

16/05/2018

AER Board

Mr Adam Petersen, Co-ord. Director – PWC

Australian Energy Regulator

By email: adam.petersen@er.gov.au Cc: ccp@er.gov.au

Dear Paula,

Re: Issues Paper – Power & Water Corporation (PWC) electricity network revenue proposal 2019-24

Please find attached our submission in relation to the above network determination.

Kind Regards,

Andrew Nance on behalf of CCP Sub-panel 13

Submission to the Australian Energy Regulator (AER)

Consumer Challenge Panel Sub-Panel 13

**Response to proposals from PWC for a revenue reset for the 2019-24
regulatory period**

Sub-Panel 13

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16/05/2018

Executive Summary

We note that this is the first determination by the AER, with previous determinations performed by the local economic regulator the Utilities Commission.

CCP 13 has considered the proposal of PWC (the Network Service Provider or NSP) in light of the objective of the CCP which is to:

- advise the AER on whether the network businesses' proposals are in the long-term interests of consumers; and,
- advise the AER on the effectiveness of network businesses' engagement activities with their customers and how this is reflected in the development of their proposals.

Our response to the PWC Proposal and AER Issues Paper have been informed by our interactions with the business and AER over a period of around 14 months, since March 2017. Overall, we have found PWC to have engaged in good faith with their customers and other stakeholders. However, the pressures of meeting the AER's requirements, particularly around data, have been particularly challenging for PWC. The timely exchange of information underpins an efficient regulatory regime and PWC has struggled to provide accurate and timely data to enable a full evaluation of their proposal by both consumers and CCP13. .

We know PWC is well aware of these issues and is making significant efforts to address. We look forward to these efforts continuing to improve the availability of data and the underlying narrative to explain their proposals. This will be crucial for the success of the remainder of the 2019-24 regulatory process and for the maturity of ongoing consumer engagement for the next regulatory reset process.

Public ownership of each stage of the supply chain as well as retail price regulation for small customers provides important context for this regulatory process. Of particular importance to the long-term interest of NT electricity consumers is the interaction between PWC and publicly owned incumbent retailer Jacana. We have not witnessed any substantive interactions over the last year and believe this should be encouraged further.

Given a combination of public ownership, price control and small customer base, it is not surprising that consumer engagement is at a relatively low level when compared with other jurisdictions. In the absence of NT consumers having access to ECA funding, PWC should give more consideration to how it might support the development of improved capability in consumer organisations to more effectively engage with PWC.

In terms of expenditure, there are a number of areas where CCP 13 is concerned that the proposal from PWC may not necessarily be in the long-term interests of consumers.

A. CONSUMER ENGAGEMENT

This is the first occasion where PWC has undertaken a revenue reset under the National Electricity Rules and where it has sought to undertake a comprehensive consumer engagement program. This has provided PWC with a number of challenges including:

- Coming to terms with the requirements of a new regulatory environment;
- Adapting historical records in order to provide the data required in this new environment;
- Training staff and resourcing for the project;
- Developing and implementing a consumer engagement program.

The nature of PWC's business presents a number of challenges to the task of rolling out a consumer engagement plan. These include:

- a network made up of three geographically isolated sub-networks (Darwin, Alice Springs and Tennant Creek);
- a small population and customer base (around 85,000 customers)¹;
- consumer bodies that have limited resources (reflecting the population and its geographic spread across the Territory) and limited experience with engagement on electricity price resets;
- Energy Consumers Australia (ECA) having no jurisdiction in the Territory.

In these circumstances PWC undertook a comprehensive and well-planned consumer engagement program. It demonstrated learning and adaptation as it moved through its consumer engagement. Senior management has been involved and have shown commitment to engagement with consumers which bodes well for genuine consumer consciousness becoming part of the culture of PWC. CCP13 also found the PWC's team it dealt with to be positive and helpful and to demonstrate a genuine belief in the process and value to the business of engaging with consumers and stakeholders.

PWC sought to engage with the full range of its consumer through several channels but as the CCP notes there is room for improvement. Greater information sharing would be a key step forward (noting that as this is PWC's first AER revenue process it has been challenged by things like its historical data, resourcing and experience). Continuing with more active engagement post submission of the reset proposal would also be beneficial.

The key issue will be continuing to improve the knowledge, capability and capacity of consumer representatives. With no ECA funding available then perhaps it falls to PWC or the NT Government to assist this process.

The maturing of the Customer Advisory Council (CAC), as it gains greater knowledge and experience, along with parties in the Territory becoming more familiar with a network that wants to listen to them, will improve future engagement. Some funding to assist consumer bodies

¹ PowerWater Regulatory Proposal 1 July 2019 to 30 June 2024 16 March 2018 p.4

may be beneficial. PWC sharing and engaging on a substantive draft of its revenue proposal with consumers and stakeholders would be a material step forward too.

PWC has demonstrated a desire to learn and improve on its consumer engagement approaches. This attitude should ensure that customer engagement going forward continues to improve.

CCP13 believes that in the circumstances PWC has undertaken a reasonable consumer engagement process and is reasonably informed of consumer interests and concerns in framing its reset proposal.

Recommendations:

- a) *That the AER accept that PWC has undertaken a reasonable consumer engagement process and is reasonably informed of consumer interests and concerns in framing its reset proposal.*

B. LONG-TERM INTEREST OF CONSUMERS

Our approach to considering the long-term interests of consumers is based in the National Electricity Objective (NEO). The NEO is an economic efficiency objective that is often described in terms of three dimensions: productive, allocative and dynamic efficiency.

- *Productive* efficiency reflects the conversions of inputs to outputs. In the case of PWC, the pursuit of productive efficiency entails providing customers what they want at the lowest sustainable cost. The prudence and efficiency of capital and operating expenditure is the central consideration here.
- *Allocative* efficiency can be considered from two perspectives. For consumers overall, the way PWC have understood preferences in terms of service standards (such as reliability, contact preferences etc) is pivotal. Secondly, the way PWC allocates these efficient costs to individual customers is critically important. The use of measures of Value of Customer Reliability (VCR) and the approach to Pricing (as documented in the Tariff Structures Statement, TSS) are pivotal aspects of the pursuit of Allocative Efficiency.
- *Dynamic* efficiency considers how Productive and Allocative Efficiency are keeping up with change over time and how well the proposal is positioned for future challenges.

In our view, there are a number of topics and issues in the PWC proposal which show or raise the prospect that the proposal is not necessarily in the long-term interest of consumers “... to the greatest degree”.

1. Capital Expenditure (capex)

PWC has proposed total (net excluding metering) capex of \$383.0m, which is 26% higher than the forecast expenditure in the 2014-19 regulatory period. In turn, the forecast net capex spend in the current regulatory period of \$302.9m is \$37.8m (14%) above the adjusted Utilities Commission determination of \$265.1m.

Consistent with other recent regulatory proposals, the largest capex category is Replacement expenditure (repex) at over 40% of the total. The most unusual element of the capex forecast is as a result of a change in capitalisation policy around classifying previous opex costs as capex. This category represents all of the capex growth from the current regulatory period.

PWC has also proposed capitalising overheads in proportion to the ratio of direct capex to total direct costs. There is great variation in approach across networks – from zero to ~60%. There are advantages and disadvantages from any approach. Consumers need to have confidence that whatever approach is chosen meets the NEO. They do not have that confidence now.

Recommendations:

- b) That the AER pay particular attention to Non-network Information and Communications Technology expenditure.*
- c) That the AER pay particular attention to repex expenditure.*
- d) That the AER pay particular attention to PWC's choices in relation to their Capitalisation Policy and the prudence of expenditure that see continual growth in the RAB. Consumers deserve to understand how the approach promotes their interests in the long-term. In particular, with regards to the PWC approach to capitalisation of overheads, we suggest that the AER consider undertaking a more comprehensive review of overhead capitalisation approaches to see whether there should be a guideline developed.*
- e) That the AER consider the prudence of expenditure that sees continual growth in the RAB.*

2. Operating Expenditure (opex)

PWC's forecast opex is one of the key drivers of the decrease in revenue it proposes for the 2019–24 regulatory control period. It proposes total opex of \$339.3 million (\$2018–19). This is a \$58.0 million or 14.6 per cent decrease from its expected actual expenditure in the current period (Issues Paper p27).

The reductions come from the transfer of what was previously opex into capex (in accordance with a revised capitalisation policy) as well as planned efficiencies.

Recommendations:

- f) That the AER satisfies itself that the proposed level of opex is efficient (or at least "not materially inefficient") and if so then we support the application of the Efficiency Benefit Sharing Scheme (EBSS) to build strong incentives to reveal efficient costs over the regulatory period.*
- g) That the AER and PWC ensure that data collection and reporting improves over the period so that the related issues do not re-occur in the next reset. Meaningful benchmarking is clearly in the long-term interest of NT electricity consumers.*
- h) That the AER reconsider the zero-productivity assumption.*

3. Rate of Return (ROR)

PWC has adopted some, but not all of the elements of the 2013 AER ROR Guideline. It proposes a rate of return of 6.62% in its calculations over the 5 years in its proposal. This would be updated at various stages along the process until the final AER decision. It proposes a value of 0.4 for gamma, which is consistent with the Guideline and recent Federal Court decisions.

The major variation to the Guidelines is that PWC propose to adopt the trailing average approach immediately rather than after a 10-year transition.

The AER is currently undertaking a review of the 2013 ROR Guideline that, if the COAG Energy Ministers proposal is accepted, will be binding on all the NSPs. For this reason we do not comment on the detail of the PWC ROR proposal.

Recommendations:

- i) Given that PWC is expected to be bound by the Rate of Return Guideline that is currently being developed and that this Guideline will be binding if the proposed COAG Energy Council proposal proceeds, then we do not intend to comment on the PWC Rate of Return proposal.*

4. Distribution Pricing

Overall, PWCs first TSS is a relatively simple and uncontroversial proposal. However, unlike other Distribution Network Service Providers (DNSPs) in the National Electricity Market (NEM), PWC retains responsibility for Type 1- 6 metering. The TSS therefore needs to align closely with proposals for metering. PWC has been deploying smart meters to all customers consuming >40MWh per annum in the current regulatory period. PWC proposes to expand this to all new and replacement customer meters installed from July 2019 (p10). CCP13 is not convinced that the business case to extend this functionality to all new and replacement metering installations has been made. We discuss this further separately in this submission.

Recommendations:

- j) The AER consider the smart meter tariff assignment in conjunction with the proposal for a roll out of smart meters to all new and replacement installations. The business case for the metering roll out has not been made and this has implications for consideration of the tariff.*
- k) The AER review the proposed Long Run Marginal Cost (LRMC) results in detail.*
- l) The TSS should provide greater clarity on cross-subsidies and the pace of reform.*
- m) The AER set clear expectations regarding engagement with dominant retailer Jacana and consumers on the tariff reform program.*
- n) PWC consider using tariff trials to improve understanding of consumer responses to price signals. Preference should be given to collaborative trials with small customer retailer Jacana.*

5. Demand Forecasts

PWC commissioned the Australian Energy Market Operator (AEMO) to carry out the forecasting of demand in the three network regions:

- Darwin-Katherine network
- Alice Springs network
- Tennant Creek network

AEMO prepared forecasts for the 2017/18-2026/27 based on information provided by PWC up to 18th August 2017.

AEMO indicates that the main drivers that lead to large changes in electricity consumption are:

- Residential connection growth,
- Gross State Product (GSP) growth and large load variations, and
- Solar photovoltaic (PV) installations/Battery Energy Storage System (BESS).²

CCP13 has concerns with some of the considerations on which the demand forecasts are based:

- (i) The apparent inconsistency between level of economic activity and customer connections

For the Darwin-Katherine network it seems inconsistent to forecast a decline in economic activity and an increase in customer connections in line with the historic trend. For the Alice Springs network it seems inconsistent to forecast a reduction in population and a slight increase in customer connections over the 5 year reset period.

- (ii) Are the population forecasts too optimistic?

AEMO uses forecasts of population increase and Gross State Product which are sourced from NT 2017-18 Budget papers. More recent NT Treasury data forecasts lower growth.

- (iii) Have improvements in energy efficiency/energy productivity been considered?

One of the major uses of electricity in the Territory is for air conditioning. Discussions with two major users in the Darwin area pointed to their significant investment in improved chiller technology over 2017-19 that in one case had already reduced their consumption by 30% in 2018 in one of their major sites. It is not clear how energy efficiency/energy productivity, and particularly this type of step change, has been considered in the AEMO modelling.

- (iv) Is the growth rate on behind the meter renewables too pessimistic?

The Northern Territory has a relatively low penetration of solar PV compared to other States and Territories. The NT Government's Roadmap to Renewables report (September 2017) made a number of recommendations for Government action to

² Power and Water Corporation Maximum Demand, Energy Consumption and Connection Forecasts – 2017 Implementation of Forecasting Procedure September 2017 (Attachment 4.4P), p.11

facilitate the transition to 50% renewable energy in the Territory by 2030³ and PWC points to this as a reason to roll-out smart meters. In light of these considerations the growth projection may be a little modest.

Therefore, CCP13 considers that the demand forecasts may overstate future demand over the reset period.

Recommendations:

- o) That the AER examine the AEMO demand forecasts for PWC's network with particular attention to the forecasts of connection growth, PV installation and energy efficiency/productivity in the Territory.*
- p) That PWC consider commissioning an updated demand forecast from AEMO that takes account of more recent input information and explicitly takes account of the Government's commitment to 50% renewables by 2030.*

6. Pass Through Events

PWC proposes some pass through events which are largely pass through events and definitions previously accepted by the AER for other NSPs. The one that is different from other NSPs is the proposed 'NT transitional regulatory change event from 1 July 2019'.

A specific provision of the NT National Electricity Regulations (NER), the "NT transitional regulatory change event", allows PWC to pass through additional costs arising from changes in its regulatory obligations or requirements between 1 July 2017 and 30 June 2019.

The proposed new pass through event would allow such changes up to 30 June 2024, to be passed through:

...if those changes, taken as a sum:

- a) substantially affect the manner in which Power and Water Corporation provides direct control services; and*
- b) result in a material increase or material decrease in the costs of providing those services, that is incurred, or likely to be incurred, in any regulatory year of the 1st regulatory control period exceeds 1% of the annual revenue requirement for that regulatory year. [Emphasis added]*

PWC's proposed pass through event, by allowing aggregation of a series of regulatory change events to meet the materiality threshold, by-passes the usual principle of the materiality threshold being applied to each event.

CCP13 considers that PWC has not presented a sufficient case to justify moving away from reliance on the regulatory change event for the changes that may arise in the next regulatory period from further implementation of national rules in the Territory and that it is not in consumers interests for the normal materiality provisions to not apply to these potential changes in regulation.

Recommendations:

³ Northern Territory Roadmap to Renewables Fifty percent by 2030
<https://roadmaprenewables.nt.gov.au/?a=460760>

- q) *That the AER not approve the 'NT transitional regulatory change event from 1 July 2019'.*

7. Smart meter roll-out

Currently for new premises and where meters reach end of life or fail, PWC installs interval meters which are configured for accumulation output and are manually read but could be upgraded to interval data with remote communications in the future.

PWC proposes changing its meter replacement policy in the next regulatory period to install advanced (or smart) meters to customer premises where it is making a new connection and where it is replacing a meter which has reached the end of its life or has failed (a 2% failure rate is assumed). The NSP proposes IT investment to support smart meters so that it will be able to remotely read these meters and remotely turn the power on or off at the premises.

PWC proposes that the cost of new meters be rolled into a standard flat daily metering charge that is payable by each connection rather than applying the cost of the new meter to the connection where it is fitted. The result of this proposed investment is that from 2020-21 annual meter prices would increase by 6.89% in each remaining year of the regulatory period. CCP13 considers that a user pays approach is more appropriate for the additional cost of a smart meter.

As explained in this submission's section on Pricing, moving from the current meter replacement program to the proposed smart meter roll-out results in ~\$10.7m of additional capital expenditure in the period.

CCP13 considers that there was only limited engagement on the smart meter issue. The result of this was summarised as there being consumer support for a smart meter roll-out based on a cost-benefit analysis and some service improvement considerations like enabling time-of-use pricing, identifying faults sooner, reducing estimated reads and eliminating intrusive meter readers. CCP13 believes that greater scope and depth of consumer engagement on this issue, such as consultation on the actual cost difference between continuing the current program and adopting the proposed smart meter roll-out, would be very helpful in considering this matter further.

The capital cost of adopting the proposed program is ~\$10.7m more over the next period than the cost of continuing the current meter program. We are yet to understand the details of the proposal but, at this stage, CCP13 does not see that this cost to consumers has been justified as being in their long-term interests.

Recommendations:

- r) *That the AER seek further information on and examine the "...benefits which we [PWC] and other parties (retailers, generators, and customers) may realise are conservatively estimated at \$6.1 to \$15.4 million".*
- s) *That the AER continue its examination of the capex and opex of continuing the current new site and meter replacement program compared to the proposed smart meter roll-out, as well as the cost over the life of the meter assets.*

- t) That on the information available, CCP13 considers that the proposed smart meter roll-out has not been justified as being in the long-term interests of consumers and that there has not been sufficient consumer engagement on the matter (including the actual cost difference compared with continuing the current program) to claim that it is support by consumers.*
- u) That if PWC continues to consider the smart meter roll-out to be justified it should carry out further and more in-depth customer consultations on the matter prior to the submission of a revised proposal in November 2018.*

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Background

- This advice was prepared as agreed between sub-panel CCP13 working on the PWC (the NSP) revenue review, and Adam Petersen, Co-ordination Director for the PWC revenue review.
- The NSP commenced the process of preparation of its revenue proposal and the related consumer engagement early in 2017. During 2017 the NSP undertook a range of consumer engagement activities and processes.
- CCP13 was established in November 2016.
- The AER's preliminary Framework and Approach (F&A) for PWC electricity distribution business was published in March 2017. CCP13 did not make a submission on the preliminary F&A.
- On 4 and 5 July 2017, two CCP13 members attended The NSP's Consumer Advisory Council meeting. On this visit the sub-panel members met with the NSP and the former economic regulator (the Utilities Commission). They also met with some consumer representative bodies as well as with some of the large electricity users in the NT.
- On 21 August 2017 a member of CCP13 attended a deliberative forum held by PWC in Darwin. There was also a meeting with one consumer representative body. There was also a meeting with the NSP.
- A member of CCP13 attended a meeting of the NSP's Consumer Advisory Council on 31 October 2017. This standing body meets regularly and has members representing a cross

section of consumer interests and other stakeholders. It considers various matters relating to the business's consumer interface including the development of the revenue proposal. There was also a meeting with the NSP.

- On 19 January 2018 CCP13 members participated in an AER Tariff Structure Workshop to be better informed on this matter as it relates to the NSP's TSS proposal.
- On 12 April 2018, a member of CCP13 participated in the AER's Public Forum convened by the AER in Darwin. CCP13 presented its preliminary observations on the NSP's consumer engagement and issues of possible concern with the revenue proposal. This Public Forum was attended by a few consumer representatives and other interested stakeholders. On this visit the CCP member also joined a meeting between the AER and the NSP.
- During the course of CCP13's engagement with PWC there have been open lines of communication and the NSP has been cooperative and supportive of the sub panels role.
- CCP13 has held regular meetings with the Co-ordination Director since January 2017.
- Meetings have been held with some of the AER specialist teams involved in the revenue review. These meetings have provided an opportunity for CCP13 to increase its understanding of some of the technical issues involved as well as for the Panel and AER officers to exchange views on issues associated with the proposal.

Role of the CCP

The objective of the Consumer Challenge Panel (CCP) is to:

- advise the AER on whether the network businesses' proposals are in the long-term interests of consumers; and,
- advise the AER on the effectiveness of network businesses' engagement activities with their customers and how this is reflected in the development of their proposals.

CCP13 is focussed on promoting the consumer interest during the development of revenues and prices for the 2019-24 PWC Regulatory Control Period (commencing 1 July 2019). Further information on the Panel is available at www.aer.gov.au/about-us/consumer-challenge-panel

ADVICE

A. Consumer Engagement

The effectiveness of network businesses' engagement activities with their customers and how this is reflected in the development of the network businesses' proposals

A.1 PWC's Consumer Engagement Program

This is the first occasion where PWC has undertaken a revenue reset under the National Electricity Rules and where it has sought to undertake a comprehensive consumer engagement program. This has provided PWC with a number of challenges including:

- coming to terms with the requirements of a new regulatory environment;
- adapting historical records in order to provide the data required in this new environment;
- training staff and resourcing for the project;
- developing and implementing a consumer engagement program.

The nature of PWC's business presents a number of challenges to the task of rolling out a consumer engagement plan. These include:

- a network made up of three geographically isolated sub-networks (Darwin, Alice Springs and Tennant Creek);
- a small population and customer base (around 85,000 customers)⁴;
- consumer bodies that have limited resources (reflecting the population and its spread across the Territory) and limited experience with engagement on electricity price resets;
- the Energy Consumers Association (ECA) having no presence in the Territory.

In this context PWC developed a consumer engagement plan that was comprehensive and well structured.

The NSP indicates that its engagement program was designed to⁵:

- *educate customer groups on our role in the provision of electricity supply in the NT, which has not been undertaken since structural separation;*
- *gain greater insight into how we are perceived by stakeholders and customers throughout the NT and what their priorities are;*
- *achieve genuine engagement and feedback from stakeholders, customers and system participants throughout the project, highlighting areas for continuous improvement and future projects;*
- *strive for customers and customer groups to advocate on behalf of our business; and*
- *meet our National Electricity (NT) Rules' (NT NER) regulatory requirements and inform our regulatory proposal and proposed TSS.*

PWC commenced its consumer engagement program in February 2017. Figure 1 sets out the high-level plan for engagement.

⁴ PowerWater Regulatory Proposal 1 July 2019 to 30 June 2024 16 March 2018 p.4

⁵ PowerWater Engagement Overview – How we engaged, what we heard and how we're responding – PUBLIC, 31 January 2018, p.4



Figure 1 – Summary of engagement phases and activities⁶

The aims of the two phases of the plan are described as⁷ -

Phase 1 - gain an understanding of:

- customers' level of knowledge of the electricity market and supply chain in the NT; and
- what customers care about most and what their preferences are to help inform:
 - the second phase of engagement (deliberative and large energy user forums);
 - various options for developing the 2019 regulatory proposal and Tariff Structure Statement (TSS); and
 - our long-term business plan for network.

Phase 2 – based on the findings in Phase 1, key issues and risks emerging from the price determination project, and the AER and CCP engagement expectations:

- established engagement topics;
- tested engagement design and topics with PWC's Customer Advisory Council (CAC);
- then identified:
 - who to engage with;
 - how to engage; and
 - how the engagement outcomes would feed into the planning process for the regulatory proposal and the TSS.

PWC sought to engage with a representative cross section of Territorians focussing on⁸:

⁶ Ibid. p.5

⁷ Ibid. p.6

⁸ Ibid. p.7

- Network location – customers in the Darwin area, Katherine, Alice Springs and Tennant Creek.
- Customer type and size – covering households, small & medium business and large commercial and government users.
- Special interest customer groups – including the aged, residential tenants, indigenous users, farmers, businesses, councils and developer.

Key stakeholders like government, generators, retailers and the Utilities Commission were also engaged.

Acknowledging its limited experience in this process, PWC engaged consultants who have worked in consumer engagement for other NSPs⁹.

PWC adapted its consumer engagement as it moved through the program based on what it was hearing. It provides the following examples of this responsive approach¹⁰:

- *the second CAC in July recommended that, even though the Pricing Order retail pricing protection mean customers who consume <750MWh per year will not see our network tariff reforms, we should include our demand pricing plans in the second phase research forums;*
- *the third CAC in October provided feedback on our draft tariff structure statement overview prior to releasing it for consultation in November;*
- *introducing a large energy user forum in place of two deliberative forums, which were to be held in Katherine and Tennant Creek;*
- *a number of customers who attended our large energy user forum requested follow-up meetings with our account managers to discuss our draft pricing plans further;*
- *introducing two consultation papers in place of the online survey and Power and Water led in-depth interviews;*
- *customers in the focus groups identified estimated bills as a key concern, which led to further investigation of our metering practices, which we further tested in Phase 2;*
- *a number of participants in our focus groups requested we perform energy audits for vulnerable customers, which we further tested in Phase 2; and*
- *customers in the focus groups requested we reinstate the undergrounding of overhead powerlines project, which we further tested in Phase 2.*

In November 2017, PWC published a draft customer overview of its proposed TSS (after testing it with the CAC). This paper invited feedback and was posted on the PWC website as well as being sent to key stakeholders. Only one formal submission was received and PWC had two follow-up meetings with stakeholders who did not make formal submissions¹¹.

Perhaps as a reflection of the immense task for PWC to prepare its Regulatory Proposal, it did not publish a draft proposal and then engage in consultation. This step has proved to be an important part of the consumer engagement process in other jurisdictions.

As far as the CCP is aware PWC's engagement post-lodgement of its proposal with the AER has only involved one meeting of the CAC.

⁹ Ibid. p.7

¹⁰ Ibid. p.9

¹¹ PowerWater Regulatory Proposal 1 July 2019 to 30 June 2024 16 March 2018 p.42

The outcome of this engagement process is summarised by PWC as¹²:

We heard that our priorities should be:

- *increasing our cost efficiency to support lower power prices*
- *maintaining current reliability and responsiveness levels for most customers and improving reliability for poor performing rural and urban areas*
- *adopting pricing structures that are more sustainable by charging for demand, which will help lower future network costs, and*
- *deploying smart meters consistent with our national peers to support NT energy market competition and modernisation.*

PWC has sought to inform on the feedback from its consumer engagement process and how it has sought to address this including:

- Reference to its CAC of matters arising from various consumer engagement forums and taking advice from the CAC on some issues arising;
- Publication on its website of an overview of its engagement program, the role of the CAC (but nothing more), and copies of reports setting out the results of consumer surveys, deliberative forums and a large user forum¹³;
- A summary table in the Proposal Overview document setting out issues, customer feedback and how these are addressed in the revenue proposal¹⁴.
- A section in the TSS explaining the consumer engagement undertaken on tariffs and the feedback¹⁵;
- In the detailed revenue proposal, a summary of customer feedback on the metering services proposal for rolling-out smart meters¹⁶.

This is helpful to consumers and other interested parties (including the CCP) in being able to see something of the engagement process, how listening to consumers has turned into action and how positions in the proposal are justified in light of consumer feedback on relevant issues.

PWC commits to learn from its experiences in the process including from what it learned and how it adapted this process along the way and participant feedback on its engagement forums which is summarised in the Table 2.

¹² Ibid. p.6

¹³ https://www.powerwater.com.au/networks_and_infrastructure/power_networks/power_and_waters_engagement_program

¹⁴ PowerWater Regulatory Proposal 1 July 2019 to 30 June 2024 16 March 2018 pp.43-46

¹⁵ PowerWater Tariff Structure Statement 16 March 2018, pp.12-16

¹⁶ PowerWater Regulatory Proposal 1 July 2019 to 30 June 2024 16 March 2018 p.131

Channel	Overall engagement rating	Feedback received
Focus groups	NA	Strong support to increase our overall level of communication and engagement with the community
Newgate Research interviews	NA	Stakeholders and customers want to see more interactions from Power Networks, strongly supporting ongoing engagement
Deliberative forums	8.2 out of 10	Customer wanted to see more events of this kind, more regularly
Large energy user forum	8.3 out of 10	Well organised and facilitated event, large energy users want these to occur more frequently in conjunction with regular account management visits
Customer Advisory Council (CAC)	8.5 out of 10	Broader range of topics will need to be introduced (covering all areas of Power and Water), provides great value

Table 2 – Engagement feedback¹⁷

The following sections consider the consumer engagement in more detail and its effectiveness.

A.2 Consumer Engagement Reviewed

Residential & Small Business Customers

In Phase 1 of its program PWC had Newgate Research conduct nine two-hour focus group sessions throughout February 2017 in Darwin and surrounds, Katherine, Alice Springs and Tennant Creek (all the key areas covered by PWC's regulated network). Seventy-three people participated representing a cross section of the community (even gender, different cultures, indigenous representation, vulnerable customers, workers & retirees). The purpose of these is stated by PWC as:

...to explore our customers' knowledge and perceptions of our business, how we fit into the supply chain, customers' key areas of interest or concern and introduce proposed changes to the tariff structure. Importantly this was intended to inform the design of the detailed options and scenarios that were evaluated in the subsequent engagement activities in Phase 2.¹⁸

The main issues and interests of participants in arising from these focus groups were:

- 1. The size of their electricity bills (including recent price rises, the effects on the elderly and vulnerable and a desire for information and support to potentially reduce their bills);*
- 2. The improved reliability of the network in the last few years (which most were aware of and appreciated); and*
- 3. The shift to solar and other renewables (which most were very supportive of).¹⁹*

¹⁷ PowerWater Engagement Overview – How we engaged, what we heard and how we're responding – PUBLIC, 31 January 2018, p.28

¹⁸ Ibid. p.10

¹⁹ Customer Attitudes to Power and Water's Future Service Delivery – Customer Focus Groups Research Report March 2017, Newgate Research, p.5

At the same time 35 in-depth interviews were undertaken with parties from the following consumer classes:

- retailers and generators in the NT;
- major energy users (i.e. consumers not protected by the Pricing Order and consuming >750MWh per year);
- indigenous representative groups;
- consumer and environmental advocates;
- industry associations; and
- government stakeholders.²⁰

When asked about their future expectations of PWC (in general), stakeholders expressed a strong desire for:

1. **Prioritising infrastructure:** investment and maintenance to guarantee a reliable energy supply;
2. **Enabling and promoting renewables:** for environmental reasons and to diversify energy sources;
3. **Reducing costs:** preferably through technology and efficiencies – even if it means some job losses;
4. **Putting customers at the centre:** with some noting this needs to be driven by upper management;
5. **Providing better information:** that is more accurate and timely; and
6. **Better and closer working relationships:** characterised by more openness, transparency, respect and improved responsiveness.²¹

Details of both these engagements are set out in the reports which are in PWC's reset proposal papers as well as having been on PWC's website²² for some time. PWC is to be commended for providing transparency to these reports by making them available on the company's website, albeit that the consumer engagement information there is a couple of layers down on a busy website.

These types of engagements are necessarily limited by the small scale and the level of knowledge/engagement. PWC acknowledges this and gives these reports the appropriate weight, using them in large part to help design the more in-depth engagement to be undertaken in Phase 2 of its program.

The key focus of engagement with household and small business customers in Phase 2 was through the CAC (discussed below) and two deliberative forums in August 2017 held in each of Darwin and Alice Springs. Newgate Research's report describes the objective of these forums:

The purpose of the deliberative forums was to provide customers with information about key elements and options Power and Water is considering for its 5-year plan, and to explore and understand their views and preferences regarding these, including:

- Reliability and responsiveness standards;
- The principles of cost-reflectivity and demand charging;
- Current cross-subsidisation from residential to business customers;
- Smart metering roll-out;

²⁰ Ibid. p.11

²¹ Stakeholder Attitudes to Power and Water's Future Reputation and Future Service Delivery – Research Report April 2017, Newgate Research, p.8

²² https://www.powerwater.com.au/networks_and_infrastructure/power_networks/power_and_waters_engagement_program

- *Undergrounding established power lines;*
- *Communication and engagement preferences; and*
- *Assistance for vulnerable customers through in-home energy audits.*

Some of these items – such assistance for vulnerable customers, and undergrounding – had emerged as issues during the focus group discussions conducted in February, and Power and Water was seeking further, more detailed consultation on these.²³

These objectives indicate that the forums were not a completely open and undirected process seeking out any and all customer concerns (although these may in this context, and by CCP observation, arise). The forums were testing some of PWC's plans, customer perceptions and concerns, and some issues that arose from Phase 1 engagement.

Newgate Research and PWC staff conducted the two 4-hour deliberative forums with energy consumers, building on the insights gained from the Phase 1 engagement activities. Newgate Research recruited the 66 forum participants to be broadly representative of PWC's customer base including specific representation of vulnerable customers, solar customers, and small business owners and managers.²⁴ The participants were seated at five tables based on demographic categories (small business, Solar PV residential, and three tables of different economic/social demographic). A CCP member attended the forum in Darwin.

During the forum topics were introduced by presentations from PWC personnel. It was very good to see the senior management of PWC represented in good number presenting and engaging with participants. This level of commitment to the process (from 6pm to 9.30pm in the evening) demonstrates the pursuit of positive consumer culture within the NSP and speaks to the participants in the forum that their views might matter.

As observed by the CCP, following the presentation on a topic there was generally a question and answer session, table discussion (with a Newgate and a PWC person on each table to facilitate) and ultimately handset electronic voting on questions (generally on a 10-point scale from "not at all acceptable" to "completely acceptable") with immediate sharing of results. Participants also completed their scoring and comments in a workbook (for subsequent collation of the complete results).

The CCP observed in the Darwin forum that PWC made a genuine effort to simplify and explain issues and to answer questions so that participants might be able to make reasonably informed decisions on matter put to them. However, in the limited time available with an audience mostly unfamiliar with electricity issues, explaining some issues sufficiently (e.g. like energy usage versus demand and pricing for these), to allow participants to make fully informed decisions, is difficult.

The following figure presents a high-level summary of the participants sentiments on the key matter put to them:

²³ Power and Water's Future Service Delivery – Customer Deliberative Forums – Final Research Report, October 2017 Newgate Research, p.12

²⁴ Ibid. p.5

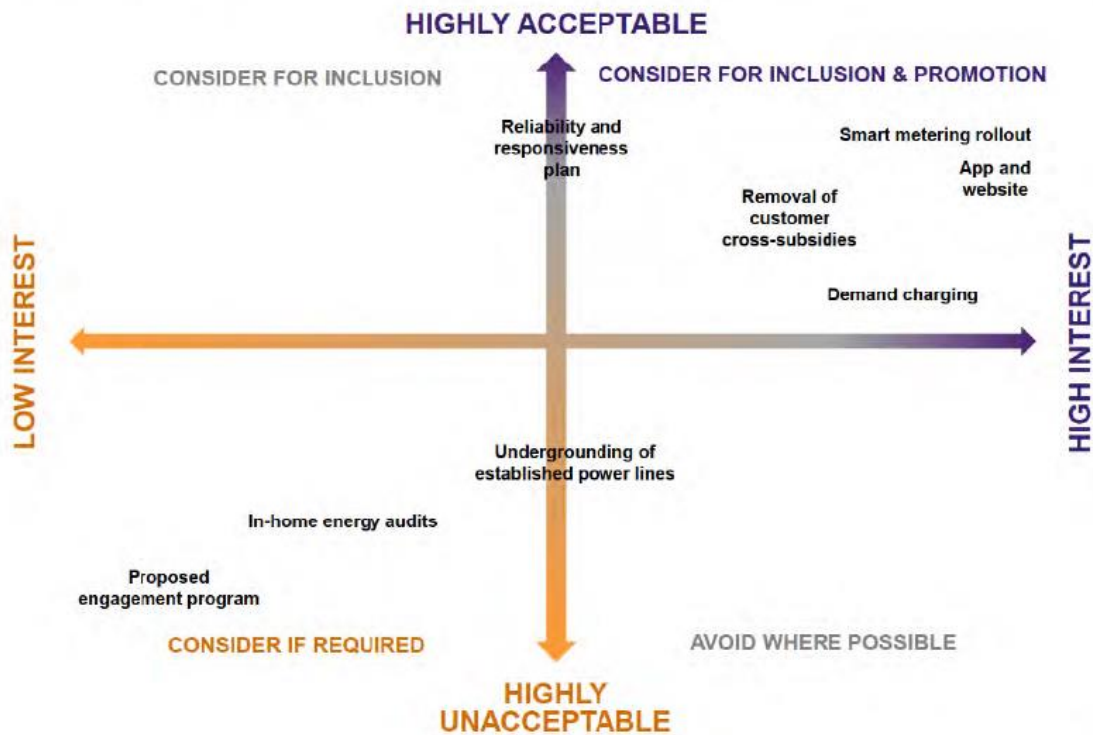


Figure 3 – Summary of Responses to the Proposal Consulted on²⁵

Throughout the Darwin session the CCP observed a reasonable level of engagement and understanding and heard comments (paraphrased) like:

- In response to the issue would you pay \$1.70 extra a year for better reliability and responsiveness, a question was asked as to whether \$1.70 could be absorbed from saving in the business and another that there's no guarantee that improvements will happen if extra money is collected.
- What is to stop PWC “gold plating” the network?
- On removal of cross subsidies to business comments that this sounded fairer but increases to small business would be passed on to customers so we pay anyhow and that employment might suffer.
- On PWC carrying out more and on-going consumer engagement at cost of \$3.50 per quarter, per consumer comment that consumers shouldn't have to pay to have PWC listen to them.

The Newgate Research Report setting out the results of the deliberative forum are on the PWC website²⁶ which is a positive in terms of transparency. Participants also completed post workshop surveys which PWC say will assist it to improve future engagement²⁷. CCP13 commends the pursuit of continuous improvement of consumer engagement.

This type of engagement does provide an NSP with useful direct feedback from members of the community. Whilst a cross section of the community was brought together as a representation of consumers' views, the two forums had a number of limiting factors including: the small sample number, the short duration of the engagement, the need to feed sometimes technical/unfamiliar information to participants, the need to lead discussion on issues and

²⁵ Ibid. p.8

²⁶ https://www.powerwater.com.au/networks_and_infrastructure/power_networks/power_and_waters_engagement_program

²⁷ PowerWater Engagement Overview – How we engaged, what we heard and how we're responding – PUBLIC, 31 January 2018, p.28

voting on a small range of questions. The learnings from such sessions are reasonable indicators of consumer views but must be considered with a range of other engagements. Some NSPs are now looking for ways to achieve a great depth of engagement with innovations like multi-day workshops of the same people.

Large Users

CCP13 met with a number of large consumers in July 2017. Overall comments on PWC included:

- Perception that it was inefficient in its work practices and staffing levels.
- There was scope for improvement on project management practices eg the changing requirements imposed on those seeking new connections; slow in arranging tenders; too strict adherence to standards.
- Restrictions on customers flexibility to utilise lower cost solutions because they do not comply with PWC standards.
- Poor reliability for number of years to 2016, recent improvement welcome.
- Relationship with PWC has been less beneficial and more 'remote' since structural separation with little discussion on network issues.

On other matters, there was a common view that economic activity was subdued and unlikely to improved in the short to medium term, particularly following the completion of the Impex LNG project.

In October 2017 PWC held a 2-hour forum for large energy users (>750 MWh per year) in order to get feedback and opinions of these customers on PWC's plans for the 5-years from 2019. These users are not protected by the NT Government's Pricing Order so changes to network pricing and tariffs are likely to impact them. Forty consumers were invited (approximately 20% of the large user class) with 17 attending (approximately 38% of the total KWh consumed by the class). All attendees received individually calculated briefing packs detailing the impacts of tariff options on their sites²⁸.

PWC presented participants with information including benefits of cost reflective pricing and proposed tariff structures. Following this, participants heard of elements of proposed tariff structures and bill impacts to the customers²⁹. A key outcome was that more than half of the participants supporting a move to the proposed fully cost reflective pricing³⁰.

The provision to participants of tailor made pricing scenarios for their sites was an excellent initiative to ensure that they had the best understanding of the potential impacts on their businesses allowing them to respond in a more informed fashion. It might have motivated more parties to become involved and helped them consider potential future impacts on their business, if more or all of the large users received this information.

As with the reports on the preceding engagement processes PWC has made the Large Energy User Report available on its website³¹.

²⁸ Power and Water Corporation – Power Networks Large Energy Users Forum, 12 October 2017 – Research Findings, p.3

²⁹ Ibid. p.4

³⁰ Ibid. p.5

³¹ <https://www.powerwater.com.au/networks-and-infrastructure/power-networks/power-and-waters-engagement-program>

Other engagement with large users were:

- Interviews with some large users who represented 36% of the 35 in-depth interviews undertaken through the process described in the preceding section.
- All large users were sent a copy of draft customer overview of the proposed TSS in November 2017 and invited to submit comments³² (see discussion of this consultation below).

Given that this large user class (who are not subject to the NT Government's Pricing Order) is made up of the only customers who might see an impact on their electricity bill because of PWC's reset proposal, CCP13 considers that it would have been better for PWC to engage over a longer period with more of these consumers. This would provide more convincing support for PWC's plans than the limited engagement done.

Customer Advisory Council (CAC)

The CAC was established in May 2017 and it met four times during 2017 and has met once in 2018. The membership provides broad range of consumer perspectives being made up of representatives from:

- Central Australian Health Services
- NT Chamber of Commerce
- The GPT Group
- St Vincent De Paul
- NT Farmers Association
- Charles Darwin University
- Tenant Advice Council
- Master Builders Association
- Council on the Ageing (COTA) Australia
- Multicultural Council of Australia
- Urban Development Institute
- NT Airports
- Environment Centre
- Department of Defence.³³

The CAC primary function so far has been to be part of the consumer engagement process associated with the revenue reset. The CAC has been:

- presented with information gathered throughout all engagement activities;
- consulted for feedback on designing successive phases of engagement; and,
- consulted on key issues including tariff reforms, smart metering and regulatory baseline.³⁴

A CCP member attended the CAC meeting in October 2017 which two-hour meeting included consideration of the deliberative forums held with residential and business customers, the regulatory baseline, and an overview of the TSS to be released for public comment. An optional tour of network infrastructure (a sub stations) was also provided. There was not a lot of discussion at the meeting of the issues presented however, much of it was subject matter that would be unfamiliar to most people (noting that PWC did make an effort to deal with the matters in an accessible way). It was encouraging to see the CEO sit in on the meeting along with some of the senior management, demonstrating a serious commitment to this engagement channel.

³² PowerWater Engagement Overview – How we engaged, what we heard and how we're responding – PUBLIC, 31 January 2018, p.14

³³ Ibid. pp.11-12

³⁴ Ibid. p.13

The CCP understands that PWC intends to continue the CAC as a permanent body through which it can maintain and develop its understanding of consumer and stakeholder interests. This is foresighted as it should build a more knowledgeable and engaged CAC and enrich PWC's customer awareness so standing it in better stead for its development of the next reset proposal. It is of course a challenge to maintain momentum and engagement with a standing consumer body, but many businesses now do this.

Unfortunately, CCP13 members did not have the opportunity to meet separately with the consumer bodies and other stakeholders represented on the CAC. So we have limited knowledge of how these key consumer parties feel about PWC's engagement with them and how well they think it has accounted for their concerns.

Greater transparency on the activities of the CAC would be beneficial in allowing the community to see the work done by the Council on its behalf. At the moment only the existence of and role of the CAC is briefly noted on PWC's website³⁵.

Public Consultation on Pricing Plan

In June 2017 PWC circulated initial tariff strategy considerations and options to retailers and generators, as well as NT Government departments and the Utilities Commission. This paper was designed to gain an understanding of the views of the various system participants and Government to allow PWC to refine its proposed tariff structures³⁶.

In November 2017 PWC published a draft customer overview of its TSS after testing it with the CAC at the October meeting. The paper invited all NT consumers and sector participants to provide feedback. The paper was published on PWC's website and sent directly to:

- CAC members;
- CCP members;
- AER;
- NT Utilities Commission;
- Department of Treasury and Finance;
- market participants (retailers and generators); and
- large energy customers (>750MWh pa).³⁷

PWC received one formal submission and had two follow-up meetings with stakeholders who did not make formal submissions³⁸.

Post-submission of Reset Proposal

As far as the CCP is aware PWC has undertaken only limited engagement with consumers since it lodged its revenue proposal in January. There has been one meeting of the CAC.

CCP13 understands that for good reasons PWC has been challenged to complete its reset proposal and submit all the related information. PWC has needed to update a number of document submitted in January with further and corrected documents in March 2018. Comment in some sections of this Advice note how the CCP has been limited in our consideration of the proposal by limitations on available information. We also understand that

³⁵ https://www.powerwater.com.au/networks_and_infrastructure/power_networks/power_and_waters_engagement_program

³⁶ PowerWater Tariff Structure Statement 16 March 2018, pp.15

³⁷ PowerWater Engagement Overview – How we engaged, what we heard and how we're responding – PUBLIC, 31 January 2018, p.14

³⁸ PowerWater Regulatory Proposal 1 July 2019 to 30 June 2024 16 March 2018 p.42

PWC's resources have been stretched over recent months due to the priority of responding to damage and other issues caused by a major cyclone in March this year. However, in the circumstance of changing reports and late information there is all the more reason than usual for continuing to engage with consumers.

A.3 Conclusion

For PWC this is the first revenue reset under the National Electricity Rules. It is the first time PWC has sought to undertake a comprehensive consumer engagement program. Following soon after the separation from PWC of generation and retail businesses, this exercise has been a challenge for the company and its staff.

In these circumstances PWC undertook a comprehensive and well-planned consumer engagement program. It demonstrated learning and adaptation as it moved through its consumer engagement. Senior management has been involved and have shown commitment to engagement with consumers which bodes well for genuine consumer consciousness becoming part of the culture of PWC. CCP13 also found the PWC's team it dealt with to be positive and helpful and to demonstrate a genuine belief in the process and value to the business of engaging with consumers and stakeholders.

As can be seen from the review above, PWC sought to engage with the full range of its consumer through several channels but as the CCP notes there is room for improvement. Greater information sharing would be a key step forward (noting that as this is PWC's first AER revenue process it has been challenged by things like its historical data, resourcing and experience). Continuing with more active engagement post submission of the reset proposal would also be beneficial.

The key issue will be continuing to improve the knowledge and capability of consumer representatives. With no ECA funding available then perhaps it falls to PWC or the NT Government to assist this process.

The maturing of the CAC, as it gains greater knowledge and experience, along with parties in the Territory becoming more familiar with a network that wants to listen to them, will improve future engagement. Some funding to assist consumer bodies may be beneficial. PWC sharing and engaging on a draft of its revenue proposal with consumers and stakeholders would be a material step forward too.

PWC has demonstrated a desire to learn and improve on its consumer engagement approaches. This attitude should ensure that customer engagement going forward continues to improve.

CCP13 believes that in the circumstances PWC has undertaken a reasonable consumer engagement process and is reasonably informed of consumer interests and concerns in framing its reset proposal.

Recommendations:

- a) *That the AER accept that PWC has undertaken a reasonable consumer engagement process and is reasonably informed of consumer interests and concerns in framing its reset proposal.*

B. Long-term Interests of Consumers

Whether the network businesses' proposals are in the long-term interests of consumers

B.1 Overview of PWC's Revenue Proposal

PWC proposes a 9.4 per cent reduction in revenue in the first year commencing 1 July 2019, followed by gradual increases of around 3.4 per cent per annum over the remaining four years. By 30 June 2024, these would bring its total forecast revenue closer to that actually recovered in the previous regulatory control period (2009–14) in accordance with the Ministerial Direction (Issues Paper, p14). The impact of the Ministerial Direction on the current regulatory period is reduced going forward by the separate recovery of metering charges as alternative control services (ACS). The overall effect on revenues is shown below in Figure 4.

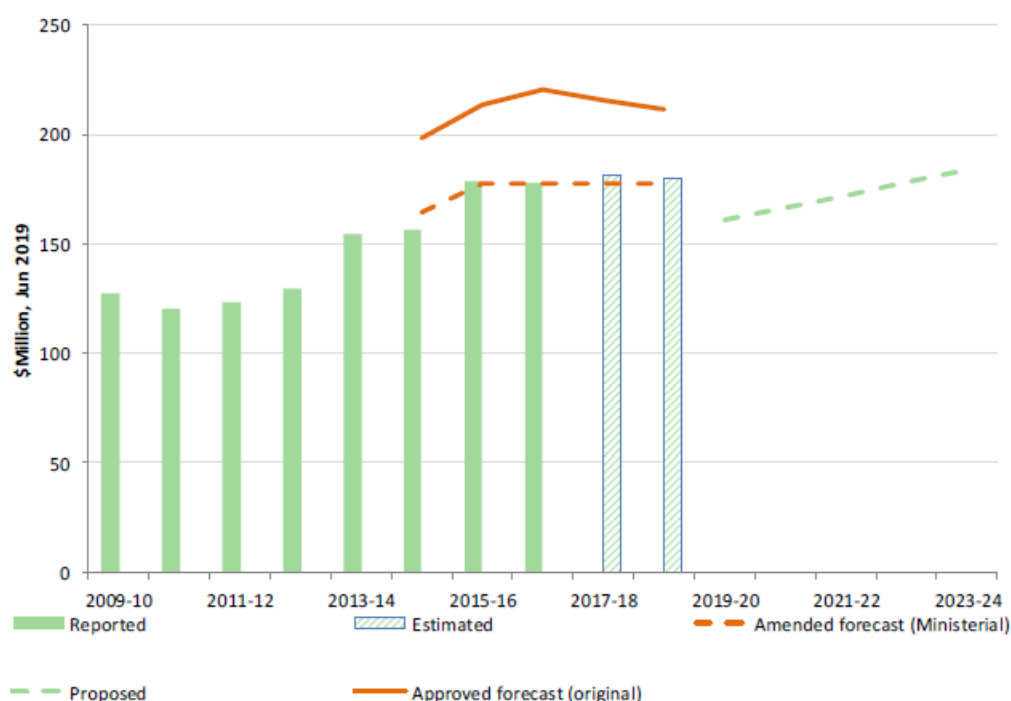


Figure 4: Forecast Revenue, PWC (Source: AER Issues Paper, Fig 3).

In terms of prices, PWC has proposed annual increases in distribution of 2 per cent in real terms and annual decreases in transmission of 5.6 per cent in real terms (Issues Paper p15-16). Overall, the AER expects a 1.8% real increase in total network charges over the regulatory period (Issues Paper, p15).

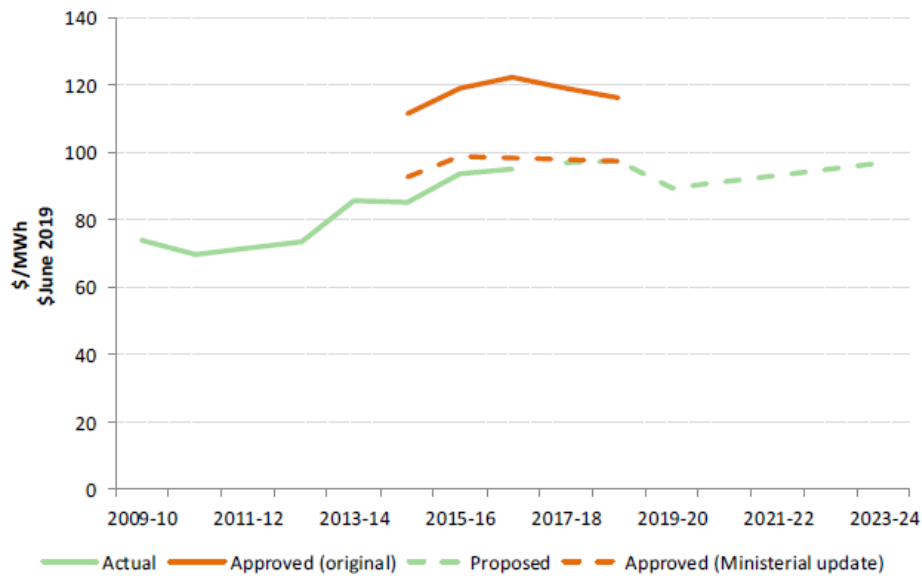


Figure 5: Indicative price path, PWC (Source: AER Issues Paper, Fig 2).

Significant capital expenditure programs will increase the real size of the Regulatory Asset Base of the network as shown in Figure 6, below.

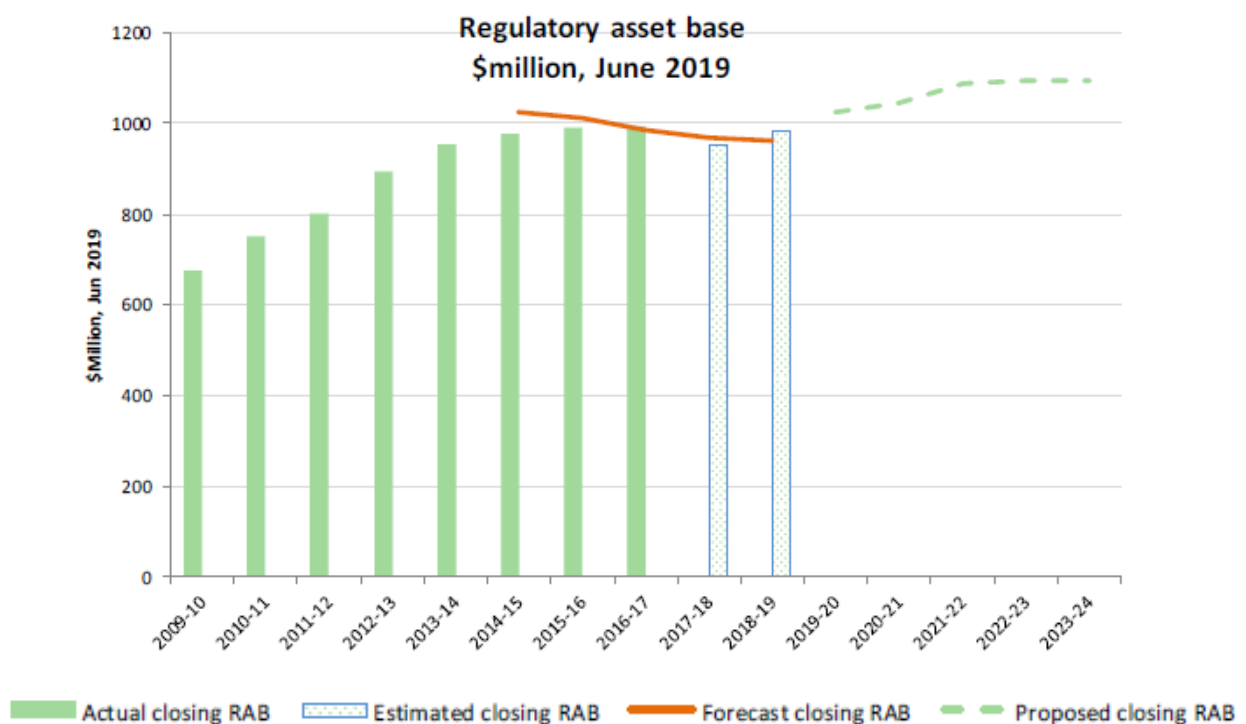


Figure 6: Projected RAB Growth, PWC (Source: AER Issues Paper Fig 7)

Overall, the proposal includes significant expenditure during a low interest rate environment that has the potential to trigger significant price rises in future years when interest rates inevitably return to a higher point in the cycle. In our view, the long-term interests of consumers are better served by lower RAB values over time – not growing as proposed by PWC.

A high-level breakdown of the revenue building blocks is provided in Figure 7 below:

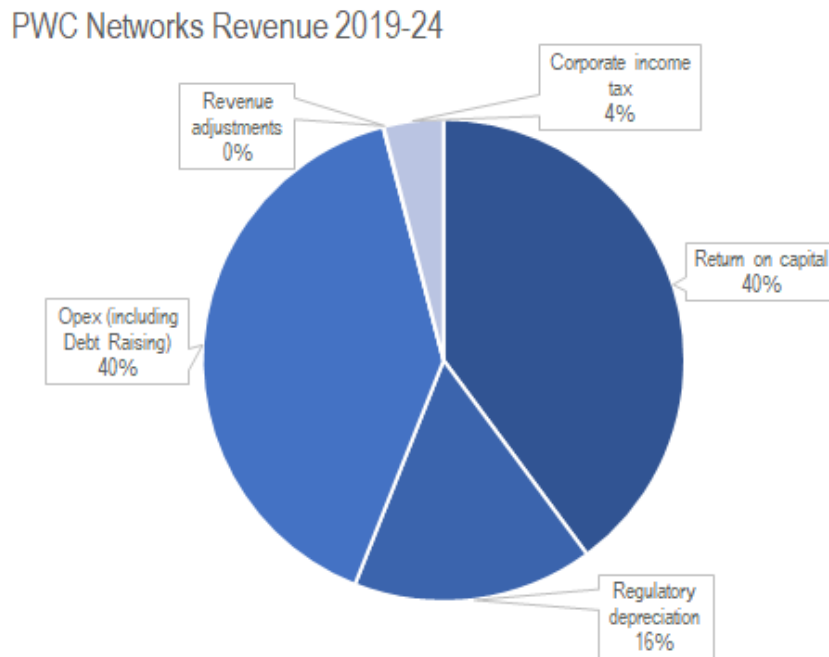


Figure 7: Proportions of revenue building blocks, PWC 2019-24, PWC (Source: Reset RIN)

As can be seen, the Return on Capital and Regulatory depreciation (Return of capital) combine to around 56% of revenue. This revenue is determined by the size of the Regulatory Asset Base (RAB), the prevailing Rate of Return (ROR) and the approach to depreciation. Allowance for Corporate Income Tax is also proposed (4%). This 60% of revenue is largely unable to be directly influenced by consumers as part of the PWC Determination process. ROR and Tax are being dealt with on a NEM wide basis by the AER. The size of the RAB is determined by past expenditure. Hence consumers are most able to influence current and future costs by ensuring only prudent and efficient operating and capital expenditure occurs.

Our approach to assessing the proposal is discussed in the following section. Detailed discussion of key elements and subsequent recommendations follow.

B.2 National Electricity Objective: Framework for Assessing the Proposal

Our approach to considering the long-term interests of consumers is based in the National Electricity Objective (NEO). The NEO is an economic efficiency objective that is often described in terms of three dimensions: productive, allocative and dynamic efficiency. The AER's Issues Paper also discusses the NEO and its interpretation at Appendix A (p38-39):

When the constituent components of our decision are considered together, this means there will almost always be several potential, overall decisions. More than one of these may contribute to the achievement of the NEO. In these cases, our role is to make an overall decision that we are satisfied contributes to the achievement of the NEO to the greatest degree (NEL, s. 16(1)(d))

Our overall assessment is that the proposal from PWC does not demonstrate that it is in the long-term interest of consumers "... to the greatest degree".

In reviewing the regulatory proposal we have asked the following questions:

- Does the proposal promote Productive efficiency?
 - In the absence of competitive market forces, is there evidence of improved productivity? Efficient costs, incentive schemes, risk reflective rate of return are all relevant.
- Does the proposal promote Allocative efficiency?
 - The pursuit of allocative efficiency refers to the alignment of PWC's regulated services with consumer preferences. Consumer engagement, network pricing reform and value of reliability matters are relevant.
- Does the proposal promote Dynamic efficiency?
 - Is the proposal consistent with the likely future transformation of the NT electricity systems?
 - How does the proposal fit with strategic directions set by the NT Government?

Our summary views on the three dimensions of economic efficiency in relation to this regulatory proposal follow:

Productive Efficiency

The pursuit of productive efficiency for an Electricity Network Service Provider is compromised by the absence of competitive market forces. Consumers should welcome PWCs proposed 10% efficiency adjustment but, in our view, PWC has not demonstrated that 2016-17 represents an efficient base year for opex forecasts.

Allocative Efficiency

The pursuit of allocative efficiency refers to the alignment of production with consumer preferences. In the context of regulated energy infrastructure, this refers to issues such as pricing and the provision of regulated "services" only up to the point of consumers' willingness and capacity to pay. In order to form an overall view on allocative efficiency, we have considered:

- Consumer engagement to elicit preferences.
- Pricing reform.
- The use of Value of Customer Reliability (VCR) estimates in expenditure decisions³⁹.

PWC has made reasonable efforts to elicit consumer preferences through its engagement program and is seeking to advance cost reflective pricing as the default tariff assignment for smart meter customers.

Dynamic Efficiency

The pursuit of dynamic efficiency for a regulated energy business relates to how efficiently the business can innovate and navigate the inevitable changes appearing in energy markets. The

³⁹ We note that the AEMC is processing a Rule Change that will allocate responsibility for setting and maintaining VCR values to the AER www.aemc.gov.au/rule-changes/establishing-values-of-customer-reliability

ENA and CSIRO released the Network Transformation Roadmap on 28 April 2017⁴⁰. In our view, this Roadmap represents the state of the art in the pursuit of dynamic efficiency for an electricity network business such as PWC.

Our summary assessment is that, since the risk of under-utilisation of assets is placed entirely on consumers, PWC's proposal could do more to demonstrate improvements in dynamic efficiency.

⁴⁰ www.energynetworks.com.au/electricity-network-transformation-roadmap

B.3 Capital Expenditure

PWC's Proposal

PWC has proposed total (net excluding metering) capex of \$383.0m, which is 26% higher than the forecast expenditure in the 2014-19 regulatory period.

The forecast net capex spend in the current regulatory period of \$302.9m is \$37.8m (14%) above the adjusted Utilities Commission determination of \$265.1m

Table 10-1 – Actual and estimated capex 2014-15 to 2018-19

\$M, Real 2018-19	2014-15	2015-16	2016-17	2017-18	2018-19	Total
	Actual	Actual	Actual	Est	Est	Est
Gross capex						
UC Determination ²⁹	92.22	66.78	55.25	64.18	73.44	351.88
Less UC Determination – metering	-2.23	-2.65	-4.15	-3.83	-1.67	-14.52
Adjusted UC Determination	90.00	64.13	51.10	60.36	71.77	337.36
Actual / Estimates (excl Metering)	93.13	80.36	59.09	51.98	71.80	356.36
Variance (Actual – Determination)	3.13	16.23	7.98	-8.37	0.03	19.00
Net capex (gross capex less capital contributions and asset disposals)						
UC Determination	78.39	52.67	40.82	49.41	58.33	279.62
Less UC Determination – metering	-2.23	-2.65	-4.15	-3.83	-1.67	-14.51
Adjusted UC Determination	76.17	50.03	36.67	45.59	56.66	265.11
Actual / Estimated (excl Metering)	83.11	69.74	48.92	40.91	60.22	302.91
Variance (Actual – Determination)	6.94	19.72	12.25	-4.67	3.56	37.80

After accounting for transfers of corporate assets (\$19.8m), the forecast capex is 7% above the former economics regulator's (the Utilities Commission) allowance.

Forecast capex for 2019-24 (net of customer contributions) is \$383m, or \$80.1m higher than forecast for 2014-19.⁴¹

⁴¹ Proposal p. 66

Table 10-4 – Forecast capex 2019-20 to 2023-24

\$M, Real 2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Replacement	34.92	38.51	33.44	22.01	19.71	148.60
Augmentation	7.39	5.76	15.46	17.59	14.40	60.59
Connections (including gifted assets)	12.65	13.38	13.56	11.49	11.59	62.67
Non-Network ICT	10.76	9.43	7.36	4.89	5.05	37.50
Non-Network Other	27.89	5.57	24.96	5.66	5.35	69.43
Capitalised overheads	13.01	13.19	13.39	13.56	13.71	66.86
Total gross capex (excluding Equity Raising)	106.63	85.84	108.18	75.19	69.80	445.64
Less capital contributions	-12.65	-13.38	-13.56	-11.49	-11.59	-62.67
Less disposals	-	-	-	-	-	-
Total net capex (excluding Equity Raising)	93.98	72.46	94.62	63.70	58.21	382.97
ACS Metering	6.65	3.75	3.80	7.48	3.69	25.37

Forecast expenditures from the Reset RIN shows the following breakdown of proposed capital expenditure.

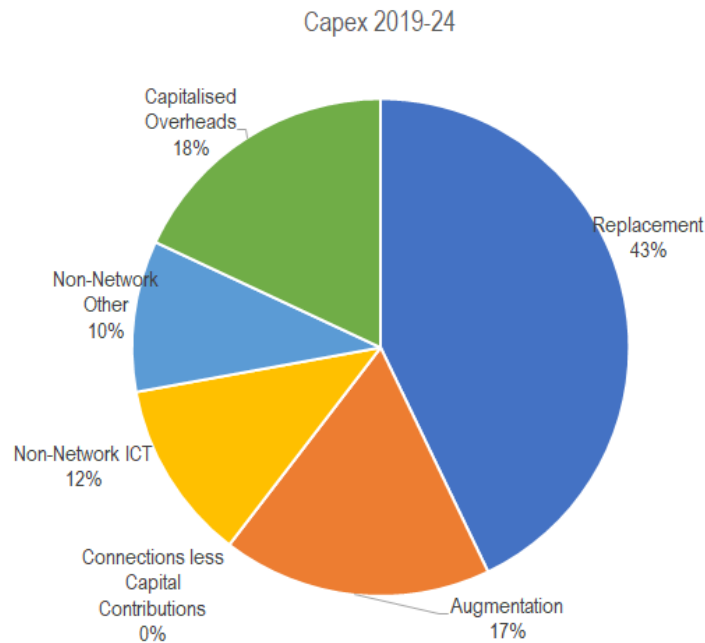
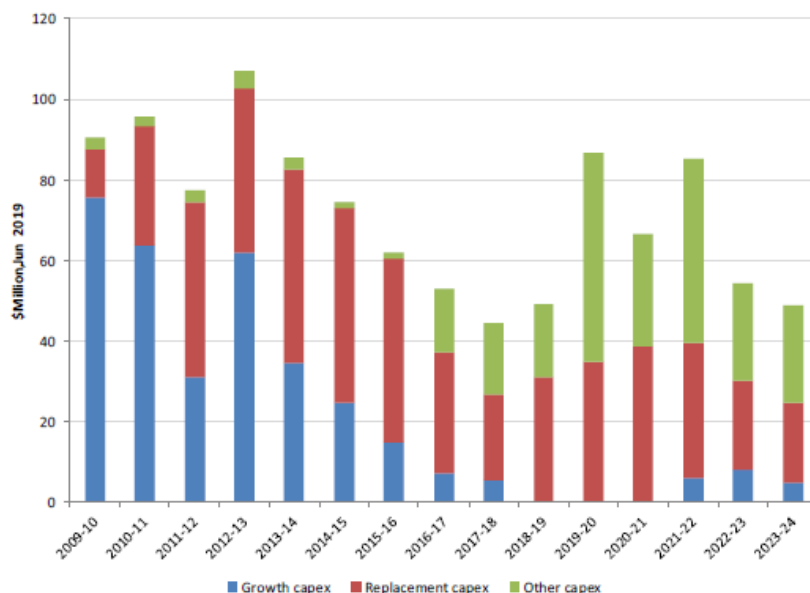


Figure 8: Forecast Capex breakdown 2019-24, PWC (Source: Rest RIN)

The overall increase is primarily driven by changes in PWC's capitalisation policy where what was previously operating expenditure is now classed as capitalised overheads and non-

network capex. Aside from these changes, all “like for like” categories of capex – augmentation, replacement and connections are lower than the current period⁴². The following figure⁴³ shows the cycle of the three main categories of capex since 2009-10 and out to the end of the forecast period in 2023-24.

Figure 10 Changes in capex composition over time



Replacement capex is forecast to be \$148.6m, 18% lower than the forecast of \$175.5m for the current period. The main drivers were renewal of underground cables, transformers, switchgear, poles and SCADA and protection systems. Nuttall Consulting’s review of this expenditure using the AER’s repex model supported \$100.5m (68%) of the proposed spend.

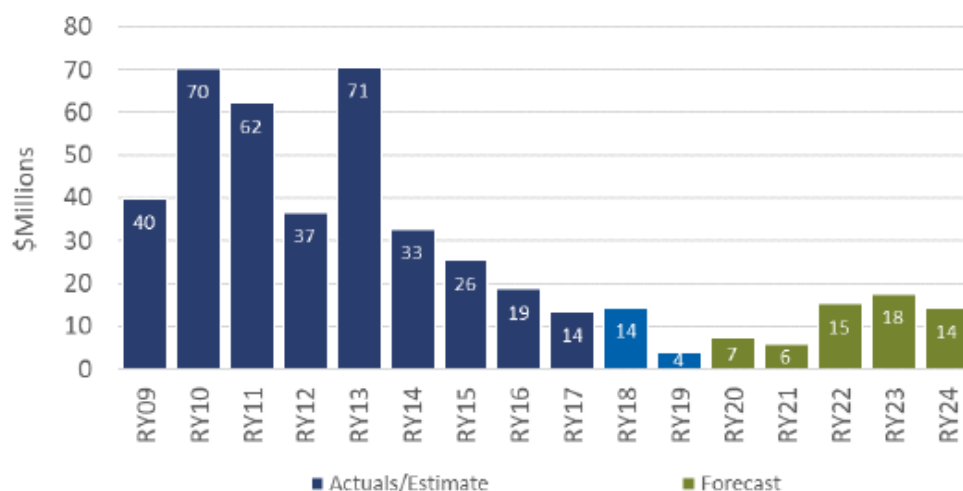
Forecast augmentation capex is \$60.6m, a reduction of 21% from the current period, reflecting the overall subdued demand growth forecast, but with some localised demand growth areas in the Darwin region, including the new zone substation at Wishart.⁴⁴

⁴² AER Issues Paper March 2018 p.23

⁴³ Op cit p.24

⁴⁴ Proposal p. 70

Figure 10.3 – Historical and forecast Augex 2008-09 to 2023-24 (\$M, Real 2018-19)



CCP response

Augmentation

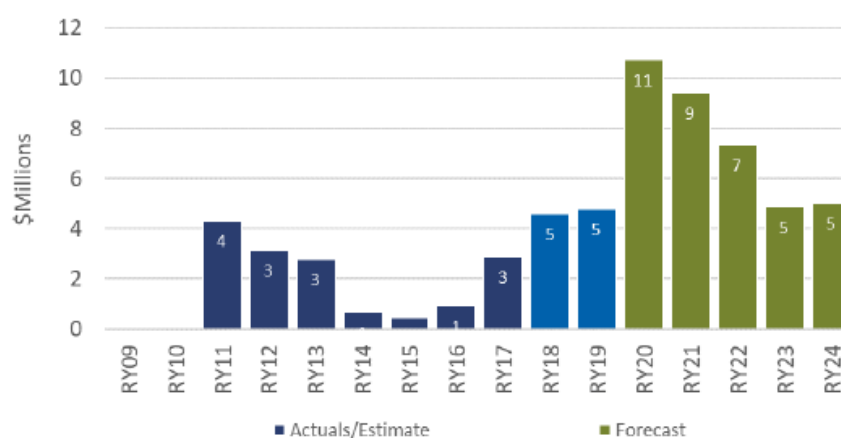
As noted above, we have concerns around the AEMO demand forecasts which may influence the augmentation capital, including connections.

We welcome the change in PWC connections policy that will now require full cost recovery of connection costs from new customers. This will avoid unnecessary increases in the RAB and inefficient cross-subsidies from all customers to new connections.

Other capex

Aside from the influence of changes in capitalisation policy, there is a significant increase in Information and Communication Technology (ICT) capex over historical level of expenditure.⁴⁵

Figure 10.5 – Historical and forecast ICT capex 2008-09 to 2023-24 (\$M, Real 2018-19)³³



⁴⁵ Proposal p. 73

While PWC's proposal outlines a number of reasons for the proposed expenditure it gives little information on the quantified benefits. For example:

- it refers to justifications in terms of “in line with the industry standards” and “prudent industry ICT asset management practices” without much explanation of what they mean
- the new Customer Management system is in response to “customer and stakeholder feedback”, but PWC does not detail the engagement and feedback which justifies this statement.

There is no doubt that consumers in various forums will have expressed the desire for improved customer service but the CCP is not aware of any detailed consideration with customers of ICT investment, its costs and how it would benefit customers. We do not see statements like “*installation of this new IT system will assist PWC in reducing xx costs over the next 5 years in these ways...*”

We look forward to the AER's analysis of the proposed expenditure.

Repex

Repex is the largest expenditure category. We note the results of the Nuttall modelling and look forward to the detailed AER Repex modelling, together with any consultants' review of individual projects. We also believe that demand forecasts can also influence repex capital. It may mean there is no “like for like” replacement. A smaller capacity replacement, or a non-network solution may be acceptable.

Capitalisation policy

There are two aspects – the change in policy that brings previous opex into capex, and the level of capitalisation of overheads.

On the former, PWC explains its change in policy by reference to Australian accounting Standards.⁴⁶ This is separate from regulatory accounts for the purpose of the reset process. It seems to CCP13 that the change for the purpose of the regulatory accounts is a PWC choice. If so, what has not been provided by PWC is a business case for the change. Why is it better for the long-term interests of consumers that large amount of current opex costs is capitalised into the RAB?

On the latter, PWC says⁴⁷

“We capitalise the same corporate and network overheads accounts for regulatory purposes, but do so in proportion to the ratio of direct capex to total direct costs. If the ratio changes, the fraction of unallocated costs capitalised also changes...”

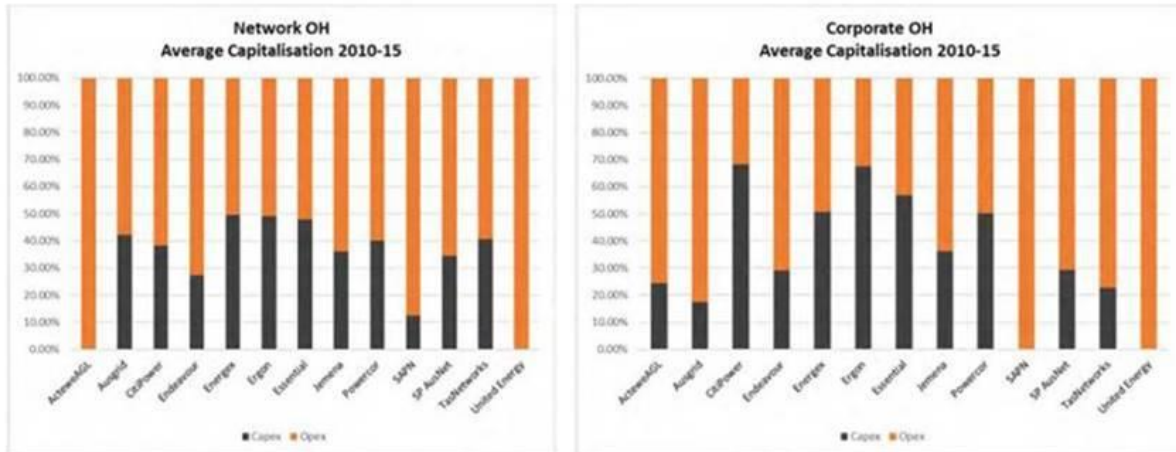
We understand that there is a wide range of capitalisation approaches and outcomes across DNSPs in the NEM, with the amount of overheads capitalised ranging from 20 per cent to 50 per cent of overheads. Our proposed capitalization approach results in a forecast that falls within this range.

⁴⁶ eg Proposal p. 75

⁴⁷ Proposal pp 75-76

Our regulatory capitalisation approach, and opex forecasts in the next chapter, will ensure that only efficient overhead costs are recovered through either capitalised overheads or our base year opex, so that there are no gaps or over-recoveries.”

There is a significant level of variation across networks on the level of capitalisation of overheads⁴⁸.



While the level of capitalisation is currently a matter at the networks discretion, CCP13 believe that consumers need a more comprehensive and transparent understanding of these different approaches to ensure they meet the NEO. There are advantages and disadvantages of putting overheads in expenditure in opex or capex. We suggest that the AER consider undertaking a more comprehensive review of overhead capitalisation approaches to see whether there should be a guideline developed.

Capital Expenditure Sharing Scheme (CESS)

We support the application of the CESS to PWC.

Implications for RAB and future prices

Significant capital expenditure programs will increase the real size of the Regulatory Asset Base of the network as shown in Figure 9, below.

⁴⁸ Data presented by SAPN at customer engagement session Adelaide May 2018

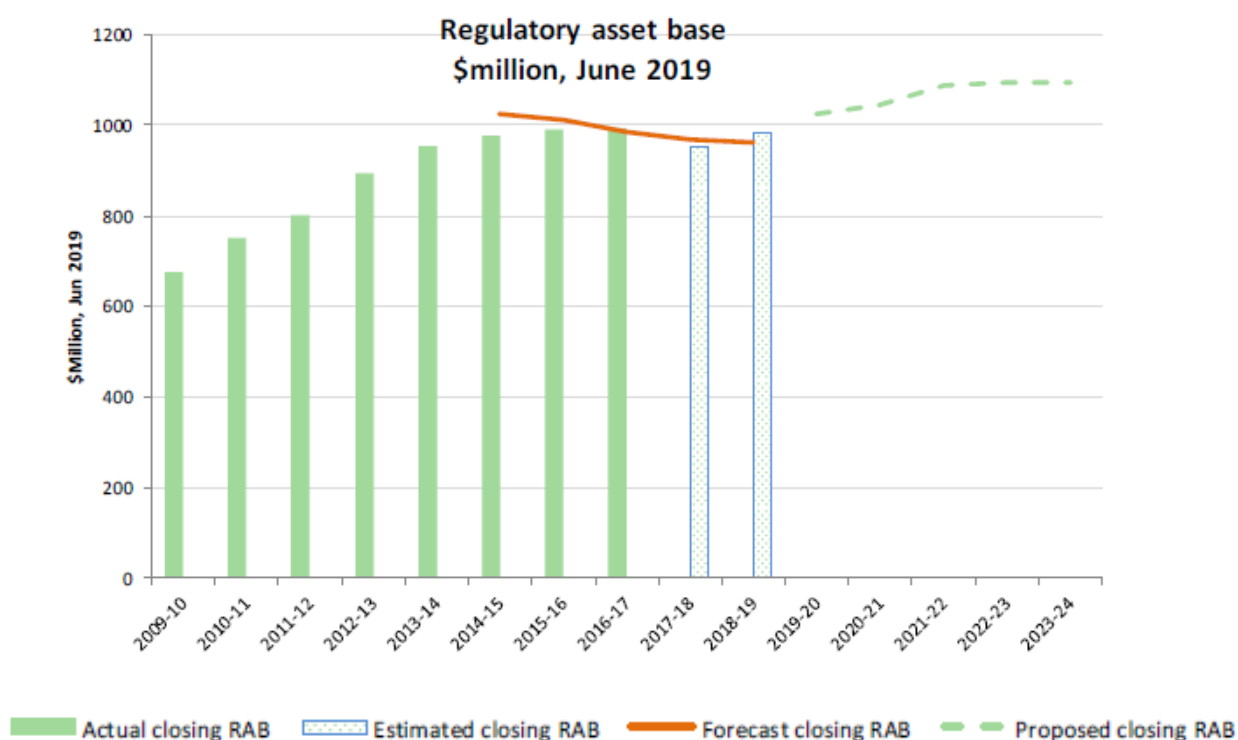


Figure 9: Projected RAB Growth, PWC (Source: AER Issues Paper Fig 7)

Overall, the proposal includes significant expenditure during a low interest rate environment that has the potential to trigger significant price rises in future years when interest rates inevitably return to a higher point in the cycle. In our view, the long-term interests of consumers is better served by lower RAB values over time – not growing as proposed by PWC.

Recommendation(s)

- b) That the AER pay particular attention to non-network ICT expenditure.
- c) That the AER pay particular attention to repex expenditure.
- d) That the AER pay particular attention to PWC's choices in relation to their Capitalisation Policy. Consumers deserve to understand how the approach promotes their interests in the long-term.
- e) That the AER consider the prudence of expenditure that sees continual growth in the RAB.

B.4 Operating Expenditure

PWC's Proposal

PWC's forecast opex is one of the key drivers of the decrease in revenue it proposes for the 2019–24 regulatory control period. It proposes total opex of \$339.3 million (\$2018–19). This is a \$58.0 million or 14.6 per cent decrease from its expected actual expenditure in the current period (Issues Paper p27).

The reductions come from the transfer of what was previously opex into capex (in accordance with a revised capitalisation policy) as well as planned efficiencies.

PWC has adopted the AER's base-step-trend approach and has proposed 2016-17 as the base year. Voluntarily, PWC has also applied a 'top down efficiency adjustment' of 10% (averaging \$7m pa). Consistent with the AER's usual approach, forecasts assume zero productivity growth. Step changes proposed include the impacts of the capitalisation policy (-\$5.5m), and five changes related to new regulatory obligations (approx. +\$1.5m pa).

Proposed expenditure has been categorised by PWC as shown in Figure 10 below:

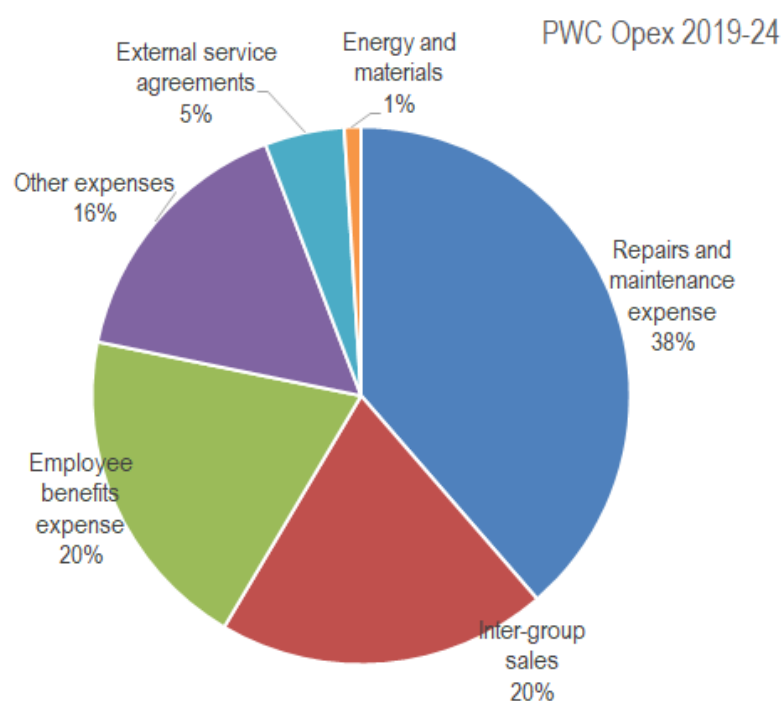


Figure 10: Forecast Opex breakdown 2019-24, PWC (Source: Rest RIN)

CCP response

Issues of opex and efficiency have been a regular feature of PWCs regulatory process to date. We understand there has been challenges in assembling and presenting information and it is not clear whether any meaningful benchmark comparisons are possible. The efficiency adjustment of 10% is material and should be welcomed by consumers. However, given the lack of data and narrative around the reasons, we are unable to come to a view on what an efficient level of opex should be.

PWC has proposed an Efficiency Sharing Benefits Scheme (EBSS) will apply. We are generally supportive of the EBSS but are cautious that a scheme be implemented in a way that genuinely incentivises productivity improvements and doesn't simply reward 'over promising and under delivering'. We do not support PWC sharing 30% of the benefits of getting to an efficient level of opex.

Given the uncertainty around an efficient base opex, our view is that the AER needs to arrive at a combination of opex and EBSS that provides strong incentives to reveal efficient costs and to incentivise continuous improvement. We also recognise that this may take some time to arrive at levels of efficiency that consumers expect from PWC.

Recommendations

- f) *That the AER satisfies itself that the proposed level of opex is efficient (or at least "not materially inefficient" and if so then we support the application of EBSS. to build strong incentives to reveal efficient costs over the regulatory period.*
- g) *That the AER and PWC ensure that data collection and reporting improves over the period so that the related issues do not re-occur in the next reset. Meaningful benchmarking is clearly in the long-term interest of NT electricity consumers.*
- h) *That the AER reconsider the zero-productivity assumption*

B.5 Rate of Return

PWC's Proposal

PWC has adopted some, but not all of the elements of the 2013 AER ROR Guideline. It proposes a rate of return of 6.62% in its calculations over the 5 years in its proposal. This would be updated at various stages along the process until the final AER decision. It proposes a value of 0.4 for gamma, which is consistent with the Guideline and recent Federal Court decisions.

The major variation to the Guidelines is that PWC propose to adopt the trailing average approach immediately rather than after a 10 year transition.⁴⁹ It argues that:⁵⁰

"...in combination, the Utilities Commission decision for the 2009-14 period and the Ministerial Direction for the 2014-19 period give us an effective trailing average return on debt allowance over the 2009-19 period."

The Ministerial Direction involved directing PWC to use the actual NT Government debt costs (4.21% or ~10bpts above the risk-free rate) in the ROR calculation, rather than the rate (6.59%) as determined by the Utilities Commission. The Government as the sole shareholder of PWC was prepared to accept a lower return to reduce consumer electricity bills.

⁴⁹ Proposal p.113

⁵⁰ Return on Debt Transition Attachment 01.10 p.4

CCP Comments

The AER is currently undertaking a review of the 2013 ROR Guideline.⁵¹ COAG Energy Council has announced its intention of making the new Guideline, to be published by December 2018, binding and draft legislation has been out for public comment.⁵² If this new legislation is passed in the current timetable, then the new binding guideline will apply to PWC 2019-24 reset. For this reason, we do not intend to comment on the detail on the PWC ROR proposal.

The AER Issues Paper on this proposal comments that:⁵³

“...we plan to consider all relevant rate of return and gamma materials submitted to us in this and other concurrent determination processes as also being relevant material for our guideline review...”

and the AER will publish the relevant PWC material on the Guideline review website.

For these reasons, we do not intend to comment on the detail of the PWC ROR proposal.

Recommendation(s)

- i) *Given that PWC is expected to be bound by the Rate of Return Guideline that is currently being developed and that this Guideline will be binding if the proposed COAG Energy Council proposal proceeds, then we do not intend to comment on the PWC Rate of Return proposal.*

B.6 Distribution Pricing

PWC's Proposal

PWC proposal includes its first Tariff Structure Statement and it is proposed to:

- Introduce demand tariffs for all customers who have a smart meter (including those consuming <750MWh and in receipt of regulated retail pricing)
- Change the legacy tariff design from a declining block to a flat rate structure
- Shorten the peak charging window from 6AM-6PM every day to 12PM-9PM weekdays only

The Issues Paper notes (p35) that as the Pricing Order sets the level and structure of tariffs faced by all customer using <750MWh per annum, the changes are likely to have the most material impact on the 200 or so large customers consuming more than the threshold. We are aware that PWC has consulted directly with many of the customer affected.

PWC proposes a simple tariff menu:

⁵¹ See <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/review-of-rate-of-return-guideline>

⁵² See <http://www.coagenergycouncil.gov.au/publications/national-electricity-law-and-national-gas-law-amendment-package-%E2%80%93-creating-binding-rate>

⁵³ Issues Paper p.25

Tariff class	Description of tariffs
LV <750 MWh	1 Residential customers consuming <750MWh pa with standard accumulation meters
	2 Non-residential customers consuming <750 MWh pa with standard accumulation meters
	3 Customers consuming <750 MWh pa with smart meters
	4 Unmetered: <ul style="list-style-type: none"> a. Street lighting and similar unmetered 12 hour supplies. b. Traffic lights and similar unmetered 24 hour supplies.
LV >750 MWh	5 Customers consuming >750MWh pa connected to the LV network
HV	6 Customers connected to the HV network

Figure 11: Proposed Tariff classes, PWC (Source: PWC TSS Table 2)

CCP Comments

Unlike other DNSPs in the NEM, PWC retains responsibility for Type 1- 6 metering. The TSS therefore needs to align closely with proposals for metering. PWC has been deploying smart meters to all customers consuming >40MWh per annum in the current regulatory period. PWC proposes to expand this to all new and replacement customer meters installed from July 2019 (p10). CCP13 is not convinced that the business case to extend this functionality to all new and replacement metering installations has been made. We discuss this further in Section B9.

The single cost reflective tariff option offered to small customers is the 'LV smart meter tariff'. There is no differentiation within this category in relation to the customer's end use (TSS, p18). The principal criteria are consumption of <750MWh and being supplied via a smart meter. Since PWC is proposing smart meters for all new and replacement meter installations, it follows that these customers will be assigned to the 'LV smart meter tariff'. However, under the Pricing Order, the customer will continue to be charged according to the regulated rates. The price signal will however be sent to incumbent retailer Jacana. The 'LV smart meter tariff' is proposed to be seasonal, applying from October to March.

We note that PWC did consult on a number of demand tariff options in 2017 and that Jacana provided the only written submission – supporting the approach (TSS, p23).

PWC has develop new estimates of Long Run Marginal Cost (LRMC) for this TSS. The TSS note s that the new figures are "... *significantly higher than our prior ones and those of our peers*" (TSS, p 28). Given the importance of LRMC in the derivation of demand charges, CCP13 looks forward to the AER's assessment of LRMC calculations for PWC and the other DNSPs.

In relation to 'rebalancing' (the unwinding of cross subsidies), the TSS seeks to make some progress on reducing the proportion of revenue derived from residential customers (TSS, p30). However, a review of revenue recovery by customer type in the Reset RIN workbook shows that 'DREV0201 Revenue from residential Customers' remains as 49.0% of 'DREV02 Total SCS Revenue' across the 5-year regulatory period. We encourage the AER to assess the tariff rebalancing as a key part of assessing the TSS overall.

The TSS outlines an understanding of future challenges (p36) but does not propose any tariff trials. In our view, there is too much useful information to be gathered and future initiatives to be better informed to not propose any tariff trials. Of particular value to NT consumers would be a tariff trial conducted in conjunction with Jacana.

We also note that the Reset RIN reports a forecast declining overall utilisation of network capacity (Quality of service tab). In our view, a principal purpose of tariff reform is to ensure well utilized assets. Tariff strategies should be aligned with utilisation and the slow decline should raise questions as to whether tariff reform should be accelerated as a response.

3.6.4 - CAPACITY UTILISATION								
DQS04		Units	Forecast					
			2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
	Overall utilisation	%	45%	47%	45%	44%	43%	42%

The PWC network reports relatively high utilisation compared to, for example, Ergon Energy who report an overall utilisation for 2016-17 of 39% or TasNetworks Distribution who report 35% for 2017-18. However, a decline is evident and should be a key consideration.

Recommendation(s)

- j) *The AER consider the smart meter tariff assignment in conjunction with the proposal for a roll out of smart meters to all new and replacement installations. The business case for the metering roll out has not been made and this has implications for consideration of the tariff.*
- k) *The AER review the proposed LRMC results in detail.*
- l) *The TSS should provide greater clarity on cross-subsidies and the pace of reform.*
- m) *The AER set clear expectations regarding engagement with dominant retailer Jacana and consumers on the tariff reform program.*
- n) *PWC consider using tariff trials to improve understanding of consumer responses to price signals. Preference should be given to collaborative trials with small customer retailer Jacana.*

B.7 Demand Forecasts

PWC's Proposal

PWC commissioned The Australian Energy Market Operator (AEMO) to carry out the forecasting of demand in the three network regions:

- Darwin-Katherine network
- Alice Springs network
- Tennant Creek network

AEMO prepared forecasts for the 2017/18-2026/27 based on information provided by PWC up to 18th August 2017. AEMO indicates that the main drivers that lead to large changes in electricity consumption are:

- Residential connection growth;
- Gross State Product (GSP) growth and large load variations; and,
- Solar photovoltaic (PV) installations/Battery Energy Storage System (BESS).⁵⁴

System-wide the forecasts demonstrate a moderate decline in both maximum energy demand and energy consumption as shown in the following graph.

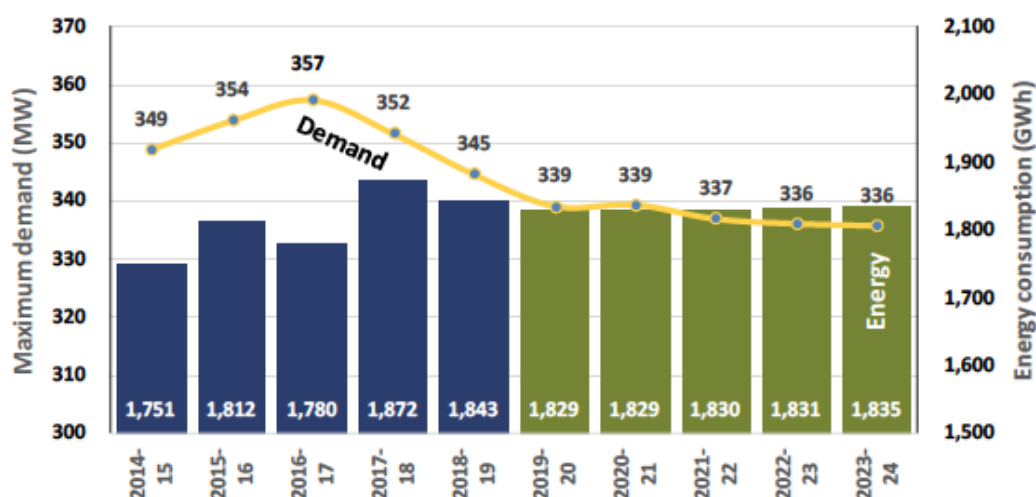


Figure 12: System-wide maximum demand and energy consumption forecasts 2014-15 to 2023-24⁵⁵

In the biggest network region, Darwin-Katherine, AEMO forecasts:

- that maximum operational demand will decline through to 2020 due to a reduction in economic activity (as the construction phase of a major gas development project is completed from late 2018) and will continue to decline marginally due to the increased penetration of rooftop PV;
- annual consumption will decline in 2019–20 due to a reduction in industrial load (due to the reduction in economic activity following the completion of the construction phase

⁵⁴ Power and Water Corporation Maximum Demand, Energy Consumption and Connection Forecasts – 2017 Implementation of Forecasting Procedure September 2017 (Attachment 4.4P), p.11

⁵⁵ PowerWater Regulatory Proposal 1 July 2019 to 30 June 2024 16 March 2018 p.56

of a major gas development project) but will then increase due to forecast population growth; and,

- customer connections will show good alignment with historical trends.⁵⁶

For Alice Springs AEMO forecasts that negative population growth and increased penetration of rooftop PV will result in:

- progressively declining maximum operational demand;
- declining zone substation growth rates;
- declining annual consumption; and,
- that customer connections will show good alignment with historical trends.⁵⁷

For the relatively small Tenant Creek network, some small demand growth is attributed to the Northern Gas Pipeline commissioned in 2018 with demand then relatively steady over the period⁵⁸.

The system-wide customer connection forecast shows a steady increase in new connections, in line with historic trends, as shown in the following graph.

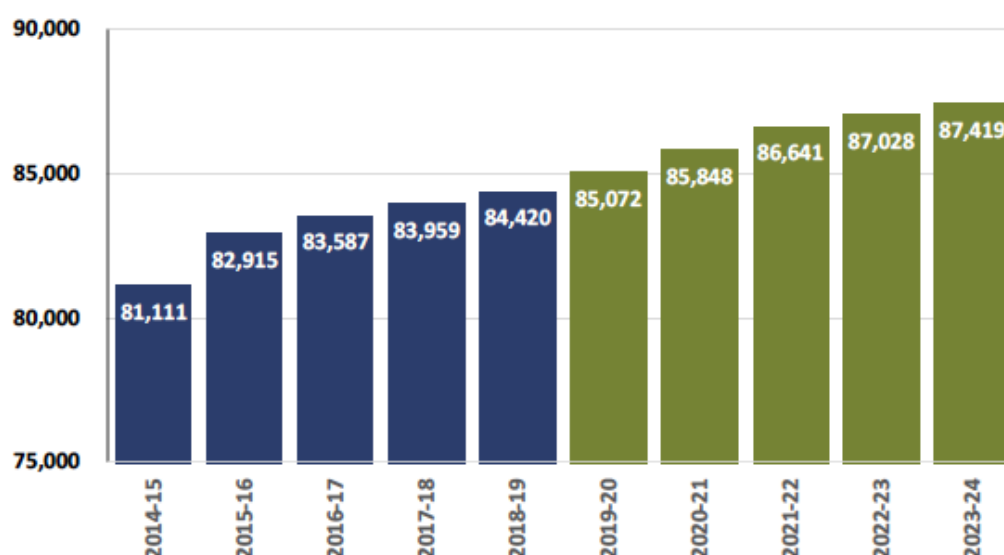


Figure 13: Customer connections forecast, 2014-15 to 2023-24 ⁵⁹

CCP Comments

We comment on assumptions around population and behind the meter renewables given the NT Government's commitment to 50% renewables by 2030. We note that the information we use includes information available after the close-off date of 18th August 2017 for input into the AEMO forecasts discussed above.

In summary we would encourage PWC to engage AEMO to prepare an updated demand forecast prior to submitting its final proposal to the AER.

⁵⁶ Ibid. p.59

⁵⁷ Ibid. p.60

⁵⁸ Ibid. p.60

⁵⁹ PowerWater Regulatory Proposal 1 July 2019 to 30 June 2024 16 March 2018 p.57

(i) The apparent inconsistency between level of economic activity and customer connections

For the Darwin-Katherine network it seems inconsistent to forecast a decline in economic activity and an increase in customer connections in line with the historic trend.

For the Alice Springs network it seems inconsistent to forecast a reduction in population and a slight increase in customer connections over the 5-year reset period.

(ii) Are the population forecasts too optimistic?

AEMO uses the following forecasts of population increase and GSP which are sourced from NT 2017-18 Budget papers:

- Darwin-Katherine network – 2% per annum
- Alice Springs network – 0.1% per annum
- Tennant Creek network – 0.9% per annum⁶⁰

To estimate new connections PWC undertook:

To forecast the number of residential connections PWC have sought independent population, dwellings and housing construction forecasts for generating expected trends over the next ten years. The 2012 Australian Bureau of Statistics (ABS) NT population forecasts have been considered along with the NT Treasury population forecasts (2014) that contain sub-Territory level projections. To provide more granularity on household formation – an important factor when estimating household size and density – housing construction forecasts compiled by the Housing Industry Association (HIA) in 2017 will be used to produce a dwelling forecast at the territory (NT) level. The HIA uses population projections from the ABS economic trends, recent data of building stocks, and surveys to key participants in the construction sector as inputs

...

*New dwellings are forecast using the HIA dwelling forecasts modified so the long-term growth rate converges smoothly with the rate of the long-term ABS population projections. The recently released 2016 ABS Census results **will be used** to guide the population forecasts to ensure they reflect the most up-to-date view of the NT population trends.⁶¹ [Emphasis added]*

It is not clear from the comment above that “2016 ABS Census results will be used to guide the population forecasts” whether it was used or will be used in a future update.

The Territory Government’s Treasury Mid-Year Report indicates that its population forecasts have been reduced since the NT 2017-18 Budget papers (which were relied upon for the AEMO demand forecasts):

⁶⁰ Power and Water Corporation Maximum Demand, Energy Consumption and Connection Forecasts – 2017 Implementation of Forecasting Procedure September 2017 (Attachment 4.4P), p.26

⁶¹ PowerWater Maximum Demand And Customer Connections Forecasting Procedure July 2017 (Attachment 4.5), p.10

The persistence of high levels of net interstate migration outflows, together with uncertainty in the timing of the transition of the Ichthys LNG project from the construction to the operational phase, have necessitated some revisions to the population estimate and forecasts published in the 2017-18 Budget Papers. Population growth is now expected to be flat in 2017 and then decrease by 0.7 per cent in 2018 as a significant portion of resident construction workers employed at the Ichthys LNG project depart the Territory. Population growth is forecast to recover to 1.0 per cent by 2020, achieving the long-term average of 1.4 per cent beyond the forward estimates period. The return to trend is largely attributable to natural increase with a modest contribution from migration as long-run economic patterns progressively re-assert themselves.⁶²

(iii) Have improvements in energy efficiency/energy productivity been considered?

One of the major uses of electricity in the Territory is for air conditioning. Discussions with two major users in the Darwin area pointed to their significant investment in improved chiller technology over 2017-19 that in one case had already reduced their consumption by 30% in 2018 in one of their major sites. It is not clear how energy efficiency/energy productivity, and particularly this type of step change, has been considered in the AEMO modelling.

(vi) Is the growth rate on behind the meter renewables too pessimistic?

The Northern Territory has a relatively low penetration of solar PV compared to other States and Territories.

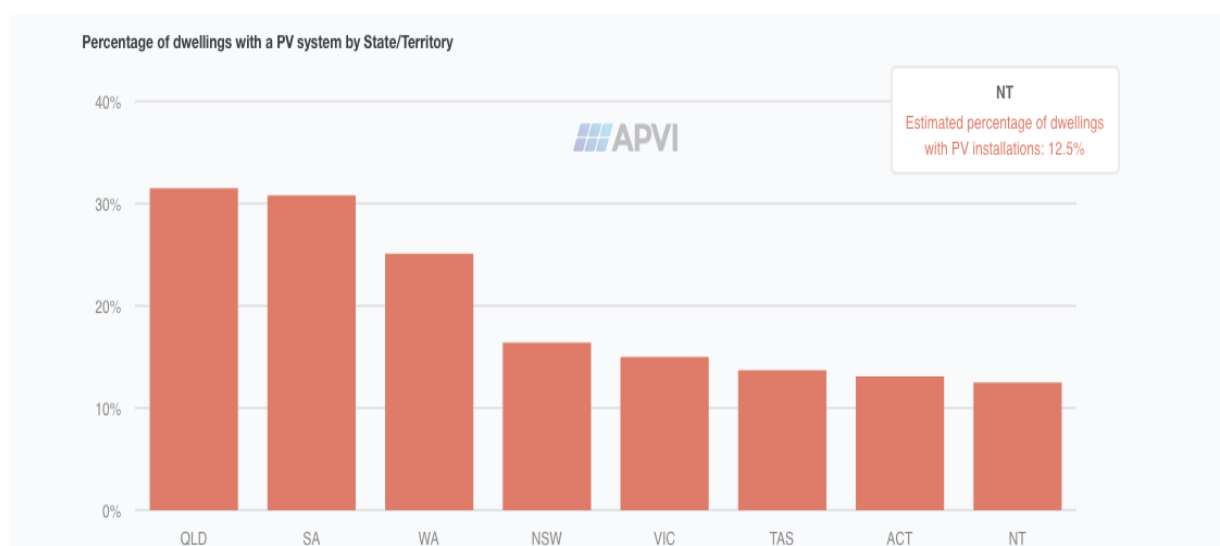


Figure 14: Percentage of dwelling with a PV system by Jurisdiction⁶³

In AEMO's demand forecasts PV installations are projected by 2026-27 to reach:

- Darwin-Katherine network – 15% of households;

⁶² Northern Territory Department of Treasury and Finance, 2017-18 Mid-Year Report (https://treasury.nt.gov.au/data/assets/pdf_file/0006/488013/R-MYR-1718.pdf), p.5

⁶³ The Australian PV Institute - <http://pv-map.apvi.org.au/historical#4/-26.67/134.12>

- Alice Springs network – 20% of households⁶⁴.

In light of where the NT sits now with PV penetration and compared to other States and Territories the growth projection may be a little modest. It would be useful to have more detail on why the forecast penetration rates were adopted and why they are considered reasonable.

PWC, in its rationale for excluding manual meters from its planning, notes the NT Government's Roadmap to Renewables commitment:

The NT Government has committed to a fifty per cent renewable energy target by 2030 and supported or supported in-principle the recommendations of the Roadmap to Renewables Report. Government noted, and is undertaking further work to assess, the recommended core and supporting enabling actions, including:

- *metering requirements to enable more appropriate tariff structures, flexible customer services and imported data for network management; and*
- *future system planning to support renewables,*
*but it is clear to us that to facilitate such a significant renewable penetration, smart grids and smart meters will be necessary.*⁶⁵

In the Roadmap to Renewables report presented to the Government in September 2017, the Committee appointed by the Government made a number of recommendations for Government action to facilitate the transition to 50% by 2030.⁶⁶

While the AEMO report outlined its assumptions on residential PV penetration, it did not outline its assumptions on the level of penetration by commercial & industrial customers. The forecasting methodology for large loads was described as:

AEMO used GSP forecasts in conjunction with a registry of expected large loads to derive the consumption forecast for non-residential customer sectors.

*Economic activity and electrical consumption were correlated by examining the historical relationship of GSP with non-residential consumption, providing a baseline relationship for the growth forecast in Darwin-Katherine. Historical GSP and future estimates were used to calculate Darwin-Katherine growth forecasts.*⁶⁷

The future grid demand for these large load customers is the area of perhaps greatest impact on grid demand levels. A key major consumer is the Department of Defence. In November 2017 the Department issued a tender for a total of 12.5MW on site solar generation at its bases near Darwin - 9.2MW for the Robertson Barracks and 3.2MW for the RAAF base.⁶⁸

⁶⁴ Power and Water Corporation Maximum Demand, Energy Consumption and Connection Forecasts – 2017 Implementation of Forecasting Procedure September 2017 (Attachment 4.4P), p.26

⁶⁵ PowerWater Alternative Control Services Metering Overview Document 2019-20 to 2023-24 16 March 2018 p.9

⁶⁶ Northern Territory Roadmap to Renewables Fifty percent by 2030 <https://roadmaprenewables.nt.gov.au/?a=460760>

⁶⁷ Power and Water Corporation Maximum Demand, Energy Consumption and Connection Forecasts – 2017 Implementation of Forecasting Procedure September 2017 (Attachment 4.4P), p.28

⁶⁸ Giles Parkinson "Defence seeks 12.5MW solar for Darwin barracks, RAAF base" Reneweconomy 7 November 2017 <https://reneweconomy.com.au/defence-seeks-12-5mw-solar-for-darwin-barracks-raaf-base-58682/>; Sophie Vorrath "Australian Air Force taps solar, battery storage for NT facility" 7 July 2017 <https://onestepoffthegrid.com.au/australian-air-force-taps-solar-battery-storage-nt-facility>

Consumer perspectives

Demand forecasts are a key determinant in the NSP's planning and have a large impact on the capital expenditure. The level of new connections and the growth in PV installations in the Territory will materially impact PWC's planning. Planning based on excessive demands forecasts may result in capital investment above the level of an efficient network. As noted in our discussion on Capital Expenditure, it is difficult to reconcile the nearly \$61m of augmentation capital expenditure given our comments on the demand forecasts.

As this capital expenditure is added to the RAB consumers may end up paying, over many years to come, for investment that is not required. The NSP's prices for the regulatory period are set to provide it with the allowed revenue in that period and demand forecasts are a key element of this price setting. Therefore, it is in the long-term interests of consumers that NSPs use the best possible demand forecasts in their planning and price setting.

PWC has not addressed demand forecasts in its consumer engagement, which is not surprising as by its nature demand forecasting is a complex matter and not readily capable of meaningful input through a consumer engagement process. There is evidence from its consumer engagement that consumers would like to see more support for PV installation⁶⁹ which indicates some community enthusiasm for residential solar installations which bears on the forecasting of PV installations.

CCP position

CCP13 considers that the demand forecasts may overstate future demand over the reset period for the reasons outlined above.

Recommendations:

- o) That the AER examine the AEMO demand forecasts for PWC's network with particular attention to the forecasts of connection growth and PV installation in the Territory.*
- p) That PWC consider commissioning an updated demand forecast from AEMO that takes account of more recent input information and explicitly takes account of the Government's commitment to 50% renewables by 2030.*

B.8 Pass through events

PWC's Proposal

PWC proposes the following pass through events, in addition to those provided for in the NER:

- insurance cap event;
- insurer's credit risk event;
- terrorism event;
- natural disaster event; and,

⁶⁹ PowerWater Engagement Overview 31 January 2018, p.11

- NT transitional regulatory change event from 1 July 2019.

PWC notes that the pass through events it proposes are largely pass through events and definitions previously accepted by the AER for other NSPs⁷⁰. The one that is different from other NSPs is the proposed 'NT transitional regulatory change event from 1 July 2019'.

This regulatory proposal is the first occasion on which PWC has undertaken a revenue reset under the National Electricity Rules (NER). This has provided PWC with a number of challenges including:

- Coming to terms with the requirements of a new regulatory environment;
- Adapting historical records in order to provide the data required in this new environment;
- Training staff and resourcing for the project.

To help provide an orderly transition to the NER in the Territory and assist PWC manage the change, specific Rules were created to apply in the NT with a range of transitional provisions and allowance for some Rules to be introduced over time. PWC has had to adopt a set of the Rules as the basis of its reset proposal:

Key uncertainties associated with the NT Law include the scope and content of any further transitional arrangements, and the timing (and possibly extent) of the application of the National Electricity Retail Law (the NERL) in the NT.

As at 1 July 2017, under the National Electricity (Northern Territory) (National Uniform Legislation) (Modification) Regulations 2016 (the NT Modification Regulations), the NT had also adopted (or adopted a modified version of) various provisions of the NER. Some provisions were adopted with effect from 1 July 2019, and some with effect from a future date when the NT adopts the NERL as a law of the NT.

The NER as in force in the NT on 1 July 2017 was published by the AEMC as Version 19. These are referred to as the NT NER and have been the basis on which this regulatory proposal has been developed, herein referred to as the "regulatory baseline".⁷¹

PWC notes that it may update its reset proposal for Rules that become applicable and costed during the current determination process but otherwise it may seek the pass through of increases in costs caused by future application of Rules not accounted for in its proposal⁷².

A specific provision of the NT NER, the "NT transitional regulatory change event", allows PWC to pass through additional costs arising from changes in its regulatory obligations or requirements between 1 July 2017 and 30 June 2019⁷³.

⁷⁰ PowerWater Regulatory Proposal 1 July 2019 to 30 June 2024 16 March 2018 p.120

⁷¹ Ibid. pp.27-28

⁷² Ibid. p.30

⁷³ Ibid. p.120

PWC expects that some of the regulatory change events may occur after 30 June 2019 and that the standard “regulatory change event” provided in the NER would not address these adequately because:

It would be inefficient to deal with them individually, given the anticipated number, magnitude and frequency of changes. Moreover, individual changes considered in isolation may not meet the materiality threshold for regulatory change events.⁷⁴

Therefore, PWC proposes the following specific new pass through event:

NT transitional regulatory change event from 1 July 2019 means the sum of the changes in relevant obligations that are associated with the transition from Northern Territory to national electricity regulation, and that occur between 1 July 2019 and 30 June 2024 if those changes, taken as a sum:

- a) *substantially affect the manner in which Power and Water Corporation provides direct control services; and*
- b) *result in a material increase or material decrease in the costs of providing those services, that is incurred, or likely to be incurred, in any regulatory year of the 1st regulatory control period exceeds 1% of the annual revenue requirement for that regulatory year.*

For the purpose of this definition, relevant obligation means a regulatory obligation or requirement, other than an obligation or requirement:

- c) *arising from any repeal, amendment, variation or modification to the National Electricity Law, National Electricity Regulations or National Electricity Rules except as made by or under the National Electricity (Northern Territory) (National Uniform) Legislation Act; or*
- d) *that the AER has considered or accounted for in a distribution determination for the 1st regulatory control period.⁷⁵[Emphasis added]*

The thrust of this proposed pass through appears to be to avoid the materiality threshold that would apply if the same changes were put through the regulatory change event by providing here for the change events to be summed when applying the materiality test.

Consumer perspectives

The NER provides a uniform regime for the pass through to customers of the costs of regulatory changes. This mechanism includes a materiality threshold:

Materially - For the purposes of the application of clause 6.6.1, an event results in a *Distribution Network Service Provider* incurring materially higher or materially lower costs if the change in costs (as opposed to the revenue impact) that the *Distribution Network Service Provider* has incurred and is likely to incur in any *regulatory year* of a *regulatory control period*, as a result of that event, **exceeds 1% of the annual revenue**

⁷⁴ Ibid. p.124

⁷⁵ Ibid. pp.124-125

requirement for the Distribution Network Service Provider for that regulatory year. ⁷⁶[Emphasis added]

Any effective reduction this materiality threshold will allow an NSP to pass through to consumers costs that they would otherwise not bear in the regulatory period. PWC's proposed pass through event, by allowing aggregation of a series of regulatory change events to meet the materiality threshold, bypasses the principle of the materiality threshold. For such a change to be in the interests of consumers the NSP would need to present extenuating circumstances.

CCP position

CCP13 considers that PWC has not presented a sufficient case to justify moving away from reliance on the regulatory change event for the changes that may arise in the next regulatory period from further implementation of national rules in the Territory. Our view is that it is not in consumers' interests for the normal materiality provisions to not apply to these potential changes in regulation.

Recommendation(s):

q) *That the AER not approve the 'NT transitional regulatory change event from 1 July 2019'.*

B.9 Smart Meter roll-out

PWC's Proposal

PWC is separating its metering operations from the electricity distribution business to mimic a stand-alone metering services supplier. This follows the separation of metering services from Standard Control Services by other NSP's in the NEM and helps facilitate future competition in the Territory for these services, when feasible. Consistent with the AER's Framework and Approach the services of the separated metering operation will have a price cap control mechanism.

According to the AER Issues Paper (p36):

It is important to note that the alternative control metering service charge is not an additional new charge being imposed on customers in NT – it is being moved from the 'standard control bucket' to the 'alternative control bucket'. Likewise, the \$8 million 'other revenue' reduction per annum for the provision of Power and Water's standard control services does not represent an actual reduction but rather the move from the 'standard control bucket' to the 'alternative control bucket'.

Currently for new premises and where meters reach end of life or fail, PWC installs interval meters which are configured for accumulation output and are manually read but could be upgraded with remote communications in the future⁷⁷.

PWC proposes changing its meter replacement policy in the next regulatory period to install advanced (or smart) meters to customer premises where it is making a new connection and

⁷⁶ National Electricity Rules as in Force for the Northern Territory Version 22, Chapter 10

⁷⁷ PowerWater Alternative Control Services Metering Overview Document 2019-20 to 2023-24 16 March 2018, p.12

where it is replacing a meter which has reached the end of its life or has failed. The NSP proposes IT investment to support smart meters so that it will be able to remotely read these meters and remotely turn the power on or off at the premises⁷⁸.

PWC proposes to add or replace between 5,300 to 5,700 smart meters per annum based upon meeting the customer connections forecast (as provided by AEMO) and replacing meters at the end of their useful life, and assuming a 2% failure and fault replacement rate. Existing advanced meters which are not communication enabled will also be upgraded (at a cost of \$2.7m) and existing smart meters will be upgraded from 3G to 4G communication technology (at a cost of \$3.4m).

The proposed capex in the metering operations is set out in the following table.

\$M, Real 2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Metering capex	3.22	3.48	3.58	3.12	3.40	16.80
Metering communications	2.89	0.18	0.19	4.18	0.18	7.62
Non-network capex	0.54	0.09	0.04	0.17	0.11	0.94
Total ACS Metering Service capex	6.65	3.75	3.80	7.48	3.69	25.37

Figure 15: PWC Metering Services capex 2019-20 to 2023-24⁷⁹

This capex program would result in an increase in the Metering Asset Base (MAB) for the metering services from an opening MAB in 2019-20 of \$16.51m to a closing MAB in 2023-24 of \$32.99m⁸⁰. PWC proposes that the cost of new meters be rolled into a standard flat daily metering charge that is payable by each connection rather than applying the cost of the new meter to the connection where it is fitted. The result of this proposed investment is that from 2020-21 annual meter prices would increase by 6.89% in each remaining year of the regulatory period⁸¹.

Based on additional information supplied to the AER by PWC in May 2018, the AER prepared the following table showing the metering services capital expenditure in the next regulatory period assuming PWC continues its current meter replacement program (i.e. for new premises and where meters reach end of life or fail, PWC installs interval meters which are configured for accumulation output and are manually read but could be upgraded with remote communications in the future).

\$M Real 2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Metering Capex	2.64598	2.71157	2.76132	2.46716	2.56967	13.1557
Metering Communications	0.00000	0.00000	0.00000	0.55703	0.00000	0.55703

⁷⁸ PowerWater Regulatory Proposal 1 July 2019 to 30 June 2024 16 March 2018 p.12

⁷⁹ PowerWater ACS Metering Overview Document 2019-20 to 2023-24 16 March 2018, p.19

⁸⁰ PowerWater ACS Control Services Metering Overview Document 2019-20 to 2023-24 16 March 2018, p.24

⁸¹ PowerWater Regulatory Proposal 1 July 2019 to 30 June 2024 16 March 2018, p.130

Non-Network	0.45260	0.09161	0.03829	0.18666	0.11957	0.88872
Total ACS Metering Service Capex	3.09858	2.80318	2.79961	3.21085	2.68923	14.6014

Table 16: PWC Metering Services capex 2019-20 to 2023-24 continuing current meter replacement program⁸²

Moving from the current meter replacement program to the proposed smart meter roll-out results in ~\$10.7m of additional capital expenditure in the period. However, we have been advised at the date of submission of our advice that the AER's on-going analysis suggests that whilst there is a capex difference, there may not be a significant difference in revenue between continuing the current meter program and the proposed roll-out of smart meters. This appears to be partially driven by increased opex under the scenario of continuing the current program. The AER has advised CCP13 that it is continuing to examine the issue to seek a better understanding and the reasons behind the apparent revenue similarity of the two scenarios.

The smart meter policy was developed following:

- a cost benefit study
- an assessment of directions in other NEM jurisdictions
- understanding customers' preferences through our engagement process
- the NT Government's commitment to 50% renewables by 2030, and
- an assessment of non-quantified benefits that may be derived by the NSP and the community (including generators, retailers, and customers), based upon the experiences in other jurisdictions.⁸³

PWC notes that the smart meter roll-out has the benefit of enabling cost reflective tariffs that encourage customers to use the network more efficiently⁸⁴.

The results of the Cost Benefit Analysis (CBA) are taken from PWC Metering Overview Document Table 1:

⁸² AER – prepared using updated versions of the ACS Metering PTRM (PWC12.2), the SCS and ACS Metering Capex Model (PWC12.7) and the ACS Metering CBA Model (PWC12.19) supplied by PWC on 10 May 2018

⁸³ Ibid. p.12

⁸⁴ Ibid. p.12

Table 1: CBA scenarios

Scenario (NPV, \$m, Real \$2018, mid-year, RY18 to RY57)	Base Case - Advanced Capable Meters (S1)	Targeted roll out (S2)	Advanced meters, enabled immediately (S3)	Advanced capable meters, enabled strategically (S4)	Transition via advanced meters (S5)
Net (Cost) / Benefit	(126.18)	(141.08)	(140.83)	(140.69)	(141.16)

The justification for adoption of the smart meter roll-out policy, despite it not being the most cost effective option (as assessed by PWC's CBA – see PWC Table 1 above indicating a +\$15m NPV of scenario 1), is summarised in PWC's proposal:

Whilst our CBA suggests that the least cost option is to base our new and replacement smart meter policy position on advanced capable meters (with manual reading), this option assumes that the meters will not be communications enabled in the foreseeable future. This is unlikely to provide the optimal long-term solution for our customers. It is also inconsistent with the direction of the NEM, our customers' preferences and our tariff reform strategy.

*Other benefits which we and other parties (retailers, generators, and customers) may realise are conservatively estimated at \$6.1 to \$15.4 million. Further, **our customers strongly support** our new and replacement smart meter policy position being based on advanced meters.*

Therefore, our new and replacement smart meter policy position is to install advanced meters immediately supported by the necessary ICT communications to give effect to remote reading and remote re-energisation and de-energisation. Our capex and opex forecasts have been developed on this basis.⁸⁵ [Emphasis added]

Therefore, on PWC's observation, it appears that it appears that the proposed smart meter roll-out will cost consumers more in the short term. Whether this is in their long-term interests of consumers and has been understood and supported by them, is of concern to CCP13.

Consumer perspectives

PWC believes that the roll-out of smart meters is in the long-term interests of customers and is supported by the consumer engagement undertaken:

We believe long-term access by our customers to better quality information and cost reflective tariffs will result in more efficient use of energy and our network. It would be a step backwards for our customers if we installed manual electronic meters (especially those that could not be communications enabled in the future), going against the national trend of providing customers with more and better-quality information to make decisions on how they consume electricity.

*During the engagement process, our customers told us that they would prefer access to advanced meters **provided that the costs of doing so are comparable** (see*

⁸⁵ Ibid. p.131

Engagement Overview at Attachment 1.4). If smart meters would be cheaper or equal cost over the life of the meter based on the cost of interval meters:

- *73% of our customers that we surveyed as part of our customer engagement for our regulatory proposal found our proposal to roll out smart meters to all new customers to be completely acceptable (scoring 10 out of 10); and*
- *71% of our customers found the proposal of replacing old meters for existing customers when they fail or are at the end of their normal life completely acceptable (scoring 10 out of 10).⁸⁶ [Emphasis added]*

The reported customer support for the smart meter roll-out is importantly founded on comparable costs to the current program and this being over the life of the meters.

This feedback comes from the August 2017 deliberative forums conducted in Darwin and Alice Springs. A total of 66 customers participated with representation of vulnerable customers, solar customers, and small business owners and managers. In these two 4-hour forums, nine key themes were covered including cross subsidies, demand charging, reliability and general issues with electricity like price. This is a heavy load of information and issues for participants to deal with, as was observed by a CCP member who attended one session, so the scope for comprehensive consideration was limited.

CCP13 is not aware of any comparison of the cost of continuing the current meter program and adopting the proposed program, being presented to consumers. The details of the cost difference between continuing the current program and moving to the proposed new program have not been available until May 2018.

Newgate Research summarised the results of the forums' discussion of smart metering with:

Acceptance was largely due to potential cost savings and having more understanding and control over energy usage.⁸⁷

From the limited engagement on the smart meter issue it is said that consumer support for a smart meter roll-out based on cost benefit and some softer considerations like enabling time-of-use pricing, identifying faults sooner, reducing estimated reads and eliminating intrusive meter readers⁸⁸.

Given the costs involved, which were not presented in any consumer engagement or in PWC's reset proposal, the very limited consumer engagement on the smart meter roll-out does not represent compelling consumer support for the proposal.

CCP position

As PWC acknowledges, the least cost option would be to maintain its current program of supplying new meters which are not communication enabled but contends that for a range of

⁸⁶ PowerWater Alternative Control Services Metering Overview Document 2019-20 to 2023-24 16 March 2018, p.11

⁸⁷ Engagement Overview: Attachment F - Power and Water's Future Service Delivery | Customer Deliberative Forums – Final Research Report, October 2017, p.38

⁸⁸ Ibid. p.38

reasons noted above, it may be in consumers interests to do proceed with this roll-out⁸⁹. CCP13 acknowledges that combined with other considerations, commencing the roll-out of smart meters in the next regulatory period with pricing based upon sharing the cost of the roll-out across all meter connections (through a standard daily charge), may be in the long-term interests of Territorian electricity consumers.

The capital cost of adopting the proposed program is ~\$10.7m more over the next period than the cost of continuing the current meter program. We are yet to understand the details of the proposal but, at this stage, CCP13 does not see that this cost to consumers has been justified as being in their long-term interests.

More information on the “soft” benefits and on the *“benefits which we and other parties (retailers, generators, and customers) may realise are conservatively estimated at \$6.1 to \$15.4 million”* would be useful in assessing the long-term benefits to consumers.

CCP13 believes that greater scope and depth of consumer engagement on this issue, such as consultation on the actual cost difference over the life of the assets between continuing the current program and adopting the proposed smart meter roll-out, would be very helpful in considering this matter. If PWC continues to consider the smart meter roll-out to be justified, some consultation on this could be carried out by PWC prior to its submission of its revised proposal in November 2018.

CCP13 understands that the AER may prefer that the cost of new smart meters be borne by the customer (or their retailer) who receives the meter: providing a price signal to inform them on the decision. Currently in the NT a customer (or their retailer) must pay \$475 for installation of a single phase smart meter⁹⁰.

Recommendations:

- r) *That the AER seek further information on and examine the “benefits which we [PWC] and other parties (retailers, generators, and customers) may realise are conservatively estimated at \$6.1 to \$15.4 million”.*
- s) *That the AER continue its examination of the capex and opex of continuing the current new site and meter replacement program compared to the proposed smart meter roll-out, as well as the cost over the life of the meter assets.*
- t) *That on the information available, CCP13 considers that the proposed smart meter roll-out has not been justified as being in the long-term interests of consumers and that there has not been sufficient consumer engagement on the matter (including the actual cost difference compared with continuing the current program) to claim that it is support by consumers.*
- u) *That if PWC continues to consider the smart meter roll-out to be justified it should carry out further and more in-depth customer consultations on the matter prior to the submission of a revised proposal in November 2018.*

⁸⁹ PowerWater Regulatory Proposal 1 July 2019 to 30 June 2024 16 March 2018, p.130

⁹⁰ PowerWater - Power Networks 2017-18 Alternative Control Charges June 2017, p.4

CONCLUSION

CCP 13 considers the consumer engagement by PWC to be reasonable under the circumstances.

However, there are a number of areas where CCP 13 is concerned that the proposal from PWC may not be in the long-term interests of consumers.

The review of the NSPs' consumer engagement and consideration of issues that may not be in the long-term interests of consumers, with CCP 13's recommendations regarding these, are concisely summarised in the Executive Summary above.

CCP 13 commends to the AER the issues raised in this advice and the recommendations made.

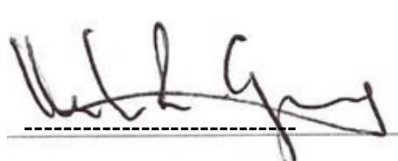
Signed



Andrew Nance
**Sub-panel
Chairperson**



Chris Fitz-Nead



Mark Grenning