

New Reg: Towards Consumer-Centric Energy Network Regulation

AusNet trial - AER staff guidance note 10

AusNet Services Final negotiating notes

AusNet Services (AusNet) released Final Negotiating Notes for its negotiations with its Forum on 2 September.

Under the section 7 of the [Early Engagement Plan](#) and section 6.3 of [Memorandum of Understanding](#) (MOU) between AusNet, AER, and Forum, the AER agreed to make AER staff available to assist in the process.

The purpose of this guidance note is for AER staff to provide assistance to the Forum. AER staff are not providing determinative views in response to the draft regulatory proposal. When AusNet submits the regulatory proposal, the Australian Energy Regulator (AER) will assess it in accordance with the National Electricity Law (NEL) and the National Electricity Rules (NER).

In preparing this guidance note, AER staff have not been able to conduct the review that AER staff would normally undertake of a regulatory proposal because AusNet and the Forum are in the process of developing the proposal. AER staff have not been able to review all the evidence or supporting material to test claims, nor apply the regulatory tools that it has available during the regulatory determination process. As a result, AER staff are not able to form a view on whether the matters in AusNet's draft proposal meet the requirements of the NEL and NER. Further, as set out under the MOU¹ this submission does not reflect the views of the AER. AER decisions are made by the AER Board. The AER must still undertake its formal assessment of AusNet's proposal as normal, in accordance with the NER.

On that basis, in this guidance note, AER staff:

- provide their views on the negotiating notes with respect to the regulatory framework and the AER's assessment approaches; and
- identify areas where the draft negotiating position may benefit from further evidence or clarification, including evidence of wider consumer support (through broader engagement or research) for that position.

¹ MoU, June 2018, cl. 2.4a, cl. 6.3 d, cl. 1xiv, cl. 1xiii.

1 Introduction

AusNet is trialling a new form of customer engagement in the development of its regulatory proposal. This is the 'New Reg' process. Under the process AusNet negotiates aspects of its proposal with a Customer Forum (the Forum). New Reg is a joint initiative by the AER, Energy Networks Australia (ENA) and Energy Consumers Australia (ECA). It explores ways to improve sector engagement, and identifies opportunities for regulatory innovation. The goal of this initiative is to ensure that customers' preferences drive energy network regulatory proposals and outcomes. In March 2018, the agencies jointly released a draft New Reg process. The process aims to further incorporate consumer perspectives in regulatory proposals before they are lodged for AER assessment.

The New Reg process empowers the Forum to negotiate and agree aspects of the NSP's revenue proposal, in advance of the NSP submitting the proposal to the AER. The Forum researches consumer preferences and directly engages with customers. It then seeks use that engagement and research to form a view about aspects of the revenue proposal.

The most significant departure from traditional practice is that a Forum negotiates aspects of the regulatory proposal in advance of lodgement with the AER. The Forum does not represent the perspectives of particular interest groups. Instead it conducts research and customer engagement to ensure it can effectively represent the perspectives of all the network businesses' customers. The Forum's representatives are selected to credibly represent perspectives of all end users, be they residential, small business or commercial and industrial. These persons are also required to have relevant skills and experience to ensure they function as an effective and robust counterparty to the network business.

As is set out in the Early Engagement Memorandum of Understanding (MOU), the Forum and AusNet are expected to enter into negotiations with a view to reaching, as far as possible, agreement on specific matters that form a part of AusNet's revenue proposal, having regard to the revenue proposal as a whole.² In doing so, the Forum is supposed to understand, and represent to AusNet, the perspectives and preferences of AusNet's customers. Negotiations should be undertaken with a view to AusNet preparing a revenue proposal that, in the opinion of the Forum, is likely to contribute to the achievement of the National Electricity Objective (NEO).³ If the process works as intended, AusNet's revenue proposal should better reflect the preferences of AusNet's customers.

The AER must still undertake its formal assessment of matters that the Forum and AusNet negotiation as normal, in accordance with the NER. If the New Reg process works as intended, the AER will be able to have regard to the extent of the Forum's agreement with AusNet on certain matters in the proposal. This will be stronger where that agreement is

² Memorandum of Understanding between AusNet Services, the AER, and Tony Robinson on behalf of the Forum, August 2019

³ The NEO is: to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to (a) price, quality, safety, reliability and security of supply of electricity; and (b) the reliability, safety and security of the national electricity system (NEL, section 7).

based on sound evidence of consumer perspectives and preferences.⁴ The AER can then take into account the outcomes that were agreed and, conversely, those that were not agreed, in its consideration of AusNet's proposal.

On 12 February 2019, AusNet Services (AusNet) released its draft regulatory proposal and the Forum released its Interim Engagement report. AER staff, and a number of other parties made submissions on these reports. In response to submissions AusNet has developed the negotiating notes that set out its final negotiating position with the Forum. AER staff's views on each of the in scope aspects of AusNet's negotiating positions are outlined below.

⁴ In accordance with the MoU, in its engagement report, where AusNet and the Forum agree on a matter the Forum must explain how the matter is consistent with or best reflects the perspectives and preferences of AusNet Services' customers, including by reference to customer research or consultation undertaken. MoU, June 2018, cl. 5(d)(ii)(2).

2 Scope

The matters in the scope agreed by the AER and the reasons for this are set out in Guidance Note 2 - Scope of Negotiation. The following topics are in the scope agreed by AusNet, the Forum and the AER:

- Operating expenditure
- Major augmentation capex projects
- Revenue path profile
- Customer experience
- Customer hardship arrangements

AER staff provided the Forum with notes that set out the boundaries of the National Electricity Rules (NER) and the AER's guidelines for the topics in scope of the negotiation.⁵

By specifying the topics that should be in scope, and providing guidance on the boundaries of negotiation for those topics, AER staff aim to make the negotiation process clearer and more efficient. Limiting the scope of negotiations also reduces the risk that the Forum and AusNet reach an agreed position on a particular matter which the AER (in assessing AusNet's proposal) determines to be inconsistent with the NER.

AusNet and the Forum may decide to discuss, or negotiate and reach an agreement on, matters that we have not explicitly agreed to be in scope. They have decided to negotiate matters that AER staff have not been identified as in scope. Areas include: major asset replacement projects, DER, innovation expenditure, smart meters and the overall 'reasonableness' of AusNet's proposal. These are referred to as 'out of scope' topics. Based on what it finds from customer research and engagement, the Forum might be in a good position to test AusNet's explanations of the value customers would get from AusNet's forecast expenditure more generally.

⁵ These notes are published on the AER's website: <https://www.aer.gov.au/networks-pipelines/new-reg/ausnet-services-trial>

3 In scope matters

AusNet's notes cover each of the in scope topics except for the revenue path profile. As AusNet notes, the Victorian Government has decided to change the regulatory years for the Victorian distribution businesses from a calendar year to financial year basis, in line with other National Electricity Market states. The Victorian Government will determine the mechanics of this transition. AER staff consider that these mechanics will likely influence AusNet's revenue path. Without clarification regarding these transition mechanisms negotiating the revenue path profile could be difficult. AER staff comments on the in-scope matters are set out below.

3.1 Opex

Operating expenditure (opex) is the operating, maintenance and other non-capital expenses incurred in the provision of network services. AusNet's final negotiating position is \$1,212 million (\$2020 CY) for the five calendar years from 2021-2025 (on a comparable basis with our May 2019 position). This is \$17m less than AusNet's draft regulatory proposal opex of \$1,229m (\$2020) for 2021-25.

AER staff have some comments on the step change increases that AusNet services has proposed. These are outlined below.

REFCL step change

AER staff set out the AER's approach to assessing step changes in opex guidance note 4 - opex, and AER staff expect to apply this approach in assessing AusNet's step changes when AusNet lodges its regulatory proposal with the AER.

AER staff advised AusNet that whether base year operating expenditure already includes REFCL costs would be a key consideration. For Tranche 1 the AER provided AusNet with \$0.9 (\$2020, million) additional opex in 2020.⁶ AusNet was also provided an additional \$0.8 (\$2020, million) opex in tranche 2.⁷ AusNet accepted that there was an error in its calculations of the step change⁸, and reduced the amount of the step change by \$4.4 million. However, it appears that the full amount of opex already included in the base year was not removed from the step change. AER staff consider that, if costs already included in the base year were fully removed, the adjustment should be \$8.5 million (\$2020, million).⁹

At the time of writing this note, the AER has not released its final decision on AusNet's proposed pass through for tranche 3 of the REFCL roll-out. However, AER staff consider

⁶ AER, *FINAL Decision AusNet Services Contingent Project Installation of Rapid Earth Fault Current Limiters (REFCLs) – tranche 1*, August 2017, p. 67.

⁷ AER, *FINAL Decision AusNet Services Contingent Project Installation of Rapid Earth Fault Current Limiters (REFCLs) – tranche two*, 31 August 2018, p. 45.

⁸ AusNet, Final negotiation notes for the Forum, September 2019, p. 95.

⁹ This is $(0.8m+0.7m)*5$ which is the addition costs that AusNet has added to its base year for the two REFCLs step changes.

that any further costs added to AusNet's base year as a result of Tranche 3 of the REFCL should also be excluded from AusNet's forecast step change.

AusNet notes that it discovered that the cost of testing REFCLs was higher than the forecasts used for the Draft Proposal and accordingly has revised the forecast.¹⁰ We do not consider that an adjustment for increases in costs in the 2016-20 period for REFCLs rolled out in the first two tranches should be included in a step change. Our opex guidance note sets out guidance regarding what we would classify as a step change. These do not include adjustments for actual costs being different to forecast. We note that, through the application of the EBSS, AusNet's customers will fund approximately 70 per cent of any cost increase above forecast in the 2016-21 period.

IT Cloud opex

AusNet has proposed an IT cloud opex step change for upgrades to two systems:

- Customer Relationship Management System - \$2.3 million (over the 2021-25 calendar year period)
- Outage management system - \$0.3 million (over the 2021-25 calendar year period).

AER staff commented on this step change in their guidance note on AusNet's draft proposal.¹¹ These comments are still relevant. In summary, justify the step change AusNet could outline the additional customer benefits and how a reduction in ongoing capex would offset the step change.

IT Security

AusNet has requested a step change for an anticipated obligation to be imposed by AEMO AusNet Services to achieve a Maturity Indicator Level 3 (MIL:3) specification before it lodges its regulatory proposal (AEMO has already mandated the MIL:2 requirement). AusNet also cites the *Security of Critical Infrastructure Act 2018* as a driver of this program.

In its draft regulatory proposal AusNet proposed an IT security step change of \$1m (\$2020). AusNet's May 2019 negotiating position included an increased amount of \$13.8m for this step-change. However, since then, they have considered the drivers of the step-change further. AusNet notes that its Transmission business, rather than its distribution business, is the key driver of the expected higher regulatory obligations. As such, a greater amount of the cost is now properly allocated to the transmission business, leading to a revised amount of \$4.7 million.

AusNet has stated that its Forum raised a number of objections to this step change. These objections include:

- The step change arrived late in the process;
- AusNet should incur these costs anyway and some of the additional capabilities should already be in place;

¹⁰ AusNet, Final negotiation notes for the Forum, September 2019, p. 108.

¹¹ AER staff, New Reg: Towards Consumer-Centric Energy Network Regulation AusNet trial - AER staff guidance note 9 AusNet Services draft proposal and the Forum's Interim Engagement Report, pp. 7-8.

- AusNet has been underspending on cyber security in the current RCP.

AusNet has submitted that to respond to stakeholder concerns, it has commissioned Deloitte to prepare a report on its existing cyber security practices and performance over the current RCP. This report will provide an independent view on the appropriateness of existing Cyber Security capabilities. In AusNet's view this report will either support or disprove that AusNet's current cyber security level is not inappropriately low. AusNet has stated that it will consider its position further once it receives the report.

Clause 6.5.7(a)(2) of the NER specifies that AusNet must comply with all applicable regulatory obligations or requirements. We note that the policy that AusNet refers to (MIL:3 requirement) has not yet been mandated. While AusNet has submitted it expects this policy will be implemented before the next period, AusNet has provided no evidence to demonstrate that this is a reasonable expectation. As such, AusNet has not demonstrated there is a clear need to address non-compliance.

Had AusNet established that this is a regulatory obligation, it is not evident how AusNet's proposal represents the most efficient way to reach compliance. AER staff note:

- AusNet has provided limited information as to what activities are included in its \$4.7 million proposed expenditure;
- If it had done so, AusNet has not demonstrated that implementing its proposed works represents the most efficient security measures. Nor has AusNet demonstrated that any change would result in AusNet becoming non-compliant with the policy. In other words, AusNet has not identified the areas of potential non-compliance and demonstrated that its proposed security controls are the most prudent and efficient solution.

On this basis, there does not appear to be enough information to determine the prudence and efficiency of the proposed expenditure.

An option for AusNet would be to commission another consultant report that would go a step further than the one already commissioned. Once it is determined what AusNet's current cyber security maturity is (i.e. the results of the Deloitte report), this additional report can then determine the prudence and efficiency of the measures proposed to address any outstanding gaps.

3.2 Customer experience and hardship arrangements

Customer experience covers how AusNet delivers its services to its customers, including how it interacts with its customers. Hardship arrangements concern the extent to which a distribution business assists hardship customers.¹² AER staff treated customer experience and customer hardship arrangements as separate topics when determining scope. However, AusNet and the Forum are considering these topics together. AER staff are comfortable with this as long as AusNet and the Forum observe the separate boundaries of negotiation. For simplicity of reference, we will refer to these two topics collectively as customer experience.

¹² New Reg: Towards Consumer-Centric Energy Network Regulation AusNet Trial – AER Staff Guidance Note 7: Customer Hardship – 29 August 2019, p. 1.

There are two parts to AusNet and the Forum's negotiations on this topic: customer service outcomes delivered in advance of the next regulatory period and the development of a customer satisfaction incentive scheme.

3.2.1 Customer Service outcomes delivered in advance of the next regulatory period

Negotiations between the Forum and AusNet on customer experience have focused on AusNet's customer service and how it can be improved to better meet AusNet's customer's expectations. The Forum stressed new and improved customer focussed services should be developed at the earliest opportunity rather than delayed until 2021.¹³

AusNet and the Forum have negotiated a number of customer service initiatives that AusNet is implementing in advance of the 2021-25 regulatory period.¹⁴ Negotiations with respect to these initiatives are now focusing on metrics used to measure AusNet's ongoing performance in delivering the customer service initiatives.¹⁵

¹³ Forum, AusNet Services EDPR Forum – Interim Engagement Report, February 2019, p. 27.

¹⁴ Forum, AusNet Services EDPR Forum – Interim Engagement Report, February 2019, pp. 27-30. AusNet Services, Delivering Better Outcomes For Customers, Draft Electricity Distribution Regulatory Proposal, 1 January 2021 to 31 December 2025, February 2019, p. 83.

¹⁵ AusNet, Final negotiation notes for the Forum, September 2019, p. 17.

Figure 1 AusNet's agreed actions to improve customer service and performance metrics for negotiation

Initiative	Clearer customer accountability	Aligning incentives to customer	Building customer understanding	Fixing pain points and improving service	Community collaboration	Being easier to deal with	Vulnerable customers	Improving claims	Accountability
Key Actions	Dedicated resources Reg. meetings b/w Snr Management and customers	Set corporate target Embed C-SAT into staff KPIs & 3 rd party contracts	Amending C-SAT program Ongoing user testing in journeys Research partnership with CPRC Secured ongoing research budget Exploring CAREing initiative	Journeys completed/ underway : DER improvements DER register CRM & self-service strategy	Defined vulnerability Research to understand service provider needs Identified outreach program areas	Call centre training Call centre mystery calling program	Research partnership with CPRC	Immediate response protocol developed Improve event and claims comms Learning from peers	Reporting on customer activities via Customer Team
Metrics (for negotiation)	# of meetings Secure ongoing resourcing Two monthly cross company team meetings	C-SAT cascaded in KPIs	Evidence and outcome of well-developed research Publish yearly research plan	Our response to pain points and evidence of CX improvements via quantified benefits. Time based-metrics	Publish research Evidence of collaborations with service providers Assessment of outreach effectiveness via independent research.	Training frequency C-SAT with call centre interaction	Report on meetings Check LSC reconnections compared to benchmark	Ongoing customer feedback	Customer Interactions and Monitoring Report

3.2.2 Proposed small scale incentive scheme for customer experience

AusNet and the Forum have agreed to the development of a customer satisfaction incentive scheme.¹⁶ AER staff consider that it may be worthwhile for AusNet and the Forum to further consider one aspect of this scheme. This is the formula for calculating the incentive rate. The incentive rate is used to determine penalties or rewards under the proposed scheme.

The formula is as follows:

$$ir_p = rr_p / (Tar_p - ilp_p)$$

Where:

ir_p is the incentive rate for parameter p

rr_p is the revenue at risk for par

Tar_p is the target set for parameter parameter p

ilp_p is an estimate of Industry Leading Performance for parameter p

¹⁶ AusNet Services, Delivering Better Outcomes For Customers, Draft Electricity Distribution Regulatory Proposal, 1 January 2021 to 31 December 2025, February 2019, p. 83. Forum, AusNet Services EDPR Forum – Interim Engagement Report, February 2019, pp. 27-30.

Under this formula, the closer the target is to industry leading performance the higher the incentive rate will be. This potentially creates three issues:

- 1) The incentive for AusNet to improve would be high if AusNet is performing close to the industry leading performance. However, if AusNet is close to industry leading performance the need for AusNet to improve may be questionable. Also, the incentive for AusNet to improve could be weak if AusNet is far from industry leading performance. In such a circumstance it may be argued that AusNet should have a stronger incentive to improve performance.
- 2) The penalties or rewards may not be linked to the benefits or costs to consumers for a change in performance under the scheme¹⁷
- 3) If AusNet is the industry leading performer, then the incentive rate is undefined.

Determining the benefits to consumers from improved performance may be difficult. However, we consider that the Forum is well placed to advise AusNet on the appropriate incentive rate.

¹⁷ Which is required under NER clause 6.6.4(b)(3)

4 Out of scope matters

The focus of AER staff's involvement is to better prepare the Forum to negotiate matters that are in scope. Despite this, AER staff have, in good faith, decided to provide guidance on the out of scope topics similar to the guidance on in scope topics. However AER staff give this advice with the proviso that it does not reflect the views of the AER Board. AER staff also note the limitations of their views. In particular, AER staff have not been able to review evidence or supporting material to test claims nor apply the regulatory tools that it has available during a typical review.

4.1 Innovation

AusNet Services' final proposal for innovation involves expenditure of \$7.5m (\$2020) over the 1 January 2021 to 30 June 2026 period which would fund ten strategic innovation projects that seek to deliver significant customer benefits.

AER staff provided comments on AusNet's proposed innovation expenditure in their guidance note 9.¹⁸ We consider that these comments are largely still relevant to AusNet and the Forum's consideration of innovation. We further elaborate on these comments below.

Customer support

In Guidance note 9, we advised that, in our view, the AER's approved opex forecast can not include a general allowance for innovation that was de-linked to specific projects.¹⁹ Guidance note 9 also noted the need for evidence that customers value and are willing to pay for the proposed innovations.²⁰

AusNet Services is currently undertaking further customer research to gauge support for the overall innovation portfolio and customers' willingness to pay for it. This research will test the support for the proposed innovation projects and will be available to the Forum prior to the commencement of negotiations. AusNet Services' has indicated that the research will be used to further refine the innovation proposal.²¹ To support AusNet's innovation projects, this research should focus on the projects themselves rather than the overall innovation portfolio. Should AusNet materially adjust its innovation proposal in light of this research, we consider that AusNet should develop an updated note setting out the new negotiating position.

Alternative funding arrangements

In Guidance note 9 we also noted that AusNet might receive funding for innovation projects either through incentive schemes or through external grants.

¹⁸ AER staff, New Reg: Towards Consumer-Centric Energy Network Regulation AusNet trial - AER staff guidance note 9 AusNet Services draft proposal and the Forum's Interim Engagement Report, March 2019, Pp.20-22.

¹⁹ AER staff, New Reg: Towards Consumer-Centric Energy Network Regulation AusNet trial - AER staff guidance note 9 AusNet Services draft proposal and the Forum's Interim Engagement Report, March 2019, Pp.20-22.

²⁰ *ibid*, Pp.20-22.

²¹ Innovation expenditure, Final negotiating position for the Forum, 2 September 2019, p.124.

A number of AusNet's innovation projects would appear to be eligible for funding under AER's incentive schemes. AusNet has responded to this comment by developing a table that outlines why incentive schemes would not fund the identified innovation projects. For the EBSS and CESS AusNet makes two points:

- The EBSS and CESS do not reward due to their 5 year timescales
- Future period forecasts would reflect any efficiency improvement - which would prevent efficiency benefits from being earned.²²

The EBSS and CESS function by allowing distributors to retain part of any efficiency gain that flows from innovation. Under the CESS a distributor retains 30 per cent of any underspend against its capex forecast. The EBSS allows a distributor to retain efficiency gains for 5 years. Given this, AusNet's two points appear to be at odds with each other. AusNet maintains that future period forecasts would reflect any efficiency improvement. However, if there is an efficiency improvement, then AusNet would be rewarded.

We consider that many of the projects that AusNet has listed would be eligible for the DMIA. In the table, AusNet states that the DMIA is not applicable to the innovation projects. This appears to be because AusNet's proposal fully commits DMIA funding to the value of \$3m over the forecast period (\$2020).²³ The Forum may want to consider these additional projects together with AusNet's existing DMIA projects and whether AusNet's customers would be willing to fund innovation projects above and beyond those already funded through the scheme.

AusNet notes that many of the innovation projects, given their minor nature are not expected to have material impacts on STPIS, GSL and potential CSIS rewards.²⁴ We accept that, relative to the total rewards AusNet may accrue through these schemes, the impact of these innovation projects may be immaterial. However, we consider that the materiality of STPIS, GSL and CSIS rewards should be considered with reference to the minor nature of the trials.

Is AusNet best placed to innovate?

In its interim engagement report the Forum requested AusNet explain why it is best placed business to undertake innovation/research projects. In its submission the ECA sought "confirmation that the innovation projects being considered are truly innovative." We have observed in other parts of the NEM that businesses have been called on to use their innovation allowances for projects that have not been trialled previously. This is so that consumers are not paying for multiple trials of the same project, and to ensure that learnings from trials are spread to maximise value throughout the NEM.

²² Innovation expenditure, Final negotiating position for the Forum, 2 September 2019, p.138.

²³ AusNet, Delivering Better Outcomes for Customers Draft Electricity Distribution Regulatory Proposal 1 January 2021 to 31 December 2025, February 2019, p.91.

²⁴ AusNet Services, Innovation expenditure 2 SEPTEMBER 2019 PAGE 112 OF 175 Final negotiating position for the Forum, 2 September 2019, p. 138.

4.2 Distributed Energy Resources (DER)

AusNet is proposing an expenditure program of \$52 million (\$2018) for the five calendar years from 2021-2025, to unlock additional DER capacity in areas where it is cost effective to do so, and where the overall benefits outlined above outweigh the costs.²⁵

In developing its proposal for DER expenditure, we consider that AusNet should have consideration for the requirements of Future DER markets. Future DER markets may require distributed assets to communicate with a number of different market participants. The development of common platforms, communication standards and shared systems will reduce the overall cost and complexity for the customer. We would like to see distributors working towards common platforms, and that they have consulted and implemented learnings from prior works and trials across the NEM. In developing such a market it will be important for the industry to work together to avoid "rail gauge" problems by developing consistent approaches and standards across the NEM (and with international practice if applicable).

Cost benefit analysis

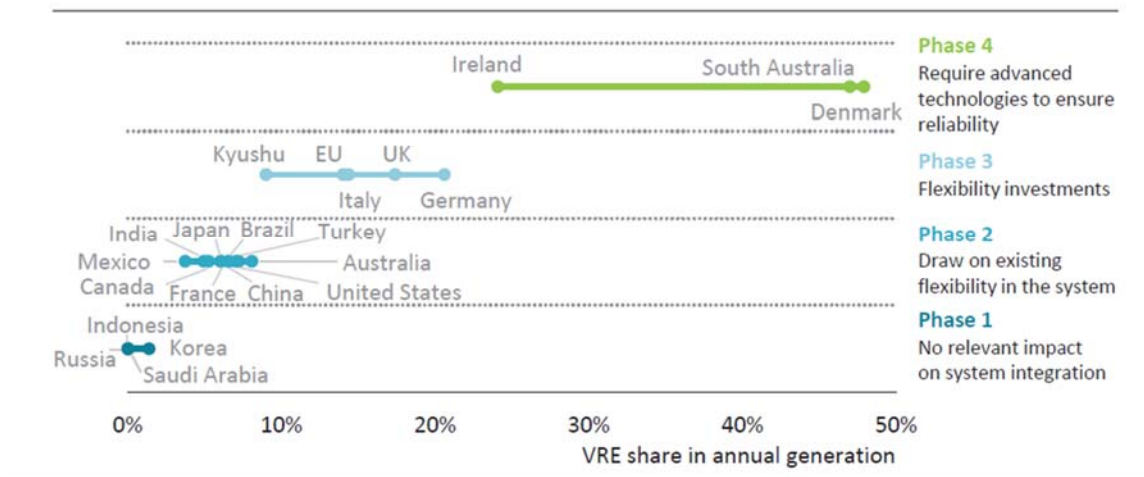
We consider that robust cost-benefit analysis should underpin any DER integration proposals. This requires appropriately identifying and valuing customer benefits (many of which will be external to a distributor). Given that network assets will typically be in place for 50 or more years it is important to test any future network expenditures against short-term options that may allow for better knowledge to be obtained.

A positive cost benefit analysis underpins AusNet's proposed DER expenditures. It is important that this is robust. AusNet's calculation of the customer benefit of this program uses the Victorian Feed in Tariff (FiT) of \$120/MWh. This is a relatively high value and includes some inputs that may not be directly applicable to NER framework (in particular a value on carbon). Other networks have applied different values. For example the value used in the SA reset was (circa) \$50/MWh. There are a number of projects also looking into this value in parallel. The benefits identified by SAPN associated with reduced solar PV curtailment were materially less than those being proposed by AusNet Services. Even noting the different customer numbers between the two businesses, the AusNet Services assessment of benefits appears quite high given that their respective PV penetration levels are almost half of SAPNs.

It may well be the case that now is not the appropriate time for AusNet to significantly invest in the integration of DER. As shown in Figure 2, the level of DER penetration in Australian networks (SAPN's network aside) is at the level where flexibility in existing networks may be used to manage DER.

²⁵ AusNet Services, DER expenditure Final negotiating position for the Forum, 2 September 2019, p. 1.

Figure 2 Annual share of variable renewables generation and related integration phases in selected regions/countries



Source: IEA World Energy Outlook 2018

The benefits of AusNet's avoided augmentation expenditure is based on a reduction in voltage compliance. This is a challenging area as it involves voltage compliance and the associated safety perceptions. AusNet Services appears to be basing their voltage compliance augmentation on the need to retain voltages in compliance with AS 61000.3.100. This requires 95% of customers have a voltage equal to or less than 253V 99% of the time and 95% of customers to have a voltage equal to or greater than 244V 99% of the time. The 253V limit here is the key aspect as distributed PV has a tendency to raise voltages on LV networks.

All new residential solar and storage inverters are required to comply with AS4777. This means that the inverter will disconnect the PV and/or storage devices when the household voltage reaches 256V. This standard was designed with the assumption that household voltage losses were 2% or less. This means that the home inverter will disconnect and stop the grid voltage rising above 253V (256v – 2%). Given this the augmentation may not be justified and the benefits (and forecasts) overstated.

4.3 Major asset replacement

In its draft regulatory proposal, AusNet outlined nine major asset replacement projects. The total cost of these projects came to \$100.8m (\$2020). These projects are for the replacement of equipment within zone substations. Over time, as this equipment ages, the risk of failure resulting in unplanned interruptions to supply increases.

The Forum is engaged to represent the perspectives and preferences of AusNet Services' customers. Thus, the feedback from AusNet's customers and how this is factored into negotiations is important. In its draft regulatory proposal, AusNet indicated that it would seek feedback from its customers on their preferences for deferring zone substation works.²⁶

²⁶ AusNet Services, Delivering Better Outcomes For Customers, Draft Electricity Distribution Regulatory Proposal, 1 January

AusNet subsequently released a survey which, in relation to customers' price and reliability trade-off preferences, found:²⁷

- 95% of respondents considered it either quite important or very important that current reliability be maintained;
- Without having regard to cost, 87% of respondents considered we should be addressing the risk of reduced reliability in their location in the next five years to seven years;
- For residential customers:
 - 75% would prefer to pay an additional \$0.17-\$0.80 per annum during the next regulatory period to improve reliability in their location, rather than face a 50% increased risk of power outages if the works were deferred and then pay a greater amount in 2026 and beyond; and
 - 70% would prefer to pay an additional \$0.80-\$3.38 per annum during the next regulatory period to improve reliability across all locations, rather than face a 50% increased risk of power outages if the works were deferred and then pay a greater amount in 2026 and beyond
- For business/farm customers:
 - 79% would prefer to pay an additional \$1.54-\$6.95 per annum during the next regulatory period to improve reliability in their location, rather than face a 50% increased risk of power outages if the works were deferred and then pay a greater amount in 2026 and beyond; and
 - 68% would prefer to pay an additional \$7.42-\$33.59 per annum during the next regulatory period to improve reliability across all location, rather than face a 50% increased risk of power outages if the works were deferred and then pay a greater amount in 2026 and beyond.

As the results of this survey are an important consideration we consider that it would be helpful for AusNet to clarify the wording of the survey specifically concerning the "50 per cent increased risk of power outages".

AusNet presents options for its major replacement projects at a portfolio level. However, each specific project should have its own cost benefit analysis as each project has specific customer implications. For instance:

- the impact of outages depends on their context. Reliability fluctuates from year to year so customer's perspective on whether or not reliability is being maintained may depend on the long-term average number of outages. The impact of outages will also depend on the location. The value of customer reliability is a useful starting point for calculating the impact of outages.

2021 to 31 December 2025, February 2019, p. 58.

²⁷ AusNet Services, Replacement expenditure: Major projects Final negotiating position for the Forum 2 September 2019, pp. 60-61.

- Capex project costs will not have a significant immediate impact on a customer's bill. However, these projects may have a compounding long-term costs which should be taken into account.
- The specific timing of each project is important. In addition to the risk of outages, AusNet may make windfall gains through the CESS if the project timing is incorrect.

We note the Forum provided feedback that a portfolio option “best balances customer concerns about reliability with their concern about cost.” We consider that the Forum should clarify this statement with respect to the costs and benefits of the individual projects and the interests of all of AusNet's customers (not just those facing the reliability implications of the specific projects).