CONSUMER CHALLENGE PANEL

Submission to the Australian Energy Regulator (AER)

Consumer Challenge Panel Sub Panel 4 (CCP4)

Response to the proposal from Tasmania's electricity distribution network service provider (TasNetworks - TND) for a revenue reset for the 2017-2019 regulatory period

Report by

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Sub Panel CCP4

CCP4 also includes:

- **Jo de Silva who has provided a separate report**
- **Hugh Grant who has not contributed to this report**

4 May 2016

1. Introduction

The purpose of this document is to deliver the views to the Australian Energy Regulator (AER) of the Consumer Challenge Panel (CCP) charged with providing input into the revenue reset for the 2017-2019 regulatory period for the Tasmanian electricity distribution network service provider TasNetworks distribution (TND).

CCP Sub Panel 4 (CCP4) has carried out this review, although this report is provided by CCP4 member David Headberry as the other members of CCP4:

- Jo de Silva has provided a separate report and
- Hugh Grant has had little direct input into this report.

Throughout this report, reference to CCP4(DH) refers to the views of David Headberry in his role as a member of CCP4.

CCP4(DH) has only provided input in passing regarding those aspects of the review where the AER has typically carried out its own detailed assessment. Such issues include the approach to the roll forward of the regulatory asset base, escalation and growth factors, and other areas where the AER has what could almost be termed automatic processes.

CCP4(DH) has instead focused on aspects of the proposals where it considers that there are significant issues to be addressed that will have considerable impact on the outturn assessments made by the AER in its role of establishing a "bucket of money" sufficient for the efficient distribution network services provider to deliver the services required by consumers.

TND has included in its proposal advice that it considers it has generally followed the suite of guidelines established by the AER as part of the Better Regulation program that arose from changes to the National Electricity Rules. However, it is not clear where TND has deviated from the guidelines why its proposed changes will provide an outcome that will be more in the long term interests of consumers than would result from application of the guidelines. Having said that, CCP4(DH) observes that, overall, TND appears to have applied the guidelines in most aspects.

In its review of the TND proposal, the AER should focus on determining a revenue that provides for the long term interests of consumers while, of course, acting within the requirements of the Rules. CCP4(DH) considers that the long term interests of consumers must reflect the interests of current consumers as CCP4(DH) is aware that actions of current consumers responding to the impacts of the current review will have a significant impact on future consumers. In this regard, the costs and tariff structures that are put in place by TND as a result of this revenue reset must provide an outcome that is efficient now as well as into the future.

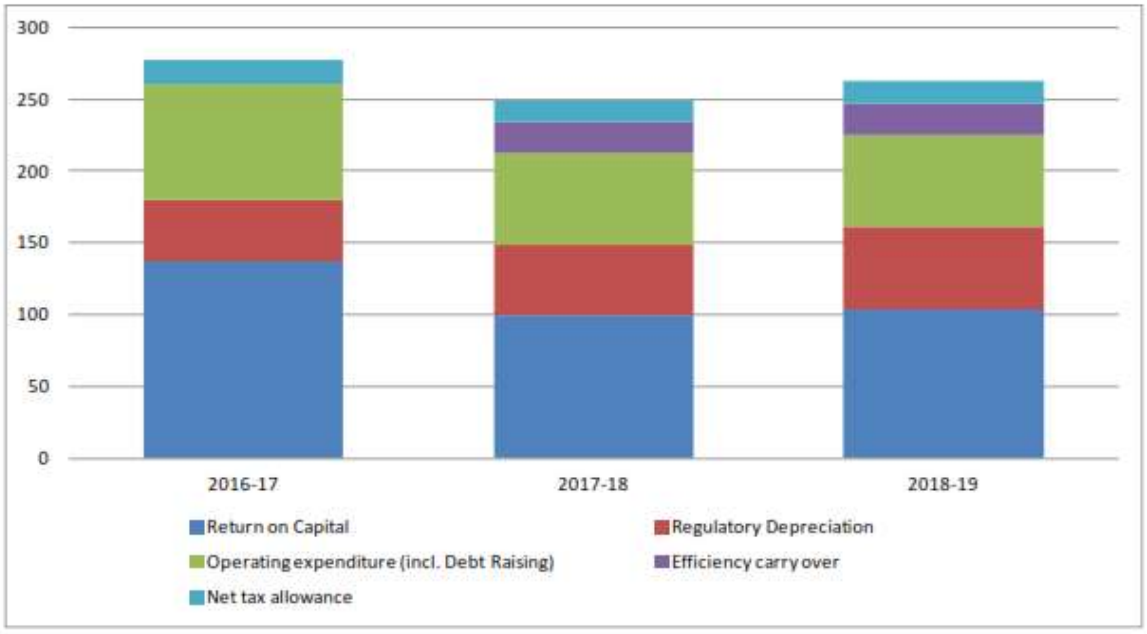
CCP4(DH) notes that this revenue reset will apply for only two years and that there will be

another revenue reset carried out where the reset will encompass both the TasNetworks transmission and distribution services. Despite the reset having a short period of application, CCP4(DH) considers that the review undertaken must be as rigorous as that for a full five year period.

1.1 Impact of the TND proposal on consumers

TND provides the following view of its required revenue for the next two years, relative to the forecast revenue for 2016/17.

Figure 14-1: Summary Building Block Unsmoothed Revenue Requirement ($m nominal)

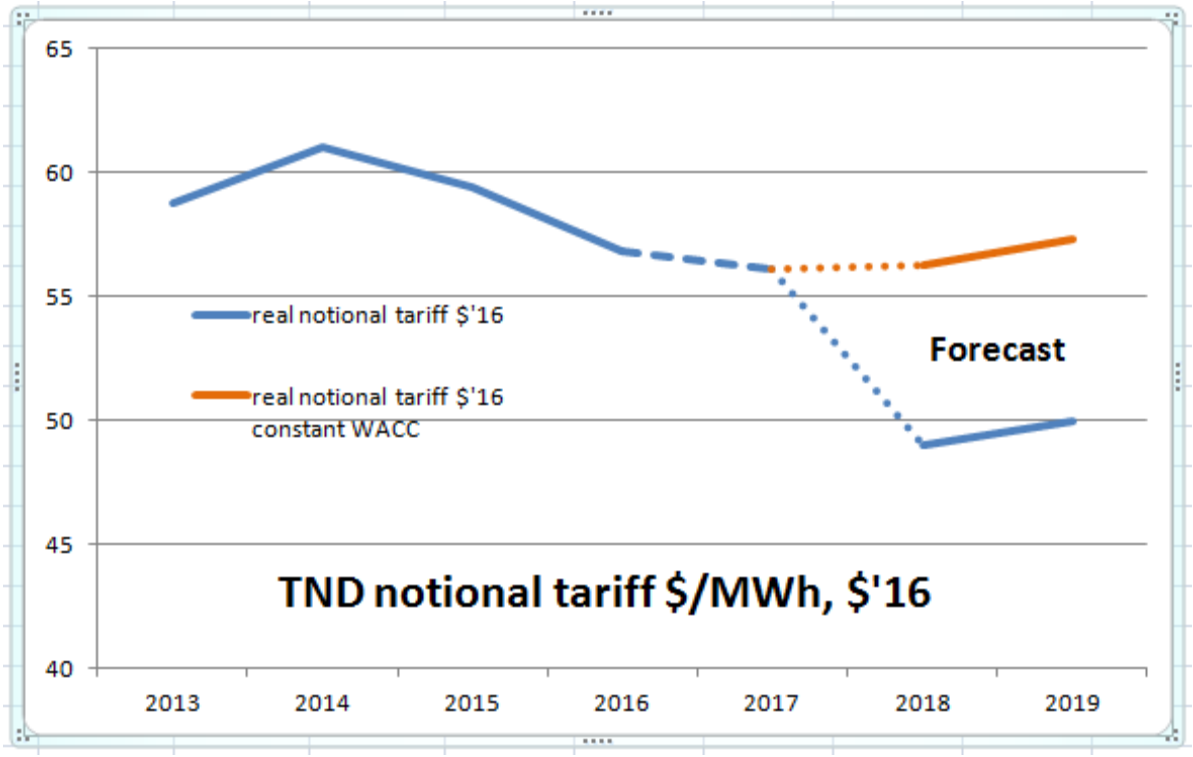


At a high level, TND is seeking a lower revenue than it forecasts it will receive in 2016/17, the last year of the current period. This reduction is primarily driven by a lower cost of capital, although opex is also forecast to reduce. These reductions are offset by higher amounts for depreciation and by including the opex efficiency carryover.

This leads to an assessment of the notional TND tariff (revenue related to sales MWh). The sales used for this comparison are derived from the NIEIR report (Electricity sales and maximum demand forecasts for Tasmania to 2045, base case[1]) and the revenue (adjusted for inflation differences) from TND TN059 Post Tax Revenue Model (PTRM) Summary page.

The outcome of this assessment shows that TND is planning on delivering lower cost services to its customers.

[1] The NIEIR data provided by TND as part of the suite of documents comprising the proposal has been used as this is comprehensive



Source: CCP4(DH) analysis

While a reduction in the notional tariff is welcome, the question then becomes "Is the reduction enough or reflective of the changed circumstances?" especially as the bulk of the reduction comes from using a much lower cost of capital (6.04%) than applied to the revenue allowances for the current period (8.28%). Effectively what is seen is a 27% reduction in the cost of capital but only an average reduction in the notional tariff of about 20%. If a constant cost of capital is used (ie the WACC that applied in the last reset – 8.28%), there is no reduction in tariff from that applying at the end of the current period and the start of the next. This means that offsetting to the lower cost of capital, there is an increase in the regulatory asset base (RAB) and in other elements of the building block such as depreciation and other allowances (eg EBSS benefit carry forward).

As TND has indicated a desire to increase the WACC through applying the outcomes of the Australian Competition Tribunal limited merits review of the NSW DNSP appeal, CCP4(DH) considers that greater attention needs to be applied to the outturn of the TND proposal by considering the impacts of increases in the WACC and whether these will result in changes to the headline view expressed by TND that network prices will see a significant fall.

2. Consumer Engagement

The CCP as a whole has provided general advice to the AER Board on consumer engagement[2] and CCP4(DH) notes that CCP advice for a number of other revenue resets have provided considerable input and assessment of the consumer engagement (CE) that has been undertaken in those other resets. Observations made by other CCP sub groups have some applicability to the TND CE and therefore CCP4(DH) considers that these other observations should also be considered by the AER in its review of the TND proposal.

However, rather than reiterating much of what has been written about CE in previous advice from CCP and its subgroups, this report focuses on its views of the CE undertaken by TND.

CCP subgroups have noted the endeavours by networks to actively engage with their consumers and incorporate their feedback into their operations, and not just for their revenue resets. Notwithstanding the requirements outlined by the AER which ensure that networks are actively seeking consumer engagement for their revenue resets, the CCP has commented that it views effective consumer engagement is central to the overall efficient functioning of the National Energy Market (NEM) and that it must be a continuing activity.

In relation to this reset review[3], CCP4(DH) acknowledges TasNetworks' strategic customer goal of "understanding [its] customers and [making] them central in all [they] do". This clear and unambiguous statement is supported by CCP4(DH). TasNetworks also made the statement to CCP4(DH) that it considered that the reset process was integral to its continuing business operations and that the process used to develop the reset was to become to the core of the ongoing business operations. CCP4(DH) supports this approach by TasNetworks.

The CCP4(DH) welcomes TasNetworks "very broad definition" of their customers, bearing in mind the diverse consumer segments that comprise their consumer groups. CCP4(DH) views this approach as prudent and one that appropriately responds to the market in which TasNetworks provides its services. Indeed, CCP4(DH) notes that some consumer engagement programs implemented by other networks do not recognize the diversity in their customer groups, and as a result, their attempts at consumer engagement might be significantly diminished.

CCP4(DH) notes this revenue reset period is quite limited in comparison to other periods, having only a short 2-year cycle. However, CCP4(DH) views that, despite this limited

[2] See https://www.aer.gov.au/about-us/consumer-challenge-panel/statements-advice

[3] CCP4(DH) recognises that TasNetworks now encompasses both the erstwhile Aurora distribution service and the Transend transmission service. Where the TasNetworks activities cross both services, CCP4(DH) uses the term TasNetworks but where the activity relates to the distribution service it refers to TND

duration, CE programs must remain robust, effective and tailored to ensure the best possible outcome for consumers over the short and long terms. CCP4(DH) notes that TasNetworks has endeavoured to achieve this, and despite the shortened time period associated with this reset, TasNetworks has included a 3 year forecast that goes beyond the time period stipulated for a number of its cost inputs. CCP4(DH) views that, although this methodology does not diminish the work within the TasNetworks CE program, it considers, given the rapid pace of market changes, this should not grant license for TasNetworks to utilize the outcomes from this current CE program for the next period. CCP(DH) considers that the CE program must be implemented on a continuous basis and that this will automatically encompass learnings for the next reset period, so that TasNetworks' CE program remains effective and the content within the CE program is relevant to the times.

CCP4(DH) welcomes the concept introduced by TasNetworks of "earning the trust of our consumers" and that a culture of "customer first" is essential. We note the varied methods outlined within TasNetworks engagement framework which aims to achieve this trust and corporate culture.

CCP4(DH) welcomes the core focus of its Voice of the Customer program, being:

- *Help us to provide quality service outcomes for our customers; and*
- *Enable the successful achievement of our vision, which is to be trusted by our customers to deliver today and create a better tomorrow.*

Whilst we welcome the intentions behind this focus, the CCP4(DH) considers that, perhaps, these definitions are very broad. CCP4(DH) questions if these definitions are, indeed, what consumers strive for. Whilst CCP4(DH) agrees that these are noble aspirations, feedback from TasNetworks' CE program has generally provided two reoccurring key themes, those being[4]:

1) Cost of the services (too high), and
2) Reliability of the services (OK as is).

We question why these two elemental areas are not reflected in the program definitions. Notwithstanding this observation, CCP4(DH) applauds TasNetworks "customer first" culture that it seeks to implement and considers that this should be introduced by all NSPs operating in the NEM.

[4] TasNetworks reports that

- customers generally expressed satisfaction with current reliability levels and did not want more investment to improve them.
- customer satisfaction would be improved if TND could reduce network costs (and electricity bills) and maintain existing levels of reliability

CCP4(DH) notes the development and use of TasNetworks Customer Engagement Framework. CCP4(DH) considers the TasNetworks CE framework is well designed and appropriate for meeting the objectives of its CE program, especially considering the robust and diverse nature of the mixed method approach to consumer engagement being used. CCP4(DH) has noted the use of a diverse range of stakeholder engagement activities utilised to capture relevant feedback that can guide and be incorporated into TasNetworks ongoing activities. Despite its support of the CE program, CCP4(DH) also notes that despite being designed and implemented appropriately, such activities could be considered tokenistic. It will be the longer term outcomes of the TasNetworks CE program that will determine its overall success. CCP4(DH) has noted that in some CE programs undertaken by other networks within the NEM, while they have utilised a similar methodology, the outcomes have delivered been very different.

Interestingly, CCP4(DH) noted that TasNetworks have openly admitted to concerns over some of the limited feedback generated in some of their activities (eg some consumers being unable to adequately outline the electricity supply chain when attending workshops) and limitations in gaining meaningful feedback. This recognition is welcomed as it is a concern of CCP4(DH) that, at this early stage of the CE program, to draw too much from the CE program is not appropriate. CCP4(DH) considers that the design of the TasNetworks CE program should be able, in the future, to offset some of these limitations.

Recognising the limitations of their CE program, TasNetworks has been careful not to use the CE undertaken so far to drive its revenue reset, other than to recognise that the cost of the services is a real concern and that current reliability levels are generally acceptable.

CCP4(DH) was specifically pleased to see that the "familiarization" phase of the CE program recognised a need for consumers to be trained, or up-skilled, to ensure meaningful conversations with stakeholders at later stages in the CE program. (Previous observations by CCP members of CE activities highlighted that workshops, focus groups meetings, etc are primarily considered to be an “information night” on how the NEM works). CCP4(DH) is still concerned that despite being up-skilled, consumers still need to be provided with information which provides the full context, rather than information which might be abbreviated and thereby prevent consumers being able to assess the information to its fullest extent.

A further concern of CCP4(DH) is that a core aspect of any CE program must be that the information provided by the network has to be correct and provided in full context. It needs to be remembered that “consumers do not know what they do not know” and it is TND that must provide sufficient information, and in full context, so that consumers can provide fully informed comment. It is easy for TND not to provide information and/or not

provide sufficient context and so lead consumers to an outcome that satisfies TND but which does not really reflect informed consumer input. CCP4(DH) noted that in its endeavours to introduce topics for deliberation during consumer consultative committee meetings, TND could have provided more information and/or better context to the issues being discussed. This observation is not intended as a criticism of TND CE activities as TND has not drawn detailed conclusions from its CE, but CCP4(DH) sees that TND should implement greater provision of information and/or context as its CE program develops.

Another feature of the TasNetworks CE program is where stakeholders were provided an opportunity to be informed and consulted on how their feedback was incorporated into the revenue reset; CCP4(DH) considers this feedback loop is an integral part of a successful CE program.

TasNetworks advises that it intends to continue with monthly customer satisfaction surveys and quarterly customer net promoter score surveys; CCP4(DH) considers this is positive.

Despite its support for the TasNetworks CE program, CCP4(DH) has identified some limitations identified by TND from its CE activities:

- ✓ There is limited time for submission work by resource poor advocates
- ✓ 50% of attendees at workshops state their motivation was to gather better understanding of the Energy sector
- ✓ 66% of participants within the workshops could not adequately describe the energy industry
- ✓ Large sample of those surveyed came from AGFEST - a potential bias in respondents?
- ✓ Limited focus of issues at the workshops where the topics are selected by TND rather than identified by participants.
- ✓ Low participation rates at workshops
- ✓ Tariff reform group bias on CE??

TasNetworks advises that its customers also provided suggestions as to how to improve the quality of its engagement and communication with them. CCP4(DH) sees this as a key aspect of the CE program. Views expressed included:

- consultation should also focus on regional areas, not just the big cities;
- TasNetworks needs to provide stakeholders with sufficient time and support to allow them to analyse and respond to questions posed as part of our engagement; and

- expenditure forecasts should be scrutinised and debated although it is recognised that the average consumer is unlikely to be qualified or sufficiently knowledgeable to be able to provide detailed comments on complex technical issues.

The overall view of CCP4(DH) is that TasNetworks exhibits a commitment to its CE and that it will seek continuous improvement in this. While CCP4(DH) considers that TasNetworks will always need to review its assumptions with consumers and the manner in which they try to engage them, there are clear indications that demonstrate a "willingness" by TasNetworks to engage in these activities. In our view, TasNetworks has to date (and CCP4(DH) hopes it will continue to do so), engaged proactively in its CE. By doing so, this will highlight to consumers that their input is valued and TasNetworks should be able to benefit both itself and its customers over the long term through the CE program.

3. Benchmarking

The benchmarking work carried out by the AER to date addresses two main aspects

- Assessment of the efficient use of capital (asset benchmarking); and
- Assessment of the efficient identification of operating expenditure.

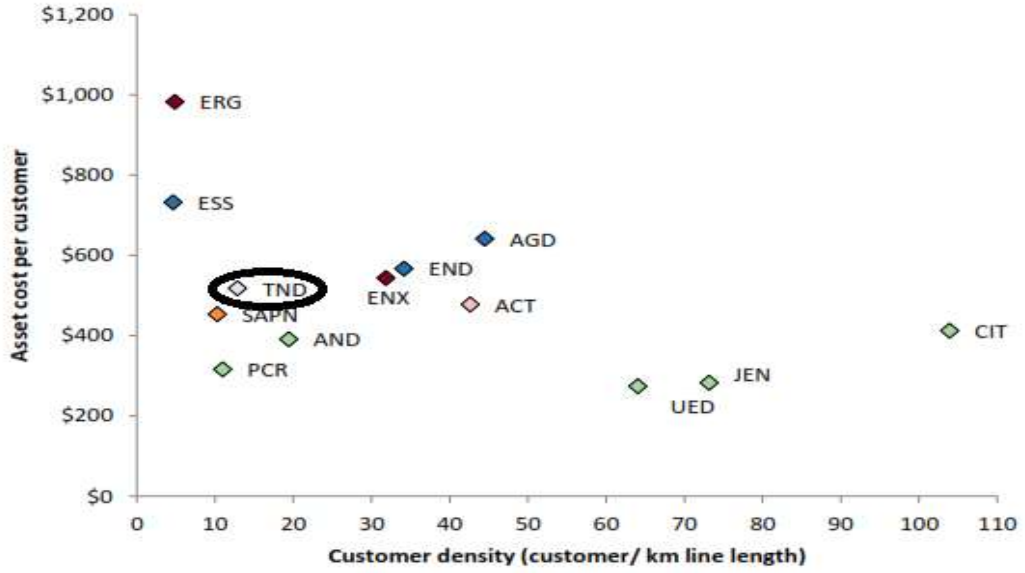
Despite the AER endeavouring to ensure that there is an efficient sourcing of debt, it has not carried out any assessment of the actual costs of debt incurred by networks in the past, to assess whether the networks have identified lower cost sources of debt, and whether these sources might be more efficient than the approach to debt sourcing embodied in the Rate of Return guideline. CCP4(DH) considers that the AER guideline on developing a cost of debt results in a higher allowance for the cost of debt than the costs actually incurred by networks.

CCP3 considers that undertaking detailed benchmarking of actual costs of debt is in the long term interests of consumers. This benchmarking should be used in the future to identify the most cost effective approach to debt provision.

3.1 Asset benchmarking

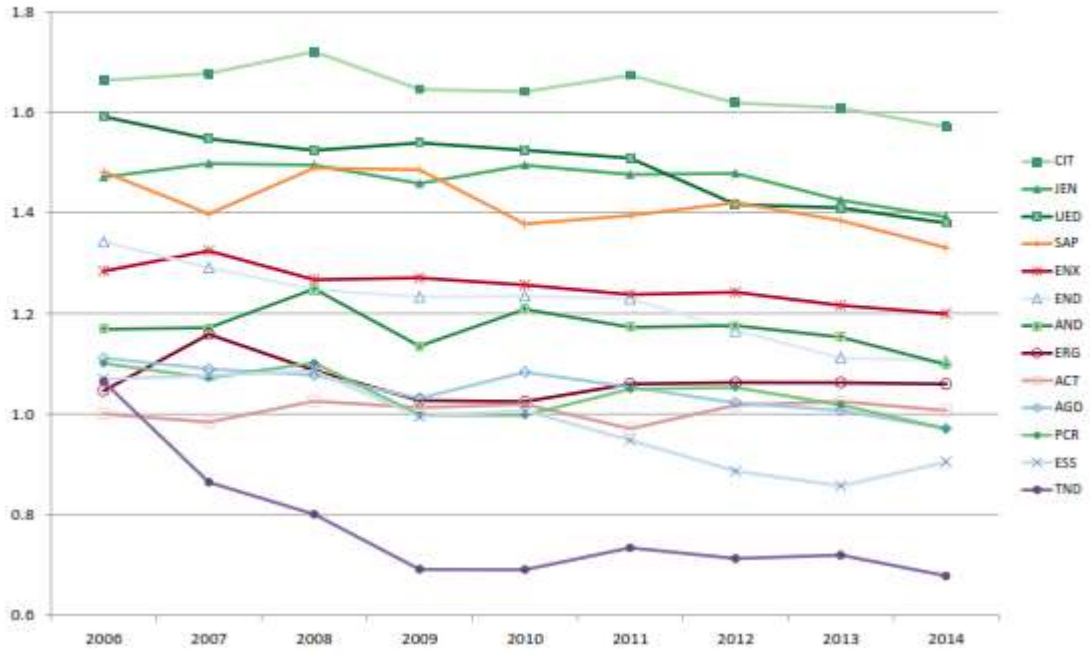
Benchmarking of the use of capital is relatively in its infancy in the NEM. The benchmarking carried out by the AER in its Annual Benchmarking Report (released November 2014) identifies the Victorian DNSPs as being the most efficient in the use of capital provided with Ausgrid, Ergon and Essential being the worst. TND is seen as being in the "ruck" with the majority of other distribution networks. This is pictorially shown in figure 13 of the AER report, which is reproduced below.

Figure 13 Asset cost per customer compared to customer density (average 2009–2013)



However, the subsequent benchmarking report by the AER (released November 2015) provides a different picture of TND asset productivity.

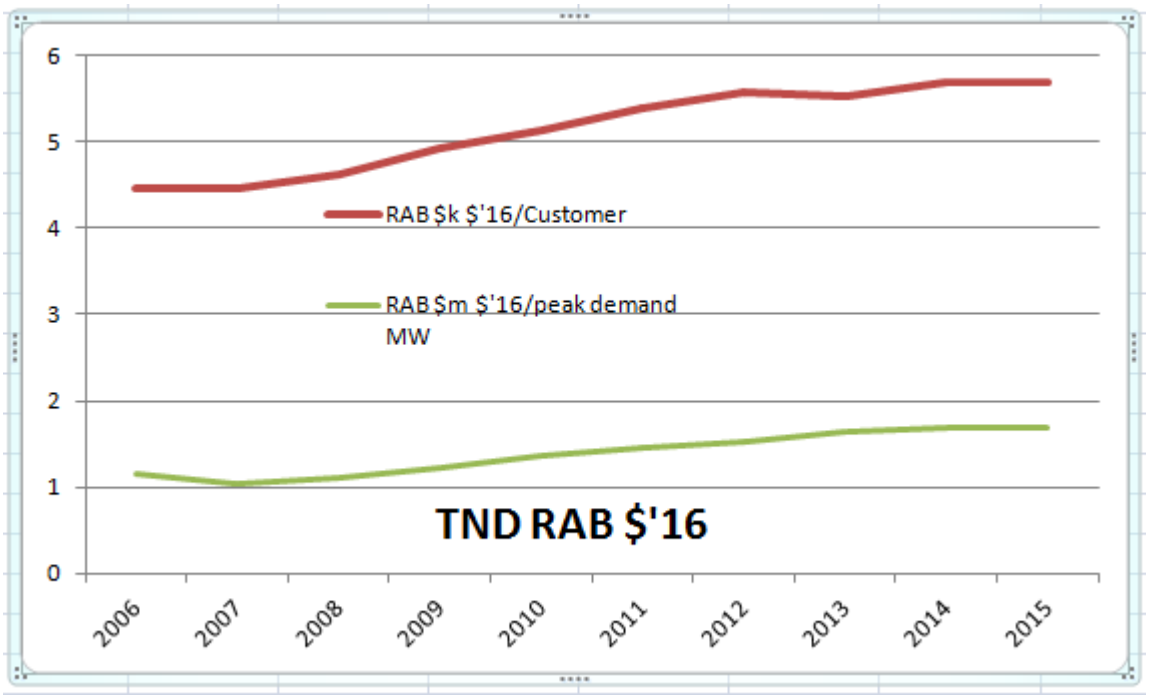
Figure 5 Capital partial factor productivity for 2006–14



This clearly shows TND as having the lowest asset productivity of all the distribution networks by a considerable margin, and one that is continuing to deteriorate. In fact, over the nine years the series has been calculated, its asset productivity has fallen by more than a third. This loss of asset productivity is by far the greatest of all the distribution networks in the NEM. While CCP4(DH) can accept that the operating features applying to TND might lead to a conclusion that its asset productivity could well be lower than that of other networks, its very loss of productivity compared to its own performance over time implies that its asset productivity is very low and needs to be improved.

The AER assessments (figure 5 above) appear to be contrary to the AMP Capital November 2014 report *The Capital Efficiency of Australian Electricity Distributors*, submitted to the Productivity Commission in November 2012, which highlights that the capital efficiency of Aurora (TND's predecessor) was equivalent to that of a privately owned network and implies that this means that TND compares well with those networks privately owned in the NEM and the UK electricity distribution networks.

Because of its concern about the asset efficiency of TND, CCP4(DH) has assessed the growth of the regulated asset base (RAB) over time, in real terms, moderated by peak demand and customer numbers. This assessment is shown in the following chart.



Source: RIN data, TND proposal, CCP4(DH) analysis

What this shows is that since 2007, the TND RAB has shown considerable growth to 2015, with growth of over 60% relative to peak demand and nearly 30% relative to customer numbers. This supports the AER benchmarking indicating that TND asset productivity have fallen considerably over time.

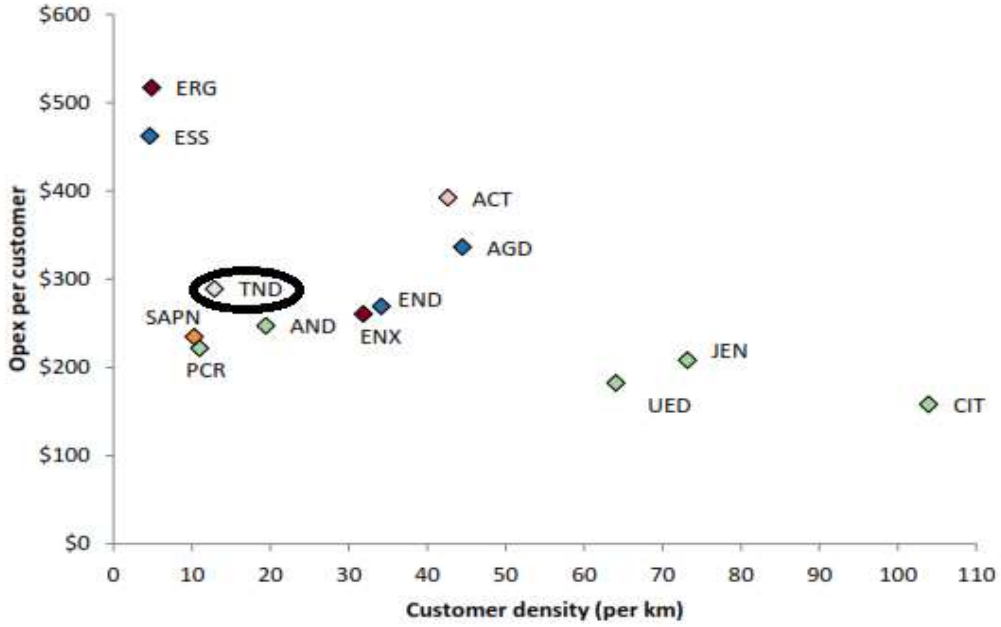
The fact that the TND asset benchmarking has shown a considerable fall in performance over time and that its ranking compared to the other distribution networks is so low, leads CCP4(DH) to consider that great care is needed in assessing the capital works program initiated by TND. The fact that the RAB has grown so much in relative terms in such a short period of time is very concerning as this high RAB not only is a cost for current consumers but will be a continuing cost for future consumers as network asset lives average at least 40 years or more.

It is important that the long term impact of any additional capital expenditure forms part of the AER's overall considerations of the capex proposals, so that overall the RAB can reduce in relative terms as this is in the long term interests of consumers.

3.2 Opex benchmarking

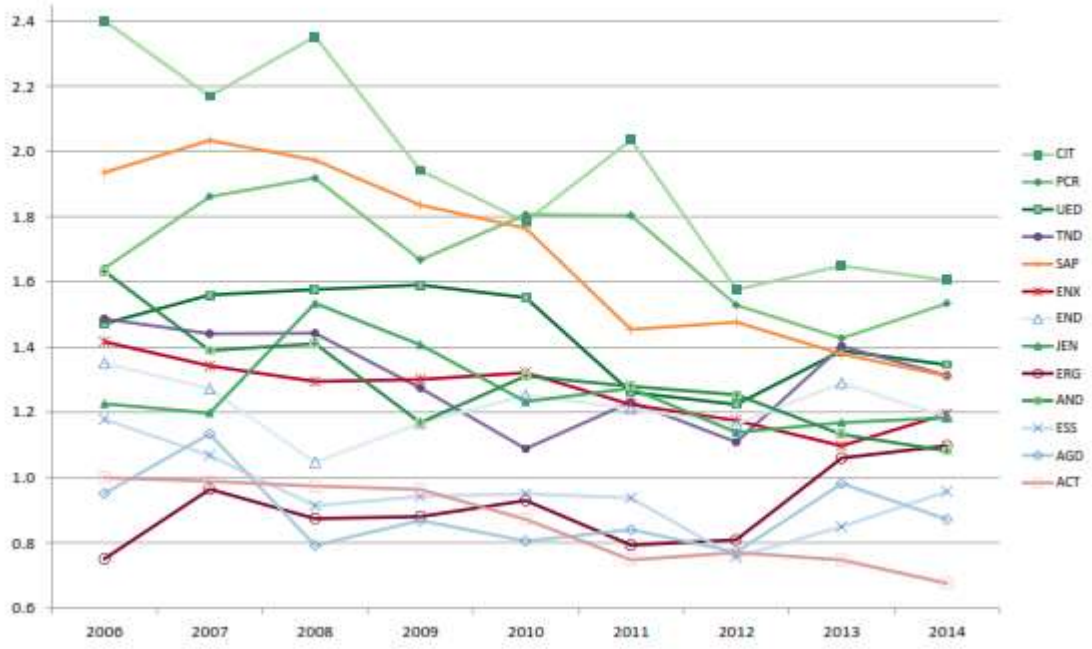
The average historic opex performance of TND generally reflects that TND is in the "ruck" of all distribution networks in the NEM with regard to opex productivity. Figure 12 from the AER's Annual Benchmarking Report (released November 2014) displays this average performance which is still not close to the efficient frontier.

Figure 12 Operating expenditure per customer compared to customer density (average 2009–2013)



This comparative performance only tells part of the story. Figure 6 in the subsequent AER benchmarking report (released November 2015) tends to support a view that TND was in the "ruck" with regard to opex productivity in 2014.

Figure 6 Opex partial factor productivity for 2006–14



A detailed analysis of the longitudinal opex Partial Factor Productivity (PFP) performance of all the distribution networks shows that across the NEM, there is a median decline of 0.039 productivity points/annum with a standard deviation of 0.033. From this, it could be assumed that exogenous factors are reducing the productivity of all electricity DNSPs.

While there is a marked rate of decline in the opex efficiency across the NEM, the TND opex productivity shows a marked improvement in recent years, and indicates that its opex productivity is approaching the same level it was at in 2006; this is a stark contrast to average performance across the NEM.

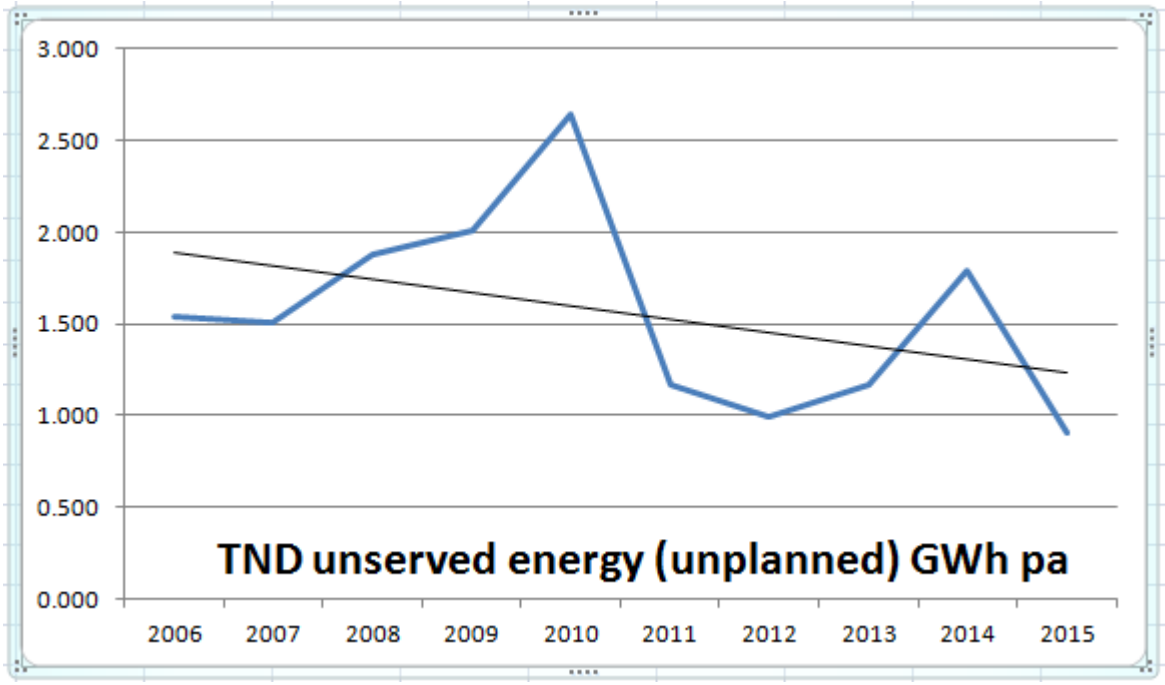
CCP4(DH) considers that the benchmarking carried out should be used to inform the assessment of the base year efficiency and the benchmarking generally supports the approaches taken by TND to set its base year opex.

3.3 Other benchmarking

CCP4(DH) undertook some additional benchmarking to address the amount of unserved energy (USE) provided by the network (to assess the reliability provided), and in asset utilisation (to assess the need for augmentation).

The amount of unserved energy was assessed, as this is a better assessment from a consumer viewpoint as to how well the networks performed, and reflects the approach used in the wholesale market.

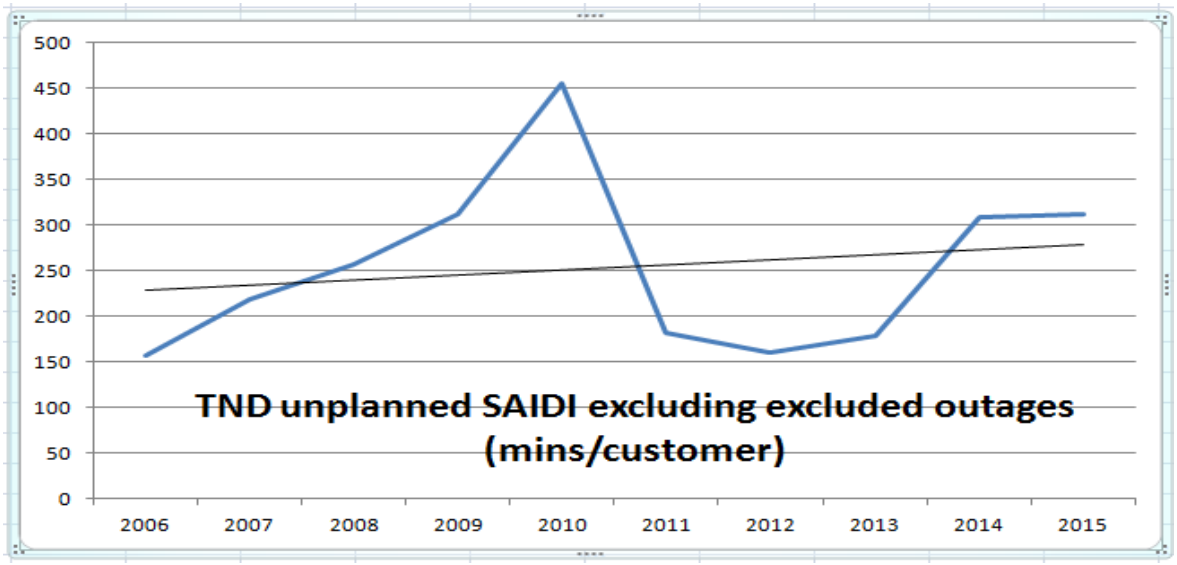
The following chart shows the amount of unplanned USE.



Source: TND RIN data

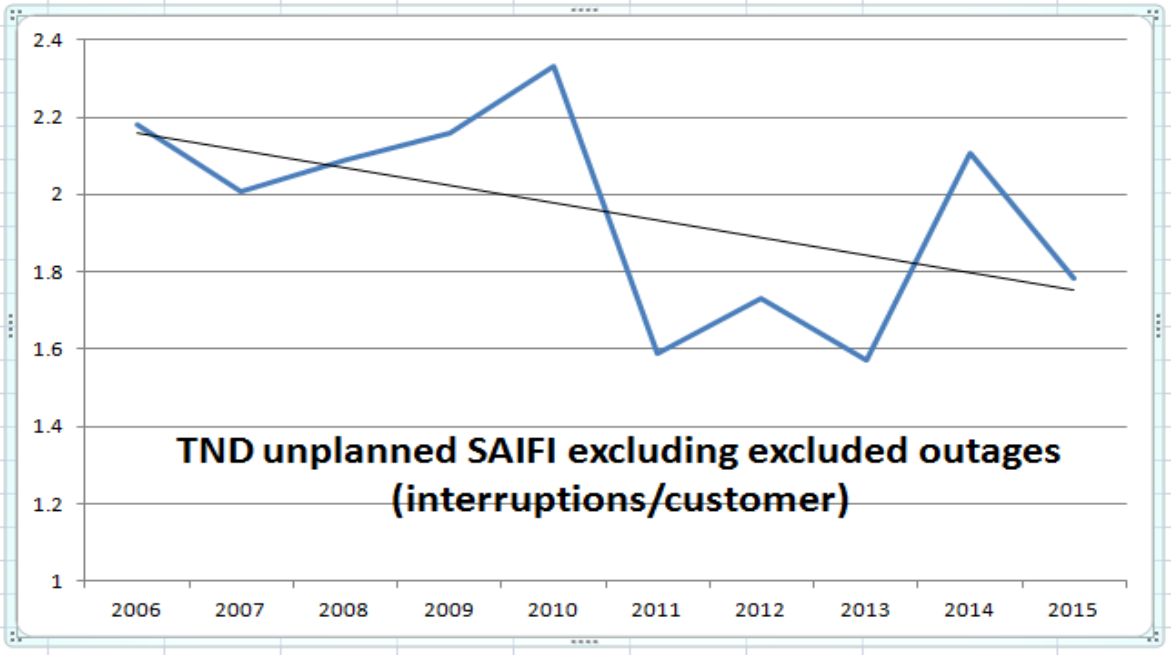
The level of USE shows a general downward trend, implying that reliability as seen by consumers is improving over the longer term.

This is in contrast to Unplanned SAIDI - a loss of supply duration index (see following chart), which shows a small upward trend.



Source: RIN data

The following chart shows that SAIFI (a loss of supply frequency index) is exhibiting a consistent downward trend.

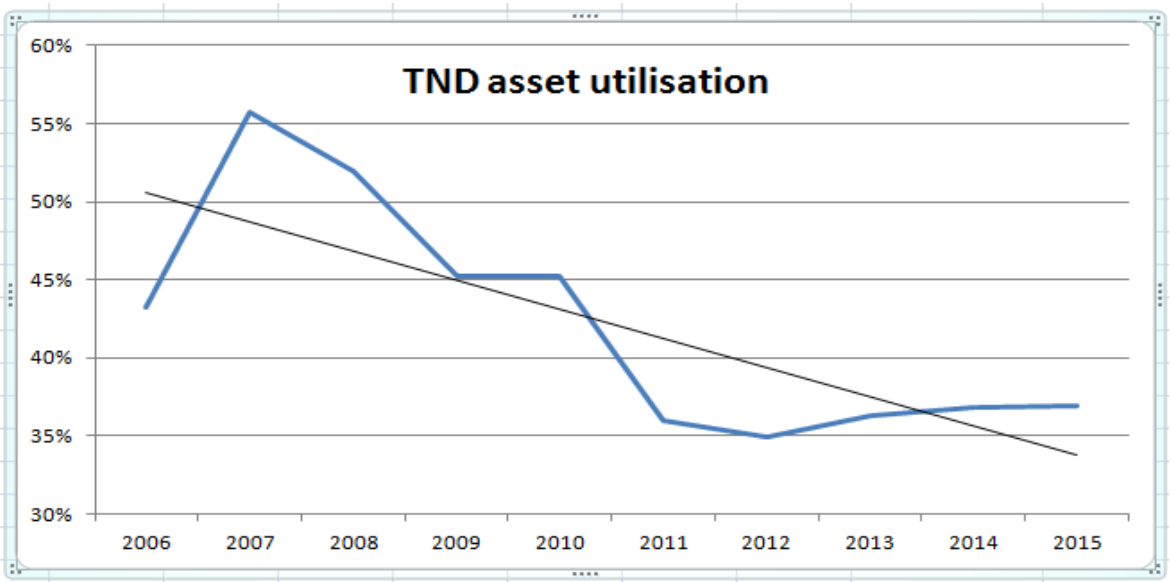


Source: RIN data

As there is a view that replacement capex is in part driven by declining reliability, this benchmarking suggests that reliability might not be a significant issue and the

replacement capex needed might well be less than used in the past and being sought by TND in this current proposal.

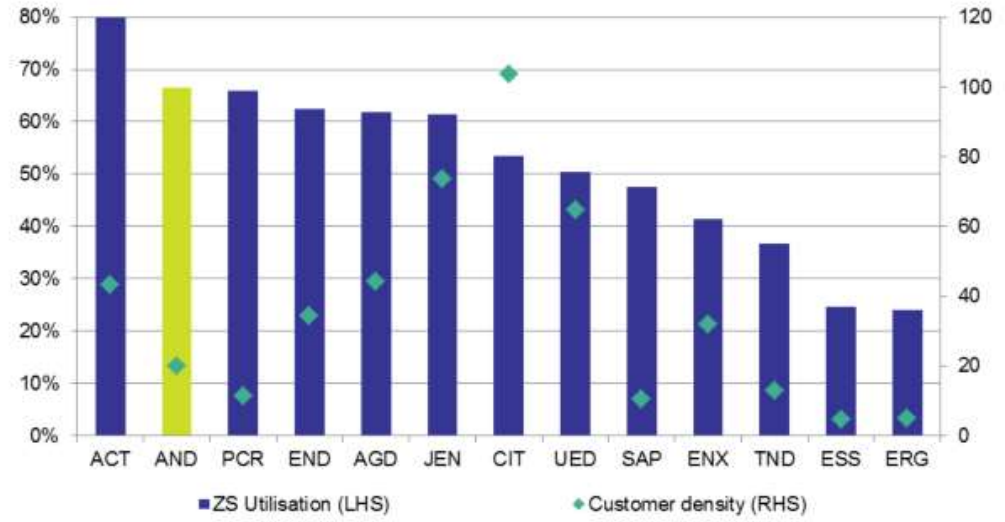
Asset utilisation is also a measure used to identify the need for more augmentation capex. The TND proposal states a need for some augmentation capex, although most of its augmentation capex is related to customer connections with a modest amount for reinforcement capex. The following chart shows that there is a significant decline in asset utilisation which militates against any need for augmentation capex.



Source: RIN Data

In its proposal for a revenue reset, Victorian distribution network, AusNet provided the following chart (related to zone substation utilisation – probably the most critical element in asset utilisation). This provides a slightly different view on asset utilisation, and shows that TND has a very low zone substation utilisation, well below that of most of the distribution networks in the NEM.

Figure 7.18: 2013 zone substation utilisation (%)



Source: AER RIN data.

Note: AusNet Services shown as AND. Customer density is number of customers per km line route line length.

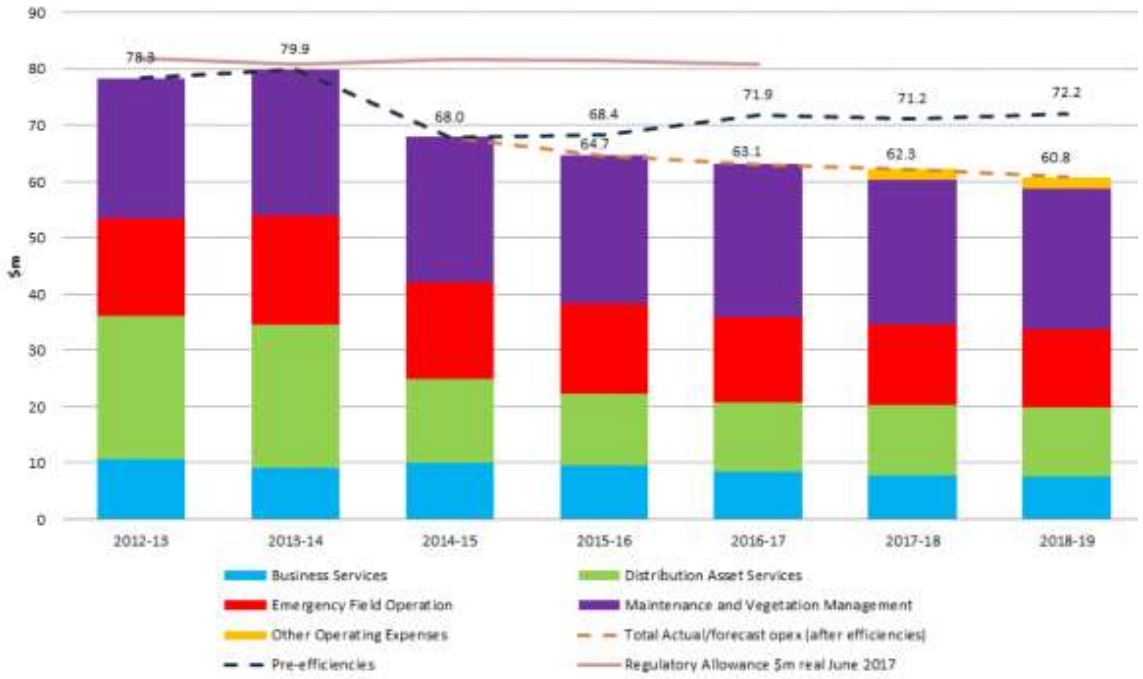
The utilisation data provides a view that there is probably little need for augmentation, when considering that greater utilisation in the past has been readily provided. The utilisation data supports the intuitive view that the static (even declining) peak demands experienced in Tasmania reflects a lesser need for augmentation capex than implied by the TND augex proposal.

4. Operating Expenditure (opex)

4.1 Overview

Operating expenses are the second largest cost item in the building block assessment of TND network costs. A reasonable expectation would be that in a relatively low growth environment, reducing operating costs would be a core focus for the businesses[5]. To its credit, TND has addressed this element of the building block and has indicated that it will seek to use less opex than in the past. TND provides the following graphic to show what it is proposing to achieve in relation to opex.

Figure 8-3: Overview of forecast and actual operating expenditure (June 2017 $m)



CCP4(DH) welcomes the forecast reduction in opex and the inclusion of further efficiency gains but notes that the forecast opex while showing a reduction in real terms, it is fairly constant when measured in nominal terms. CCP4(DH) therefore questions whether the opex allowance could be even lower.

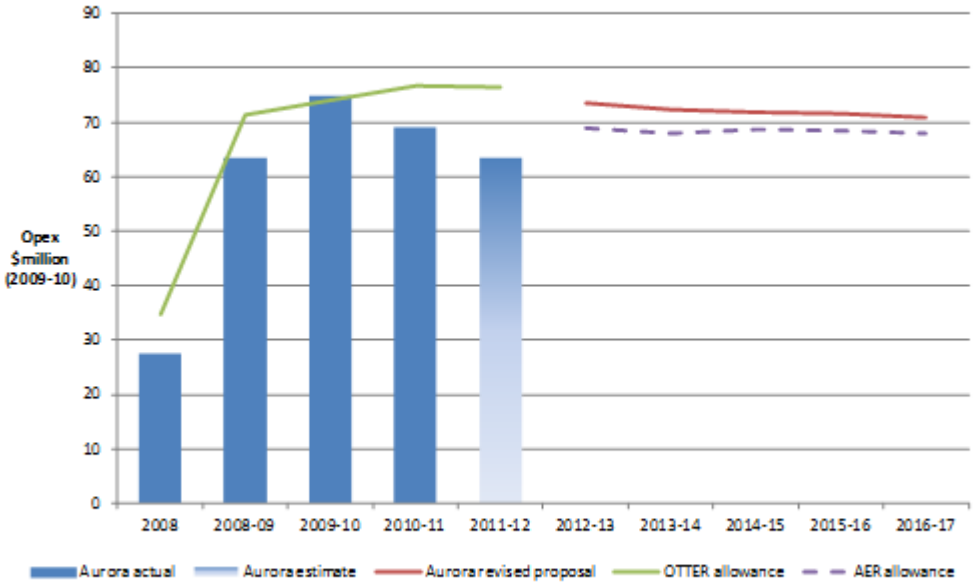
In this regard, CCP4(DH) notes that other large capital intensive operations that are subject to competition not only have to achieve opex reductions in real terms but achieve them in nominal terms as part of their core activities in order to remain competitive.

This opex performance should also be seen in context with what had occurred in the past. As can be seen from the chart and following chart[6], TND has consistently beaten the opex

[5] CCP4(DH) points out that in a competitive environment, in a static growth environment, reducing opex is the prime tool used by a firm to maintain its market share.
[6] Sourced from the AER final determination for Aurora in April 2012

allowance set by OTTER and the earlier graphic shows that TND has under-run the opex allowed by the AER for the current period.

Figure 7.1 Comparison of Aurora's past and revised forecast total opex and the AER final determination ($million, 2009-10)[302]



Source: Aurora proposal, Aurora revised proposal, AER analysis.[303]

The allowance provided by the AER for 2012/2017 is clearly greater than what TND was achieving prior to the current regulatory period and for TND to so readily under-run the allowance (and thereby gain an EBSS bonus) implies that the opex allowance set by the AER was too high.

The fact that TND has been able to outperform the allowances set in previous regulatory periods (and by a significant margin) but then convince the regulator that increases in opex are still warranted is a concern to CCP4(DH); such criticism is not intended to take away from TND performance in reducing its opex, but to highlight that the OTTER and AER allowances did not set a target for opex that was efficient in the first place.

In this regard, an efficient opex would provide little scope for earning bonuses such as TND has been able to do. It is pertinent to state that the EBSS bonus that TND will achieve in the current period will add to the revenue for the two years of the next period about one third of the forecast opex and increase the allowed revenue overall by nearly 10%. This supports a view that the opex allowances in the past were too high and may still be so!

CCP4(DH) notes that there has been a significant overspend on repex in the current period (and compensating underspend on augex which would also reduce the amount of opex allowed for growth) and this higher level of repex is forecast to continue for the next period. This increase in repex (replacing old with new) must impose significant downward

pressure on the opex needed in the next period yet this aspect has not been explicitly taken into account in the TND opex forecasts.

Further, CCP4(DH) notes that there is forecast capital expenditure of some $82m ($'17) for IT in the current period of which most is already committed. For an investment of this magnitude, CCP4(DH) would expect that there would have been substantial opex savings, perhaps of $15-20m pa[7], to justify such an expenditure. A benefit to consumers of this amount of IT capex is not reflected in the claimed opex although there has been some reduction against a forecast "business as usual" opex allowance when using the 2014/15 actual opex as a benchmark. However, CCP4(DH) does not consider that the only source of opex improvement would come from IT investment as benchmarking does highlight that TND does not exhibit the most efficient opex when compared to other DNSPs and that efficiencies from other sources than just IT should have been achieved.

4.2 Benchmarking

The benchmarking studies referred to in section 3 above suggest that TND is not the most efficient of the DNSPs in the NEM. While its more recent opex performance has elevated its position in the "standings" in opex partial factor productivity, it still has a way to go as is discussed in section 3 above. TND sits equal fourth out of 13 in the standings as at 2014 but this performance is still below that of what TND achieved in 2006 and implies that its most recent performance is "middle of the range".

Despite the fact that TND opex performance is still "middle of the range" its performance compared to AER and OTTER allowances shows that it regularly and significantly underspent on allowed opex yet still maintained reliability to the satisfaction of its customers.

This raises the question as to whether the opex performance for 2014/15 sets an efficient starting point for assessing the efficient opex allowance for the next period. While TND has forecast an opex allowance which is below in real terms the "benchmark" year used of 2014/15, it has drawn comparisons with that year to demonstrate that its forecast is more efficient in comparative terms.

CCP4(DH) notes the Huegin report included in the TND proposal (attachment TN075) on TND opex efficiency and its conclusions that (Huegin page 37)

> *"TasNetworks' distribution network operating expenditure appears to be comfortably within the bounds of what the current AER approach considers efficient at this stage."*

While CCP4(DH) is not as sanguine about TND's productivity as Huegin, it does note that TND itself questions whether it is at the efficient frontier. The fact that TND has

[7] Reflecting some 4-6 years simple payback

implemented its own decision to reduce its opex (ie increase its productivity) as detailed in its proposal, raises a concern about the effectiveness of the Huegin assessment of TND productivity being (Huegin page 3)

> *"... that [as]TasNetworks' current opex is below that predicted by the AER using the current approach, models and assumptions combined with our view of the underestimation of efficiency inherent in the assumptions leads us to conclude that within the current framework TasNetworks opex performance is within the frontier (top 5) set of networks."*

CCP4(DH) also highlights that assuming future opex is efficient based on historical data is only part of the story – there is a need to benchmark the forecast opex to identify if the claimed opex is also efficient. In this case, TND has clearly determined that its previous opex (benchmarked as supposedly efficient) was, if fact, not efficient and that it needed to be more efficient.

CCP4(DH) notes that reducing its current opex for the next period will take it closer to the efficient frontier.

4.3 TND approach to opex

CCP4(DH) is intrigued at the approach used by TND to set its opex. Starting with the 2014/15 base year, TND then follows the "traditional" approach to building up its forecast opex through the base-step-trend approach. Using this, TND identifies that it would have needed considerably more opex (see table 8.9 line 7) than it is seeking. TND then states that they are proposing productivity savings to effectively provide a constant level of opex in nominal terms with that incurred in 2014/15.

CCP4(DH) sees that the opex approach proposed reflects to a degree what is seen more widely in competitive capital intensive operations but it does not reflect that competitive industry has to reduce its opex each year in nominal terms. The TND concept also assumes that the actual opex in 2014/15 is efficient.

Because of the TND approach, CCP4(DH) does not see the necessity of carrying out a detailed assessment of the step changes claimed and trend approaches used as these are effectively "washed out" of the forecast opex through the proposed productivity gains needed to maintain the forecast opex constant in nominal terms.

Despite this, CCP4(DH) considers that a view on the step changes and trends should be provided and considers that the following are not step changes:

- Third party caused damage should not have been in the opex and should have been recovered from those causing the damage
- Additional repair costs due to premature failure of air break switches should not be at consumer cost as TND was responsible for selection of the equipment in the

first place; the subsequent attention to maintaining them in working condition would have been included in the base year opex

- Track maintenance for vegetation management access should already be in the opex already as a prudent operator would have already included such costs in the past. As the decision to increase such access is by TND and not a legislated change, this is not a step change
- While appropriate inspection of assets is expected of a prudent operator, a decision by TND to increase inspection is not a step change
- Low spans are not caused "overnight". While appropriate rectification of low spans is expected, a decision to increase the rate of such rectification is not a step change as TND has always had this responsibility. Further, elevation of low spans would be a continuing requirement and some work would be included in the base year opex.

CCP4(DH) also notes that the forecast growth factor is predominantly driven by increased customer numbers and CCP4(DH) view (see section 5.1) is that TND forecast growth in customer numbers is overstated; this also has implications for the increase in circuit length.

Overall, the growth factors and step changes are overstated.

4.4 CCP4(DH) conclusions on opex

The TND approach to setting opex (by holding opex in nominal terms based on the 2014/15 actual) is supported to a significant extent as this reflects what occurs in competitive industry.

The TND outcome is in stark contrast to what has been claimed by other DNSPs in the recent round of resets, where all other DNSPs have claimed increases in opex in real terms. CCP4(DH) notes that it considers that all other DNSPs could well follow the TND approach and this would lead to other DNSPs forecasting their opex closer to the efficient frontier.

Where CCP4(DH) has concerns with what TND proposes is that it is not convinced that 2014/15 opex is efficient to start with and the costed increases for step changes and growth (which are then effectively removed through the productivity adjustment) are, in the view of CCP4(DH), overstated. This raises the question as to what more productivity adjustment could have been included by TND if these growth and step increases were more appropriately costed.

Further, CCP4(DH) notes that TND has a track record of using less opex than it claims so there is a view that this opex claim could also be overstated. CCP4(DH) also notes that repex is forecast to be much higher than in the current and previous periods, and this should also provide downward pressure on the opex needed.

CCP4(DH) notes that the forecast opex for 2015/16 and 2016/17 will deliver further bonuses to TND through the EBSS which will offset some of the risk of TND not achieving its forecasts. CCP4(DH) provides further comment on this EBSS bonus in section 7.3 below.

On balance, CCP4(DH) considers that the proposed opex is acceptable, closer to the efficient frontier but still on the high side of that target although CCP4(DH) cannot identify by how much.

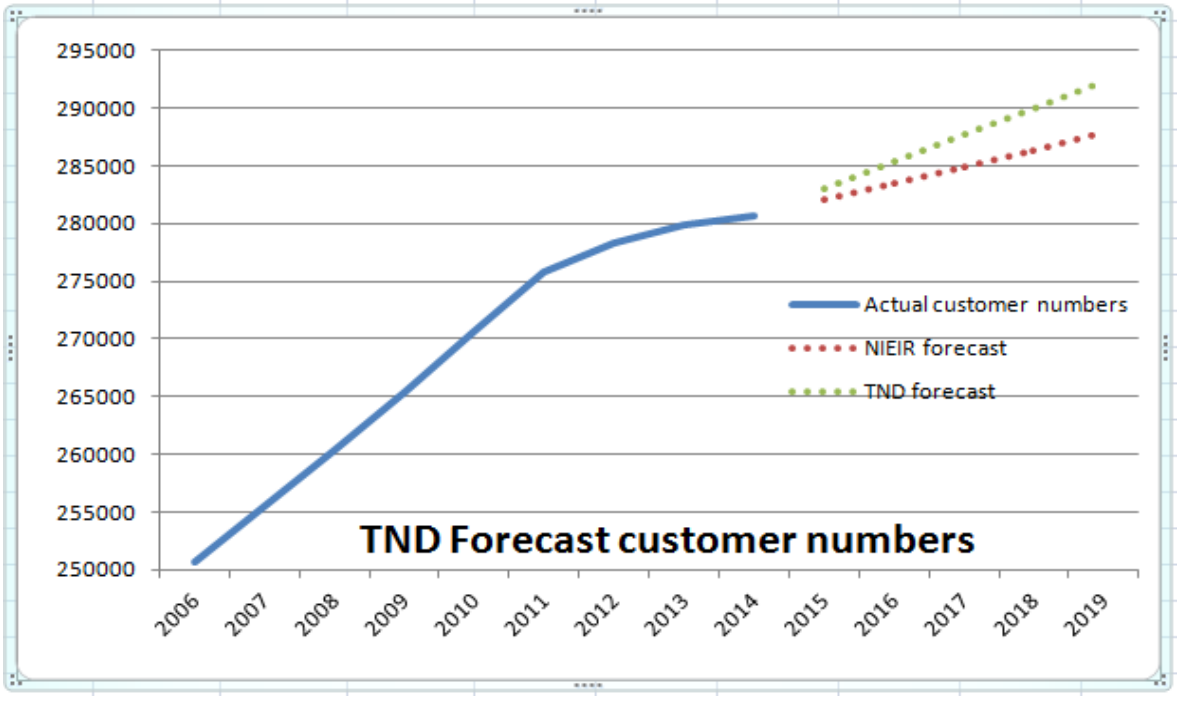
5. Forecasting – demand, customer numbers

This section covers forecasts by TND of customer numbers, peak energy demands, and total energy to be distributed in the coming regulatory period. These forecasts are important because they provide a basis for the forecasts of operating and capital expenditure, which are key components in the building block analysis used by the AER to set the DNSPs' efficient future revenue requirements. All other things being equal, over-forecasts of these numbers would result in a higher revenue requirement being determined by the AER than is appropriate.

Further, these forecasts are used directly to translate future revenue requirements into tariffs. Inaccuracies in forecasting customer numbers and total energy to be distributed for any given year will result in under- or over-recovery by the DNSP in that year against the determined revenue requirement for that year. Under a revenue cap, the amounts of any under- or over-recovery are carried over to following years, and the tariffs for those following years are adjusted accordingly. Ultimately, the impact of adjusted tariffs fall on consumers, who will end up paying different prices to those that had been anticipated in the AER's Final Determination price path.

5.1 Customer numbers

The chart below reflects the differences in view as to expected customer numbers for the next period. This shows a significant variation between TND forecasts and those of its consultant NIEIR.



Source: TND proposal

What is important to note is that there is a significant "tailing off" in increase in customer numbers after about 2011 to now. The NIEIR forecast more closely reflects a continuation of the trend since 2011 whereas the TND forecast indicates a return to the customer growth seen prior to 2011.

The impact of customer growth impacts both the capex for new connections and the amounts expected to be recovered from new connections. As the recovery of new connections is less than the cost to connect these new customers, the larger the numbers of new connections forecast, the greater the differential between cost and recovery, resulting in a larger contribution that existing customers must provide as part of the capex allowance.

As CCP4(DH) has already highlighted that it is concerned with the growth of the RAB, so ensuring the allowed capex is set at the most efficient level is very important.

CCP4(DH) considers that the recent trend (ie since 2011) is the most likely scenario for growth in new customers, and this should be used for the forecast 2 year period. The risk that this forecast is in error is modest as the forecast is for only 2 years and if the forecast is wrong it can be corrected when the review for a full 5 year period commences in the next year.

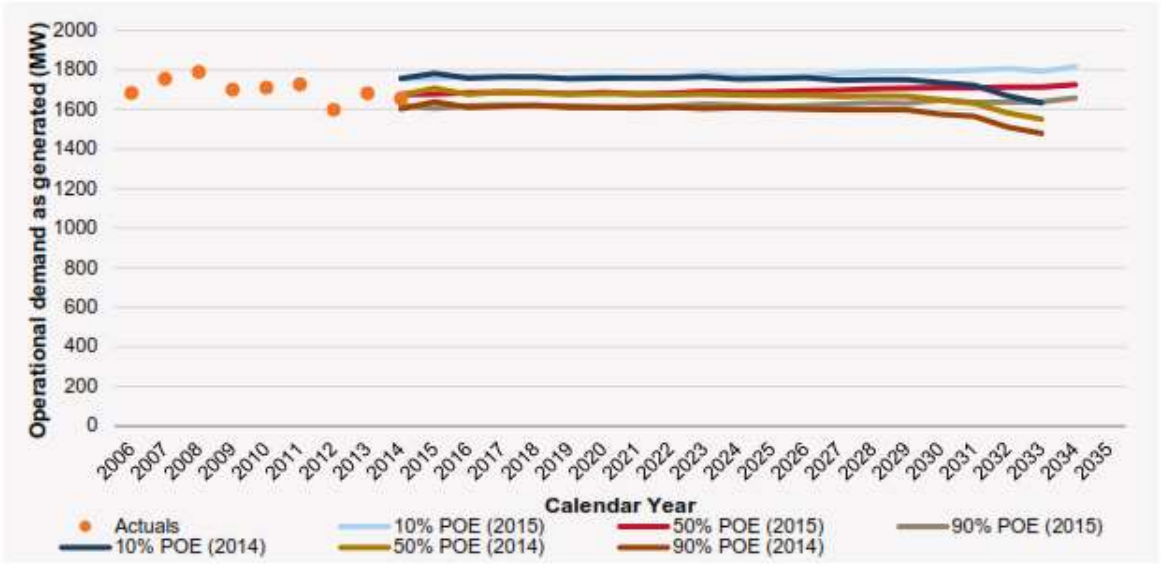
5.2 Energy peak demands

Another key driver of the cost of providing distribution network services is the maximum rate of flow of electricity, which must be accommodated at each point on the network. The larger the peak flow on a given part of that network, the larger the capacity of network assets must be at that location.

CCP4(DH) has examined three different views on the growth in demand for electricity – from TND, its consultant NIEIR and from the market operator AEMO. All provide a different view on the growth in demand.

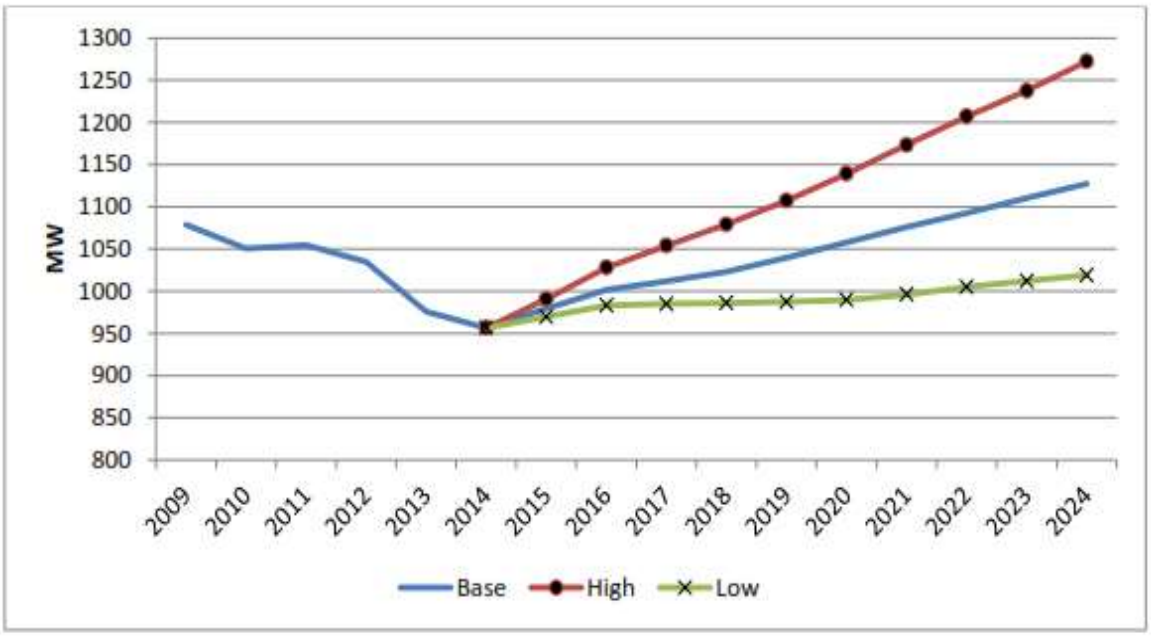
AEMO's forecast is the least specific to the TND network as it assesses the total demand in Tasmania, including the demand of the consumers direct connected to the transmission network. The AEMO forecast is shown on the chart below, sourced from the 2015 NEFR. This shows that the expected peak demand in Tasmania is unlikely to exceed the highest peak demand so far experienced in 2008, noting that Tasmania is winter peaking rather than summer peaking as experienced in all other regions in the NEM.

Figure 61 Winter 90%, 50% and 10% POE maximum demand forecasts for Tasmania



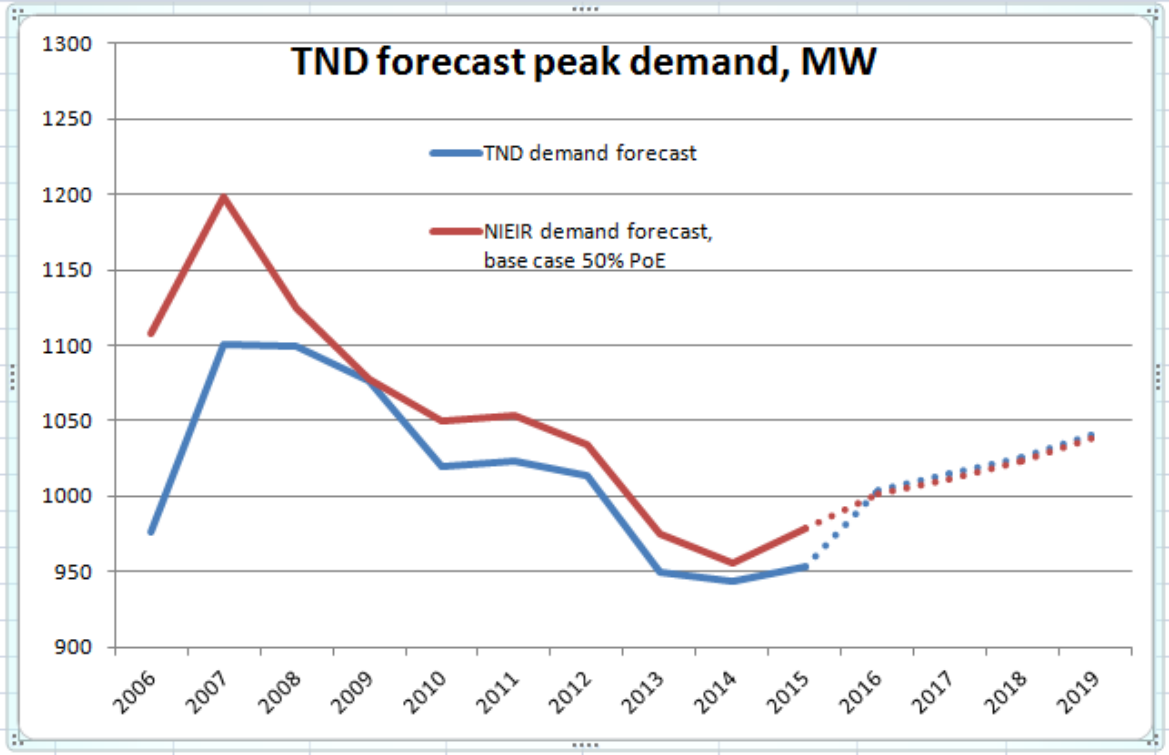
In contrast to the AEMO view that Tasmania wide demand will be constant, TND provides a view that demand will increase, as shown in the following chart

Figure 5-1: Actual and forecast Maximum Demand on the Tasmanian distribution network



However this forecast needs to be seen in context as it would appear from the data (starting in 2009 that there is likely to be an increase in peak demand which will exceed historic peak demands.

Included in the TND proposal are assessments of expected peak demand made by TND and its consultant NIEIR, and these forecasts (along with actuals[8] for the TND network back to 2006) are shown in the following chart. This shows that the longer term historic peak demand has reached between 1100 MW and 1200 MW depending on which set of data is used. Either way, the forecast peak demand is not likely to exceed historic peak demands until the middle of next decade, and well beyond the next 2 year period and even the regulatory period beyond that.



Source: TND proposal, RIN data

This assessment shows that there is some inconsistency between the actual peak demand (especially in 2006 and 2007) between the RIN data and NIEIR data. What is more important is that TND and NIEIR forecasts show an increase of about 6% over the four year period to the end of the 2 year regulatory period. Even this relatively low expected increase in peak demand is higher than implied by the increase in customer numbers. In this regard, CCP4(DH) points out that the AMI data analysed by Ausnet Services in Victoria shows the usage of electricity in new homes is lower than in existing residences and that usage in existing residences has fallen over time. This means that extrapolating new connections based on historic residential usage is likely to overstate expected growth in peak demand.

Because of this, CCP4(DH) considers that a close examination of the peak demand forecasts is warranted due to the inconsistencies, especially as growth in peak demand will depend, among other things, on the tariff structures chosen by TND for the

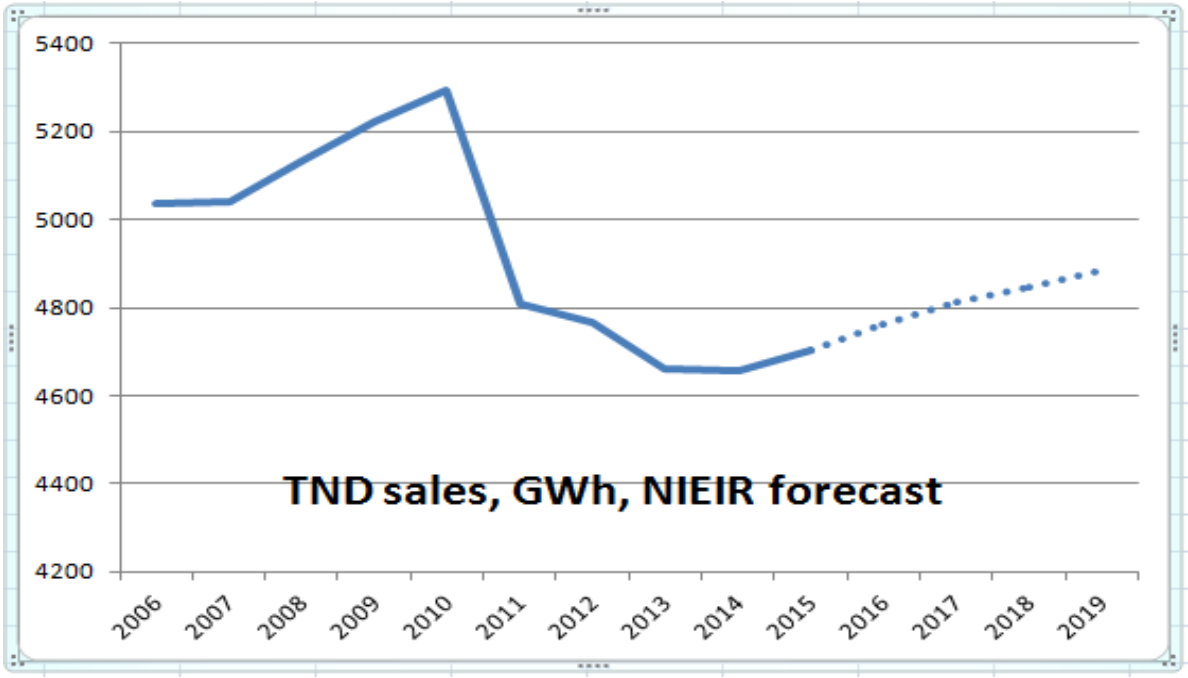
[8] TND actual peak demand is drawn from TND RIN data and the NIEIR forecasts from the proposal documentation.

forthcoming period as a move to the greater use of peak demand tariffs could result in moderating peak demand.

Overall, CCP4(DH) considers that the forecasts of peak demand imply that there is little or no need for reinforcement of the existing network to accommodate the peak demand forecast, especially as the peaks forecast are less than the peak demands already accommodated in the past.

5.3 Total energy

While forecasts for energy sold have little bearing on the proposal due to the use of a revenue cap to the allowable revenue, they are useful to provide support for other forecasts. TND consultant NIEIR has provided a forecast of energy sold through the TND network and this is shown in the following chart.



Source: TND proposal

The expected sales are forecast to be lower than in the past and, in keeping with forecast consumption in other regions, there has been a marked reduction in consumption since 2010. The forecast reflects that consumption is expected to continue to be lower than recorded in the past, although, in keeping with increasing customer numbers and an expectation of a small increase in peak demand (NIEIR forecast) there is a forecast small increase in consumption.

This modest increase in forecast consumption impacts on the notional tariff referred to in section 1.1 above.

6. Capital expenditure (capex)

As noted in section 3 above, CCP4(DH) is very concerned at the continuing growth in the RAB in relative terms and therefore great care is needed to ensure that the capex allowed is efficient and does not result in the RAB further increasing.

6.1 General comments on capex

6.1.1 Category based costing

One of the features of the category analysis element of the Better Regulation program was to provide efficient valuations for carrying out various elements of the capex programs. Of concern are the observations made by DNSPs generally (and implied by TND through its Huegin report) that the category analysis benchmarking has significant issues that limits its usefulness. For example, CCP4(DH) is aware of the observation of CCP3 that unit costs vary considerably between DNSPs and notes that this has been attributed to the way the data and the costs are reported, environmental differences and whether the costs are representative and based on an appropriate sample size.

CCP4(DH) has no comment on the extent of this concern or whether it influences the AER models which will be used for assessing TND capex but CCP4(DH) considers that as the category analysis is a key element for providing useful input into capex forecasting and benchmarking between DNSPs, the issue needs to be investigated.

6.1.2 Environmental impact on category costs

As noted above, there is concern generally exhibited among DNSPs as to the value of the category analysis work undertaken by the AER and its application to the DNSP activities. DNSPs each have stated that their environment is unique and should have higher costs allowed.

CCP4(DH) is aware of recent work in the UK by Ofgem that implies that the costs between DNSPs because of environmental differences are not as great as is asserted. This view is supported by the work of Economic Insights during the Better Regulation process where the cost impacts from environmental differences were discussed at length.

6.1.3 Capitalisation policies

CCP4(DH) has noted that there are apparently different approaches taken by each DNSP with regard to capitalisation policies and if this is the case, this will impact the trend analyses used for assessing forecast capex.

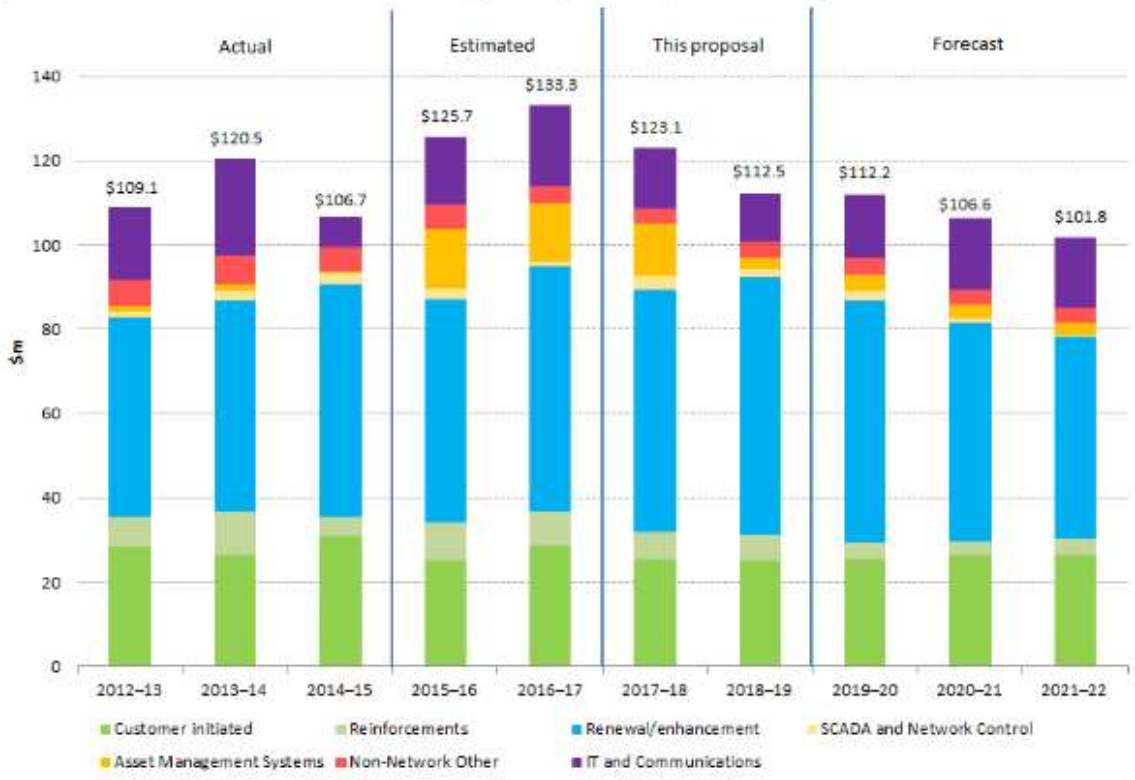
CCP4(DH) considers that these policies need to be formalised for regulatory purposes and made consistent across all DNSPs so that appropriate comparisons can be made.

CCP4(DH) relies on the AER to ensure that capitalisation policies between DNSPs and between regulatory periods for the same DNSP do not impact trend analyses as inconsistencies make difficult making historical trend comparisons and the challenge of benchmarking both opex and capex.

6.2 TND capex overview

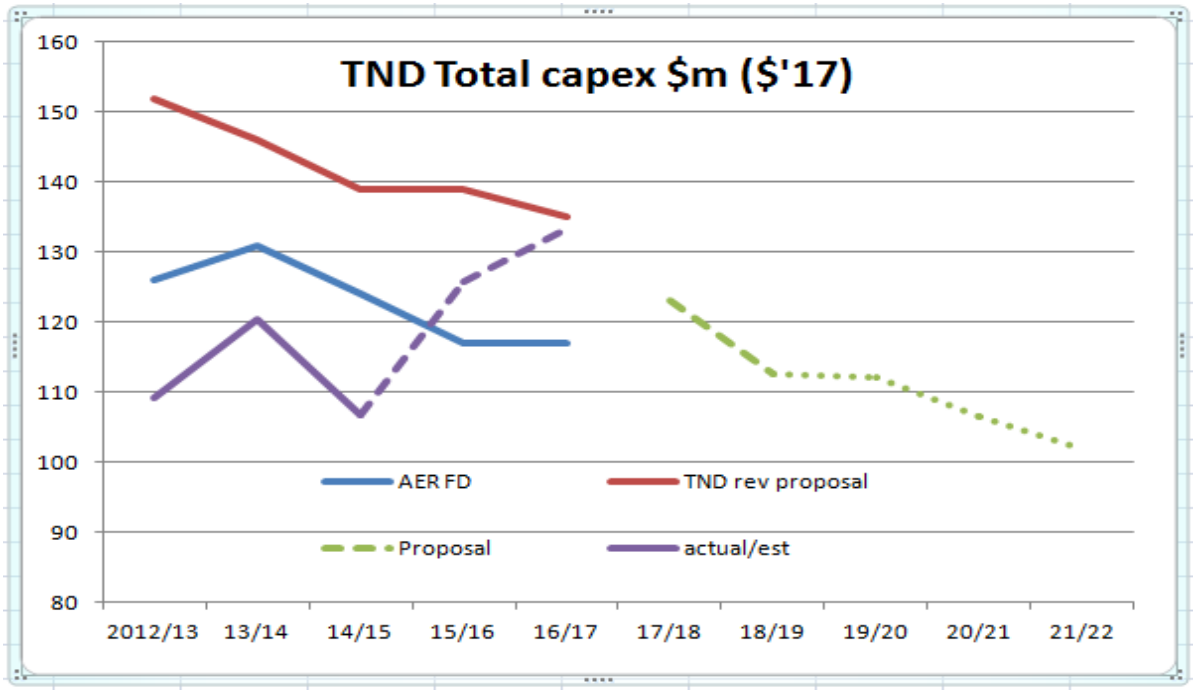
TND has proposed increasing its total capex needs for the next regulatory period and the three years after that from the current $106.7m actually used in 2014/15. The trend in total capex is shown in the following graphic.

Figure 7-4: Overview of forecast and actual capital expenditure (June 2017 $m)



What concerns CCP4(DH) is that TND is forecasting a significant increase in capex for the last two years of the current period (ie 2015/16 and 2016/2017) compared to the capex actually used in the first 3 years of the current period (an average of $112m pa) to $125.7m and $138.3m respectively. The comparison for the next two year regulatory period shows forecasts which exceed the average capex used in the first 3 years of the current regulatory period. This apparent back loading of capex in the current period coupled to under-running the allowed capex for the current period, has resulted in TND generating a considerable financial benefit.

The following chart shows the overall trend of total capex for the current period, the next 2 year period and the subsequent three years.



Source: AER FD 2012, Aurora revised applic, TND proposal, CCP4(DH) analysis

CCP4(DH) makes a number of observations regarding the historic capex.

- The revised proposal in 2012 greatly overstated the actual capex needed, indicating that TND (as Aurora) was overstating its needs.
- The AER discounted the allowed capex significantly but even so, actual capex to date is well below the AER allowance for the same period
- TND is forecasting a "back loading" of its current period capex but even so still total capex will be less than the AER allowance. By back loading the capex, TND has garnered a significant financial benefit.
- The step increase in capex for the 2 years 2015 to 2017 is mainly due to increased repex, asset management systems and IT expenditure
- The average capex for the 2 years 2017-2019 is higher than the average for the three years of actual data for this period, signalling that TND is increasing its capex.

At a high level, CCP4(DH) considers that the forecast capex for the next 2 year regulatory period appears to be too high, especially when considering the significant step up on capex estimated for the last two years of the current period when the actual capex so far has been so low.

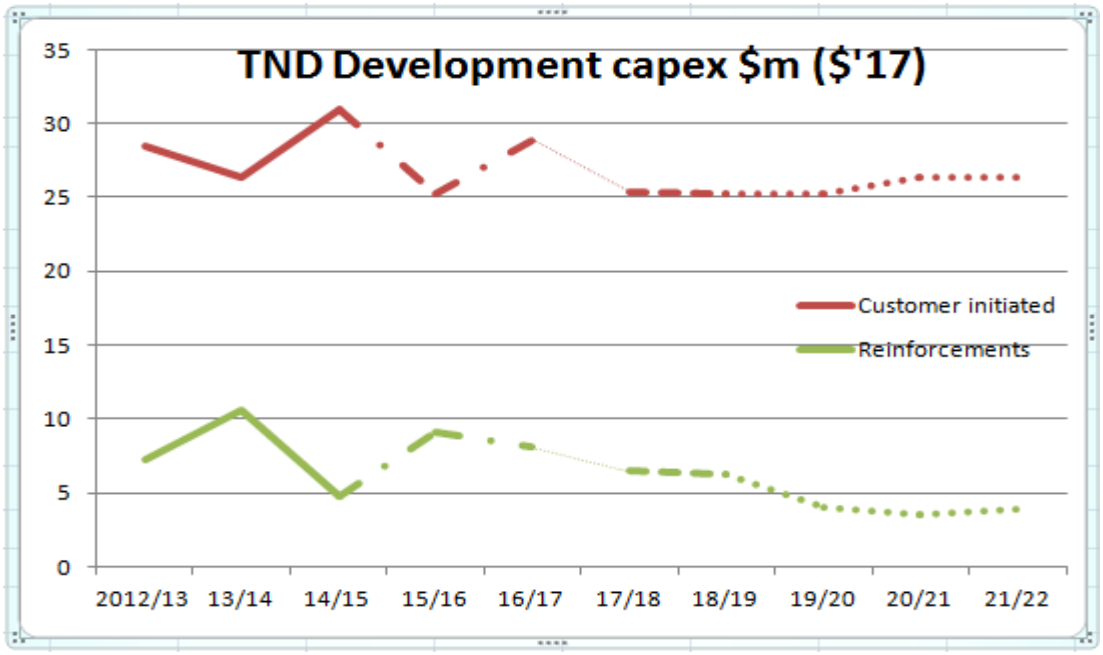
In order to assess where the areas for excessive capex might be CCP4(DH) has looked at augex, repex and IT capex particularly as it appears that this is where the excessive amount of capex is forecast.

CCP4(DH) notes that TND has benchmarked its capex program and concludes that its unique features are inconsistent with the way other DNSPs operate (eg in relation to step down terminal stations) and this at least in part explains why TND asset benchmarking implies TND has very low asset productivity. While CCP4(DH) accepts that this is the case, it is also important to note that the benchmarking shows that TND had much higher asset productivity in the past (eg as in 2006).

CCP4(DH) also considers that while historic benchmarking is important, it is important to benchmark the forecast capex to assess whether the forecasts deliver the same outcome as the historical benchmarks.

6.3 Augex

Augex comprises two main elements – customer initiated and reinforcement capex. The following chart shows these two elements



Source: TND proposal

Reinforcement capex is forecast to remain virtually constant for the next 2 year period. CCP4(DH) finds this is inconsistent with the expectation of no increases in peak demands above that already experienced (see section 5.2 above).

CCP4(DH) would expect on this basis that there would be no need for reinforcement capex as forecast peak demands are lower than those experienced in the past. While CCP4(DH) considers that there is a likely increase in customer connections, the data from

Victoria (from the AMI program) indicates that forecasts of peak demand based on new connections are most likely overstated as new connections have a lower demand than existing residences.

Customer initiated capex is essentially based on new customers connecting to the network. As discussed in section 5.1 above, CCP4(DH) considers that TND has over estimated the number of new customers expected to be added to the network. CCP4(DH) notes that in the regulatory period before the current period, TND was adding some 5000 new customers a year and the customer connection capex averaged $45m pa. In the current period, there are being added new customers at a quarter of this rate, yet the costs were about two thirds previous annual cost. This seems excessive.

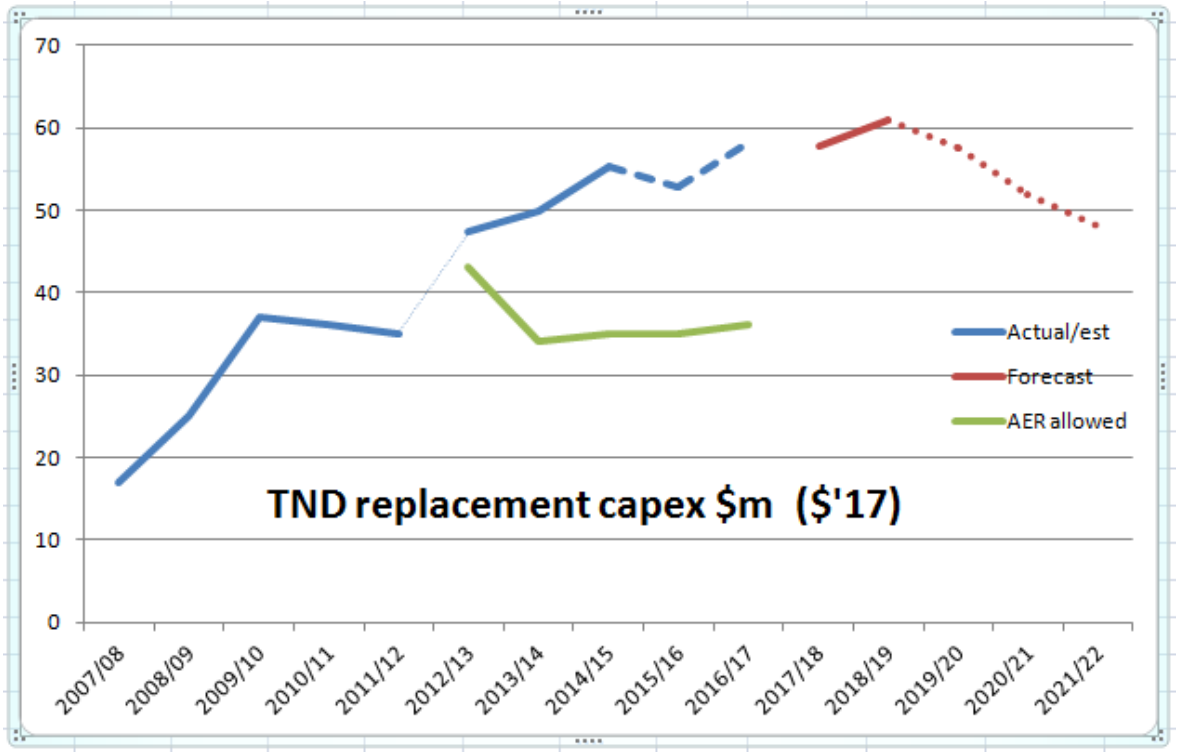
As the TND forecasts for new connections has used the high rate of new connections seen prior to 2011, CCP4(DH) considers that the forecasts for customer initiated capex are too high and the recent historic rate needs to be used to forecast the expected growth in peak demand from new residences.

CCP4(DH) also notes that the utilisation of the TND assets is falling considerably (see section 3.3 above) and this implies that there is increasing spare capacity in the network. CCP4(DH) considers that this spare capacity reinforces a view there is little need for any augmentation of the network. It further indicates that TND should be looking to redeploy underutilised assets into any areas of growth in demand.

CCP4(DH) considers that the data supports a view that the forecast augex is probably too high

6.4 Repex

The following chart reflects the amounts of repex used in the past and forecast for the next period. An estimate of the AER allowance for the current period is also included.



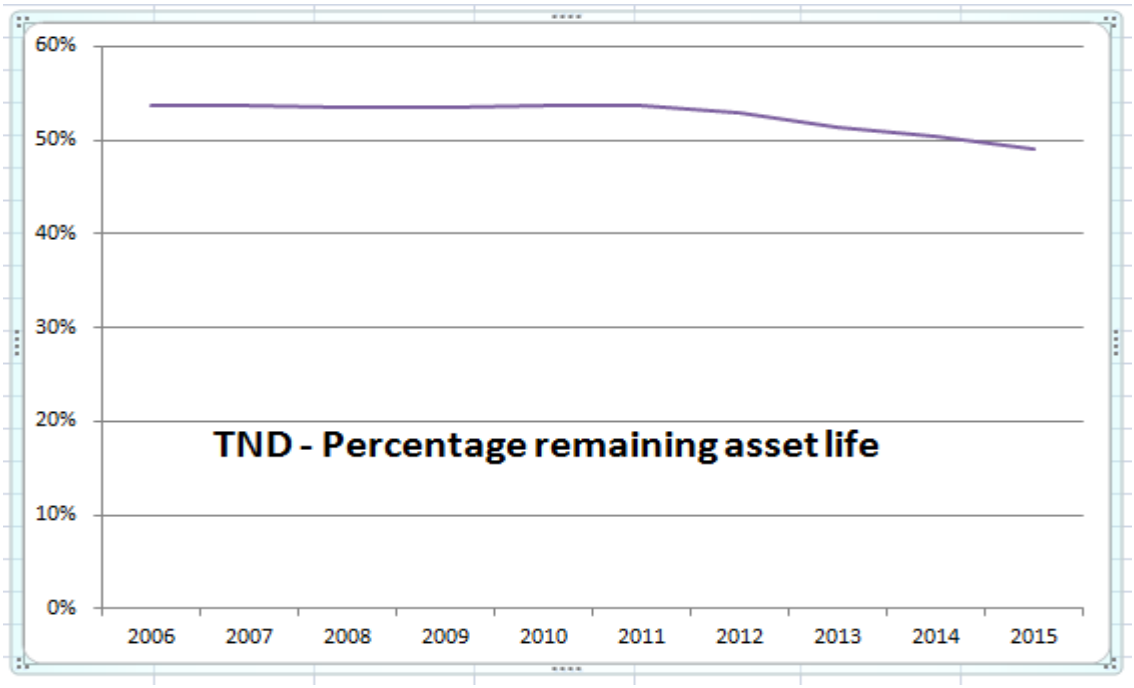
Source: TND proposal, Aurora revised applic 2012, AER FD 2012

CCP4(DH) has made an effort to assess the AER allowance for the repex for the current period[9]. While this is only an estimate, what the chart shows is that TND has overspent on repex (countering to a significant extent the under-run on augex) even though the repex allowance by the AER reflected the high end of historic allowances.

On a long term trend basis, CCP4(DH) considers that the forecast repex is significantly higher than it needs to be and that repex allowed for the current period would retain the average age of the assets at the current acceptable level. CCP4(DH) also notes that the repex forecast for the 2 year regulatory period is much higher than in the 3 years following. This "front end loading" of repex is concerning as generally in a distribution network, repex can be considered to be a relatively consistent recurrent year by year expenditure, and therefore should be relatively smooth and predictable.

A review of the remaining asset lives of the TND assets (EB RIN data page 4) highlights that the remaining lives of the TND assets compared to the expected lives shows that the historic repex has been sufficient to maintain the average life of assets at about 50% which is an appropriate level. This is shown in the following chart where assets have been weighted in proportion to their RAB values in each year.

[9] The structure of the AER FD and the allocation of repex in the Aurora revised application is different to that in the TND application so assumptions have been made to derive an equivalent capex



Source: Aurora/TND Economic benchmarking RIN, CCP4(DH) analysis

This assessment is reinforced when reviewing table 10.1 in the TND proposal which shows that by 2017 the remaining asset lives of assets will generally exceed 50% of the standard lives used for depreciation purposes.

Table 10-1: Standard and remaining asset lives as at 1 July 2017

Asset category	Standard life (years)	Remaining life (years)
Overhead subtransmission lines (urban)	50	27.2
Underground subtransmission lines (urban)	60	33.3
Urban zone substations	40	28.0
Rural zone substations	40	29.3
SCADA	10	9.1
Distribution switching stations (ground)	40	28.0
Overhead high voltage lines urban	35	22.0
Overhead high voltage lines rural	35	18.1
Voltage regulators on distribution feeders	40	21.4
Underground high voltage lines	60	38.4
Underground high voltage lines SWER	60	46.4
Distribution substations HV (pole)	40	31.4
Distribution substations HV (ground)	40	18.1
Distribution substations LV (pole)	40	20.0
Distribution substations LV (ground)	40	22.0
Overhead low voltage lines underbuilt urban	35	22.5
Overhead low voltage lines underbuilt rural	35	15.1
Overhead low voltage lines urban	35	15.4
Overhead low voltage lines rural	35	23.7
Underground low voltage lines	60	35.3
Underground low voltage common trench	60	43.1
HVST service connections	40	0.0
HV service connections	40	25.2
HV metering CA service connections	40	6.5
HV/LV service connections	40	24.3
Business LV service connections	35	10.6
Business LV metering CA service connections	25	4.1
Domestic LV service connections	35	20.0
Domestic LV metering CA service connections	20	18.1
Motor vehicles	6	3.6
Minor assets	5	3.6
Non-system property	40	13.1
NEM assets	5	2.0
Business Management Systems	10	N/A

The other driver for assessment of repex is to review the performance of the network in terms of reliability. As highlighted in section 3.3, overall reliability of the networks has been maintained even with lower levels of repex than are proposed for the balance of the current period and forecast for the next; this implies there is no need to increase repex above long term historic levels.

CCP4(DH) is aware that there is a general "push" by networks to increase the amounts of asset replacement in the current climate of low or zero growth in the networks and low costs of capital, but it needs to be remembered that, overall, regulatory assets bases (RABs), including that of TND, are increasing in relative measures. To unnecessarily increase capex merely increases the financial burden that will have to be carried by future consumers.

Overall, CCP4(DH) is of the view that the repex claimed is too high and probably only needs to be $30-$40m pa as allowed by the AER in its 2012 assessment for the current period.

6.5 IT, AMS and communications

CCP4(DH) observes that although it is aware that software is frequently updated every 2-3 years, it questions whether there is a need to continually update network systems – especially those that have demonstrated they are still capable of providing the services needed. Whilst software might be upgraded because it provides new features, the fundamental business systems do not vary significantly over time – only the ability to do more is available with the software upgrades. CCP4(DH) questions the value provided to consumers from the frequent software upgrades that the NSPs seek to incorporate at each reset.

CCP4(DH) is very concerned about the estimated and forecast expenditure by TND on IT systems. CCP4(DH) points out that the costs are very high and the likely benefits to consumers modest. As noted in section 8.1, these IT systems are to be depreciated in 10 years, so there is a significant cost impact on consumers of higher costs and fast depreciation which appears to give little benefit to consumers.

CCP4(DH) has noted that other CCP subgroups have highlighted a concern that the capex claims for IT and management systems increase every regulatory reset and there appears to be little benefit generated for consumers in terms of reduced opex or capex elsewhere in the allowances – in fact it has been observed that the introduction of such new IT has resulted in arguments that more capex for other areas has been required, and even increases in opex have been sought to provide additional operational support for the new systems.

CCP4(DH) provides a summary view of the total proposed TND IT and AMS expenditure.

$m ($'17)	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22
SCADA	1.1	2.4	2.5	2.6	1	3.2	2	2.2	1	0.5
FRC	10.3	15.4								
Infrastructure & Systems	6.9	7.3	7.1	9.2	5.1	5.8	11.7	15.3	17	16.5
IT & Comms (Ajilis)				6.6	6.6	4.3				
Metering rule change					7.5	4.1				
AMIS and GIS	1.5	1.6	0.4	3.4	3.2	5.3	2.8	3.8	3.1	2.9
AMS (Ajilis)					10.8	10.8	7			
Total	19.8	26.7	10	21.8	34.2	33.5	23.5	21.3	21.1	19.9

Source: TND proposal

CCP4(DH) notes that the expenditure on total IT aspects averages about $10m pa for the first three years of the current period when the impact of the "one off" program for FRC is excluded. This expenditure of ~$10m pa is consistent with the amounts sought by Aurora for the current period in its revised application submitted in 2012 and accepted by the AER in its Final Decision. It is also consistent (although a little more) with the

expenditure on IT related capex incurred by Aurora in the 2007/8-2011/12 period[10]. It would seem from this that perhaps about $10m pa is typically the total IT capex that TND has incurred over the longer term and reflects the underlying need.

CCP4(DH) notes that the planned capex for AMIS and GIS is forecast to rise from an average of $1.5-2m pa actual to peak at the end of the current period and in the next 2 year period and then fall to an average of about $3m pa. Firstly there is no explanation as to what the high expenditure in the first year of the 2 year period is for and why the long term recurrent costs have doubled from the historic costs. There needs to be a detailed justification for the value **to consumers** of the investment and why and how the increase in the recurrent capex is delivering value to consumers to justify the increased costs.

CCP4(DH) also notes that the Infrastructure and Systems capex recurrent capex has more than doubled from the average of the current period into the next and subsequent periods. Again, there needs to be justification and a clear demonstration of the value to consumers of this significant step increase in capex.

It is also clear that TND has commenced implementing its Ajilis AMS program and that this was commenced within the existing capex allowance for the current period. CCP4(DH) notes that Aurora did not forecast the need for this IT/AMS program in its application for a revenue reset in 2011 and so there has not been provided to consumers (or probably the AER) a justification for the decision to implement this new program – such a justification would explain why the capex will deliver savings to consumers that would justify the expense.

While CCP4(DH) is not convinced that this decision by TND to introduce Ajilis (or a similar program) is demonstrably efficient from a consumer viewpoint (ie that the investment that consumers will fund will deliver consumers a net benefit over time) it also recognises that the program has already commenced and should be completed.

Overall, CCP4(DH) accepts with reluctance that the Ajilis IT program should continue but considers the AER must seek from TND the business case **in terms of consumer benefit** why the AER should allow the Ajilis project to be implemented and added to the RAB. CCP4(DH) notes that the depreciation schedule implies that the Ajilis program will be fully depreciated after 10 years so any consumer benefit should be assessed over this period as presumably TND will seek a similar amount of capex in 10 years time to replace the hardware and software associated with this program.

6.6 Other non-network capex

CCP4(DH) has no specific comment about with regard to other non-network capex

[10] The actual expenditure on IT aspects for the 2007/08-2011/12 period is difficult to identify from the Aurora application made in 2011 which is where this information on actual expenditure was drawn

6.7 Conclusions on capex

CCP4(DH) notes that TND opines that its capex program will enable it (page 88)

- *"to meet the expected demand for our services;*
- *to comply with our safety and regulatory objectives;*
- *to maintain network reliability; and*
- *to maintain the safety of our distribution network."*

CCP4(DH) comments that TND is already achieving these outcomes with the historic levels of capex and considers that considerably less capex would achieve the same outcomes.

CCP4(DH) also comments that it is concerned that TND has overstated its capex needs and therefore it will be able to generate bonuses under the STPIS and CESS incentives through improved reliability through excessive repex and under-running capex more generally.

As the capex program will result in an increased RAB in relative terms, there is a need to ensure that the proposed capex delivers long term benefits to consumers which are funding this capex. CCP4(DH) is aware that competitive industry is already showing that capital investment is constrained as investment is not occurring, CCP4(DH) observes that a similar and significant restraint on TND capex is required.

7. Incentive schemes

CCP4(DH) sees that the incentive schemes especially those applying to the reliability (service target performance incentive scheme – STPIS), opex (efficiency Benefit sharing scheme – EBSS) and capex (capital expenditure sharing scheme – CESS) provide an inter-related suite of incentives. This means that a change to any one of them has the potential to cause a change in the power of the incentive and change the inherent relationship that is a core element of the schemes.

As a matter of principle, CCP4(DH) does not consider that any element of the three schemes should be varied from what is detailed in the guidelines detailing the incentives.

TND suggests variations to the guidelines for the various incentive schemes, with most of the variations applying to the EBSS and STPIS.

The exclusions for the EBSS proposed by TND are those that already are applied to the current EBSS. While CCP4(DH) accepts that these exclusions are consistent with the current period, CCP4(DH) is aware that the AER has since moved to exclude as few limitations to the assessments of inputs as possible in its decisions. CCP4(DH) supports this as consumers experience total costs and reliability as a package, uninfluenced by the network's experiences. Further, as noted above, CCP4(DH) sees that the incentives need to be seen as a package.

On this basis, CCP3 considers that no exclusions should be made to the approach used by the AER in its guidelines as this will change the balance of the incentives.

7.1 VCR change impact on STPIS

It has been suggested that the recent change to the Value of Customer Reliability (VCR) developed by AEMO, will impact on the reliability provided by the DNSPs as it will result in deferments of augmentation and replacement projects. CCP4(DH) agrees that this will be a natural outcome as VCR is a core element used in the probabilistic calculation of the need for capex. Over time, a lower VCR will impact network reliability.

Equally, CCP4(DH) considers that the impact of changing VCR will be minimal in the short term as the bulk of assets providing the reliability were implemented under the higher values of VCR used in the past, along with deterministic reliability settings used before probabilistic tools were used. Overall, reliability across the TND network should be maintained despite a lower VCR because the decisions for historic investments which comprise the vast majority of the network assets were made using higher standards. As the STPIS reflects historic performance, the impact of the slight deferrals that will now apply through the use of a lower VCR will change over time to reflect the outcomes of using a lower VCR.

CCP4(DH) does not consider that the approach to setting reliability levels for the STPIS incentive need to be changed as a result of the lower VCR.

7.2 STPIS

TND proposes that the STPIS should be limited to +/- 2.5% of revenue rather than +/- 5% used in the AER guideline. CCP4(DH) has been consistent in its view that a reduction in the revenue at risk under the SPIS must be kept consistent with the penalty/bonus arrangements applying across the suite of incentive schemes. To reduce the STPIS amount at risk will change the balance of the incentives.

TND comments that a lower amount at risk is beneficial to its customers on two counts

1. It reduces price volatility and
2. It does not reflect consumer wishes that there be no incentive to increase reliability as they do not seek to pay for increased reliability.

CCP4(DH) comments that there is already significant volatility in pricing due to the application of a revenue cap (which adjusts prices annually to balance the allowed revenue) and due to the potential of the cost of debt varying each year as the annual cost of debt rate tracks the market rather than being fixed for a 5 year period as in the past. On this basis, CCP4(DH) does not consider the argument for greater price stability reflects the reality of what will occur due to other changes already implemented.

The argument that having a higher level of revenue at risk will incentivise improved reliability and therefore there is an implication that consumers will pay for increased reliability which they have expressly stated they do not want. While there is merit in the observation, CCP4(DH) observes that the STPIS is bidirectional in that it incentivises both improved reliability but also penalises reduced reliability. CCP4(DH) does not accept that there should be a lesser penalty for reduced reliability as consumers have also expressly staed they do not want lower reliability even if this is accompanied by a lower price.

On balance, CCP4(DH) does not support the TND proposal that the revenue at risk should be reduced.

7.3 EBSS

CCP4(DH) notes that in the last three years of the current period, actual opex will significantly under-run the allowed opex. As a result, TND expects that the EBSS will provide a significant bonus which has to be added to the allowed revenue in the future – in fact this bonus adds some 10% to the allowed revenue in the 2 years of the next regulatory period.

CCP4(DH) finds that a bonus of this magnitude highlights that the AER allowance for opex in the current period was grossly overstated.

As noted above in section 7.2, TND considers that the STPIS should be limited to +/- 2.5% of revenue as a tool to limit price volatility. Further, TND has stated that it is driving improved efficiency to reduce prices that consumers will pay. Despite this rhetoric, TND has not raised any concern that the EBSS will increase the allowed revenue by 10%. That a bonus of this magnitude can occur and still TND considers that it is legitimate to carry forward this amount raises the question as to why TND considers that it should include this amount in its allowed revenue while stating that it is actively seeking to reduce consumer costs as was revealed during its consumer engagement. CCP4(DH) considers that TND should review whether it should carry forward this EBSS bonus with a view to relinquishing some or all of the bonus in the interests of its customers on the basis of its consumer engagement.

While CCP4(DH) recognises that the AER EBSS guideline permits this carry forward, CCP4(DH) considers that the AER needs to much more closely review the allowed opex to prevent a similar occurrence at this and the next review.

7.4 DMIA

CCP4(DH) also has concerns about the claims for demand management incentive schemes (DMIS). As the scheme operates for revenue capped DNSPs, the AER determines an allowance (the DMIA) for DNSPs to devote to examining options for increased demand management and demand side participation.

CCP4(DH) has noted that there is a concern among consumers that the amounts allowed for the DMIA are significant when assessed in aggregate across all of the DNSPs in the NEM. With this in mind, CCP4(DH) raises questions as to what this allowance is to achieve overall, to what extent the programs are managed between DNSPs to prevent duplication and whether there have been cost benefit analyses undertaken to ensure that the maximum value is achieved for the investments made using consumer contributions.

CCP4(DH) notes that currently TND receives $380,000 pa for the DMIA and proposes that this be increased to $400,000 pa. Bearing in mind the concerns above about the DMIA across the NEM, CCP4(DH) considers that the amount claimed has to be justified in more detail, and that there must be an accounting to demonstrate that the projects proposed are not being duplicated by other DNSPs. In this regard, CCP4(DH) notes that there are and have been in the past many demand management, power factor correction, experimental tariffs to lop peak demand and energy storage trials being undertaken by other DNSPs and CCP4(DH) queries whether the repeating of similar trials in Tasmania is warranted.

8. Weighted average cost of capital

CCP4(DH) notes that:

- The rate of return allowance is a contributor to some 50 per cent of TND total cost base. Decisions on the rate of return therefore have very significant impacts on prices to consumers and on investment incentives for the DNSPs;
- The assessment of the rate of return has long been the area of greatest dispute between the regulator and the various network service providers (NSPs);
- The amendments to the National Electricity Rules (NER) and the National Gas Rules (NGR) in late 2012 made very substantial changes to how the rate of return should be determined, with a focus on objectives, principles and criteria rather than prescriptive requirements while broadening the scope for the AER to use its judgement in making its decision in the long-term interests of consumers;
- After some 12 months of consultation, the AER published a Rate of Return Guideline (as required under the amended rules) in late 2013. The Guideline was designed to provide some certainty and transparency to all stakeholders including the NSPs regarding the AER's intended approach to estimating an efficient rate of return. However, although TND has accepted most of the guideline, it has not accepted the value for gamma. TND also reserves its position on WACC so that it can benefit from the final decisions of the Australian Competition Tribunal (ACT) after the appeals by the NSW distribution networks;
- The rule changes have now been tested in the ACT and the AER approach to return on equity has been upheld, although the return on debt has been changed and the AER approach to gamma has been overturned.
- CCP4(DH) is now aware that the AER has appealed the ACT decisions and it is unlikely that there will be a decision on the AER appeal before TND has to submit its revised proposal.

CCP4(DH) also notes the concern of consumers about the decisions of many DNSPs to reject the AER guideline, with the express goal of increasing their allowed revenues. That TND has generally accepted the AER guideline is recognised, although this TND decision seeks the benefit of any decision from the current appeal process which will increase its revenue.

CCP4(DH) considers that TND should have applied the AER guideline in its entirety (just as did Transend and TransGrid) without holding open the right to apply the benefits of the appeal process. CCP4(DH) is concerned at the TND attitude in regard to the AER guideline. TND has stated that it seeks to meet its customers' need for lower costs (with reliability maintained at current levels) yet it has indicated that, despite an acceptance of the AER guideline as it is, it wants any additional revenue that might come as a result of the NSW

networks' appeal process. CCP4(DH) considers that TND should have either accepted the AER guideline or claimed for the changes that it considers it should receive and costed these into its proposal. To provide a proposal which is based on the AER guideline provides TND customers with a false expectation which may come to naught. For example, if the NSW networks' appeal is ultimately successful, Tasmanian consumers will not see a reduction in the TND revenue allowance and so the fall in prices forecast by TND will not eventuate, despite the fact that TND has been headlining that there will be lower prices – this assessment is reflected in section 1.1 above.

While CCP4(DH) accepts that the AER guideline should be used to set the rate of return, CCP4(DH) recognises that the guideline is significantly conservative with the point estimates for the inputs it uses in its model. CCP4(DH) accepts that some conservatism is appropriate but questions its extent, noting that each element of conservatism is both additive to and, in some cases, compounding the overall level of conservatism in the final allowance. For example:

- Analysis of the investment in TND by its shareholder shows that its equity is about 30%, yet the AER guideline assumes that equity is 40%. As the return on equity is larger than the return on debt, a low value for equity increases the overall rate of return
- The AER guideline cites that the market risk premium should be 6.50% and equity beta 0.7, yet both of these values are recognised by the AER to be in the high end range. When two conservative values are multiplied, the outturn amount is even more conservative than either of the two inputs. This increases the return on equity
- The level of gearing in the AER guideline is at a level where "real world" cash flow secure businesses are able to acquire debt at higher level than that assumed (BBB+)[11]. Using a lower credit rating increases the return on debt allowance
- All debt is assumed to come from corporate bonds, yet these provide debt at higher costs than other forms of debt used by the networks.

CCP4(DH) notes that TND has sought for gamma to be 0.25 rather than the AER guideline value of 0.50 or even the more recent decision of the AER to reduce gamma to 0.4. CCP4(DH) also notes that the ACT decision for the NSW DNSPs (which has been appealed) sets gamma at 0.25.

CCP4(DH) considers that TND should have applied the AER guideline in respect of gamma, especially as gamma only has value where there are shareholders subject to the Commonwealth tax on business profits. As TND is not subject to this tax, setting gamma at a level lower than unity merely increases the revenue to TND with little legitimate basis

[11] For example, Ausnet Services has a gearing close to 70% debt but is able to acquire debt at A or A- credit rating.

and therefore this is an unnecessary cost that that is being transferred to consumers. By seeking a value for gamma lower than unity, TND has not applied the concept that it will reduce the costs to consumers by eliminating unnecessary costs.

8.1 Depreciation

Regulatory depreciation is the third largest element of the TND building block approach to setting an allowable revenue for the next regulatory period. CCP4(DH) notes that the allowance claimed for regulatory depreciation is forecast to be larger in the next period than was experienced in previous periods. This is probably more related to the actual growth on the RAB over time than due to any change in the rates of depreciation used as well as to lower inflation currently occurring (and forecast to continue). CCP4(DH) notes that TND is applying the same rates of deprecation that it has in the past but has added a new category for Business Management Systems so it would appear that exogenous factors are having an impact on the amount of regulatory depreciation as well as a higher RAB.

CCP4(DH) is concerned that the new category (Business Management Systems) to be added to the depreciation rates should be 10 years. CCP4(DH) considers that there is a view that all DNSPs should be allowed to replace their computer systems every one or two regulatory periods. CCP4(DH) considers that the Business Management Systems should have a longer life than 10 years. As noted in section 6.5, the cost of IT is rising at each regulatory reset, yet the rate of replacement of such tools is occurring quickly. In section 6.5 it is also noted that there seems to be no countervailing benefit to consumers of this increased IT capex. This joint impact imposes higher costs and fast depreciation on consumers when there is little or no outturn benefit to consumers.

CCP4(DH) notes that the rates allowed for depreciation by TND reflect those that are shown in the TND/Aurora economic benchmarking RIN[12], although they are considerably different to rates for depreciation used by other DNSPs. For example, in the case of overhead distribution lines of 22 kV and less (which comprise nearly half of TND assets) there is a massive difference across all DNSPs as to the expected life of this class of asset. CCP4(DH) notes that the average expected life of all DNSPs for this class of asset[13] ranges from 35/36 years (TND and United) to 62/63 years (Jemena and ActewAGL), with the average of 50 years.

Similarly TND forecast asset lives are on average shorter than the averages for most other DNSPs as the following table highlights.

[12] CCP4(DH) notes that this is not the case with many other DNSPs
[13] This data is drawn for the economic benchmarking RINs for each DNSP

Asset class	TND	NEM median	Longest	Shortest
Overhead network assets less than 33kV (wires and poles)	35	49	62	35
Underground network assets less than 33kV (cables)	60	55	60	36
Distribution substations including transformers	40	45	73	36
Overhead network assets 33kV and above (wires and towers / poles etc)	50	53	64	47
Underground network assets 33kV and above(cables, ducts etc)	60	50	60	40
Zone substations and transformers	40	46	60	40
"Other" assets with long lives	33	23	50	8
"Other" assets with short lives	5	6	8	5

Source: EB RINs

This table highlights two major issues:

- There needs to be consistency across all DNSPs for the rate of depreciation of assets. Without such consistency, benchmarking between DNSPs (especially capital productivity benchmarking) is distorted.
- TND rates of deprecation are much higher (ie are depreciated faster) than similar assets in other regions, increasing the costs to consumers.

CCP4(DH) also notes that the actual replacement rates for assets provided in the category analysis RIN imply that the actual age of assets on replacement is much longer than is indicated by the depreciation rates.

CCP4(DH) points out that it is aware that there may well be some financial reasons why there is a difference between the rates of depreciation and actual assets lives but it also is aware that the development of the regulatory asset base (RAB) is a tool to assist in the assessment of an appropriate revenue stream. Because of this the RAB should reflect the actual asset lives rather than a notional expected life of the assets used in providing the service. In this regard it is important to recognise that faster depreciation of assets than actually occurs, results in a transference of wealth between generations and this is not consistent with the regulatory concept of equity between current and future consumers.

9. Pass through events

The general view is that there are risks faced by networks where consumers should bear the risk rather than face the potential costs a network might perceive would be needed to manage that risk. This particularly applies to High Impact, Low Probability risks where the cost to manage the risk could be very high. Additionally, in theory, the transfer of the risk of such low probability events to consumers, networks need a lower rate of return to reflect the lower risk profile the DNSPs have. CCP4(DH) does not consider that equity beta used by TND in its cost of equity calculation reflects this lower risk.

The rules allow for the costs for the following events to be passed through

> *(1) a regulatory change event;*
>
> *(2) a service standard event;*
>
> *(3) a tax change event;*
>
> *(4) a retailer insolvency event; and*
>
> *(5) any other event specified in a distribution determination as a pass through event for the determination."*

TND adds to the lists of Pass Through events:

- Insurance cap event
- Terrorism event
- Natural disaster event

As a matter of principle, CCP4(DH) considers that fewer pass through events should be allowed than more. While CCP4(DH) has a view that it is not convinced that the pass through events previously allowed by the AER should be provided, it accepts that these have now moved to become generally accepted pass through events.

10. Public lighting

Concern has been expressed to CCP4(DH) about the derivation of the rates applied in the ACS pricing tables, especially about public lighting. Councils have commented that they do not know how the prices are developed and nor are they convinced that the prices reflect the costs for the services provided. CCP4(DH) recognises that prices will vary locations for the same apparent service; a key aspect is related to the distances that the DNSP maintenance crews have to travel to provide the service, so maybe there is a need for the services to be further subdivided.

CCP4(DH) considers that TND should demonstrate that the rates for public lighting services are reflective of the actual costs involved in providing the services. In this regard, CCP4(DH) considers that perhaps the pricing for the services to provide public lighting should reflect the difficulty in providing the services (e.g. be broken down to into urban, regional city and rural categories).