

Electricity Distribution Price Review FY2027 to FY2031 (EDPR 2027-31)

Resubmission Addendum: Distribution System Operator
(DSO)

Date: 1 December 2025



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Document history

| DATE | VERSION | COMMENT |
|------------|---------|-------------------------------|
| 17/11/2025 | V1.0 | Draft business case addendum |
| 29/11/2025 | V2.0 | Final addendum for submission |

Related documents

| DOCUMENT | VERSION | AUTHOR |
|--|---------|-----------------|
| Wipro - Cost Estimation Report | V1.0 | Wipro |
| Revised Proposal Digital Program NPV Model | V2.0 | AusNet Services |
| Demand Driven Augmentation in the LV Network & Flexible Services Business Case | V1.0 | AusNet Services |
| CER Enablement Business Case | V1.0 | AusNet Services |

Approvals

| POSITION | DATE |
|--|---------------|
| Digital & Technology – Strategy, Regulatory and Partner Management | November 2025 |
| Digital & Technology – Architecture | November 2025 |
| Distribution – Grid Evolution | November 2025 |
| Distribution – Strategy and Regulation | November 2025 |

Executive Summary

The Distributed System Operator (DSO) program is AusNet's non-recurrent expenditure to uplift capabilities and services to meet the evolving needs of our customers, through supporting the continued adoption and integration of Distributed Energy Resources (DERs) and Consumer Energy Resources (CERs). We currently leverage capabilities delivered under the Victorian Emergency Backstop Mechanism (VEBM), through our Distributed Energy Resource Management System (DERMS) and Advanced Distribution Management System (ADMS), to manage CERs. As DER/CER adoption increases, AusNet will be required to transition to a full Distributed System Operator model, expanding core technologies and capabilities to support our customers, maintain grid stability, and build a more flexible and resilient energy system.

AusNet's initial proposal included \$40.8m capex and \$3.2m opex (\$real 2026) for the Distributed System Operator program. The AER Draft Decision, approved the Flexible Exports component of this program, resulting in an alternate forecast of \$16.5m capex and the removal of opex, as detailed in Table 1 below.

Table 1 AusNet Initial Proposal and AER Alternative Forecast (\$m, real FY2026)

| Cost item | AusNet Initial Proposal | AER Alternative | Adjustment |
|-----------|-------------------------|-----------------|------------|
| Capex | \$40.8M | \$16.5M | -60% |
| Opex | \$3.2M | - | -100% |

The AER's Draft Decision details reasons for these adjustments, which AusNet has addressed in our Revised Proposal:

| AER Draft Decision Feedback | How this has been addressed in AusNet's Revised Proposal |
|--|---|
| AusNet's economic assessment is implausible and cannot be relied on. The economic model inputs were highly questionable, the timing of forecast benefits did not appear realistic, avoided generation curtailment and emissions reduction benefits were not proportionate to each other | <ul style="list-style-type: none"> As per the AER's Draft Decision, AusNet's proposed Flexible Exports approach has been accepted as prudent and as such we have not revised our cost-benefit assessment for this scope. Revised cost benefit modelling has been completed for the additional scope in our Revised Proposal, with benefit modelling specifically refined to ensure assumptions are plausible and realistic. |
| AusNet's options analysis is not meaningful, as 'do nothing' is not a credible investment option, and the remaining options considered by AusNet do not account for project scope refinements (the inclusion/exclusion of certain initiatives) | <p>We have addressed the AER's Draft Decision feedback and updated our options analysis accordingly. We recognise that our Initial Proposal considered too few options and have now included three scales of scope options for consideration in our Revised Proposal.</p> <ul style="list-style-type: none"> Option 1 proposes to deliver our Flexible Exports approach (as accepted by the AER), a commitment we have made with clear customer benefit Option 2 proposes to deliver our Flexible Exports approach, non-network solutions portal and community network data upgrades Option 3 proposes to deliver a full program, enabling Flexibility Services for all customers |
| Costing is likely to be overestimated. EMCa found that, as with AusNet's other proposed ICT projects, costs for the seven DSO initiatives are somewhat overestimated. | <ul style="list-style-type: none"> We have addressed EMCa's findings by validating our estimates with our ICT delivery partner Wipro. As a result, the cost estimate for the Network Data Sharing initiative has reduced, while other estimates have been confirmed as broadly accurate following refinement of scope |
| AusNet has not justified the proposed scope. EMCa found that the roll out of flexible exports, DER Optimisation and DERMS – Load Management provide most of the project's benefits. For some initiatives, including Network Data Sharing and Flexibility Services Integration, the estimated customer benefits are not evidenced | <p>We have identified and validated clear need, expectation, and realistic demand for the Distributed System Operator (DSO) capabilities and services in the FY2027-31 period:</p> <ul style="list-style-type: none"> Non-network solutions portal and Flexibility Services: The energy transition presents a significant augmentation challenge, with a desire to maximise utilisation of existing assets with added flexibility to manage grid constraints, in line with Victorian Government and AER expectations for increased demand management. Community Network Data Upgrades: Current demand from customers, in line with industry moving towards increase in published data to deliver greater benefit. |

In addressing the AER's Draft Decision feedback, AusNet evaluated three options for the Revised Proposal program. The options assessed the relative cost and benefits from the three alternative scopes of work. **Table 2** details the results of this assessment, with the preferred Option 3 delivering the highest NPV.

Table 2 – Options assessment results (\$m, real 2024, distribution network cost allocation)

| # | OPTION NAME | COST (TOTEX \$M) | NPV (\$M) | PREFERRED |
|---|---|---------------------|--------------|------------|
| 1 | Flexible Exports Only | \$15.0m | \$12.8m | No |
| 2 | Flexible Exports + Non-network Solutions Portal | \$19.3m | \$16.4m | No |
| 3 | Full Program – Enable Flexibility Services | \$30.8m | \$18.7m | Yes |

Based on this assessment, AusNet's DSO Revised Proposal represents \$29.9m capex and \$0.9m opex (made up of non-recurrent SaaS implementation costs, and recurrent ongoing software licencing and support). All costs represent distribution network allocation. The expenditure profile for the FY2027-31 regulatory period is shown in **Table 3** below.

Table 3 - Forecast expenditure for Option 3 (\$m real 2024)

| Cost item | FY27 | FY28 | FY29 | FY30 | FY31 | Total |
|-------------------------------------|---------------|---------------|---------------|----------------|---------------|----------------|
| Capex (Implementation) | \$7.8m | \$2.8m | \$7.1 | \$12.1m | - | \$29.9m |
| Opex (Implementation) | \$0.1m | \$0.1m | - | - | - | \$0.2m |
| Opex (Licencing and Support) | - | - | - | - | \$0.8m | \$0.8m |
| Total expenditure | \$7.9m | \$2.9m | \$7.1m | \$12.1m | \$0.8m | \$30.8m |

1. AusNet's Proposal and AER Draft Decision

The Distributed System Operator (DSO) program is focused on transforming the electricity distribution network to create a more flexible, customer-centric energy system. It aims to support expanded integration of Consumer and Distributed Energy Resources (CERs / DERs) to enable flexible load and export management, expand opportunities for customers and third parties to participate in non-network solutions, and improve network utilisation while reducing costs and deferring augmentation. The program also aims to enhance data sharing with customers, communities, third parties.

This section summarises AusNet's initial FY2027-31 regulatory period proposal for implementation of DSO capabilities to support customer needs and network flexibility. Also detailed is the Australian Energy Regulator's (AER's) Draft Decision, alternative forecast, reasons for adjustments to AusNet's proposal, and feedback to be addressed in revised proposal.

1.1. Initial Submission Summary

The Distributed System Operator (DSO) program was established to meet emerging customer needs and unlock greater value from CERs, such as rooftop solar, batteries and EV chargers, while enabling new digital operational, and process capabilities. We engage with our customers every day on their energy needs and pain points, including most recently with customers looking to install public charging stations across our network, or to upgrade existing connections to incorporate EV charging units.

These engagements shaped the scope and timing of our proposed DSO work program; responding to key themes identified from our engagement with customers, community groups and the EDPR engagement.

- Strong support to introduce Flexible Exports as an option for all new solar customers from 1 July 2026
- Strong demand for more network data to be shared in a uniform streamlined manner
- Strong demand for flexible connection options for flexible load
- Strong desire to simplify processes and opportunities to be rewarded for flexibility, through 'flexibility services'
- AEMO is currently designing a national CER Data Exchange, with AusNet as a key participant

AusNet's initial Distributed Service Operator (DSO) submission included a program of seven initiatives to be undertaken during the FY2027-31 regulatory control period, aimed at expanding AusNet's capabilities to support increased customer adoption of DERs, enabling AusNet to transition towards becoming a Distributed System Operator (DSO):

- **DER Optimisation/Integration:** Expand and optimise Distributed Energy Resource Management System (DERMS) capabilities to integrate not only Consumer Energy Resources (CERs) but also larger, decentralised assets, including AusNet owned pole top batteries and other utility-scale DERs, to support an evolving network and enhance flexibility, stability, and resilience across the grid.
- **DERMS - CER Gen/Load Management:** Expand Consumer Energy Resources (CER) management capabilities beyond solar exports (current state) to include controllable export/load management for a broader range of CERs including Electric Vehicle (EV) chargers, residential battery systems and solar hot water units.
- **Flexible Exports Full Roll Out:** Expand Flexible Exports from a static, foundational solution supporting ~1,000 customers to a scalable, dynamic solution, enabled by revised export engine calculations. This will support continued solar uptake and offer dynamic export limits to all new solar customers, with streamlined registration, asset validation, and automated onboarding.
- **Network Data Sharing:** Enhance reporting capabilities to meet growing demand from customers and third parties for streamlined access to network data, enabling customer to make more informed decisions about renewable investments. Expanded data sources will include data captured from CERs, including inverters and solar systems and behind-the-meter data within DERMS to enable more granular monitoring.
- **CER Open Data Exchange Integration:** Integrate AusNet's internal systems with the AEMO CER Data Exchange to enable DERMS to share CER data with the broader market, including retailers, other DNSPs, aggregators, supporting improved coordination, integration, and compliance with potential future regulatory requirements.
- **Flexible Demand Orchestration (C&I):** Establish demand-side orchestration for Commercial and Industrial (C&I) customers with large flexible loads, enabling participation in programs that reduce demand during peak periods, or based on network conditions. Customers will engage directly or potentially via aggregators, receiving financial incentives.

- **Flexibility Services Integration:** Establish generation and load flexibility integration capabilities to encourage participation in grid flexibility through DERMS or via-price based controls, supporting growing adoption of Consumer Energy Resources (CERs) and enabling a more flexible, stable and resilient grid.

The proposed Distributed System Operator (DSO) program aimed to improve network efficiency and customer experience by increasing network utilisation, flexibility, and resilience, ultimately deferring network augmentation and reducing long-term costs for AusNet customers. Further, it aimed to enable faster, lower-cost connections for flexible loads, support better-informed decisions on where and how to connect to the network, and reduce the cost of aggregation and participation in non-network solutions, benefiting AusNet customers and electricity consumers in the National Electricity Market (NEM).

Based on assessment of alternate architectural implementation options, recommended expenditure was \$37.0m capex and \$3.0m opex for incremental ongoing licences and support, as shown in **Table 4** below (\$real 2024 and representing distribution network allocated costs). The recommended option expenditure was based on augmenting AusNet's existing DERMS and ADMS platforms to deliver the targeted capabilities.

Table 4 - Initial Submission Forecast Expenditure for DSO Program (\$'million, real FY2024)

| Cost item | FY2027 | FY2028 | FY2029 | FY2030 | FY2031 | Total |
|-----------|-----------------|-----------------|----------------|-----------------|----------------|-----------------|
| Capex | \$10.50m | \$10.50m | \$4.00m | \$9.00m | \$3.00m | \$37.00m |
| Opex | - | \$0.75m | \$0.75m | \$0.75m | \$0.75m | \$3.00m |
| Total | \$10.50m | \$11.25m | \$6.36m | \$12.91m | \$7.06m | \$40.00m |

1.2. AER Draft decision feedback

The AER's Draft Decision accepted the full roll-out of Flexible Exports (\$16.5m) and provided feedback that forms the basis of this Revised Proposal summary.

The AER's feedback on the overall DSO program is detailed below:

- AusNet's economic assessment is implausible and cannot be relied on. The economic model inputs were highly questionable, the timing of forecast benefits did not appear realistic, and avoided generation curtailment and emissions reduction benefits were not proportionate to each other
- AusNet's options analysis is not meaningful, as 'do nothing' is not a credible investment option, and the remaining options considered by AusNet do not account for project scope refinements (the inclusion/exclusion of certain initiatives)
- AusNet has not justified the proposed scope. EMCa found that the roll out of flexible exports, DER Optimisation and DERMS – Load Management provide most of the project's benefits. For some initiatives, including Network Data Sharing and Flexibility Services Integration, the estimated customer benefits are not evidenced
- Costing is likely to be overestimated. EMCa found that, as with AusNet's other proposed ICT projects, costs for the seven DSO initiatives are somewhat overestimated.

Table 5 below shows the AER's Draft Decision for the DSO program, with the AER's alternative forecast of \$16.5m capex (\$real 2026) representing the accepted full roll-out of Flexible Exports.

Table 5 - AusNet Initial Proposal and AER Alternative Forecast (\$m, real FY2026)

| Cost item | AusNet Initial Proposal | AER Alternative | Adjustment |
|-----------|-------------------------|-----------------|------------|
| Capex | \$40.8M | \$16.5M | -60% |
| Opex | \$3.2M | - | -100% |

2. AusNet's Revised Submission

In response to the AER's draft decision, AusNet has reviewed the DSO program. This section details the approach taken to specifically address the Draft Decision feedback, and the revised proposal changes that have resulted from this review.

2.1. Revalidation of Identified Needs

In reviewing the DSO program for our revised proposal, we revalidated the needs for each program scope initiative.

Flexible exports

This is outlined in our initial proposal and remains unchanged.

Automating non-network solutions procurement process through a new portal

We are currently seeking third-party non-network opportunities for areas of the network experiencing constraints. Our public RIT-D process requires identification and assessment of these opportunities for augmentation over the threshold where we receive interest. However, significant benefit can be achieved through procuring these services as an alternative to augmentation on the LV network. LV projects fall below the RIT threshold and therefore these need to be procured through a separate mechanism.

We have recently established a process to procure non-network solutions through our website. The current process is very manual but manageable at the current scale and resources required to administer. In next period, this manual process will not be fit for purpose and will likely limit our ability to effectively procure non-network solutions at the scale that would be required to defer augmentation and maximise benefit to our customers.

We consider that an automated process, and centralised portal, would be a much more effective channel if we are to expand the non-network opportunities procured in the upcoming period.

Non-network solutions procured through this process can include 3rd party batteries and other large CER or demand flexibility options which are offered to AusNet in bulk. We expect in the upcoming period, there will be significantly more 3rd parties who can offer these services, such as aggregators. The emergence of aggregators and more controllable CER deployment on our network will allow for more sophisticated and granular non-network solutions to be offered and can enable more LV network demand flexibility

Without this dedicated investment, we will require significantly more resources to manage a growing non-network/demand management portfolio. This would include more engineering resources to assess suitability of non-network options at constrained network locations, complete a tender process and assess all responses to the tender for suitability, and monitor effectiveness of the established solutions over time. We have not asked for these resources in our opex step change and instead consider the portal to be the preferred option when taking in to account the opex savings. Our opex step change is solely focused on the administrative and customer service resources required to manage these new customer segments.

We anticipate the scope of services we can procure is likely to expand over the forthcoming regulatory period but have not assumed a step change for payments beyond this program and will assess the capex-opex trade-offs associated with other non-network solutions at time of investment. This approach ensures we have not double counted for capex and opex solutions to address our network constraints in our proposal.

Increasing our ability to elicit demand response from our customers through flexible services

While non-network solutions described above can include a third party offering a demand management solution in bulk, we also consider there is significant value from AusNet investing in uplifting our ability to send signal to individual customers to change their demand during times of network constraints.

We have forecast the scope to include demand control for C&I customers when signalled and behavioural demand response. These arrangements are opt-in and the assumed rewards from customers expected to be a strong enough incentive for engaged customers wanting to maximise value from their CER investments.

We have modelled the impact of 10% of customers opting in to these flexible services on our LV network, which results in \$17m of the deferred augmentation as outlined in our LV augex business case. We consider these assumptions are a realistic scale and recognise the assumed uptake of flexible services in our initial proposal was likely too high and we have revised from 35% to 10% of customers.

Expanding published network data

We reviewed the cost provided in our Initial Proposal and ensured it is only to meet the current needs and expectations of our stakeholders. The scope of our cost estimate includes expansion of data sets, greater frequency of data published, and automation.

Our investment assumes we can expand the scope of data provided on our GridView Rosetta platform to align with that identified in the Network Visibility Phase 3 Final Report, such that key datasets presented are aligned with the expectations of our customers. It is important we evolve the presentation of data to ensure its useability is effective for the stakeholders consuming the data. We have established a GridView Investment Group to ensure the scope of data published on GridView remains a fit-for-purpose tool that provides relevant and accessible network data to support communities in achieving their energy goals. We have proposed to increase key data set publication to quarterly rather than the current annual, which is more valuable especially for LV network data.

We have also quantified the benefits of this investment which we consider far exceed any incremental cost. Benefits include:

| Quantified | Not quantified |
|--|---|
| <ul style="list-style-type: none"> • Employee time saved from automating the additional data sets for GridView • Customer time saved from requesting data from AusNet manually, which can delay project delivery for weeks compared to readily available public data | <ul style="list-style-type: none"> • Improved information to inform efficient deployment of community batteries and public EV charging • Faster connection approval timelines |

We note the AERs comments in their Draft Decision around Energy Consumers Australia's 'Integrated distribution system planning' rule change request. There is already significant demand for this data on our network which is why we launched GridView in 2023 and therefore this investment is prudent now and not in response to this emerging obligation (see opex step change). Therefore, there is no risk that AusNet is investing in a bespoke network visibility solution which will require subsequent standardisation as the Energy Consumers Australia rule change request progresses.

2.2. Updated Program Scope

Incorporating our revalidation of needs, AusNet has reviewed the AER and EMCa feedback and revised our proposal to address the identified gaps and strengthen the overall program justification. Where our revised submission maintains scope outlined in the initial proposal, we have provided additional evidence to support the scale and maturity of each initiative, along with how each initiative addresses the current limitations of our DSO systems.

Table 6 – Updates to Program Scope Following Draft Decision Feedback

| Action in Revised Proposal | Initiatives from AusNet Initial Proposal |
|---------------------------------|--|
| Initiatives Consolidated | <p>The following initiatives were approved as part of the Flexible Exports approach (\$15.0m) and have been consolidated into one single Flexible Exports Full Roll Out + DoE Implementation program in the Revised Scope.</p> <ol style="list-style-type: none"> 1. DER Optimisation/Integration 2. DERMS – CER Gen/Load Management 3. Flexible Exports Full Roll Out |
| | <p>The following initiatives proposed within the Initial Submission have been consolidated to form the DERMS Uplift to Support Flexible Load Control and Coordination initiative in the Revised Submission following re-analysis of scope, costs, and benefits.</p> <ol style="list-style-type: none"> 4. Flexible Demand Orchestration (C&I) 5. Flexibility Services Integration |

| Action in Revised Proposal | Initiatives from AusNet Initial Proposal |
|-------------------------------|--|
| Initiatives De-Scoped | <p>The following initiative proposed within the Initial Submission has been de-scoped in the Revised Submission, in line with AER Draft Decision Feedback.</p> <p>6. CER Open Data Exchange</p> |
| Initiatives Maintained | <p>The following initiative proposed within the Initial Submission has been maintained in the Revised Submission, noting that the initiative title has been clarified as Community Network Data Upgrades.</p> <p>7. Network Data Sharing</p> |
| Initiatives Added | <p>The following initiative not proposed within the Initial Submission has been added to the Revised Submission.</p> <p>8. Flexibility Market Portal Creation for Non-Network Customers</p> <p>Refer to Section 2.1 Revalidation of Identified Needs for supporting details.</p> |

As a result of the program scope changes detailed in Table 6, our revised proposal DSO program consists of four initiatives. The detailed scope of each of these four initiatives is provided in **Table 7** below.

Table 7 – Revised Proposal DSO Program Scope

| Initiative | Scope |
|---|---|
| Flexible Exports Full Roll Out + DoE Implementation | <ul style="list-style-type: none"> Begin offering Flexible Exports to new solar customers through functional fixes and improvements to assessment tools, policy and rule alignment, enhanced compliance monitoring and reduced restrictions on solar exports to support customer participation. Enable Dynamic Operating Envelopes (DOEs) to increase export/import limits through refined algorithms, upgraded DERMS, and streamlined onboarding for customers supporting network management and emissions reduction. Provide existing customers and installers with communications and resources to educate on dynamic exports, ensuring that they are educated and aware of changes/new capabilities. |
| DERMS Uplift for Flexible Services | <ul style="list-style-type: none"> Enhance DERMS capability to be able to identify and resolve network constraints through dynamic, near real-time behavioural demand response, aligned to grid conditions. Enable behavioural demand response for residential and commercial customers by sending signals (e.g., SMS) to reduce load, with rebates for responding. Implement Direct Load Control specifically for Commercial and Industrial (C&I) customers, allowing AusNet to directly control load device (e.g. through CSIP type device) |
| Non-Network Solutions Portal | <ul style="list-style-type: none"> Implement portal to enable customers or aggregators to offer demand response or battery support to AusNet. This includes trialling a marketplace platform (e.g. Piclo Flex) where AusNet can procure flexibility from third-party providers. Participants are rewarded for helping relieve network constraints. |
| Community Network Data Upgrades | <ul style="list-style-type: none"> Automate and/or integrate current manual data extract processes to facilitate quarterly updates of data ingested in GridView. Expand current state dataset to consider the AER priority datasets that are currently not provided in GridView. |

2.3. Program Dependencies

The DSO program builds on the capabilities that AusNet delivered in the current regulatory period under the Victorian Emergency Backstop Mechanism (VEBM), through our Distributed Energy Resource Management System (DERMS) and Advanced Distribution Management System (ADMS), to manage CERs.

The initiatives proposed continue to build on these capabilities, with Flexible Exports Full Roll Out + DoE Implementation representing the next step and foundation for further capabilities:

- Implementation of Non-Network Solutions Portal is dependant on Flexible Exports upgrades to automate the constraint forecasting and desired scope and scale of flexible services needed to alleviate the constraints.
- Implementation of DERMS Uplift to Flexible Services is similarly dependant on Flexible Exports upgrades to automate the constraint forecasting and required scale of demand response required to alleviate the constraints.

The delivery of the AusNet's ICT DSO program is assumed as input for some EDPR 2027-32 augmentation expenditure. This includes:

- Our proposed CER Enablement program is dependent on delivering flexible export capability in 2026, as all options presented are based on the assumed uptake of customers on flexible exports reduces the need for investment to unlock exports and benefits
- Option 2 in our LV Augex and Flexible Services Business case. This option is dependent on the DERMs uplift to support flexible load control and coordination. Flexibility services defers our proposed augmentation by \$17m, which we have used as the quantified benefit for this initiative. We would need to amend these assumptions if this capability is not available in full, with Option 1 representing the preferred option for LV augex if the capability to procure flexible services is not introduced. Refer to ASD - AusNet - Demand Driven Augmentation in the LV Network & Flexible Services Economic Model - 1Dec2025 – PUBLIC for detail.

2.4. Revised Program Costs

Based on the revised initiative requirements and scope, we engaged our delivery partner Wipro to provide cost estimates. Wipro are best positioned to provide cost estimates for these initiatives, based on their experience with implementation of AusNet's Distributed Energy Management System (DERMS) and the Advanced Management Distribution System (ADMS), understanding of AusNet's systems architecture and requirements, and their local and global domain expertise.

Table 7 provides the revised cost estimates for each program initiative. Wipro estimates have been adjusted to \$real 2024 cost basis, and AusNet Internal Program Management and Architecture costs have been added. As a Software-as-a-Service (SaaS) solution, configuration of AusNet's GridView portal has been treated as project implementation opex per International Financial Reporting Interpretations Committee (IFRIC) guidance. Opex licensing costs are AusNet estimates for incremental usage based on vendor contracts. All costs in this program are fully allocated to the Distribution line of business.

Table 8 – Revised Program Costs (\$m, real 2024)

| Initiative | Capex | Opex - Implementation | Opex - Licensing | Notes |
|--|----------------|-----------------------|------------------|---|
| Flexible Exports Full Roll Out + DoE Implementation | (C-I-C) | (C-I-C) | (C-I-C) | Unchanged from AusNet initial proposal, and accepted in AER draft decision |
| DERMS uplift for flexible services | (C-I-C) | (C-I-C) | (C-I-C) | (C-I-C) cost estimate |
| Non-network solutions portal | (C-I-C) | (C-I-C) | (C-I-C) | (C-I-C) cost estimate |
| Community network data upgrades | (C-I-C) | (C-I-C) | (C-I-C) | AusNet cost estimate based on historical GridView and data systems projects |
| Total | \$29.9m | \$0.2m | \$0.8m | |

2.5. Updated Program Benefits

Our revised DSO proposal has quantified benefits for each initiative individually to ensure robust assessment that all investments proposed are prudent and efficient in the upcoming period. These quantified benefits include:

- **Reduced export curtailment, emissions reduction and avoided augmentation output from CER model (Flexible exports)**

We acknowledge the issues raised by EMCa on our flexible exports benefit modelling. However, given the AER has accepted flexible exports in their Draft Decision, and our commitment to deliver this capability is in line with Victorian government expectations, we have not re-run our model to produce a new estimate of the benefits of flexible exports. We consider updating the modelling would not change the outcome that inducing flexible exports is NPV positive and should be delivered as soon as possible.

- **LV Deferred augmentation (Flexible services)**

As discussed in Section 2.3, we have modelled deferred demand driven LV augmentation due to the reduced energy at risk from flexible services on the LV network on peak demand days. We have not quantified MV or HV augmentation deferral as our MV/HV Business cases do not consider use of flexible services is an option.

- **Employee time saved (Non-network solutions portal)**

We have assumed the amount of engineering resourcing needed to manually source and procure non-network solutions from our forecast large customers, community batteries or aggregators). Our current process includes an expression of interest process on our website.

- **Employee and customer time saved (Community network data)**

The estimated time saved for AusNet employees to provide desirable data if not automated and published through the GridView portal. We have assumed a benefit to our customer from time saved requesting and analysing network data.

There are addition benefits of our DSO investment which we have not been quantified but will deliver further value to our customers:

- Improved efficiency of integration of CER and electrification of network, through increase network data provision and flexible connection arrangement to manage real-time network constraints
- Faster connection approval time
- Additional value for our customers from rewards from providing a flexible service to AusNet
- Faster and more streamlined process to establish non-network solution agreements

3. Evaluation of Options

Consistent with the AER's "Non-network ICT capex assessment approach" of November 2019, for AusNet's revised proposal we have evaluated credible options for the DSO program. Recognising the AER's Draft Decision feedback, we have focused options analysis on alternate degrees of scope within the program.

We have identified 3 credible DSO program scope options, as detailed in **Table 8** below:

Table 8 – Options summary

| OPTION | SUMMARY |
|--|---|
| Option 1: Implement Flexible Exports Only | Partially execute the target program scope, implementing only foundational improvements to address existing capability gaps in AusNet's Flexible Exports and DER integrations. This option will deliver the following initiative: <ul style="list-style-type: none"> Flexible Exports Full Roll Out + DoE Implementation |
| Option 2: Implement Flexible Exports + Non-network solutions portal for large CER customers | Partially execute the target program scope, delivering enhanced data capabilities and enabling customer participation in flexibility services through a market portal, automated data processes, and expanded datasets. This option will deliver the Flexible Exports capabilities detailed in Option 1 in addition to the following initiatives: <ul style="list-style-type: none"> Flexibility Market Portal Creation for Non-Network Solutions Community Network Data Upgrades |
| Option 3: Implement Flexibility Services for all CER Customers | Execute the full target scope of the program, implementing flexibility services capabilities to enable behavioural demand response and direct load control. This option will deliver the capabilities detailed above in Options 1 and 2 in addition to the following initiative: <ul style="list-style-type: none"> DERMS Uplift to Support Flexible Load Control and Coordination |

3.1. Option 1 – Implement Flexible Exports Only

The Flexible Exports initiative will deliver a scalable, dynamic export solution that expands beyond the current static model to provide all new solar customers with real-time adaptive limits, supporting continued solar uptake and network stability. It will also streamline customer onboarding through simpler registration, automated asset validation, and integration with enhanced DERMS capabilities for broader CER and utility-scale DER management.

The cost of this option is \$15.0m capex, as shown in **Table 9** below. This option delivers NPV of \$12.8m.

This option is not recommended as it only addresses enhancements to solar export limits and does not deliver on the clearly identified and validated customer needs, expectations, and realistic demand for DSO capabilities and services. It will not deliver capabilities to provide meaningful data for informed decision-making and does not enable customer participation in flexible services or non-network solutions.

Table 9 – Forecast Expenditure for Option 1 (\$'million, real FY2024)

| Cost item | FY2027 | FY2028 | FY2029 | FY2030 | FY2031 | Total |
|-------------------------------------|--------|--------|--------|--------|--------|----------------|
| Capex (implementation) | \$7.5m | \$2.5m | - | \$5.0m | - | \$15.0m |
| Opex (Implementation) | - | - | - | - | - | - |
| Opex (Licencing and Support) | - | - | - | - | - | - |
| Total expenditure | \$7.5m | \$2.5m | - | \$5.0m | - | \$15.0m |

3.2. Option 2 – Flexible Exports + Non-network Solutions Portal

This option will deliver the Flexible Exports approach as outlined in Option 1 and additionally implement the non-network solutions portal to enable customers or aggregators to offer demand response or battery support to AusNet. This option will additionally enhance the data available on our GridView platform, addressing the minimum additional needs of our customers, community groups, aggregators and large CER customers over the FY2027-31 period.

The cost of this option is \$19.2m capex and \$0.2m non-recurrent opex for SaaS product configuration, as shown in **Table 10**. This option delivers NPV of \$16.4m, \$3.6m higher than Option 1.

This option is not recommended as it only partially addresses the key customer needs identified and validated through our EDPR customer and community engagement. It will not deliver capabilities to enable customer participation in flexible services.

Table 10 – Forecast Expenditure for Option 2 (\$'million, real FY2024)

| Cost item | FY27 | FY28 | FY29 | FY30 | FY31 | Total |
|-------------------------------------|---------------|---------------|---------------|---------------|------|----------------|
| Capex (Implementation) | \$7.8m | \$2.8m | \$1.7m | \$6.7m | - | \$19.2m |
| Opex (Implementation) | \$0.1m | \$0.1m | - | - | - | \$0.2m |
| Opex (Licencing and Support) | - | - | - | - | - | - |
| Total expenditure | \$7.9m | \$2.9m | \$1.7m | \$6.7m | - | \$19.3m |

3.3. Option 3 – Flexibility Services for all CER Customers

This option will deliver the full target DSO program scope, encompassing both Options 1 and 2, and implementing flexibility services capabilities to enable behavioural demand response and direct load control.

The cost of this option is \$29.9m capex, \$0.2m non-recurrent opex for SaaS product configuration, and \$0.8m recurrent opex for ongoing licencing and support as shown in **Table 11** below. This option is recommended as it delivers NPV of \$18.7m, \$2.2m higher than Option 2.

Of the options evaluated, Option 3 provides the highest NPV. This option not only addresses the key identified needs and expectations of our customers, but also enables AusNet to most prudently and efficiently manage LV network constraints. Delivery of target program scope will enable a more flexible, resilient and stable network which will deliver long term value for customers and AusNet.

Table 11 – Forecast Expenditure for Option 3 (\$'million, real FY2024)

| Cost item | FY27 | FY28 | FY29 | FY30 | FY31 | Total |
|-------------------------------------|---------------|---------------|---------------|----------------|---------------|----------------|
| Capex (Implementation) | \$7.8m | \$2.8m | \$7.1 | \$12.1m | - | \$29.9m |
| Opex (Implementation) | \$0.1m | \$0.1m | - | - | - | \$0.2m |
| Opex (Licencing and Support) | - | - | - | - | \$0.8m | \$0.8m |
| Total expenditure | \$7.9m | \$2.9m | \$7.1m | \$12.1m | \$0.8m | \$30.8m |

3.4. Preferred Option

Of the options evaluated, our analysis has found that Option 3 provides the highest NPV as shown in **Table 12** below. Based on this assessment Option 3 is recommended. This option best supports AusNet's commitment to meeting customer needs and investing to unlock value for customers and AusNet, leveraging Consumer Energy Resources (CERs) across the network and driving new digital, people and process capabilities.

AusNet is requesting \$0.9m in opex (\$0.2 implementation, \$0.8m licensing and support) to deliver Option 3 of the DSO program. As there are no business efficiency offsets for flexibility services licensing and support costs, these amounts have been included in our proposed opex step change.

Table 12 – Option analysis summary (\$'000s, real FY2024)

| Criteria | Option 1 | Option 2 | Option 3 | Initial Proposal |
|-------------------------------------|------------|------------|-------------------|-------------------|
| NPV (\$'000, real FY24) | \$12,777.4 | \$16,426.9 | \$18,659.1 | \$4,800.0 |
| Capex (\$'000, real FY24) | \$15,000.0 | \$19,159.7 | \$29,863.9 | \$37,000.0 |
| Opex (\$'000, real FY24) | - | \$174.7 | \$924.7 | \$3,000.0 |
| Technically feasible | ✓ | ✓ | ✓ | ✓ |
| Addresses identified need | ✗ | Partial | ✓ | ✓ |
| Deliverable within timeframe | ✓ | ✓ | ✓ | ✓ |
| Delivery risk | Low | Low | Low | Low |
| Preferred option | ✗ | ✗ | ✓ | ✗ |

A1. Non-Network Solution Definitions

Table 12 summarises various types of non-network solutions that can be utilised to manage network constraints. It is important to note that most of the services can be provided by AusNet or third parties.

Table 12: Flexible Services Options

| Solution | Description | Advantages | Disadvantages |
|---|---|--|--|
| Flexible Export Limit | Involves dynamically limiting customer exports on the network by curtailing generation, to maintain the operation of the distribution network within its capabilities. | Proven method for addressing network export limitations. i.e. high use case maturity. | Can result in comparatively high adverse impact on customer generation output. (i.e., poor customer service outcomes) |
| Dynamic Operating Envelopes (DOE) | Dynamically calculates and publishes the capability of the network to maximise the opportunity for increased customer demand on the network for imports or exports. | Sophisticated allocation of import and export capacity among customers. | Low technical maturity for import management, and low customer appetite at present as impacts on customer daily lives unclear. |
| Behavioural Demand Response (BDR) | Providing near real-time information to a customer via a mobile app or other interface trigger a demand response to an imminent network limitation. The customer has full control over what actions that are taken (if at all) to vary their load or generation. | Provides a high level of flexibility and choice for customers. The solution encourages customer engagement, empowering customers to make informed choices about their energy usage and can lead to permanent behaviour changes. | A critical level of customer participation is needed in aggregate to avoid loss of supply on the network. Customer rewards payments are currently typically lower than customer expectations. |
| Direct Load Control (DLC) | Involves establishing a communication link direct to customer loads to enable switching of duty-cycle change, thermostat control or other form of load control of large customer appliances that are enrolled into a direct load control scheme. (e.g., electric vehicle, air-conditioning, pool pump and/or storage). | Direct control of high energy consumption appliances can produce larger demand responses than behavioural programs. The solution is easily scalable and likely to have a lower operating costs than behavioural programs. | Customers may override direct load control, or the communication may be inadvertently interrupted. Upfront costs in setup or appliance rebates are required. Less flexibility for customers compared to behavioural programs. |
| Third-party contracted Virtual Power Plant (VPP) | Virtual power plants are an orchestration of storage, generation, and/or demand response resources (including an aggregation of customer and community storage facilities, solar PV installations, EV charging stations, load control and demand response). They enable a scheduled response, to maintain the operation of the distribution network within its capabilities. | More reliable than other forms of demand response at meeting the need. VPPs participate in energy markets and provide grid services (value stacking) making them potentially more attractive investments than other forms of demand response solutions. | Energy limited or variable resources in the portfolio need to be managed carefully to be able to service an imminent network limitation. Implementing and managing VPPs involves integrating a diverse array of technologies. This complexity can pose challenges for system integration, data security, interoperability, and performance. |

Source: AusNet analysis

AusNet

AusNet

Level 31
2 Southbank Boulevard
Southbank VIC 3006

T 1300 360 795

Locked Bag 14051
Melbourne City Mail Centre
Melbourne VIC 8001

Follow us on

 @AusNet.Energy

 @AusNet

ausnet.com.au

