
CCP14

Response to the AER Consultation Paper
ICT Expenditure Assessment

AER Consumer Challenge Panel Sub-Panel CCP14

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19 June 2019

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Acknowledgements

CCP14 acknowledges and appreciates the advice provided by our CCP colleagues Bev Hughson, Mark Henley and David Prins in the preparation and review of this document.

CCP14 wishes to advise that to the best of our knowledge this report neither presents any confidential information nor relies on confidential information for any comments.

1 Introduction

Over the last year or so, there have been a range of submissions from consumer advocate groups highlighting the need for both networks and the AER to bring into greater focus the networks' ever-increasing expenditure on Information and Communication Technology (ICT). In the context of several recent network revenue resets, CCP sub-panels, the ECA, the EUAA and QCOSS have all made submissions to the AER seeking a more systematic and effective approach to the assessment of ICT expenditure.

We also note the work being done by Energy Consumers Australia to help build knowledge and capability within consumer advocate organisations regarding the impact of ICT costs within the network business.

It is recognised that ICT is a critical and growing component of modern utilities. Opportunities and needs have changed significantly over recent years, providing network businesses with even more avenues for cost savings in both operating and capital expenditure while also providing better and more advanced services for customers. The significant concerns about cyber security are also recognised, and the potential for disruption to electricity supply from overseas sources is more real now than even five years ago.

At the same time many consumer groups are concerned with suggestions that ICT investment is essential, so the costs must be accepted and be borne by customers with little scrutiny. Despite the advances in the level of engagement and detail in recent regulatory proposals, we have seen generic references to ICT expenditure being "good" because it "improved productivity" or provided an "improved customer experience", without detail or evidence of informed consumer support for these alleged, poorly defined benefits. ICT, with its relatively short depreciation schedule, delivers "fast returns" to the network owners and an immediate impact on customer bills. Sometimes, the justification has not been any improved productivity or customer experience, rather simply reflecting company policy to upgrade to the latest version of software, without robust analysis of the risks or real consequences of delaying the upgrade or not implementing it at all.

We are pleased that the AER has undertaken this 'lateral' review, and we welcome the opportunity to provide this submission on the Consultation Paper.¹

We agree with the AER's observation:

"We therefore consider that the views of stakeholders are important to informing the assessment approach we apply. It is also important that networks understand what services consumers expect from them and know how to demonstrate that a proposal reflects these expectations. DNSP's need to be able to demonstrate to consumers that these costs are in their long term interests and are the efficient costs of maintaining the service."²

The key outcomes for this review are the need for network businesses to:

1. Present their ICT plans – both capital and operating costs – in a form that both:
 - a) allows the AER to meaningfully consider the prudence and efficiency of the investments to a level of maturity that already exists for the operating expenditure and capital investment in 'traditional' asset classes; and
 - b) does this in a manner that allows consumer groups to understand the purpose of the investment, the options considered, and the returns in the forms of productivity, service improvement and risk mitigation that the investment is to deliver.

¹ ACR Consultation Paper ICT Expenditure Assessment May 2019 <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/ict-expenditure-assessment-review>

² Ibid p 4

2. Be accountable to clearly measure and explain whether the promised benefits of the expenditure are actually achieved.

In many ways, there are parallels that can be drawn from ICT investment with that of a utility's more traditional asset base; that is, to benchmark both recurrent and non-recurrent expenditure and to seek a comprehensive cost-benefit analysis for the investments that are intended to augment a utility's capability or performance. We note the good work done by some utilities, such as Ausgrid, in redefining the role of ICT to underpin a 10% productivity improvement target in the labour component of its total capex forecast and avoided FTE, and by Essential Energy in its close coupling of business benefits in the form of lower opex and capex forecasts from the increased ICT capability.

Generally, CCP14 supports this approach as taken in the consultation paper. However, we believe that traditional approaches such as benchmarking and well-defined cost-benefit analyses do not go far enough to provide the level of reassurance and information that customers require to meaningfully respond to the proposed ICT spending.

Section 2 of this advice discusses what we would like to see as outcomes of this review that apply not only to the evaluation of ICT expenditure during the revenue reset process, but also to consumer engagement on ICT more generally. Section 3 comments on particular aspects of the suggested approach, highlighting what we consider are limitations in the AER's proposed methodology. Section 4 suggests some additional considerations on how to bring further rigour to the assessment of ICT spend. Section 5 provides some specific comments on the questions asked in the Consultation Paper. Our approach to the structure of this submission means that our answers to the questions posed are spread throughout the submission, rather than all being collected in this section.

We note that the consultation Paper only refers to DNSPs. We believe that most, if not all of the issues discussed have equal relevance to TNSPs, and trust that this work can be applied to all regulated utilities.

This submission is intended to encourage the AER to take a bold, innovative and comprehensive review of how utilities are required to report and justify their ICT proposals, and ultimately invest in assets that transparently and efficiently deliver the services demanded by customers, both now and in the future.

In addition, we trust that networks will take our suggestions on board in how they seek to continually improve their ICT engagement with consumers. Consumer engagement on ICT expenditure and associated costs and benefits to consumers is a core issue. We recognise the challenges in these tasks, and consumers stand ready to work with networks to achieve them.

Mark Grenning, Louise Benjamin and Mike Swanston

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2 Proposed outcomes of this review

The AER consultation paper opens the discussion to describe the options, thinking and processes that could apply to assessing the prudence and efficiency of network ICT investment. In so doing, we encourage the AER to take an even greater customer focus in the review to deliver clarity, assurance and confidence that the investment is in the long-term interests of consumers and that customers are engaged in the development of ICT strategies and expenditure proposals.

We see this review having an impact on developing deeper consumer engagement not just around a network revenue reset, but in ongoing business-as-usual consumer engagement. It should result in greater transparency on the need, nature, cost and purpose of the ICT investments proposed by utilities through the following:

1. Improving the form of information provided by utilities – in clarity, format, definitions and benefits

CCP14 believes the current trend of providing high-level, ‘rolled up’ information on the costs and benefits of ICT investment does not allow reasonable scrutiny and informed engagement either with customers or with the AER. We acknowledge that utilities often present some ‘next level’ data in their proposals and presentations, often followed by more detailed business cases as part of the information provision to the AER post-proposal. However, in the customer arena we see little consistency in language, descriptions, information format or other detail.

It is our goal that this review will guide businesses to remove a lot of the generic language and jargon and to provide the data and information in greater granularity and a more standardised form. This will allow both the AER and consumers to better evaluate the prudence and efficiency of any planned ICT expenditure, as well as their impact on the wider business processes and service delivery.

The fact that there is only a limited number of vendors and system providers of the primary ICT tools in the utilities environment should assist in using common terminology, sub-system descriptions and versions.

Removing the variability of language will highlight to informed customer advocates the real situation that utilities are in, such as what tools they currently have, who has already adopted newer versions and when, the extent of compliance with mandated systems and establish broad benchmarks of the capability of different utilities - allowing better assessment of risk, project costs, benchmarking and performance expectations.

2. Providing a framework where the total costs and benefits can be understood

We recognise that ICT is an enabler of processes and the costs and benefits are often sprinkled across several aspects of the business. Examples of this ‘multiple line item’ approach include a utility’s approach to accommodating DER, where costs lie in asset augmentation, automation, information systems, communications and operational technology; or the transition to ‘cloud’ services, where costs and benefits span the cost of delivering work, capex efficiency, operating cost benefits and costs, and impact on the regulatory asset bases.

Similarly, changes due to regulatory decisions such as 5-minute settlement, the expansion of interval metering, and changes to network tariff structures will drive in ICT costs and benefits in various parts of the businesses.

We are keen to see a framework that will support bringing together the various aspects of costs and benefits, so that these more complex investments in ICT can be ‘seen as a whole’ by customers, and a better view of the benefits of the investment can be achieved.

Related to this approach is the importance to better identify the real total cost of regulatory and compliance obligations, such as 5-minute settlement or cybersecurity investments, to allow for more informed decisions in the future. We observe that there have been some occasions where the ICT costs of implementing a system change have been dramatically overstated prior to implementation, reflecting imprecise scope, early vendor quotes and high levels of delivery risk.

We believe that a framework where costs and benefits are collected and articulated, backed up by ex-post review is essential.

3. Providing guidance on how the benefits might be measured

Overall, networks are gradually moving towards a more quantitative approach to measuring benefits, but there is still a high reliance on describing benefits in qualitative terms of their contribution to “productivity”, “improved service”, “efficiency” or “it’s board practice”. Often, large sums of ICT investment are justified as “replacing legacy systems”, with only qualitative descriptions of the need for such an action.³ The adoption of benefits in these general terms makes it very difficult for customers to meaningfully consider the true value of the proposed investment.

The trend of quantifying ICT investment in broad terms and being ‘tangible’ and ‘intangible’ can be illustrated by the SAPN proposal for 2020-25. SAPN proposes a totex ICT spend of \$391.7m, about the same as in the current period and notes the benefits of this investment as:

“...delivers substantial tangible and intangible benefits to customers including:

Maintain current levels of service, managing IT risks and maintaining compliance.

Manage business and network costs through efficient use of data and digital technology.”⁴

SAPN then presents the “tangible” i.e. able to be valued, benefits are \$192.3m spread over the next two regulatory periods.⁵ The remainder are “intangible”.

Table 4.3: Tangible benefits by category and RCP for the 2020–25 proposal (\$million, Dec \$2017)

Benefits category¹⁵	Total value of benefits (2020–25)	Total value of benefits (2025–30)	Total benefits 2020–30
Cost reduction	6.8	24.7	31.6
Cost deferral and avoidance	90.7	70.0	160.8
Total	97.6	94.7	192.3

Note: Numbers may not add up due to rounding

Figure 1: Extract from SAPN Regulatory proposal - ICT benefits 2020-25 (Source: SAPN)

Despite the claims about the efficiency benefits, this did not lead SAPN to propose any opex productivity improvement in its Proposal.

³ For example, SAPN “2020-25 Regulatory Proposal – Attachment 5 Capital Expenditure” p. 93 “...legacy systems that are unable to provide required flexibility”.

⁴ SAPN “2020-25 Regulatory Proposal – Supporting Document 5.32 IT Investment Plan 2020-25” p.

⁵ Ibid p.16

Similarly, Energy Queensland, in its recent regulatory proposals, credits its ICT investment programme as:

“delivering Energy Queensland’s forecast 10% reduction in indirect costs and 3% improvement in programme or work labour costs”⁶.

The programme is also intended to deliver intangible benefits, including (in part):

- Sustaining business systems and technology infrastructure for ongoing supportability;
- Undertaking safety risk mitigation through accurate data and consistent work practices;
- Being able to respond to ongoing regulatory, compliance and technology changes.

Whilst these benefits are admirable and often important, we believe it is very difficult for both the AER and consumers to consider the prudence and efficiency of such a significant investment when these benefits are described in such broad terms, including ‘intangible’, ‘cost deferral avoidance’ or ‘sustaining for ongoing supportability’. A level of measurability, clarity, evidence of need and commitment to deliver the benefit is important for such significant amounts of expenditure.

There is often a catch-all phrase for a combination of outcomes e.g. lower costs and “improved consumer experience”. Often the expenditure is in the regulatory period under review, but the benefits are not significant until the following period. Moreover “improved customer service” – requires evidence that there is a problem with the current standard of service. The great majority of customers are not seeking significant changes in the level of services.

In some cases, the benefits should be measurable e.g. a new maintenance scheduling system will enable crews to get to jobs quicker and finish the job quicker. Benefits could include lower labour costs and reduced fleet. In other cases, such as a new customer management system that provides more real time outage data to customers, benefits will be harder to quantify and will require informed feedback from consumers to support an investment or otherwise.

These approaches on their own have limited value in assessing prudence and efficiency. We support the application of ‘Smart’ indicators in the development of the ICT business cases where the aspects of the justification are, as much as possible:

- Specific – clearly linked to identified aspects of business’ operation
- Measurable – demonstrated impact on business performance indicators, with targets where needed
- Achievable – confidence that the programme can be delivered as proposed, with risk assessment
- Relevant – supported by informed customer engagement where appropriate
- Timely or time-referenced – a proposed timeframe for the delivery of the benefits

We support a mechanism that encourages and guides utilities to be very clear on the expected benefits of their ICT investment, with commitments to measurable improvements in service performance, that will be observable by customers. In cases of service delivery, we trust the review will encourage utilities to ensure specific, informed feedback from consumers as to the value of the service improvements to them as part of the proposal.

4. Ensuring rigour in assessing the options and impacts of ICT investments

We believe that the rigour in assessing large network investments, including a robust ‘baseline’ case, strong options analysis and aggressive cost management is not universally evident in ICT investments. Such rigour exists in major investments of asset replacement and new investments, and the same rigorous approach should be considered for large ICT investments that often are, in value, complexity and impact, more significant than many projects related to traditional network assets.

⁶ “Ergon Energy Regulatory proposal” p.76

Anecdotally, it can be suggested that utilities are encouraged to take a very conservative approach to ICT risks, such as immediately embracing version upgrades, as they are able to almost immediately recoup the cost of the upgrade from customers.

To assist establishing rigour in the assessment of ICT expenditure, we would expect as a minimum similar consideration as network-related business cases (e.g. statement of need, base case, options considered, scope cost justifications, sensitivity analysis and delivery / staging considerations), as well as a statement of the risk approach taken by the organisation, including an assessment of their Business Continuity Planning regarding ICT.

Almost all ICT expenditure should be subject to this form of analysis, with the exception of investment that is clearly recurrent, such as licence renewals or basic hardware replacements.

5. Providing clarity as to how the benefits of the ICT investments are shared with customers

We note this matter is a specific consideration of the consultation, and CCP supports this initiative. Networks are improving the level of information being provided to consumers, but the methodologies are network specific and the details around specific measuring methods are not transparent.

As a recent example, SAPN provides an estimate of the financial benefits of its forecast \$297m IT capex spending in the current 2015-20 period:⁷

Table 5.1: Financial benefits from the 2015–20 IT expenditure (\$million, Dec \$2017)

Benefits category	2015–20 actuals/forecast	2020–25 estimates	2015–25 total
Cost avoidance and deferral	71.6	155.0	226.6
Cost reduction	9.8	23.3	33.1
Total	81.4	178.4	259.7

Note: Numbers may not add up due to rounding

Figure 2: Extract from SAPN Regulatory proposal - ICT benefits 2015-20 (Source: SAPN)

But there are few details on the detailed methodology. We look forward to the AER assessment of this investment in the current decision process. SAPN claims “non-financial benefits” to customers for this expenditure, including:

- significantly improved outage reporting capabilities and more timely and accurate information to help customers make decisions during outages;
- reduced risk of cyber interference with the distribution network (and hence outages) or a privacy breach due to the implementation of our foundational cybersecurity capability;
- a foundation for rationalising a number of systems to reduce our IT environment complexity and hence our IT recurrent costs; and
- meter contestability related market changes to support “Power of Choice” for customers.⁸

⁷ Ibid p. 24

⁸ Ibid p. 25

Again, these are network specific and no common language is available to compare networks.

We recognise the complexity in assessing how the benefits will be shared. For instance, benefits of enhanced vegetation management will show investment in capital investments in systems such as LiDAR, GIS systems, and analytics, with benefits in reduced operating costs. The nature and timing of these cost reductions need to be transparent to customers, with confidence in their delivery, which may be in the next regulatory period. Clarity about benefits for customers will be an important part of customer engagement, so key customer representatives need to be able to be satisfied that the proposed ICT investment benefits are clear and prudent, and there is a high probability that the proposed investment is sound.

6. Heightening confidence in ICT project deliverability and properly allocate risks

Experience has shown that large ICT investments can often be delayed, change in scope, go over budget, or fail to realise the promised benefits for other reasons. Where more than one major ICT project is undertaken at the same time, this risk increases. Utilities will need to give customers confidence that the significant ICT investment programme can be undertaken efficiently and effectively.

With the efficiency schemes being a key part of focusing the utility to deliver the changes, we trust that should a utility re-scope or postpone a change initiative, especially delay a 'programmed' upgrade due to lack of resources, such a change would not be seen as efficient and hence rewarded under the CESS.

We welcome the AER's proposal to introduce a practice of undertaking a post implementation review of prior ICT expenditure as part of the ICT Review and look forward to the AER back casting, and assessing what benefits customers actually received.

7. Providing confidence in the competitive nature of the supply of ICT systems

There are a limited number of suppliers of the major ICT systems in use by utilities. These suppliers appear to customers to have the market power to initiate version upgrades at significant cost, and remove support for past systems in a relatively unconstrained manner. Businesses have highlighted their strong reluctance to accept the risk of operating unsupported systems. The cost of these upgrades is largely passed directly to customers.

We seek a framework that supports confidence that competition in the supply of ICT services to utilities exists and is exercised, that utilities are not seeking to pass these commercial risks to customers, and that utilities are actively pursuing innovative options to minimise ICT costs and maximise the benefits to customers.

3 Comments on the proposed approach to the review

The fundamental approach to this review is an extension of the ‘recurrent expenditure / non-recurrent expenditure’ analysis, where:

- recurrent expenditure is the ongoing ‘maintenance’ costs of an ICT investment to a general programme or schedule, including licence renewal, hardware upgrades and the like, analogous to the asset replacement capital categories seen in the management of the utility’s distribution or transmission assets; and
- non-recurrent expenditure that is intended for a project that delivers specific change in the capability of the ICT systems, whether to meet regulatory change, or to enable new functionality or services.

While this approach is relatively clear to understand and has powerful parallels with expenditure on a utility’s ‘core’ assets, the methodology will be difficult to effectively implement.

1. The allocation of expenditure to ‘recurrent’ and non-recurrent’ is not clear-cut

It will be extremely difficult to consider ‘which is which’.

ICT investment is a fast-changing environment that is akin to the rapidly changing technology and energy demands of a distribution network a decade or so ago. In this case, the pressing organisational needs to replace, upgrade and improve assets well outstrip the actual operational lives of the ICT assets involved – in this case both software and hardware.

‘Programmed’ asset renewal almost always includes, in our experience, major steps up in system capability, performance and functionality in the new version of the system. It is rarely a ‘like for like, new for old’ replacement, such as poles or transformers. Similarly, the highly integrated nature of ICT means that investments in new capability (non-recurrent expenditure) often requires significant reinvestment in new core hardware and licences, well before the existing software and hardware has reached the end of its service life and requires ‘recurrent’ investment.

Is a version upgrade because a current release of a system becomes unsupported recurrent or non-recurrent?

2. The framework must work well for ‘vendor driven (loss of version support) upgrades’

For many of the ICT subsystems in a utility, the risks of an unsupported version of a particular application are a major consideration for the business. These upgrades are often expensive, and generally involve a requirement to change business processes. This occurrence is particularly prevalent in core systems such as the ERP, and Works and Asset Management.

It is important that the framework being developed under this consultation works well and is ‘tested’ against a vendor-driven upgrade proposal.

From the EMCa review of Ausgrid’s ICT / OTI proposal, *“For instance, we understand that SAP has set a deadline of 2025 for their customers to move to their cloud-based platform. In our experience vendors tend to impose such milestones, but generally with provisions (at a cost). It would be reasonable for (the utility) to split the transition over two regulatory periods.”*⁹

⁹ EMCa Review of aspects of Ausgrid’s forecast capital expenditure. Report to AER August 2018 at p93. At: <https://www.aer.gov.au/system/files/EMCa%20-%20Review%20of%20Ausgrid%27s%20capex%20proposal%202019-24%20-%20Final%20report%20-%20August%202018.PDF>

3. Benchmarking must consider the ‘lumpy’ nature of ICT investment

The lives of ICT assets and systems are generally much shorter than other network assets – many are fully depreciated over a regulatory period. We support benchmarking to assist in considering ‘recurrent’ expenditure. However, ICT investment (and often, benefits) has significant peaks and troughs in cycles that are not concurrent with the regulatory cycles.

4. Limitations in use of revealed costs in recurrent ICT capex

In the case of recurrent ICT expenditure, the AER argues for the:

“...use of revealed (past actual) costs as the starting point for assessing and determining efficient forecasts for recurrent costs... (with) a preference for the previous five years of actual data given the standard life of these assets.”

Noting that:

“the application of the EBSS and CESS places a strong incentive on distributors to pursue efficiencies in its recurrent expenditure practices. As such, a distributor's actual expenditure while subject to this mechanism is a good indicator of the efficient expenditure the distributor requires in the future. In particular, where past expenditure was sufficient to achieve the capex and opex objectives, this can be a reasonable indicator of whether an amount of forecast capex and opex would form part of a total capex forecast that we are satisfied reasonably reflects the capex and opex criteria.”¹⁰

We highlight this limitation in three ways.

(i) We are not convinced that this is an appropriate starting point.

We do not accept that past /currently approved ICT totex has been subject to the appropriate level of rigour to give confidence that base year expenditure is “efficient”.

As the various graphs in section 2 of the Consultation Paper show, there has been a significant rise in ICT totex in recent years. Given the AER’s acknowledgment of the need for greater rigour in the future, it is fair to assume that has not been present in the past. Therefore, past / approved expenditure levels are not necessarily efficient.

In recent resets, the AER’s practice has been to allow ICT capex in the revenue allowance even where the business failed to fully justify the benefits, provided that the forecast expenditure was similar to the expenditure in previous periods.

We illustrate this point with information from the recent Ausgrid and Endeavour Energy 2019-24 resets. Ausgrid provided some history of total spend \$ capex/customer and \$ capex/FTE as shown in the two figures below.¹¹ We note that this information relates to capex only, and not totex.

The variability of spend over time, often reflecting the ‘lumpy’ nature of ICT investment that does not align well with regulatory periods makes it difficult to look at just the last 5 years as an efficient guide to the next 5 years. Energy Queensland and Essential Energy, for instance, have elected to carry our major upgrades to most systems in one period, whereas other companies may take a more fragmented approach across a number of periods.

The AER approved the revised Ausgrid ICT expenditure in the Final Decision. The AER commended Ausgrid for providing a revised project justification report and cost-benefit analysis in support of one of its projects. The

¹⁰ Consultation Paper p. 17

¹¹ See pp. 88-9 <https://www.aer.gov.au/system/files/Ausgrid%20-%20Revised%20Proposal%20-%20Revised%20Regulatory%20Proposal%20-%20January%202019.pdf>

AER noted that many submissions asked the AER to require Ausgrid to clearly define measurable consumer benefits from the ICT investment.

Despite the improvements in Ausgrid’s information, the AER concluded that it did not consider that Ausgrid had adequately demonstrated the benefits of that investment.¹²

Figure 5.20

Benchmarking of Ausgrid’s non-network ICT (\$million, real FY19)

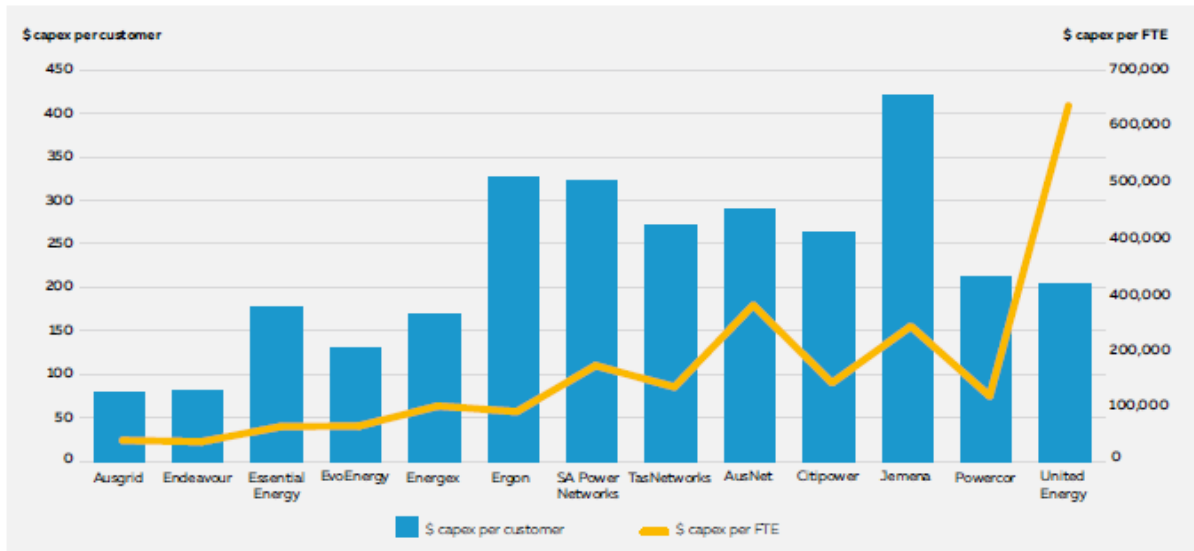
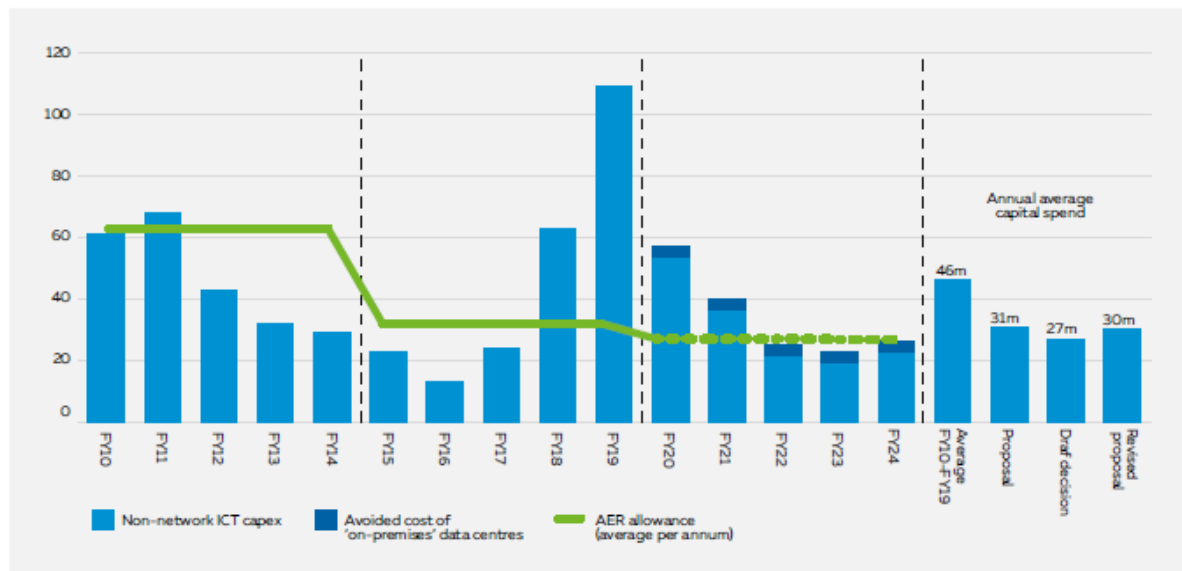


Figure 5.21

Ausgrid’s non-network ICT capex (\$million, real FY19)



Endeavour Energy mounted a similar argument:

¹² AER Final Decision on Ausgrid 2019-24 Attachment 5 at 5-42

“Our forecast ICT capex as a percentage of total capex is 4.2 percent compared to the 2016 industry average of 7.2 percent, our ICT totex per employee has been consistently below the industry average, and our ICT totex per customer in 2016 was equal to the industry average.”¹³

Favourable comparisons among the DNSP cohort could simply be an indication of too high a spend across all networks. Then it suggests another justification:

“...our forecast ICT capex was below both 2009-14 and 2014-19 levels providing prima facie evidence of its efficiency under a revealed cost incentive based regulatory framework.”¹⁴

It might provide prima facie evidence, but it does not provide substantive evidence. Endeavour’s forecast ICT expenditure in the current period of ~\$120m is substantially above its allowance of \$91m. Is that prima facie evidence that Endeavour is a poor manager of IT spend (cost overruns?), or prima facie evidence of Endeavour finding new ways to improve capex and opex productivity?

In its draft decision (affirmed in the final decision) the AER stated:

“We consider that Endeavour’s proposed non-network capex forecast of \$170.1 million (\$2018–19) is justified and would form part of a total capex forecast that reasonably reflects the capex criteria.

Endeavour’s non-network capex forecast at a category level is broadly in line with historical levels of expenditure for each category. We have included \$170.1 million (\$2018–19) in our substitute forecast of total capex.... The largest component of Endeavour’s forecast relates to ICT capex (\$91 million, or 53 per cent). While we have identified specific concerns with Endeavour’s forecasting methodology, including its cost-benefit analysis, Endeavour submitted that its updated lower capex forecast takes into account the expected efficiencies of its transformation of its ICT systems and capabilities.”¹⁵

(ii) We do not accept that EBSS and CESS are strong drivers of delivery and benefit realisation

Last year CCP proposed that the AER should assess the effectiveness of its incentive schemes more generally in reducing costs – particularly as they are so easily distorted, e.g. by postponement of investment unrelated to improved efficiency or changing need.

The EBSS and CESS incentives are insufficient to deliver benefits to customers, as they are triggered by the investment being made or deferred and not by whether the investment achieved its goal of delivering benefits to customers.

Until a robust mechanism is in place to provide confidence that the approved investment is prudent and efficient, CCP14 does not agree that the existing incentive schemes will provide adequate incentive. Until this can be proven, we favour the AER using both the productivity adjustment and the incentive schemes and leaving both options available. In its recent submissions on the NSW 2019-24 revenue resets, CCP10 made the following observation about the relationship of ICT and EBSS and CESS:

¹³ Endeavour Energy p. 21 <https://www.aer.gov.au/system/files/Endeavour%20Energy%20-%20Revised%20Proposal%20-%2001%20Revised%20Proposal%20-%20January%202019.pdf>

¹⁴ Op cit p.20

¹⁵ AER Draft Decision in Endeavour Energy 2019-24 Attachment 5 at 5-19 see <https://www.aer.gov.au/system/files/AER%20-%20Endeavour%20Energy%202019-24%20-%20Draft%20decision%20-%20Attachment%205%20-%20Capital%20expenditure%20-%20November%202018.pdf>

“The efficiencies that businesses gain through ICT investment, the cost of which is largely recovered from customers, should not be recovered again through the incentive schemes.”¹⁶

We strongly support CCP10’s recent request for the AER to do a thorough review of its incentive schemes. Ausgrid has already decided to exclude a total \$123m capex for innovation, cyber security and ADMS for the CESS calculation. We think that should be considered more widely.

(iii) We believe that more work needs to be done to give confidence around what is considered “efficient”

The consultation paper acknowledges that networks will have varying levels of efficiency and proposes to undertake totex benchmarking studies to judge whether the revealed costs are “efficient”. However, little detail is given on the proposed methodology, and how the “efficient level” will be determined in time to apply to the SAPN and EQ decisions in April 2020. Will it mirror the approach to opex productivity where the “not materially inefficient level of totex” is determined in a very conservative approach, saying any network at or above the 0.75 benchmark is “not materially inefficient”? We hope not. Will it assume some form of network wide productivity factor to be applied each year? Until we see more detail on the proposed methodology, we have little confidence that benchmarking per se will effectively demonstrate the prudent and efficient ICT operating and recurrent expenditure plans of utilities.

5. Compliance and corporate risk appetite will play a major role

As seen in the current round of regulatory resets, major ICT investments are being presented as ‘non-discretionary’. This includes version upgrades, on-shoring of data and some security investments. In this case, the counterfactual (base case) must be clearly stated and the validated impacts of alternative courses of action must be considered. In our experience from observing several recent ICT deep dives, the CIO genuinely appears dumbfounded when customers press for information about counterfactuals, options analysis and in particular the delay case. Their response inevitably is: “but it won’t be vendor supported.”

The AER must develop greater guidance for the businesses about the rigour required to support option analysis, including close association with the businesses’ risk planning and business continuity plans.

6. We support the total investment (totex) view, of planned investment and costs

As the involvement of Software as a Service (SaaS), cloud-based data services and mobile computing become an integral part of ICT investment, it is important to consider all three aspects of the expenditure.

- Capex is important in regard to the impact on the regulated asset base and fast-depreciating assets.
- Opex costs, including telecommunication, must be in a form that allows meaningful base-step-trend analysis.
- Finally, a total expenditure (‘totex’) approach is needed to allow reasonable assessment of the impact on productivity and revenue, and ultimately a guide to ‘value for money’ for consumers.

The capex / opex trade-off is a significant part of ICT investment, and the analysis must approach this factor with flexibility and clarity.

We believe that the AER’s Consultation Paper understates the impact of the proposed movement by most networks to the SAP Cloud ERP services (or equivalent). This represents a significant shift in ICT approach and alters both capex and opex relative to historical trends. It is also important to separate the implementation costs (business requirements definition, data base cleansing, etc) from the ongoing costs.

Also, while most businesses seem to be moving to the SaaS, some may prefer to adopt Infrastructure as a Service (IaaS) or Platform as a Service (PaaS), to allow greater customisation or to simplify transition

¹⁶ CCP10 response to the Ausgrid, Endeavour and Essential revised revenue proposals January 2019 at p20

requirements. These different choices may be prudent and efficient but will have different impacts on capex and opex and the capex/opex trade-off.

7. Development of a standard regarding cybersecurity requirements will be helpful

Investment to meet cybersecurity objectives is a feature of current and upcoming proposals.

While we recognise the sensitivity and individual approaches to cybersecurity that businesses may choose to take, some better information on the 'benchmark' of appropriate cybersecurity will assist customers and the AER to form an opinion on whether investment in this area is prudent and necessary.

We suggest that some briefings from the Australian Government's intelligence services regarding cybersecurity would be of benefit to all stakeholders to assist the understanding of what level of cybersecurity 'capability' is prudent, against which the situation in any utility may be considered. We do appreciate the sensitivity of such information in the public arena, however.

4 Suggested inclusions and variations to the study

In this section, we discuss some important variations to extend the review and the AER's approach:

1. Break down the components of corporate ICT into subsystems for clarity and optimal assessment

The recurrent / non-recurrent split to assess expenditure is not optimum. To assist in assessing ICT expenditure, rather than a global approach to ICT investment and cost analysis, greater transparency would be gained by looking at the functional subsystems of a corporate ICT system.

Despite the ICT ecosystem in a utility being heavily interconnected, with many shared data sets and connected systems, each utility tends to have a common set of functional components in its ICT suite. This is still largely true when one vendor provides several of these systems. Each system has a particular set of features that generally drives its lifecycle and upgrade path.

Value may exist in taking a more granular view of the subsystems that are common to almost all utilities in Australia. This would assist in applying more appropriate normalisation factors and comparison with a broader range of like organisations when benchmarking, and provide greater clarity when assessing cost / benefit proposals.

Table 1 below shows a common set of sub-systems within a utility ICT environment.

Subsystem	Function	Performance measures
Enterprise Resource Management (ERP)	Finance & accounting, HR, AP/AR Reporting	Compliance Efficiency / productivity
Customer Relationship Management (CRM)	Customer management Service delivery	Compliance for services (e.g. privacy, GSLs) Service delivery Customer satisfaction
Works and Asset Management (WAM)	Asset maintenance records Works planning Work scheduling and dispatch Procurement	Unit costs Repx top line
Geographic Information System (GIS)	Spatial asset database	Accuracy and completeness Service delivery Unit costs
Network Management (ADMS / OMS)	Distribution management system Emergency and outage response	Network performance Network security Fault response Unit costs of work Future capability (e.g. DER)
Network Billing, Meter Data Mgt	Tariff allocations DUoS billing, MSATS interface	Billing NEM compliance
Desktop Applications	Office Automation Business systems	Business efficiency

Other systems (many, small)	a) Metering (legacy for some) b) Communications c) Planning and forecasting, analytics	Business Efficiency Compliance Future capacity
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Table 1 - Common subsystems in a utility business (Source: CCP14)

Each of these subsystems has, to a large extent, specific features that would assist in considering both non-recurrent and recurrent forms of expenditure.

Table 2 suggests some particular features of each subsystem that could guide the application of benchmarking, indicators of prudent and efficient investment, and features of any cost / benefit proposals. It is by no means exhaustive.

Subsystem	Features to assist benchmarking and investment value
ERP Enterprise Resource Management	<ul style="list-style-type: none"> - Driven by the ‘size’ of the corporation – asset value, turnover, staff numbers - Can be benchmarked with other large organisations beyond utilities - Upgrades driven by maintainability in the corporate environment, licencing, number of users
CRM Customer Relationship Management	<ul style="list-style-type: none"> - Driven by the number of customer transactions - Relates to customer service performance - Customer satisfaction and engagement guides the need for investment and improved performance - Benchmarks with other organisations in cost to serve
WAM Works and Asset Management GIS Geospatial Information System	<ul style="list-style-type: none"> - Lends itself to being modelled similar to repex - Expect direct correlation to unit cost of work and risk - Benchmarks normalised to asset value
Network Billing and Meter Data Management	<ul style="list-style-type: none"> - Driven by compliance and capability - Can be effectively benchmarked with other utilities
ODMS	<ul style="list-style-type: none"> - The rapidly changing environment (DER, etc.) dictate ‘future-capability’ driven investment, so business cases will be different to that of other sub-systems.

Table 2 - Features of selected subsystems (Source: CCP14)

As a minimum, considering each system through the recurrent / non-recurrent lens would be helpful.

2. Consideration of a ‘contingent project’ approach to large ICT investments

We recognise that the ICT landscape changes quickly. Similarly, regulatory change or compliance requirements may proceed at different speeds. Companies may take some time to consider the scope and timing of major ICT investments. Against this background, some expenditure can be uncertain in nature, scope and timing.

It may be useful to consider making a ‘contingent project’ approach available for some ICT proposals, where:

- a) the project is dependent on an externality or other ‘trigger events’, such as regulatory change;
- b) the cost is still outside reasonable confidence levels at the time of the regulatory proposal; or
- c) the technology or nature of the proposal is still under trial or development.

Such an approach may assist businesses in not having to make a commitment to costs and investment up to seven years out in a time of rapid change. We also support the mechanisms being used by Transgrid (through its Power Sydney’s Future analysis) and Ausgrid (through putting its ~\$123m capex covering innovation, stage 3 ADMS and cyber security expenditure through its new Technical Review Committee). Both of these approaches embed a level of oversight by customer representatives.

Of course, such an approach is not necessary where a business decides to invest in ICT for its own organisational needs.

3. Large ICT assets would benefit from a Regulatory Investment Test or similar approach

The RIT-D process was introduced to encourage businesses to consult and undertake robust cost-benefit analysis before making major investments. The RIT requires a clear identification of the need in consumer benefit terms (not just a general claim), definition of options and cost-benefit of options under reasonable range of scenarios and discount rates (reflecting short life of assets). A similar interest exists for ICT investment where expenditure that exceeds the RIT thresholds is made, including that for asset replacement. We pose the question, “*Should significant ICT investments receive the same level of scrutiny?*”

We affirm that a fundamental objective of the RIT process is to identify credible options to meet the need, before selecting the option that maximises the net economic value (to customers). The RIT also promotes selecting the most efficient investment, imposes transparency and accountability in investment decisions, and places the assumptions that drive the investment into the customer spotlight for validation.

The RIT process should also add transparency to significant expenditure decisions so that the outcomes, options and expenditure decisions are openly transparent to all stakeholders. ICT decision-making would also benefit from similar transparency.

Such rigour is in many ways similar to that being sought for ICT investments, many of which well exceed the threshold for RIT analysis.

Similarly, the *Industry practice application note for asset replacement planning*, issued by the AER on 25 January 2019, provides a significant level of clarity into asset replacement decisions. While this note is intended for network assets, we believe that many principles of this note apply just as much to ICT replacement (recurrent expenditure), such as the need to:

- define and characterise ‘business as usual’;
- provide clarity on the assessment and treatment of compliance, legal and safety risks within the context of asset replacement planning; and
- guide the valuing of risk (analogous to VCR), and how High Impact Low Probability (HILP) scenarios are accommodated in the replacement planning.

4. Include a requirement of a 'Post Implementation Review (PIR)

CCP is a strong supporter of the post implementation review process. Also the prospect of PIR is not only best practice, it is likely to provide a greater incentive for the networks to accurately define their decision. The PIR should at a minimum cover each claimed expenditure (i.e. opex and capex) and associated business efficiency, operational and consumer benefits. Shareholders, not consumers should be the party facing the risks of poor forecasting of costs and benefits and/or poor implementation (cost and timing) of the proposal.

We encourage the AER to release a draft version of the RIN that sets out the PIR as part of this review so stakeholders can also comment on the PIR, and the way in which the AER will measure how well the investment has realised the promised benefits.

It is not clear from the Consultation Paper what the AER will do with the information from the PIR. On page 21, the AER suggests it will inform the AER's view on future ICT proposals. However, it is unclear how that will apply. If the benefits promised did not flow to consumers as noted above, the EBSS and CESS will not assist. How will the AER seek to reduce the revenue from the next period for a previous investment? We are keen for clarity on how the PIR would be incorporated into the AER assessment. Similarly, where the investment is claimed to increase e.g. reliability, then PIR should identify this and consider the impact on the STPIS targets for future.

A PIR type process should be developed to optimise shared and continual learning. ICT is a fast paced, rapidly changing industry so dynamic approaches to network-wide continual improvement are critical. Perhaps this is a project area that the Energy Charter businesses would like to consider, with shared ICT learning across all businesses in the energy supply chain?

5. Broaden consideration of incentive schemes to include STPIS

The AER's Consultation Paper focuses principally on the role of EBSS and CESS. Some ICT projects are related to improving performance/service delivery. However, there is limited discussion in the AER's Consultation Paper on how this might relate to STPIS target setting. STPIS targets are currently based on historical average performance on the relevant measures, but if an ICT project is designed to enhance reliability/service delivery then we would expect a step change in these outcomes.

If this is not reflected in STPIS targets for the future, then the networks will get a STPIS reward and, as per the CESS and EBSS, consumers will pay twice.

One option may be to extend the consideration of the Small Scale Incentive Scheme (SSIS) currently proposed to consider the impact of ICT investment that is specifically targeted at improvements in customer service.

5 Response to questions

In this response, we have suggested several changes to the methodology proposed by the AER in the consultation paper as well as other variations to the review. Consequently, some of the AER’s questions are narrower than our approach. We set out below some brief observations in response to the AER’s questions.

Question 1: Do you agree with the RIN categories of ICT expenditure? Are there others we should request DNSPs to report? Does it make more sense to disaggregate ICT into its ‘recurrent’ and ‘non-recurrent’ components? Ausgrid presented their ICT capex forecast into the categories ‘Comply’, ‘Protect (cyber)’, ‘Maintain’ and ‘Adapt’ that are based on purpose. Would stakeholders find these categories more useful than our suggested recurrent and non-recurrent categories?

We do not support the current RIN categories, as they are too broad and, for the reasons noted elsewhere in this response, will not lend themselves to the benchmarking or business case analysis required. Further, it is important to recognise that networks are now moving to a SaaS environment – which will change the nature of opex, capex and capex/opex trade-offs – so the use of historical data may be difficult for such significant transition.

CCP14 supports a more granular approach, similar to that taken by Ausgrid of ‘Compliance, protection (security), maintain (asset replacement) and adapt (augment capability). We acknowledge that, depending on the outcome of ‘who pays’, there will be another category that may not be reported which is ‘works funded by the utility themselves to improve shareholder returns’.

Our main proposal is to separate the expenditure into subsystems. If the AER chose to segment that further into the granularity proposed by Ausgrid, the proposed expenditure would need to be allocated in the following form:

Subsystem	Compliance	Protection	Maintenance	Augment / Adapt
Corporate Enterprise Resource Management (ERP)				
Customer Relationship Management (CRM)				
Works and Asset Management (WAM)				
Geographic Information System (GIS)				
Network Management (ADMS / OMS)				
Network Billing, Meter Data Mgt				
Desktop Applications				
Other systems (nominate)				

Within this framework, expenditure proposals can be considered through both a benchmarking approach (reasonableness, prudence, efficiency) and a project-based approach (cost / benefit, delivery certainty, allocation of benefits).

Question 2: What other methodologies can we use to benchmark ICT capex? What are the benefits and disadvantages of each approach? What other benchmarking normalising factors do you consider appropriate? For example, Regulatory Asset Base (RAB) could be used as a proxy for asset size.

See our discussion above and our answer to question 1 for the suggested approach. Each subsystem has a more identifiable and appropriate (targeted) set of normalising factors. For instance, ERP could be normalised for employee numbers, turnover, or asset base value, and benchmarked against many other large organisations beyond electricity and gas utilities. As networks move to SaaS, relevant measures may change, e.g. include totex cost per user. As most networks are also relying on SAP, this cost should be comparable.

We believe that it is reasonable for the AER to develop benchmarking using overseas data as well as local data, given that IT systems are international. Overseas network businesses are dealing with very similar ICT issues to Australian-based businesses.

We also highlight the 'lumpy' nature of ICT investment, and the need for any benchmarking mechanism to consider the periodicity of ICT investment.

It will also be useful to take a totex view of ICT costs when benchmarking across businesses. This issue is not unique to regulation of utilities. For example, state and federal governments have instituted ICT expenditure monitoring and benchmarking.¹⁷

Question 3: We note the difficulty in assessing the efficiency of implementing a compliance driven step-change ICT projects. What information do you consider is required to assess the efficiency of these projects?

Compliance driven ICT benchmarking can be difficult – the cost of compliance with new regulation will depend on the nature of the existing systems and even the particular requirements of specific jurisdictions. This is evident in the costs of compliance with NSW Government cyber security requirements.

There is no easy answer to this. But benchmarking can be a basis of further exploration with individual companies to explain and assess their different claims.

As companies move to common SAP based systems, benchmarking may become more directly applicable, taking into account capex/opex trade-offs for different companies.

As we outline above, the greater granularity should permit more appropriate and targeted benchmarking.

A total cost (totex) approach is also necessary.

Businesses should make reference to the adequacy and integration of the ICT investments within the needs and assessment of their Business Continuity Planning and Corporate Risk Framework.

Effective and ongoing consumer engagement, including with informed consumer group representatives should be the basis of determining efficiency and compliance approach.

Question 4: What do you consider a sufficient business case for an ICT project should include?

We note the consideration of enhanced rigour in business cases above. In addition, the business case should include:

¹⁷ See for example <https://www.enterprisesolutions.vic.gov.au/wp-content/uploads/2016/02/ICT-Expenditure-Reporting-Guideline.pdf> and <https://www.finance.gov.au/archive/ict-benchmarking/>

- a) Needs analysis (in consumer terms) – e.g. is the proposed service enhancement a priority for consumers and is it properly categorised as ICT or direct expenditure¹⁸
- b) options analysis, including fully exploring life extension and application consolidation
- c) risk-based cost-benefit analysis
- d) identified benefits, quantified as best as possible in terms of consumer outcomes such as performance improvement, productivity and service enhancement
- e) evidence of consumer support for the expected benefits given the forecast costs and/or impact on forecast STPIS
- f) a benefits-tracking and reporting mechanism
- g) information on system and supplier warranties and expected service (vendor support) life
- h) total costs, including opex step changes and relevant discount rates
- i) expected time frame for implementation of the project and the subsequent delivery of benefits – will expenditure incurred and/or benefits delivered within next regulatory period, or beyond
- j) discussion to engender confidence in the capability to deliver the project within the specified time frame
- k) relationship with and impact on other systems that may lead to additional costs in the future and
- l) robustness of data quality and risks for ongoing data maintenance
- m) clear evidence of open and transparent consumer engagement

Question 5: What is your opinion on us requesting DNSPs provide post implementation reports from historical ICT investments?

We see this as a critical part of the reforms under this consultation. The variability in ICT project delivery, the breadth of benefits realisation and the fact that benefits are most likely to be realised in the following regulatory periods suggest a PIR approach is needed to adequately assess the delivery of large ICT projects.

Question 6: What do you consider is required to demonstrate that DNSPs have incorporated benefits into its overall proposal?

In addition to the list provided by the AER at page 22 of the Consultation paper, the potential impact on forecast outcomes, e.g. STPIS relative to regulated performance targets, capacity to expand consumer access to DER.

CCP agrees with the AER that it is important to demonstrate how benefits from previous ICT investments are incorporated into the current regulatory proposal - and to provide indicative benefits in subsequent regulatory proposals, given the benefits are most likely to be achieved across periods.

Question 7: Which scenario - self funding or productivity improvement - would you prefer and why? Are there other scenarios we should consider?

CCP agrees with the AER at page 22 of the Consultation Paper, that where the network does not demonstrate that its ICT proposal is 'prudent and efficient' then the AER should not include the project forecast in its alternative forecast of opex or capex. This is no different than the AER's approach to network expenditure proposals.

¹⁸ See AER Consultation paper at p 20.

Where the business case for the ICT project indicates that it is prudent and efficient, but the network does not explicitly reflect these efficiencies in its overall proposal, then it may be preferable for the AER to exclude the forecast capex/opex in its alternative estimates (reflecting scenario 1, page 22 of the AER consultation paper – assume self-funding), rather than applying a broad productivity adjustment (scenario 2 page 23).

This preference reflects the difficulty for categorising the ICT proposal into a productivity change for a specific capex category (repep/augex etc) and to quantify a specific productivity change percentage (see also Question 8). Note, the application of a general industry productivity factor is still relevant to the AER's decision as this captures the broader view that consistent with competition theory, a firm will continuously seek to reduce its input costs for the same output.

Question 8: We welcome stakeholder comments on the practical application of a productivity adjustment. If we were to include a productivity adjustment on the basis of ICT expenditure, how should it be incorporated? If so, how should we determine how large should this adjustment be? What aspects of a DNSP's forecast should it be applied to?

We agree with the concept in principle. There is no doubt that a major factor in ICT totex is spending to improve efficiency. As with the debates around an opex productivity factor, we think that this ICT productivity benefit should not be retained 100% by the network but shared with consumers. Perhaps the methodology for this factor might be considered concurrently with the review of the CESS, EBSS and other incentive schemes.

6 Summary of recommendations and comments

1. Objectives

- a) Networks present the ICT plans – both capital and operating costs – in a form that both:
 - allows the AER to meaningfully consider the prudence and efficiency of the investments to a level of maturity that already exists for the operating expenditure and capital investment in ‘traditional’ asset classes; and
 - does this in a manner that allows consumer groups to understand the purpose of the investment, the options considered, and the returns in the forms of productivity, service improvement and risk mitigation that the investment is to deliver.
- b) Networks be accountable to clearly measure and explain whether the promised benefits of the expenditure are actually achieved.

2. Proposed outcomes of the review

- a) Improving the form of information provided by utilities – in clarity, format, definitions and benefits
- b) Providing a framework where the total costs and benefits can be understood
- c) Providing guidance on how the benefits might be measured
- d) Ensuring rigour in assessing the options and impacts of ICT investments
- e) Providing clarity as to how the benefits of the ICT investments are shared with customers
- f) Heightening confidence in ICT project deliverability and properly allocate risks
- g) Providing confidence in the competitive nature of the supply of ICT systems

3. Comments on the proposed approach to the review

- a) The allocation of expenditure to ‘recurrent’ and non-recurrent’ is not clear-cut
- b) The framework must work well for ‘vendor driven (loss of version support) upgrades’
- c) Benchmarking must consider the ‘lumpy’ nature of ICT investment
- d) Limitations in use of revealed costs in recurrent ICT capex
- e) Compliance and corporate risk appetite will play a major role
- f) We support the total investment (totex) view, of planned investment and costs
- g) Development of a standard regarding cybersecurity requirements will be helpful

4. Suggested inclusions and variations to the study

- a) Break down the components of corporate ICT into subsystems for clarity and optimal assessment
- b) Consideration of a ‘contingent project’ approach to large ICT investments
- c) Large ICT assets would benefit from a Regulatory Investment Test or similar approach
- d) Include a requirement of a ‘Post Implementation Review (PIR)’
- e) Broaden consideration of incentive schemes to include STPIS

Appendix 1 – Comments from recent consumer perspectives

The following are comments from seven different consumer perspectives over the last year:

1. *“The ICT investment by utilities is growing rapidly as the role of corporate support systems, real-time control systems, data gathering, and data analysis plays a much greater role in delivering business efficiencies; both in the operation of the business itself and the optimal investment, operation and risk management of the distribution network. CCP10 acknowledges that ICT expenditure will genuinely be an item of increasing expenditure over the next twenty years. However, utilities need to be held accountable for these significant and growing-investments in Information and Communication Technologies.*

Similarly, consumers need to be more informed of the requirements, benefit, prudence and risk implications of investment in ICT and related assets, as they gain an increasing influence on business performance and efficiency (and hence operating cost), depreciation (again, influencing price to customers), data risk, service delivery, customer choice and network supply risk and performance.

We recognise that each utility is encouraged to seek new and innovative ways to work with customers, the community, the regulator and other stakeholders. However, a number of significant matters are arising in the industry generally that lack transparency and clarity of definition and approach. Unless addressed in a common and effective way, the risk continues that this growing area of investment may not be fully in the interests of consumers.

A number of specific concerns exist regarding ICT spend, both as operating costs and the return of investment in new capability.

1. *The quantum and impact of significant ICT expenditure by all utilities affects all customers*
2. *A single provider, SAP is emerging as almost a monopoly provider of utility enterprise systems, and the accountability and influence this provider has on the cost of ICT operation and regular investment is not at all transparent.*
3. *The efficiencies that businesses gain through ICT investment, the cost of which is largely recovered from customers, should not be recovered again through the incentive schemes.*

In their regulatory proposal, Essential Energy is commended for linking the increased investment in ICT capability with performance improvements that are specific and measurable. Whilst we expect that there will be significant challenges in demonstrating the performance change resulting from the technology investment, Essential’s commitment to visible benefits for customers sets a new benchmark for ICT investment in the regulatory proposals.

In response to CCP10’s ongoing concerns about IT expenditure we are pleased that Ausgrid has committed in its Revised Proposal to share further granularity of customer benefits derived from IT expenditure and to support an industry wide review by the AER into IT forecasting to improve expenditure assessment.

CCP10 recommends that the AER and community advocates take a stronger role in the understanding of the prudence of ICT investment by utilities. We support the recent advice by the AER to consider the establishment of greater skills in this area and encourage the AER to work with utilities to present the

value and risks of ICT investment to consumers in the form of transparent, measurable and specific performance improvement.”¹⁹

2. *“We believe that the ICT Investment plan is not a customer-focused document, and does not support transparent, validated and efficient ICT investment.”²⁰*
3. *“CCP13 recommends the AER pay particular attention to IT and Communications expenditure in the 2019-24 regulatory period.”²¹*
4. *“We consider that these expenditures (Ausgrid ICT) need to be scrutinized carefully.”*

“It is unclear that there are tangible benefits from this expenditure (Ausgrid ICT), and we are seeking further information from Ausgrid on the benefits and costs, including ... in relation specifically to the Project Justifications for operational technology and innovation programs – April 2018, this appears to be a “shopping list” for \$102 million of equipment with very little justification and no evidence or forecast of savings.”²²

5. *“Finally, we comment on the urgent need for the AER to institute a network wide review of ICT and associated cyber security capex and opex spending. This is an increasing component of networks’ revenue that does not have the same rigour applied to it that is applied to other parts of a network’s expenditure. Networks claim that such expenditure is required to improve efficiency, meet customer expectations and comply with legislative obligations. Consumers are seeking much more detailed justifications and AER review rigor around this expenditure.”²³*
6. *“As stated in our submission to SAPN’s Draft Plan, we recognise that ICT is required as a transformation enabler. However, this position does not mean that consumer preferences, outcomes and benefits should not be articulated.*

The key issues across the NEM are the lack of transparency and trust that the proposed ICT investment will deliver what it is meant to, and that the level of ICT investment is needed. Much of these concerns stem from not knowing what is driving the investment, not being able to see clear links between ICT investment and increased productivity and efficiency (and therefore reduced costs to consumers); and, the apparent need to invest more often. “²⁴

7. *“The justification and transparency for the size of the ICT budget is not clear in the draft Regulatory Proposal. It is noted that EQ will be conducting another deep dive on ICT expenditure in November 2018. QCOSS is requesting that in determining its ICT budget across the two networks, EQ answers the following questions:*

¹⁹ CCP10 submission to the AER on the revised revenue proposals of Ausgrid, Endeavour and Essential dated January 2019 at pp. 19-20

²⁰ CCP 10 discussing Endeavour’s Initial Proposal capex August 2018 p.4 https://www.aer.gov.au/system/files/CCP10%20-%20Submission%20-%2008%20August%202018_1.pdf

²¹ CCP13 submission on Tasnetworks’ Initial Proposal May 2018 p. 39 CCP13 recommends the AER pay particular attention to IT and Communications expenditure in the 2019-24 regulatory period.

²² ECA Submission to Ausgrid Proposal August 2018 p.

²³ EUAA submission on the NSW NNSPs 20-19-24 Revenue Reset January 2019 p.3 <https://www.aer.gov.au/system/files/EUAA%20-%20Submission%20on%20NSW%202019-24%20draft%20decisions%20and%20revised%20proposals%20-%20February%202019.pdf>

²⁴ ECA Submission to SAPN Proposal May 2019 p 22

- *What specific operating efficiencies are likely to arise from the ICT spending?*
- *What would happen if 10 per cent was removed from the ICT budget?*
- *What ICT work has been carried over from the current and previous regulatory periods? It is noted that EQ was allowed around \$451 million this regulatory period but only spent \$367 million. How can customer advocates be confident that the proposed budget of \$461 million does not include spending on ICT budget items that were proposed in the current regulatory period but were deferred to the 2020-25 regulatory period?”²⁵*

²⁵ QCOSS submission on EQ's Draft Plans for 2020-25 at p 19

Appendix 2 - Glossary

AER	Australian Energy Regulator
AMI	Advanced Metering Infrastructure
AP / AR	Accounts Payable / Accounts Receivable
Augex	Network Augmentation capital expenditure
BCP	Business Continuity Plans or Planning
CCP	Consumer Challenge Panel
CESS	Capital Efficiency Sharing Scheme
DER	Distributed Energy Resource (small scale energy generation or storage devices that are grid connected)
DM	Demand Management
DNBP	Distribution Network Service Provider
EBSS	Efficiency Benefit Sharing Scheme
ECA	Energy Consumers Australia
ENA	Energy Networks Australia
EQ	Energy Queensland
ERP	Enterprise Resource Planning (system) (typically HR, Finance, & Accounting, AP/AR)
EUAA	Energy Users Association of Australia
EWON	Energy and Water Ombudsman NSW
ICT	Information and Communications Technology
LMR	Limited Merits Review
QCOSS	Queensland Council of Social Service
NEL	National Electricity Law
NEM	National Electricity Market
Opex	Operating expenditure
PTRM	Post-tax revenue model
RAB	Regulated Asset Base
Repex	Network Asset Replacement capital expenditure
RIN	Regulatory Information Notice
Totex	Total expenditure, being operating cost and the impact of capital investment
TSS	Tariff Structure Statement