-22 was provided in the 2020-21 Budget, while capital funding for the project (\$95.8 million) and expense funding from 2022-23 were provisioned.

A market sounding process for the Big Canberra Battery Project (the Project) has been undertaken to gauge industry interest and capability and provide industry with an opportunity to provide input on the engagement process, role of government and system design considerations.

Independent analysis of the market sounding outcomes was undertaken by the Utilities Technical Regulator (UTR) and commercial consultant Baringa Partners, to consider the appropriateness of recommendations and alignment with the ACT Government's objectives and interests.

A Cabinet Submission was considered by Cabinet on 8 December 2021 (Cab 21/779), which:

- established three primary streams for delivery as part of the Project, with the \$100 million funding to be split amongst these three streams, as well as \$4.2 million for project administration expenses:
 - **Stream 1:** \$80.8 million allocated to large, grid connected batteries primarily on the transmission network;
 - **Stream 2:** \$10 million allocated to batteries at government sites such as schools; and
 - **Stream 3:** \$5 million allocated to neighbourhood-scale batteries (medium sized batteries connected to the distribution grid).
- outlined the recommended investment mechanisms and services to be provided by the batteries for Stream 1; and
- provided agreement to release an Expressions of Interest (EOI) process for Stream 1, while noting that the findings of the EOI would be used to develop this business case for Stream 1.

The three streams of the Project will deliver an ecosystem of batteries distributed across the ACT with the aim of meeting the following objectives:

- deliver 250 MW of new battery storage in the ACT;
- deliver new revenue sources and/or cost savings to the Territory;
- support grid reliability in the ACT and broader network while helping to integrate greater amounts of renewable electricity; and
- put downward pressure on prices in the ACT and broader network.

An EOI process for Stream 1 was held in December 2021 to February 2022. This process was held to:

- identify a shortlist of appropriate organisations to participate in a later RFP;
- determine industry interest and capability and indicative pricing to help inform this business case; and
- refine the development of second stage RFP documentation.

The EOI process identified strong support in the market for the project.

2. Problem statement – define the problem

The following statements apply to Stream 1 (large grid connected batteries).

Australia's electricity market is undergoing a significant transition, from large coal and gas generators to a distributed network primarily powered by solar and wind. Wind and solar are the cheapest forms of electricity generation, and they are supplanting fossil fuel generation. However, wind and solar are inherently volatile in their output and hence need to be supported by other technologies such as batteries.

Existing fossil fuel generation is retiring. This is likely to happen sooner than the technical lifespan of generators, with little notice. The New South Wales National Electricity Market (NEM) region (which the ACT is part of) will be the most impacted in the near term. The lack of coordinated national action in managing the transition is expected to lead to higher electricity prices, lower reliability and worse emissions outcomes than if the transition is managed well. Support from batteries will assist in managing the transition.

Batteries support renewables in the NEM primarily through two mechanisms; a) levelling the daily peaks and troughs in supply and demand through arbitrage and b) by providing 'Ancillary Services' to smooth out sudden changes in electricity generation or usage. The Australian Energy Market Operator (AEMO) pays fees for Ancillary Services that are forecast to make up 20-30% of Stream 1 Project revenue. The majority of the revenue comes from electricity price arbitrage: exploiting the difference between the cheapest and most expensive electricity prices of each day. This price arbitrage and the Ancillary Services help bring down electricity prices charged to the consumer.

Securing financing for battery projects can be difficult, due to uncertainties around revenue and Australian Government policy. Stream 1 would see the Territory share market risk on behalf of project developers, in exchange for a potential return to the Territory. Modelling undertaken for the Territory by the Project commercial advisor, Baringa Partners, suggests that, in the most likely case, the Territory could earn a financial return on its investment. However, in a less likely downside case, the Territory could lose a part of its investment (see below under Detailed Costs).

3. Options analysis

This business case is seeking agreement to proceed to the second stage (RFP) of a two-stage procurement process. Subject to approval to proceed with the RFP stage, the business case is seeking guidance on two key commercial principles (CP) to inform the development of the RFP documentation:

- CP 1: which type(s) of contracts for output to offer in the Stream 1 RFP; and
- CP 2: scale of procurement.

Finally, this business case is also seeking funding for the internal resourcing and external advisor support to deliver the RFP and provide ongoing support to management of the contract(s).

Contract type

The Stream 1 EOI asked proponents for their interest in, and indicative pricing for two contractual mechanisms:

- A **Revenue Share** contract whereby the Territory takes an agreed portion of income generated from the battery's participation in the NEM in exchange for a monthly or annual payment to the proponent. The proponent would retain ownership and control of the

battery and would benefit from a stable revenue stream from the Territory allowing them to secure a loan to part-finance the delivery of the battery (likely combined with equity finance from the Proponent). Revenue Share contracts are well established in the industry.

- A **Virtual Storage** contract which provides the Territory with the difference between the cheapest and most expensive electricity prices of each day. This contract consists of two electricity price swaps. The Territory would receive the revenue that a battery could earn by buying electricity when it is cheap and selling it when it is expensive. In exchange, the Territory would pay the provider fixed daily rates, which could assist the proponent to secure project finance. The first swap will be profitable for the Territory if electricity prices are higher than the agreed fixed swap rate during the daily peak periods, and the second will be profitable if electricity prices are lower than the agreed fixed swap rate during the daily low periods. Virtual Storage contracts are relatively new and not well established in the industry.

The Territory outlined in the EOI that it was considering proceeding to a procurement with one or both mechanisms. Responses to the EOI indicate a majority of respondents prefer the Revenue Share model, although there were some proponents that expressed a preference for Virtual Storage.

Indicative pricing received in the EOI was not comprehensive or sufficiently detailed to enable a comparison between commercial models, or to refine the modelling of financial impacts for this business case.

Option 1 (preferred): Proceed to RFP for both Revenue Share and Virtual Storage contracts

Allow respondents shortlisted through the EOI to submit proposals based on their choice of Revenue Share or Virtual Storage contracts, or potentially allow respondents to submit pricing for both, and allow the Territory to select whichever represents better value for money.

The financial impacts for this business case have been developed on the assumption that 100% of contracts struck are for Revenue Share, as this is the mechanism that attracted greater interest. Under this option the delegate would sign Virtual Storage contracts only if they are found to offer better value for money to the Territory.

Option 2: Proceed to RFP for Revenue Share contracts only

Allow shortlisted respondents to submit proposals based only on the well-established and industry preferred Revenue Share arrangement. This would simplify the second RFP stage of the procurement.

Scale

PAGA commitment A1(v) is to deliver at least 250 MW of battery storage in the ACT. As agreed in Cab 21/779, Stream 1 of the Project has the objective to deliver at least 250 MW of battery storage. Streams 2 and 3 are not expected to deliver a material percentage of the 250 MW commitment.

The procurement could require successful bidders to deliver 250 MW of battery storage capacity but offer a contract for output for a small share of the capacity (20-40%), instead of up to 70% share that industry has indicated is their preference.

Option A (preferred): Up to 70% share as preferred by industry

Deliver the procurement as outlined in Cab 21/779, to secure contracts for at least 250 MW of physical battery capacity.

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Option B: reduced government investment

Deliver the procurement for 250 MW of battery storage with a lower share of the project backed by a Territory contract.

Typical responses to the EOI process indicated that respondents preferred that Territory take a share of approximately 50-70%. A small number of respondents suggested that if the Territory wished to contract a lower share than 50-70%, respondents could attempt to enter into an additional contract for output with a third party so that the project can secure the required amount of financial certainty with less Territory backing.

Assuming the respondent successfully enters into a similar contract with a third party, reducing the size of the Territory's investment would be expected to proportionally decrease the revenue and expenses for the project. For example, reducing from a 50% Revenue Share contract to a 25% share could halve both the forecast revenue and expense.

EOI responses indicate that if the Territory were to provide a contract for output for a lower share of the project, and the respondents are unable to secure a contract for output with another party, the pricing received during the RFP would reflect a higher Weighted Average Cost of Capital (WACC) and be a more expensive option for the Territory. In this scenario, while expenses may be reduced, revenue would be reduced by a greater degree and the net outcome would be less likely to be positive overall.

Option C: do not deliver any large scale grid connected battery through this process

A third option is to not proceed to RFP. This would expose the Territory to criticism and would result in a failure to meet the PAGA commitment.

3.1 Options comparison table (brief summary comparison)

CP 1: Which type(s) of contracts for output to offer in the Stream 1 RFP?

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	Option 1: Proceed with Revenue share and Virtual Storage (recommended)	Option 2: Revenue Share only
Benefits Outline the benefits of each option	- Provides the market with flexibility, which may increase the level of competition in the RFP to deliver a value for money outcome to the Territory. - Allows the choice between Revenue Share and Virtual Storage to be made when final pricing and proposals are known. - Territory could contract with multiple providers for different contract types – this will limit the Territory's exposure to certain risks events through diversification (subject to proposed battery solution delivering up to 250MW).	- Administratively simpler in RFP. - Clearer evaluation framework – a value for money assessment will be undertaken on a single contract form.
Disadvantages and Major Risks List negative consequences for each option	- Additional complexity in RFP, in particular in assessing the risk associated with both contract types to inform the value for money considerations. - Approximately \$45,000 higher consultancy spend required in 2022-23 for additional contract drafting. This cost can be covered by existing budget. - Increased tender evaluation effort and negotiations, should suppliers respond to one or both contracts. The impact on costs (legal and commercial) is not able to be quantified at this point. - Additional impact on the market's effort to respond to the RFP, in particular if the Territory chooses to select the revenue share model.	- Many respondents who expressed a preference for Revenue Share requested a number of modifications to the model be considered. These modifications may present risks to the Territory but failing to accept modifications may lead to decreased interest from shortlisted respondents. This risk applies to Option 1. - Greater exposure to risk of low electricity prices and volatility under the downside scenario. - Greater exposure to additional operational and market risks, such as the battery operator charging and discharging the battery at the wrong time.
Timescale What period will the costs and benefits be incurred over	Up to 20 years	Up to 20 years
Forecast revenues and expense	- As outlined in this business case under 'Detailed Costs.' - Base case electricity price forecasts: \$10.59 million net revenue to the Territory over a 10-year contract life. - Less likely downside case price forecasts: \$20.27 million net expense over a 10-year contract life.	- Base case electricity price forecasts: \$10.59 million net revenue to the Territory over a 10-year contract life. - Less likely downside case price forecasts: \$20.27 million net expense over a 10-year contract life.

	Option 1: Proceed with Revenueshare and Virtual Storage (recommended)	Option 2: Revenue Share only
Evaluation Determine how the outcomes will support wellbeing	Figures based on a Revenue Share model. Supporting greater uptake of renewable electricity in the ACT and National Electricity Market. Supporting reliability of the ACT, NSW and broader electricity grid. Providing an additional revenue source for Government. Supporting the development of the battery industry. Assisting to put downward pressure on electricity prices.	As option 1

CP 2: scale of procurement

	Option A: Up to 70% share as preferred by industry (recommended)	Option B: reduced government investment (25% capped)	Option C: do not deliver any large scale grid connected battery through this process
Benefits Outline the benefits of each option	Highest potential revenue to Territory. Provides greater revenue certainty to the developer, which will further de-risk the project's cashflows and improve the overall bankability of the project.	If suppliers can secure additional contracts from third parties, potential to deliver the same battery investment with lower financial risk to the Territory.	No financial risk.
Disadvantages and Major Risks List negative consequences for each option	Potential risk to Territory financial position under a downside scenario.	Risk to delivery of project and/or Territory financial position if suppliers are unable/unwilling to secure additional contracts for output with third parties. Potential legal complexities from introducing a third party. Less likely to be net positive financially as project is likely to have a higher WACC.	Reputational risk associated with failure to deliver the PAGA commitment. Reputational risk associated with running an EOI process, and then not proceeding to an RFP despite the EOI indicating a strong level of industry interest and capability.
Timescale What period will the costs and benefits be incurred over	Up to 20 years.	Up to 20 years.	N/A
Forecast revenues and expense	As outlined in this business case under 'Detailed Costs.' Base case electricity price forecasts: \$10.59 million net revenue to the Territory over a 10-year contract life. Less likely downside case price forecasts: \$20.27 million net expense over a 10-year contract life. Figures based on a Revenue Share model.	If suppliers are willing and able to secure additional contracts from third parties, revenue/expense may be roughly half that of Option A.	Nil.

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Evaluation Determine how the outcomes will support wellbeing	Option A: Up to 70% share as preferred by industry (recommended)	Option B: reduced government investment (25% capped)	Option C: do not deliver any large scale grid connected battery through this process
	Supporting greater uptake of renewable electricity in the ACT and National Electricity Market. Supporting reliability of the ACT, NSW and broader electricity grid. Providing an additional revenue source for Government. Supporting the development of the battery industry. Assisting to put downward pressure on electricity prices.	As option 1.	Nil.

4. Proposed Solution (as per options table above)

Summary

This business case seeks to remove the provisioned capital funding and replace it with revenue and expense provisions that reflect the base case estimate of the financial impact of contracts for output planned to deliver Stream 1 of the Project. The capital provision for Streams 2 and 3 remain unchanged.

This business case also seeks approval to proceed to the next stage of the procurement process, a Request for Proposal issued to respondents shortlisted through the Expression of Interest (EOI) stage.

Given the quasi-PPP nature of the commercial arrangements, and the potential for upwards of \$250 million private finance for the project (based on an assumed \$1m per MW), a level of due diligence commensurate with the project scale and complexity will be required – it is typical to engage a financial and commercial advisor for a transaction for this purpose. As such, the business case seeks funding to engage advisors to provide the necessary support during the next stage of the procurement and budget for ongoing contract management activities. This role is in addition to the specialist energy advisor (Baringa Partners) who are already engaged to provide advice.

The recent EOI has been used to inform this business case. In responses to the EOI industry indicated that higher Territory share ratio and longer contract durations would lead to lower weighted average cost of capital for proponents and lead to better pricing for the Territory.

The design brief provided to Cabinet in 2021 provided initial assumptions of a 50% Territory share in a contract for output arrangement and a contract duration of around 10 years. Through the EOI we have learned that industry are interested in up to 70% Territory share and up to 20-year terms to provide more certainty for proponents, lower WACC, and potentially more competitive pricing.

Our preferred option therefore is to proceed to RFP with both Revenue Share and Virtual Storage commercial models as options, and with the Territory offering up to a 70% share arrangement for a contract duration of up to 20 years.

Given the nature of the contracts, an acceptable level of confidence in the budget estimates will not be known until pricing is provided through the RFP process. The RFP will solicit specific proposals and binding prices. A later business case will be brought forward that seeks ERC's agreement to a precise expense amount and revised revenue estimates for a specified contract duration when the RFP concludes and the preferred proposal(s) identified. Similar to recent precedents on Light Rail Stage 2 and the Canberra Hospital Expansion projects, this future submission will also seek ERC's final approval to enter into a contract with the preferred supplier(s).

The financial modelling provided is based on 10-year terms and a 50% Territory share. A longer term and/or larger Territory share should lead to more beneficial pricing for the Territory. The existing modelling is therefore inherently conservative. Expense and revenue have not been modelled beyond ten years at this stage. Treasury advise that is an appropriate course of action at this stage given the alignment with the 10-year time horizon of the Territory budget forecasting.

NPV modelling on longer durations will be done if the preferred proposal(s) from the RFP are for longer than a 10-year period. Similarly, NPV modelling on larger than 50% share proportion will be done if the preferred proposal(s) from the RFP are greater than 50% share. The later business case will contain that modelling.

Detail

Remove capital funding provision

Nominally \$80,816,000 was provisioned for Stream 1 in the 2020-21 Business Case (CMTEDDE21) and subsequent Cabinet Submission (Cab 21/779). This capital provision is no longer required.

Create expense and revenue provisions

Instead, the Territory would proceed to a procurement seeking to enter into one or more financial contracts that generate revenues and incur expenses over the contract lifespan.

The actual net revenue or expense will depend on the contract(s) signed and the performance of the battery/batteries and/or the market over the contract life. The revenue and expense figures provided in this business case are an estimate based on modelling by energy markets consultancy Baringa Partners. They represent the most likely outcome based on Baringa's modelling of energy markets combined with likely future changes to energy market rules as well as plans for the exit of fossil fuel generation and the increase in renewables and dispatchable storage. Expressions of Interest received during the first stage of the procurement have confirmed the estimates provided by Baringa and have not provided information that would lead us to question that modelling.

Proceed to the second stage of procurement: Request for Proposals (RFP)

Stream 1 financial performance and risk is driven by six key elements about which the Territory will seek detail from proponents through the RFP process. These are:

- 1) Project quality including technology, location, local industry support and sustainability measures
- 2) Respondent capability and capacity
- 3) Territory share

EOI submissions indicated that by providing additional certainty to the project with a larger Territory share of project output (i.e. up to 70%), the project could be delivered with lower WACC, reducing the total cost to finance the project. This could lead to better pricing to the Territory, although this would have to be considered against the increased risk from a higher overall Territory investment. The preferred option therefore seeks to put 'up to 70%' Territory share in the RFP Statement of Requirements.

4) Contract duration

EOI submissions have suggested that longer duration contracts provide additional certainty so the cost of finance can be reduced and better pricing received. The RFP will therefore seek proposals of up to 20 years duration.

Potential downsides are that this would add risk to the contract – revenue predictions for the contracts will be less reliable for longer durations, and battery performance needs to be managed over a longer period. This would also potentially place the Territory under longer term financial obligations than assumed previously.

5) Price

The expense provision in this business case is based on price estimates provided by Baringa. After the RFP has concluded the Territory will have binding prices for selected proposal(s) which will be used to refine the expenses in a future business case.

6) Contract type

The contract type will impact expense and revenue expectations and risk profile.

A **'Revenue Share'** contract provides the Territory with an agreed share of all revenues from the battery, including net revenues earned from buying and selling electricity on the wholesale market, ancillary services revenues, as well as other revenues which could include capacity market payments and payments for other grid services. In exchange the Territory would make an agreed annual payment to the proponent. The proponent would retain ownership and control of the battery and would benefit from the more stable revenue stream from the Territory allowing them to secure a loan to deliver the battery.

The Territory would have a financial interest in the success of the contracted battery but would not have operational control. During the procurement phase, the Territory will need to ensure that consideration is given to the capability of proponents to deliver the project and operate the battery in a profitable manner. Project delays or lower than forecast project revenue would impact the Territory's financial position.

This mechanism is considered at low risk from changing market rules. As the Territory would be entitled to a share of any project revenues, the Territory would only be exposed to risk if rule changes were to materially decrease the profitability of battery projects. As battery projects are the main forecast source of new build dispatchable electricity capacity, any rule change that decreases battery profitability would reduce the competition for the Territory's battery. This reduced supply of dispatchable electricity would then lead to an increase in profitability for existing projects, moderating the impact of the rule change.

A **'Virtual Storage'** contract provides the Territory with the difference between the cheapest and most expensive electricity prices of each day. The Territory therefore receives the revenue that a battery could earn by buying electricity when it is cheap and selling it when it is expensive. In exchange, the Territory would pay the provider a fixed daily rate, which could assist the proponent to secure project finance. This contract will be profitable for the Territory if electricity prices are high during peak periods, and low during off-peak periods.

The Virtual Storage contract is primarily a financial contract. The Territory's financial position would be impacted only by changes to the wholesale electricity price over the contract duration. The Territory would not be financially impacted by delays to the battery project being completed or operational factors such as outages at the battery facility. The Territory would not be exposed to any risk from whether the battery is operated in a way that maximises revenue for the owner.

However, this financial contract will be linked to the delivery of physical battery infrastructure in the ACT. The size of the contract will not exceed the size of infrastructure installed, and the Territory will not make payments under the contract unless and until the infrastructure is constructed.

This contract structure carries risk that changes in electricity market rules could materially impact the wholesale market price. Several recent proposed changes to electricity market rules have been canvassed that could significantly reduce the wholesale price a project can receive. For example, the proposed capacity market (physical retailer reliability obligation) would provide an alternative revenue stream for energy projects and would also be expected to reduce the maximum allowable and average wholesale electricity prices.

Appoint financial and commercial advisors

A financial and commercial advisor will be engaged to provide advice throughout the RFP development and evaluation stages, through to negotiations and contract close. The financial and commercial advisor will provide input into the development of the suite of RFP documentation, general transaction management, support to the team evaluate tender responses and negotiations support. While \$100,000 was allocated to specialist advice from the energy consultant (Baringa Partners) in the 2020-21 budget, the Infrastructure Finance and Reform Division of Treasury has advised recently that given these factors, an allowance of up to \$850,000 may be required for the financial and commercial advisory services. This business case therefore seeks an additional \$850,000 to cover the difference.

Other outputs funded by this business case

This business case seeks staffing and expenses funding to undertake the following tasks:

- Monthly forecasts of financial contract position for the current and next financial year will be required over the term of the contracts to enable net revenues to be appropriately forecast for the Budget. These forecasts will cost \$30,000 per annum from 2023-24. This expense was not foreseen in the original business case.

Authority to enter into contracts – proposed next business case

When the RFP has concluded and negotiations with a preferred supplier(s) have been finalised, a further business case will be developed, outlining total anticipated expense and revenue impacts based on the preferred supplier(s) response(s). This business case will be brought to Cabinet, seeking agreement to proceed to contract execution with the preferred supplier(s). The financial and commercial advisor will also provide assistance to the project team in the development of this business case.

One AS06 will also be required from 2025-26 to manage contracts under this Project. Funding for this will be requested in this forthcoming business case.

5. Policy alignment

Action A1(v) of the PAGA specifies a government commitment to deliver at least 250 MW of new 'large-scale' battery storage distributed across the ACT. This business case will deliver important elements of this PAGA commitment.

This proposal will deliver environmental and economic benefits to the Territory. It has no specific impact, positive or negative, on the ACT Aboriginal and Torres Strait Islander community or on gender equality.

6. Implementation, risk management and governance

Implementation

Project design considerations for the proposed Project have already been undertaken, using funding secured in the 2020-21 financial year.

The first stage of an anticipated two-stage procurement process (an EOJ) for Stream 1 was open between 15 December 2021 and 11 February 2022. It is anticipated that this stream will proceed to a second stage process, an RFP, which is expected to be released in mid-2022.

Evaluation of the RFP would be completed by November 2022. Contract negotiation and installation and connection of the battery or batteries will then be undertaken in 2023.

Risks

Risk	Potential Impact	Controls
Market assumptions are not correct	- Financial return to the Territory may not be correct. - Developers may not be interested.	- Assumptions have been developed by market experts and circulated with Treasury in CMTEDD. - The procurement delivery team has a well-documented business case and has further refined the project's strategic direction through a co-design process with numerous industry stakeholders. The team has a high capability to manage procurements associated with energy infrastructure due to prior experience on renewable electricity auctions. - Assumptions will be assessed against tender responses. Final contract values will be based on binding pricing submitted by tenderers.
Energy market factors (competition, rule changes, new markets, improved technology, etc.)	- Project interest reduces. - Decreased project viability. - Worse financial outcome for Territory. - Delays and additional costs associated with additional regulation.	- Deliver a flexible and diverse battery ecosystem with multiple potential revenue sources, and with different profiles of exposure to various risks. - Monitor energy market conditions and forecasts and use information to adapt project if required. - Engage external consultants with market forecasting expertise.
Government faces liability at end of contract/project life	Worse financial outcome for Territory.	Include assessment of end-of-life plans in procurement evaluation
Contracted developer fails to deliver project	- Failure of the project. - Reputational damage to the Territory.	Engage specialist advisors to provide financial, commercial and legal due diligence on tender responses commensurate with level of project complexity and value.
Competing projects in Australia diminishes market appetite.	Reduced competitive tension in the process due to a lower number of responses to the RFP.	- Commercial principles and assumptions consistent with market norms. - Timely release of the RFP to the market to minimise impact with competing projects.

Risk	Potential Impact	Controls
Insufficient funding allocated	Funding shortfalls for the consultants and / or project team.	- Active management to ensure early identification of issues that may result in cost overruns, as well as options considered, agreed and implemented. - Developing cost estimates based on existing data.

Governance

Funding will be appropriated to CMTEDD, and the delivery is overseen by the Office of the Coordinator General for Climate Action. The delivery team is functionally located in EPSDD (reimbursed by CMTEDD), which ensures linkages with other energy initiatives and leverages existing knowledge and capability. The delivery team will continue to deliver the Project during the contract management phase, including monitoring, evaluation and through to end-of-life.

The Coordinator General for Climate Action reports to the Climate Action Subcommittee of Strategic Board on implementation progress.

7. Performance measures and evaluation

Assuming later agreement to proceed to contract execution, performance measures for the delivery of Stream 1 of the Project will include:

- Has the project delivered battery capacity as outlined in this project business case consistent with contracts signed, with minimal delays?
- Are Stream 1 financial returns broadly consistent with expectations set in this business case?
- To what extent do Stream 1 batteries reduce the ACT's electricity demand during the peak consumption of the ACT electricity grid, or the part of the electricity grid the batteries are connected to?

8. Inter-agency collaboration and stakeholder management

The Project has been delivered in collaboration between the Office of the Coordinator General for Climate Action in CMTEDD and the Climate Change and Energy Division of EPSDD, as outlined under 'Governance'. This business case has been developed with assistance from CMTEDD including several parts of Treasury (Finance and Budget, Infrastructure Finance and Reform, Economic and Financial Analysis, Strategic Finance and Financial Reporting and Frameworks).

The Utilities Technical Regulation team, Access Canberra is supporting the Project team with technical advice.

The Project team has also worked with a number of other governments and government agencies to refine the Project design, procurement plan and draft contracts, including the NSW Department of Planning, Industry and Environment, Victorian Department of Environment, Land, Water and Planning, Clean Energy Finance Corporation and the Australian Energy Market Operator. External consultation has been undertaken with industry through the market sounding in order to refine the design of the Project.

Consultation with Evoenergy and Transgrid has been undertaken to understand the availability of the ACT electricity network to host battery storage and preferred locations.

9. Communications

Communications for this project are managed by the CMTEDD Climate Action communications team from a strategic perspective, with delivery support provided by the EPSDD communications team. There is no budget allocated for communications of the Project. However, it is likely that over the course of the Project there will be a number of important milestones, which will provide opportunities to update the ACT community about progress on the Project.

10. Detailed costs

10.1 Preliminary cost estimates

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

This business case seeks agreement to remove the existing capital provision for Stream 1 and replace it with provisioned expenses and revenue. It also seeks agreement to proceed to RFP for contracts for output for Stream 1 as well as some additional project administration expenses.

Contracts for output

These contracts may generate net revenue or incur net expense for the Territory during each financial year, depending on the wholesale electricity price for a Virtual Storage contract or a battery's net revenue for Revenue Share.

The financial impact presented here is based on modelling produced by commercial advisor, Baringa Partners. Expense estimates are based on expectations for pricing that will be received during the RFP.

[REDACTED]

[REDACTED]

Baringa forecast the most likely net financial position for the Territory under a 'base case' scenario (Figure 1). The base case uses an estimate of wholesale electricity prices informed by a series of neutral assumptions.

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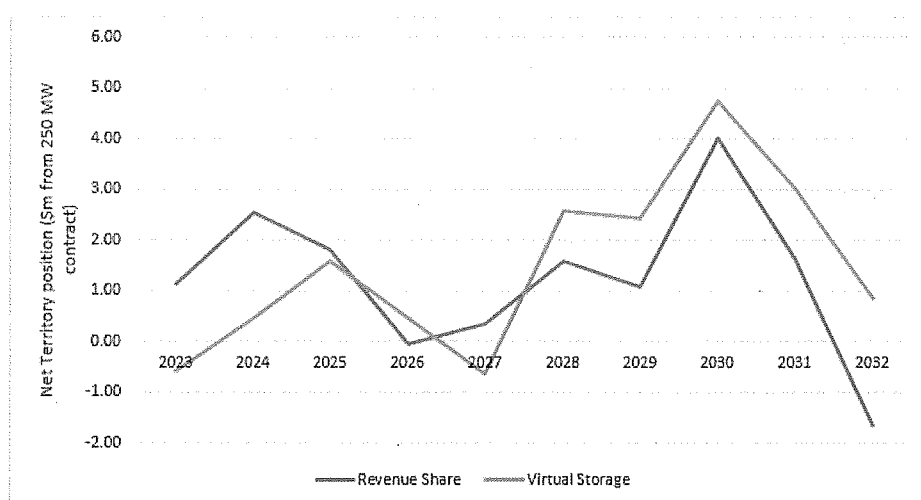


Figure 1 - Forecast Territory return profile

To investigate risk to the Territory, a bespoke 'downside' case was also modelled, and the cost of the contract to the Territory was calculated. This much less likely downside scenario used lower electricity and much lower ancillary services prices, driven by increased, low-cost competition due to:

- lower prices for coal and gas; and
- additional battery capacity driven by other governments' intervention and reduced technology costs after the Project is complete.

While probability analysis has not been undertaken, Baringa advise that they consider the base case as the most likely scenario. The downside scenario was prepared to understand the exposure of the Territory if many of the default assumptions prove to be too optimistic, so should be viewed as a much less likely scenario. There has been no analysis of the net revenue to the Territory under an 'upside' scenario, where electricity price forecasts are deliberately optimistic, rather than neutral or negative.

A later business case will be brought forward after the RFP has concluded. That later business case will seek the release of the provisioned revenue and expense items and seek agreement to proceed to contract negotiations. At that time the expense obligations will be known, as the Territory will have selected specific project(s) with known project size, Territory share, pricing, contract duration and contract type.

CABINET

This later business case will provide a more refined estimate of revenue that the contracts will be expected to deliver. This estimate will be based on expectations for future revenue from the battery (for Revenue Share contracts) or electricity price forecasts (Virtual Storage).

Initial accounting advice from the Strategic Finance team of Treasury is that the contracts for output would not establish a Finance Lease, and the Territory would not record any fixed assets or service concession arrangements related to the stream. All revenues and expenses from the contracts would be recognised in the Operating Statement. This accounting advice may need to be refined during contract drafting and negotiation.

Project administration expenses

This business case requests that funding be made available on an ongoing basis to support forecasting the Territory's net revenue and expenses for the contracts for output, to allow for these to be entered into the Budget (the "fair value consultancy").

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Overall Total Recurrent Costs	2022-23	2023-24	2024-25	2025-26	Total
Employee Expenses	-	-	-	-	-
Fair value consultancy	-	30,000	30,000	30,000	90,000
Financial and commercial advisor (RFP)	850,000	-	-	-	850,000
Total	850,000	30,000	30,000	169,000	1,079,000

A detailed breakdown of the proposed financial and commercial advisor fees by key activities is as follows:

Stage	Summary of key activities	Proposed budget
RFP development	Review of RFP documentation, development of commercial principles, update to financial modelling and development of detailed benchmark estimates, development of templates, returnable schedules.	100,000
Transaction management support while RFP is in the market	Support to the project team over a 3 month period on an adhoc basis. This may include support to developing responses to tenderer queries, drafting addendums to the RFP documentation.	45,000
Tender evaluation support	Support to the evaluation of the financial and commercial aspects of the tenders and pricing. This will include due diligence on the ability of the tenderer to finance the solution, analysis of the robustness of the assumptions in the financial model, financial strength assessments of the developer and key entities, review and analysis of any commercial assumptions. Assumes due diligence on up to 10 tenderer responses.	400,000
Negotiations support	Financial and commercial support to negotiations. This budget assumes the potential for negotiations with more than one preferred supplier.	250,000
Ad hoc advice	Ad-hoc support throughout the project. This may include the provision of limited accounting advice, if required.	30,000
Input into future business case	Support to the project team draft the final business case for ERC consideration.	25,000
Total		850,000

9.2 Other funding sources

- Nil

9.3 Offsets

- Nil

Part B: Business Case Authorisations

Capital Works and Plant & Equipment Authorisations (sign-offs essential)

Not applicable

ICT reviews

This business case does not have any ICT requirements.

WELLBEING IMPACT ASSESSMENT

Big Canberra Battery	CMTEDD	Wellbeing Impact 1
Purpose of proposal This proposal seeks agreement to proceed to a Request for Proposals for Stream 1 of the Big Canberra Battery Project so as to secure contracts for output for one or more large-scale battery storage systems. The Big Canberra Battery Project is a Parliamentary and Governing Agreement (PAGA) commitment to deliver at least 250 megawatts (MW) of large-scale battery storage distributed across the ACT.		
Impact description We anticipate that the proposal will have positive wellbeing impacts for the Canberra and broader community, particularly across the environment and climate wellbeing domains. Batteries are a key part of a clean energy future as they provide a vital link to store energy from renewable sources and improve the resilience and reliability of our future electricity system. The Big Canberra Battery Project is part of the ACT Government's \$307 million investment over five years to take the next steps to transition to net zero emissions. The proposal facilitates the penetration of renewables into the electricity grid, provides grid support services, potentially provides cost savings or revenues for the Territory, puts downward pressure on electricity prices and helps to build the renewables economy in the ACT. The focus of the current proposal is large-scale grid-connected batteries (>10MW). It is likely that batteries will be located in the vicinity of existing electricity infrastructure such as substations. Batteries are modular in nature, and so construction is relatively straightforward. There may be a temporary negative impact on the community living in the vicinity of the battery sites during the construction phase. This negative must be considered in the light of a trade-off to be balanced against the future benefits of the proposal – both for the community and the environment. This proposal is one of three streams of procurement for the Big Canberra Battery Project. Other streams include batteries at government sites such as schools, and neighbourhood-scale batteries. This proposed 'ecosystem' of batteries, with batteries at different scales and providing different services, means the benefits will be shared broadly across the community.		
Who is affected? The proposal has positive wellbeing impacts for the entire community through its contribution to climate action by allowing greater penetration of renewable energy into the grid. There are also implications for energy users generally with the different procurement streams under the project providing benefits for different user groups. The focus of this proposal - Stream 1 (large, grid connected batteries) - will benefit energy users across the ACT through downward pressure on energy prices. The proposal is seeking to explore noteworthy social and environmental outcomes. Large-scale battery storage systems are a new and exciting form of electricity infrastructure that may attract community interest. Subject to the constraints of site safety, there may be opportunities to offer public visibility for interested members of the community or other forms of educational awareness. There may also be opportunities for community involvement or support in the project. A Cultural Heritage Assessment (to assess the potential heritage impacts of the battery development) will be required as part of a Development Application for any sites that will host large-scale battery storage systems under this proposal. Consultation with Aboriginal and Torres Strait Islander ACT community will occur. In terms of impacts on the local business community, the project already has a large number of ACT businesses registered to receive information. The procurement of large-scale batteries under the proposal will include local content/services requirements. Other streams of procurement under the Big Canberra Battery project will see different wellbeing impacts. Stream 2 (batteries at government sites) will support directorates with reduced electricity bills, their transition from gas, as well as putting downward pressure on prices through reduced augmentation costs across the distribution grid. Stream 3 (neighbourhood-scale batteries) is being designed currently but may provide the opportunity for individuals, small organisations or community groups to participate in the energy transition.		
Wellbeing domain	Environment and climate	
Timeframe Five years plus It is estimated that batteries established through the proposal will have a 10 to 20-year life.		
Evidence base and data What do we know now?		

WELLBEING IMPACT ASSESSMENT

The role of large-scale batteries in Australia's clean energy future, particularly in relation to smoothing energy flows from solar and wind generators and in the supply of grid stability services, is well understood and supported by considerable data. The impact of the transition from fossil fuels to renewables on the price of electricity and the stability of the grid is also well documented and supported by data, primarily informed by the Australian Energy Market Operator's Integrated System Plan: aemo.com.au/en/energy-systems/major-publications/integrated-system-plan-isp/2022-integrated-system-plan-isp

As part of Phase 1 of the Big Canberra Battery project, a market sounding process was undertaken to gather insights from industry on various aspects of the project, including the engagement process, the role of government and design considerations. This included work with the ANU's Battery Storage and Grid Integration Program.

Commercial consultants, Baringa Partners, were engaged to quantitatively model the financial impacts to the Territory for several models that were considered for this proposal. This modelling is underpinned by their robust 'reference case' – a report produced quarterly which provides projections on the National Electricity Market wholesale power prices. A summary of outcomes has been provided in the design brief considered by Cabinet in October 2021 (CAB2021/683).

What do we need to know?

After implementation of the proposal, data will be collected on use, performance and return on investment as measures of impact. The impact on emissions reduction is more difficult to quantify but could be drawn from that use and performance data.

Accountability and evaluation – how will we know this proposal has been successful?

The proposal (Stream 1 – large scale batteries connected to the grid) will be evaluated against how well it delivers against the following performance measures:

- Has the project delivered battery capacity as outlined in the Project business case consistent with contracts signed, with minimal delays?
- Are Stream 1 financial returns broadly consistent with expectations set in the Project business case?
- To what extent do Stream 1 batteries reduce the ACT's electricity demand during the peak consumption of the ACT electricity grid or the part of the electricity grid the batteries are connected to?

A post-implementation review will be undertaken to analyse and report against the criteria listed above.

The performance of all batteries will be tracked through the life of the program.

The overall benefit of the proposal on environment and climate by supporting renewable penetration into the grid and improving the resilience and reliability of a future energy system is long term, dispersed and changes are virtually impossible to link back to a single initiative.

Key relationships

The Office of the Coordinator General for Climate Action in CMTEDD and the Climate Change and Energy Division in EPSDD are collaborating on the delivery of the Big Canberra Battery Project. Assistance and advice have been provided by CMTEDD (Finance and Budget, Infrastructure Finance and Reform, Economic and Financial Analysis, Strategic Finance and Financial Reporting and Frameworks) as well as the Utilities Technical Regulation team in Access Canberra.

The Project team consulted with a number of areas of government to identify government owned land that may be leased to support Stream 1. Owners of (and other stakeholders associated with) potential sites for Stream 1 batteries have also been consulted through the Land Requests Advisory Committee (LRAC) process.

Aboriginal and Torres Strait Islander representative bodies have not been consulted to date. As sites for Stream 1 batteries become better known, Aboriginal and Torres Strait Islander representative bodies will be consulted on those sites.