

19 June 2019

Mr Chris Pattas
General Manager, Distribution
Australian Energy Regulator (AER)

Uploaded via email: AERinquiry@aer.gov.au

Dear Mr Pattas

AER consultation paper — ICT Expenditure Assessment

SA Power Networks welcomes the opportunity to comment on the consultation paper which sets out how the AER proposes to assess the Information and Communications Technology (ICT) expenditure proposals of electricity distribution network service providers (DNSPs, or distributors). This is a particularly important review, given that ICT has, and will increasingly be, fundamental to enabling the effective and efficient delivery of low-cost electricity distribution services to our customers.

Our submission mostly supports the AER's proposed assessment framework, while raising a number of issues for consideration, so that regulatory forecasts can reasonably cover at least efficient costs, and to ensure consistency with the broader incentive framework.

A key benefit of the AER's proposed approach is that it appears to acknowledge that while distributors may propose new initiatives to adapt to changing needs which should be justified on the basis of new positive merits, much of a distributor's ICT expenditure is simply to maintain existing services, functionalities and capabilities which would have been previously subject to regulatory scrutiny. The latter should feasibly be subject to more practical assessment approaches.

Some aspects of the AER's approach such as proposed benchmarking of costs and key definitions applied require more detailed engagement with distributors and other stakeholders. More engagement is required on these matters given their complexity and because we have only been provided an opportunity for a submission response to a broad consultation paper.

We would be pleased to engage further with the AER on any aspect raised in our submission or any other matter relevant to this important review. If you wish to discuss our submission further, please contact Bruno Coelho on 08 8404 5676.

Yours sincerely



Doug Schmidt
General Manager Regulation

SA Power Networks

Submission to AER consultation paper



ICT expenditure assessment

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Executive summary

Our overarching views on the AER's consultation paper are that:

- Context is needed in observing trends in Information and Communication Technology (**ICT**) expenditures across the National Electricity Market (**NEM**). These cannot be viewed in isolation of changing customer and regulatory demands, and electricity distribution network service providers' (**DNSPs**, or **distributors**) broader performance. For efficient distributors, gradual long-term increases in ICT expenditures are likely expected.
- Generally, the AER's proposed framework for assessing distributors' proposed ICT expenditures appears reasonable and practical to the extent that it customises approaches to different types of ICT. Our 2020-25 Regulatory Proposal largely mirrors the AER's framework, subject to the AER addressing matters which we raise in this submission—Appendix 1 outlines how the assessment approaches would operate with our recommendations.
- More thorough engagement with distributors and stakeholders is required on some key aspects such as benchmarking and definitions (e.g. recurrent vs non-recurrent, ICT, etc). Affording one written submission is inadequate, particularly as we are responding without a detailed AER draft decision.
- Consistency is needed between the proposed assessments and the broader incentive based regulatory framework, so as to not undermine the incentive framework and adversely affect investment confidence at a time when electricity networks' investors are having to turn to ICT to adapt networks to changing customer demands.

Our key positions on the AER's proposed assessment framework are as follows:

- Applying top-down 'revealed cost' approaches to assess 'recurrent' expenditures appears practical for these expenditures which mainly aim to maintain services, capabilities and functions. This is providing that legitimate cost increases are accounted for by:
 - escalating historic actuals for input cost (e.g. vendor costs) and growth-related changes (e.g. customer and / or user numbers, network attributes etc); and
 - adjusting for increases in 'recurrent' costs arising from: implementation of 'non-recurrent' expenditures; and, regulatory compliance costs that were not subject to regulatory funding.
- In future, benchmarking can at best provide an additional source of information for the AER, subject to further engagement to resolve data consistency / definition concerns and decide the form benchmarking should take. Benchmarking ICT spends cannot be viewed in isolation of service demands and a distributor's overall performance, and is not fit to be applied deterministically.
- 'Non-recurrent' expenditure is appropriately assessed via business cases, but distinction is needed between:
 - cases for "maintaining services, functions, capabilities" and cases for "complying with new/changed regulatory obligations/requirements", for which do-nothing scenarios are unreasonable / impractical and therefore should not be expected to have measured benefits outweighing costs; versus,
 - cases for "new / improved services, functions and/or capabilities", which should reasonably be shown to derive measured benefits that outweigh costs.
- While distributors should account for efficiencies across their entire Regulatory Proposal that are reasonably expected to result from their proposed ICT expenditure, we identify that:
 - the applied framework should not be asymmetrical by only accepting expected cost decreases to be identified without accounting for legitimate and efficient cost increases;
 - efficiencies / productivity particularly in operating expenditures must not be double counted; and
 - should the AER consider that a distributor has not identified or under-valued expected efficiencies, opportunity should be provided to further substantiate a proposal rather than employing extreme measures such as rejecting a proposal or applying a top-down productivity adjustment, neither of which afford reasonable opportunity to recover at least efficient costs.
- It is preferable and consistent with the principles approach to engagement, that distributors have discretion on the need for post-implementation reporting of the outcomes from non-recurrent ICT, and the regularity and form of reports—these need to be customised to a distributor's ICT and the needs of its stakeholders.

The context to ICT expenditures

In our customer and stakeholder engagement we have noted a growing interest in understanding the trajectory of distributors' ICT expenditures and how these link to customer services. Equally, the AER's consultation paper draws attention to ICT expenditures trending upward in absolute terms and as a percentage of total expenditure. Context is needed as these trends should be expected:

- There is a world-wide trend of increasing ICT expenditures¹ as firms transform from manual to automated operations and as customer demands change. Distribution networks are no different and increasing ICT expenditure is observed consistently across the NEM—trends being most consistent and gradual for distributors deemed most efficient by the AER's benchmarks. Isolated exceptions for which a decrease in ICT expenditure may be expected are for historically least efficient distributors, those for which various reviews have raised concerns as to previous asset over-investment.
- While distributors' ICT expenditures have increased, total expenditures have concurrently decreased (Figure 1).² Various factors explain this, but ICT has played a part.
- At the same time, not all ICT investments have a productivity motive or can be expected to reduce expenditures between regulatory periods noting:
 - The nature of distribution services demanded by customers is evolving at the same time as the 'outputs' as measured by AER regulatory approaches do not keep pace with these changes.³ This requires urgent and thorough AER attention both in the context of ICT reviews but more broadly also.
 - Regulatory changes continue to drive ICT requirements. Table 1 outlines just some examples that have been introduced in recent years.
 - Replacements of existing ICT systems and capabilities do not of themselves drive reductions in costs, as replacements are typically scoped to achieve 'like-for-like' outcomes.⁴
 - ICT solution options are changing in nature and present different cost implications, increasing recurrent costs. For example, alternatives to hosting systems in Cloud environments or alternatives to subscription-based services from external providers are increasingly disappearing.

Figure 1: NEM DNSP total expenditure & ICT total expenditure



Table 1: Examples of regulatory changes driving ICT expenditures

Regulatory change	Impact
AER Regulatory Information Notices (RINs): annual; category analysis; reset.	Fundamental increase in data requirements as compared to what was previously required by jurisdictional regulator, in particular due to shift from use of actuals instead of estimates.
Power of Choice rule changes – in particular, metering contestability	Required step increase in ICT requirements on distributors to interact with AEMO's B2B systems and registered parties including Metering Coordinators.
5-minute rule change	Require a step increase in ICT requirements to store multiple amounts of settlement data.
Critical Infrastructure Centre	Driving a step increase in cyber security spend.
AER expectations for regulatory proposals	Increased expectations as to data required to support network expenditure proposals is driving a step increase in our required visibility of our network to more accurately and economically value the likelihood and consequence of asset failures.

¹ IDC, *International Data Centre Global ICT spending 2007-17*. [<https://www.idc.com/promo/global-ict-spending/overview>].

² Source: AER, *Consultation paper – ICT Expenditure Assessment*, May 2019, p.11

³ The AER decides the 'outputs' to factor into benchmarking, productivity and opex growth forecasting. If 'outputs' don't keep pace with services distributors provide, measured productivity may decline and regulated forecast expenditures will be insufficient. Examples of factors that may drive increases in inputs without reflection in the AER's measured 'outputs' include:

- Cyber security investments and investments to manage the effects of DER connecting to distribution networks which drive cost inputs but are not measured as 'outputs';
- DER exports may affect the calculation of 'energy throughput' as measured by the AER. This may affect measured output and also seemingly indicate that the network is working less when it's actually working more to transport energy in two directions.

⁴ More material effects would have been evident in transitioning away from alternatives to ICT systems – for example when ICT payroll systems were introduced, or when sub-station and network drawings were shifted to ICT from paper-based approaches.

Categorising and defining ICT expenditures

ICT expenditure is appropriately distinguished between 'recurrent' and 'non-recurrent'. Further distinctions under these groupings should be left to distributors' discretion as appropriate to their circumstances, to minimise administrative burden and avoid data inconsistencies over time, noting that:

- The main purpose of distinguishing between ICT expenditures should be to identify those warranting more 'top-down' assessment as opposed to 'bottom-up' assessment of business cases, and 'recurrent' and 'non-recurrent' distinctions help in this regard accordingly.
- Distributors may find it useful to further distinguish proposed ICT expenditures on the basis of cost drivers or needs, to help explain the purpose of the expenditures in engaging with customers and other stakeholders, including with the AER as part of the regulatory determination process.⁵
- However, there is no one-size-fits-all approach as expenditure drivers / needs vary by distributor. Some wish to invest in new ICT as they believe their operations can be rationalised. For SA Power Networks, our operations are consistently comparatively efficient and we have seen greater potential to mitigate costs to customers by focussing (among other things) on investing in innovative ICT to better prioritise network asset replacements by valuing the likelihood and consequence of asset failures.
- Expenditure drivers / needs change over time, making mandated disaggregations obsolete. Changes to disaggregations involve high administrative burden and complexity in back-casting regulatory reports.

Some definitions in the consultation paper need clarifying and we encourage the AER to engage further with distributors to ensure consistent interpretation and reporting. In our view:

- 'Recurrent' expenditure is properly characterised as periodic or cyclical spends including replacements occurring every five years or less. This could be further explained as being to maintain services, functionalities and capabilities.
- It is unclear if 'recurrent' intends to capture the following:
 - New regulatory compliance initiatives—expenditure to meet a new obligation should be characterised as 'non-recurrent', with the ongoing costs of maintaining the compliance capability being 'recurrent'.
 - Unfunded regulatory compliance initiatives—some compliance costs may not be included in the AER's forecast allowances due to uncertainty on the obligation's timing, or because that forecast was insufficient to cover compliance actions.⁶
 - Distributed Energy Resource (DER) related expenditures—the AER refers to DER within 'non-recurrent' in the context of new capabilities to host DER, but it is unclear what is to be captured in 'recurrent'.
- 'Non-recurrent' expenditure is appropriately characterised as more infrequent major replacements (i.e. on a cycle greater than 5 years), the acquisition of new or expanded capabilities, but also compliance with new / altered regulatory obligations / requirements. There is no reason to suggest why these will always be project related⁷ or why a project / programme distinction is relevant.
- 'ICT' is briefly defined in AER Category Analysis RINs. However, it appears there may have been differing interpretations of this term, particularly relating to expenditure for network control (e.g. SCADA, ADMS/OMS systems) and telecommunications.⁸ A further complication appears from some of these expenditures being subsumed in Advanced Metering Infrastructure for the Victorian distributors.

⁵ For example, our Regulatory Proposal distinguishes 'recurrent' from 'non-recurrent' expenditures for: maintaining service; compliance; and managing business & costs. The latter being associated essentially with new / increased capabilities and service improvements. SAPN, *Supporting document 5.32: IT Investment Plan 2020-25 – 2020-25 Regulatory Proposal*, January 2019, p.15.

⁶ Our submission to the AER's productivity review outlined several increases in costs to serve including from regulatory compliance, which were not funded, e.g. increases in costs of complying with: ESCOSA's Guaranteed Service Level scheme; Metering Contestability reforms; various AER's requirements. SAPN, *Submission to AER draft decision: Forecasting productivity growth for distributors*, 21 December 2018, Appendix 1.

⁷ For example, SAPN's Regulatory Proposal includes a 'non-recurrent' programme of 'Assets and Works' which seeks to invest in innovative ICT solutions to acquire various capabilities to better value and prioritise network asset replacement works.

⁸ This has also been highlighted in our discussions with consultancies experienced in benchmarking distributors' ICT operations for business/financial management, such as KMPG and Gartner. The AER may find it useful to draw on their experience.

Assessing recurrent expenditures

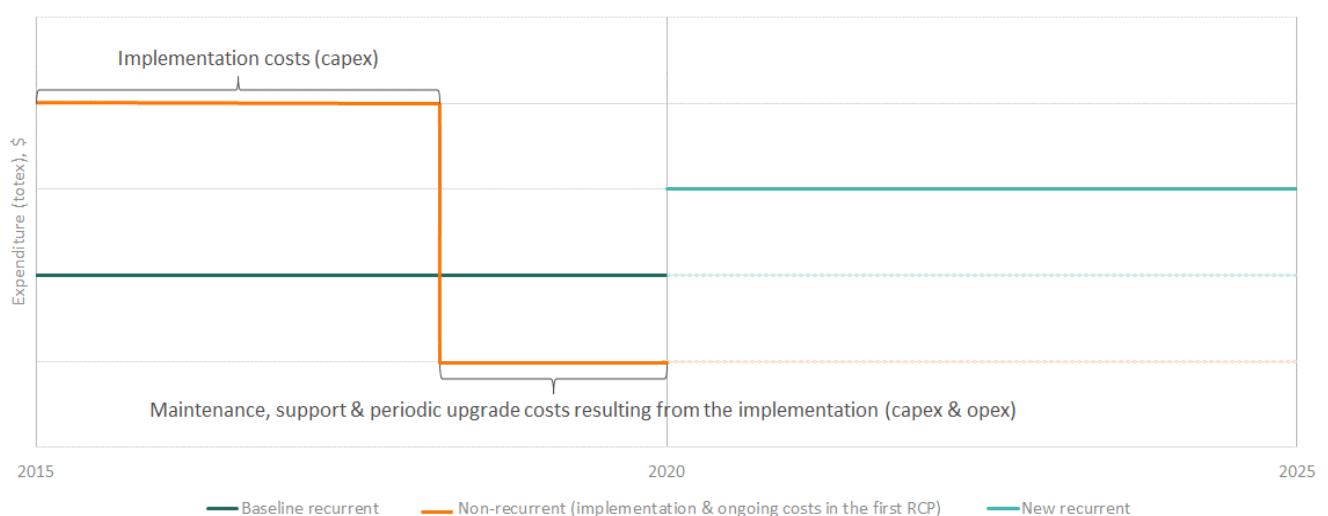
Revealed cost approach

As ‘recurrent’ expenditures are to maintain services, functionality and capabilities, modelling and explaining ‘do-nothing’ scenarios is inappropriate. If these expenditures are subject to business cases, the cost-benefit-analyses would necessarily show net costs (negative benefits vs costs in NPV terms).⁹ Applying more top-down assessments to ‘recurrent’ expenditure appears a potentially appropriate and practical alternative.

However, it is incorrect to expect ‘recurrent’ expenditures to be flat over time, and any ‘revealed cost’ approach (i.e. comparing forecasts vs actuals) must account for legitimate / efficient increases over time in order for forecast expenditure allowances to comply with the NER and afford distributors a reasonable opportunity to recover at least efficient costs, consistent with the National Electricity Law (NEL). As per the AER’s Base-Step-Trend approach to forecasting operating expenditure (opex), historic actual ICT expenditure should only serve as a base and be subject to:

- input cost escalation—such as increases in vendor and other costs which may not track consistent with the Consumer Price Index (CPI);
- growth escalation—ICT has various costs drivers, such as increases in user numbers, or network attributes, for example: network coverage and number of regional depots / offices; number of assets / feeders being actively recorded for more economic approaches to valuing the likelihood and consequence of asset failure; number of feeders actively monitored / managed with respect to DER export driven constraints etc;
- accounting for driver dependent costs: while the AER should clarify if it intends some aspects of DER related expenditures to be in ‘recurrent’, some costs of connecting and managing DER may be directly correlated with DER connection rates. In South Australia, DER connection rates are increasing significantly over time and so historic actuals would inappropriately reflect future requirements;
- inclusion of unfunded regulatory compliance costs: as discussed, there may be regulatory compliance costs not included in the AER’s forecast allowances due to timing uncertainty or because the allowances under-forecast compliance costs. Actual compliance related spends must be accounted for in revealed costs; and
- adjustment for required increases to ‘recurrent’ expenditures resulting from implementing ‘non-recurrent’ expenditures. As visually demonstrated in Figure 2, the implementation of a system such as ADMS (or any other new system) in a previous regulatory control period (RCP),¹⁰ would have increased ‘recurrent’ expenditure to maintain support for / upgrade / refresh that system—some of this increase may or may not present in that previous RCP.

Figure 2: Step increases to ‘recurrent’ from implementation of ‘non-recurrent’ expenditures



⁹ Our 2020-25 Regulatory Proposal, submitted before the AER’s consultation paper, provided business cases to support all of our ‘recurrent’ expenditure, noting the complication highlighted here of the unreasonableness of modelling ‘do-nothing’ scenarios.

¹⁰ Implementing the ADMS system in this case would have been efficient if reviewed / incorporated in a distributor’s approved revenues, or if implemented while keeping actual capital and operating expenditures within forecast approved expenditures. Ex-post reviews of the efficiency are only conducted where a distributor has spent more than its allowed capital expenditure.

Benchmarking

Benchmarking ‘recurrent’ ICT expenditures may eventually form part of a suite of information tools the AER could have regard to in its assessments. However, ICT benchmarking is not capable of being applied in a deterministic manner and nor is it likely to provide much useful information to the current round of distribution determinations. Further engagement is also required with distributors and stakeholders to address data consistency issues and agree the appropriate form of benchmarking. In our view:

- ICT expenditure benchmarking cannot be viewed in isolation. Spends provide no indication of the ‘outputs’ derived across an organisation, differing to the productivity benchmarking the AER uses to assess forecast opex. For example, AER RIN data shows that in the most recent years, the highest spenders on recurrent ICT appear to have been the most efficient distributors as measured on the AER’s Multi-lateral Total Factor Productivity (MTFP) and other bases.¹¹
- There are potential data inconsistencies in comparing distributors, particularly given the definition uncertainties discussed earlier in this submission.
- The appropriate form of benchmarking requires more detailed consideration and we do not yet have a draft AER proposal in this regard that incorporates distributor and stakeholder views. In our initial view:
 - For recurrent ICT capex, distributors will be on different refresh / upgrade cycles. Therefore, benchmarking on the basis of a single point in time may be inappropriate, with a moving average being a potential alternative.
 - In deciding the factors to use to normalise for differences between distributors, a balance is required between simplicity of application / interpretation and reflection of the drivers of ICT expenditure—both historic and forecast. There will likely be multiple major cost drivers relevant to different types of ICT. We encourage the AER to undertake correlation analysis of ICT ‘recurrent’ expenditures against different cost drivers across NEM networks and consult on its findings. Our initial views on potential approaches are set out in Table 2.

Table 2: potential benchmarking normalisation factors

Factor	SAPN initial views
Customer numbers	Appears the most simple and practical approach at this time and has historically seemingly correlated well with trends in ICT spends.
Employee numbers	Potential to be interpreted inconsistently depending on the extent of third-party contractors employed and who utilise a distributor’s ICT devices. ICT ‘users’ would more appropriately capture factors that drive matters such as a distributor’s required number of devices, licenses, subscriptions, data storage requirements, and support costs etc. ¹²
Network attributes - historic	An example relevant to SAPN has been the dispersity of our network and therefore the number of required depots and offices that we operate, particularly in regional areas, and the number of devices required for staff in travelling across a large dispersed network area. Kilometres of line length may help to account for these asset dispersity / spatial cost drivers.
Network attributes - future	Network attributes will increasingly drive ICT costs in different ways. Some examples for SAPN include the number of assets and feeders that we identify / monitor the condition / value of to prioritise our repex work; and the number of feeders / assets that we may monitor for the purposes of actively managing the hosting of DER connecting to our network.
Other specific factors	The number of DER units such as generators connected / connecting to distribution networks drive a range of ICT costs, including with respect to connection process administration / communications as well as costs in managing the effects of DER on the network. The latter may be otherwise captured in a network attribute factor depending on the DER management approach proposed by a particular distributor.

¹¹ Based on SA Power Networks view of the historic data reported in the AER’s RINs, as available to on the AER website: [<https://www.aer.gov.au>].

¹² Even the term ‘users’ has potential to be interpreted differently depending on the time-period being measured and the definition as to the business (i.e. regulate business, business unit providing standard control services etc)

Assessing non-recurrent expenditures

Expectations of business cases

'Non-recurrent' ICT expenditures are appropriately subject to 'bottom-up' assessments of business cases, as generally these expenditures have options on timing and the means of achieving the need identified.¹³ Broadly, business cases should: outline an 'identified need' in some form;¹⁴ set out options to meet the need; and compare options via a cost-benefit-analysis. The detail expected should be commensurate with the expenditure's materiality. Importantly, the approach to business cases must vary, as there are typically three very different types of needs for 'non-recurrent' expenditure, being as follows

1. *New or improved ICT capability, functions and services:*

- It is reasonable for expenditures aiming to achieve new / improvement goals to be justified by benefits to customers outweighing costs. This may involve quantifying risk avoidance benefits if relevant.
- Examples of these are included in our 2020-25 Regulatory Proposal, including (among others) in business cases aiming to provide us with a capability to better value the likelihood and consequence of network asset failures, and expenditure to actively manage potential network constraints arising from the connection of DER. The capabilities enabled by these expenditures are not ones we currently possess.
- The types of benefits targeted by these expenditures will vary by distributor and over time. For example, some may reduce base costs / achieve productivity (e.g. to base opex), others may mitigate cost increases (e.g. avoid more network repx/augex), and others may also achieve positive market benefits.

2. *Maintenance of ICT capabilities, functions and services:*

- Many non-recurrent expenditures only seek to maintain capabilities, functions and services. This is the case for major replacements of ICT on cycles greater than five years. Examples relevant to our Regulatory Proposal include replacement of our core enterprise system (SAP) platform, billing, and network protection settings systems.
- In accordance with the AER proposal, major replacements are to be treated as 'non-recurrent' by virtue of this expenditure's relatively infrequent nature. However, these major replacements share the same purpose as 'recurrent' expenditure being only to maintain capabilities, functions and services.
- As major replacements are to maintain capabilities previously deemed efficient in earlier RCPs, the prudence and efficiency of taking the replacement action should not be in question.¹⁵ It is unreasonable and of no practical gain to expect business cases for major replacements to include a base-case of 'do-nothing' or quantitatively model effects on a distributor's services of say, not having a billing system or SAP in place—equivalent to modelling the benefits of having ICT vs paper-based systems.
- As the premise of taking an action for major replacements should not be in question, all options to undertake that replacement will have costs outweighing measured benefits and therefore negative NPV outcomes. The question then turns to which negative NPV option is most prudent and efficient, mirroring the AER's existing approach to 'reliability corrective actions' in the RIT-D process.¹⁶
- It is still reasonable for major replacements to be justified on the basis of business cases, as there may be options on the timing of replacements, and options as to alternative systems and service providers.

3. *Complying with new / altered regulatory obligations / requirements:*

- The treatment of these cases should mirror (2), as 'do-nothing' scenarios for compliance purposes are inappropriate and costs will outweigh measured benefits.
- Should there be options as to the means of compliance including options as to the use of external service providers, the costs and merits of these should be compared.

¹³ We refer to the 'identified need' here in the same way as this term is applied to network investments for the purpose of the Regulatory Investment Tests, as defined in Chapter 10 of the National Electricity Rules (NER).

¹⁴ The expenditure's purpose in terms of running the distribution business and the services the distributor provides to customers.

¹⁵ The capabilities would have been subject to expenditure incorporated into a previous AER regulatory determination of the forecast efficient allowance, or deemed efficient if actual spends in a previous RCP were below the AER's allowances.

¹⁶ Clause 5.17.1(b) of the NER provides that for the purposes of a RIT-D, an option may: "...have a negative net economic benefit (that is, a net economic cost) where the identified need is for reliability corrective action".

Further, an option with the highest NPV (or least negative NPV) may not be the most appropriate. There are hard to quantify factors that may make it efficient and prudent to opt for an option with a lower NPV (or more negative NPV). These may include the reputation, likely longevity of, and cyber security issues with different service providers; or implications for a distributor's deliverability of its whole ICT work portfolio. In these situations, distributors should show that they have at least employed a qualitative risk framework.

Assessing the efficiency of the overall expenditure forecast

Distributors should account for and identify interactions between ICT expenditure proposals and the overall expenditure forecast.¹⁷ However, if the AER considers that these interactions have not been identified or have been under-estimated, there should be an opportunity to respond via an information request or revised proposal, rather than imposing the extreme options of rejecting the proposed ICT or applying a top-down productivity adjustment to capex and/or opex. This is given that:

- In the context of a minimum seven-year forecast (i.e. from the base year to the end of RCP), absolute precision is unattainable. AER amendments to a distributor's identified and reasonably expected efficiencies must be properly substantiated to not risk revenue shortfall.
- If a proposed ICT project / programme is deemed prudent and efficient under the NER, neither rejecting the project / programme nor applying a productivity adjustment complies with the NER and NEL.

If the AER proceeds with its proposal to either reject a business case or apply a top-down productivity adjustment, distributors should be permitted to withdraw the project / programme in question from the Regulatory Proposal as appropriate.

Post implementation reporting

We recognise that stakeholders may be interested in distributors reporting back at some stage and in some form on experiences with achieving the benefits identified as part of the 'non-recurrent' business cases included in a previous Regulatory Proposal and associated engagement.

However, it should be left to distributors' discretion to provide these reports and appropriately customise their frequency and form. Reports will likely be more useful as context to the stakeholder engagement on a subsequent Regulatory Proposal. Mandating specific reporting requirements and frequency will be inefficient and unlikely derive information of practical stakeholder and AER use. We caution against reporting for reporting's sake, noting that:

- Under the incentive regulatory framework, the AER does not approve specific projects / programmes, and distributors can and do reprioritise based on the latest prevailing conditions which change over the course of the RCP. Frequent and yearly reporting would require heavy context, result in administrative burden and provide limited to no benefit.
- There are typically lags between the timing of expenditures and achievement of benefits, making regular / annual reporting meaningless. Many projects / programmes will not be fully implemented within a 5-year time-frame, hence the benefits realisation will not commence until subsequent RCPs.
- The benefits and goals on which 'non-recurrent' projects are proposed will vary as discussed earlier, such as between achieving cost reductions / productivity, new / altered services, market benefits or cost mitigation / deferral etc. There is no one-size-fits all reporting approach for all benefit types and distributors.
- Some benefits identified within a business case may not directly lead to an observed financial effect. For example, the effect on insurance premiums of investing in cyber security may not be directly evident.
- It is unclear to what use the AER will practically be able to put post-implementation reports, as the NER only permit ex-post reviews of capital expenditure efficiency if a distributor has over-spent its efficient capital expenditure regulatory allowance.

¹⁷ For example, our Regulatory Proposal identifies (among other interactions): the network augmentations (augex) avoided by our proposal to actively manage network constraints arising from DER; and, how our repex forecast is lower because of deferred works enabled by ICT—by better valuing network asset replacement works we forecast being able to mitigate the extent of cost increase required to address the challenges of having the oldest network asset base in the National Electricity Market (NEM).

Rather than the AER mandating new reporting requirements, SA Power Networks sees greater value in distributors working collaboratively with our respective customer and stakeholder groups to identify the information that will be most meaningful and useful to our engagement in developing our future Regulatory Proposals. This is consistent with the current principles-based approach to consumer engagement in the AER's current guideline.¹⁸

Regulatory framework coherency and integration

Regard is needed to how the assessments proposed in this review interact with the broader incentive-based regulatory framework, to not undermine the credibility and stability of this framework. This is particularly important at a time when investors in networks are, among other imperatives, being asked to make new types of investments to adapt networks to the increasingly new ways that customers are seeking to use networks.¹⁹ This adaptation and other new customer demands²⁰ will depend on ICT capabilities. Key considerations are set out below.

Interactions between proposed ICT and forecast opex

There is an inconsistency in the AER wanting distributors to account for expected decreases to base opex arising from implementation of proposed ICT, while at the same time seemingly not being prepared to accept legitimate increases to base ICT opex other than for regulatory compliance or capex / opex substitution:

- If a proposed ICT project or programme is efficient and prudent, and it requires an addition to base opex in order to implement the need identified for that project / programme, then the opex increase must form part of a distributor's efficient forecast allowance.²¹
- Accounting only for expected opex decreases and not increases, results in asymmetry and will not comply with the NEL by denying distributors a reasonable opportunity to recover at least their efficient costs.
- Since the Better Regulation reforms, the AER has only accepted step changes for regulatory compliance or capex / opex substitution. However, nothing in the NER prescribes this approach, which to date has been broadly acceptable given the symmetry of acknowledging there may be immaterial increases or decreases to opex occurring over time. The topic must be reviewed in light of any AER move to only account for opex decreases, particularly when also combined with the effect of separately imposing risk on distributors via a pre-emptive opex productivity adjustment.

Interactions between proposed ICT and productivity

It is also unclear how the AER envisages that the efficiencies expected to result from a distributor's proposed ICT expenditures (including between recurrent and non-recurrent expenditures) interact with its separately identified 0.5% opex productivity adjustment. In our view:

- productivity (including within opex) is predominantly derived either via staff redundancies or investing in ICT capabilities and innovation to improve work systems;
- the 0.5% productivity adjustment must be reasonably capable of being achieved, and for distributors operating around the efficient frontier this will depend on their proposed ICT investments; and
- therefore, any efficiencies reasonably expected to result from a distributor's proposed ICT expenditures must be counted toward the 0.5% adjustment and not be in addition to that adjustment. Doing otherwise would double count the expected productivity improvement and be inconsistent with the NEL requirement that distributors be provided with a reasonable opportunity to recover at least efficient costs.

¹⁸ AER, *Better Regulation—Consumer Engagement Guideline for Network Service Providers*, November 2013. Accessible on the AER's website: [<https://www.aer.gov.au>]

¹⁹ For example, by connecting DER and other new applications and using the network as a platform for exporting and trading energy.

²⁰ For example, customers are increasingly demanding communications from us in different ways, e.g. to obtain information about planned or unplanned outages, and to process network connection requests etc.

²¹ In these cases, any reasonably expected opex decreases or increases arising from implementation of an ICT project or programme should be factored into the cost-benefit-analysis for that project or programme.

Appendix 1: ICT assessment approaches incorporating SAPN recommendations

The diagram below summarises how the AER’s proposed assessment approaches for ICT expenditure would operate, incorporating SA Power Networks’ recommendations as discussed in this submission.

