



Submission to Utilities Commission

on

PWC Networks Pricing proposal: 2014 Regulatory Reset

UC Draft Decision and PWC Revised Proposal

March 2014

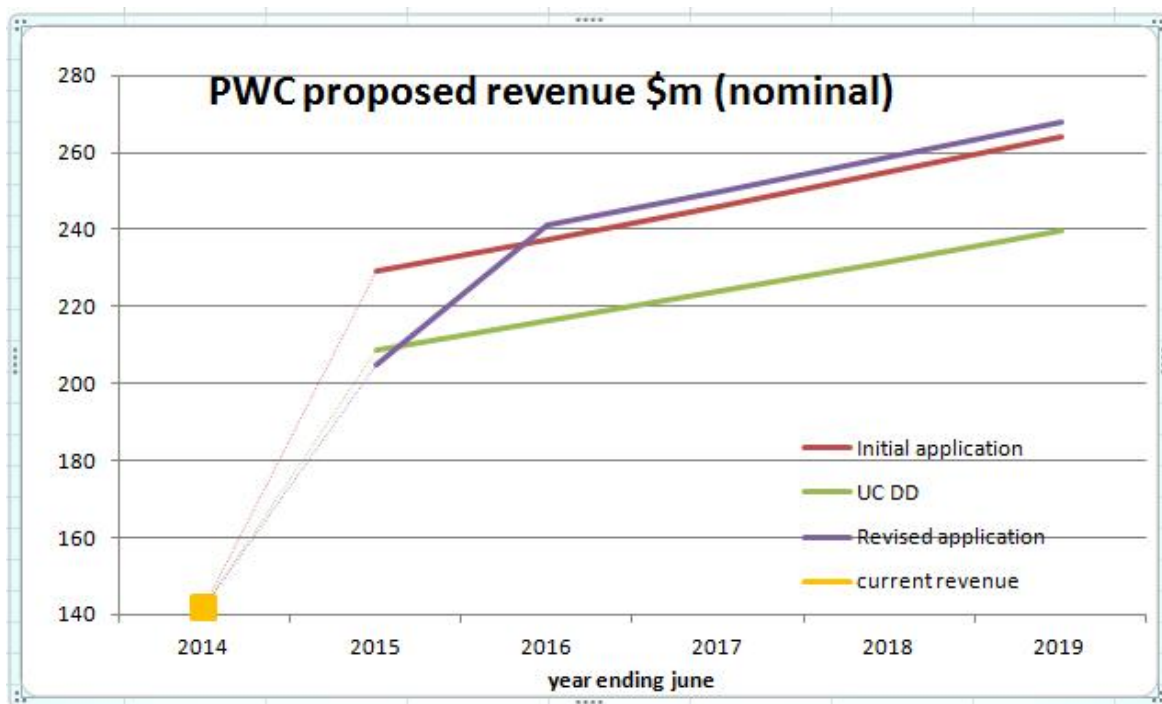
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EXECUTIVE SUMMARY

The Northern Territory Major Energy Users (NTMEU), on behalf of the larger energy users in the Territory, welcomes the opportunity to provide its comments on the draft decision by the Utilities Commission (UC) on the Power and Water Corporation (PWC) application to increase its electricity network charges, and the revised application from PWC responding to the draft decision.

The revenue sought by PWC in its initial and revised applications and the UC draft decision impose a massive revenue shock on consumers as the following chart shows.



Source: PWC applications, UC decisions

With a modest (if any) increase in demand or consumption, the entire step increase will apply to PWC prices converting the revenue shock into a price shock of similar magnitude.

The cause of the UC decision to agree with such a large price increase has been the inability of PWC to manage the networks efficiently in the past, and the UC is complicit in the PWC passing onto consumers the costs of its poor performance.

In addition to the high debt risk premium used to generate the WACC, it is that aspect of the opex allowance that is driving the excessive increase in the revenue proposed for PWC activities. The UC consultant (PB) has clearly identified that PWC is operating well outside of efficient performance levels and suggested that a considerable reduction in opex by at least a quarter is needed to bring PWC opex closer to the average performance of PWC comparators. In this regard, it must be highlighted that reaching the average of all comparators does not mean that PWC would be operating at the efficient frontier, but considerably well above it. The UC has the responsibility for only allowing opex revenues that are efficient and not the much larger amounts claimed by PWC or even allowed in the draft decision.

Rather than setting an efficient opex allowance, the UC has only imposed on PWC an efficiency impost of about 2% pa which PWC has rejected. The NTMEU considers that the UC has not paid sufficient attention to the benchmarking work by PB and by not doing so will cause consumers considerable harm.

1. Introduction

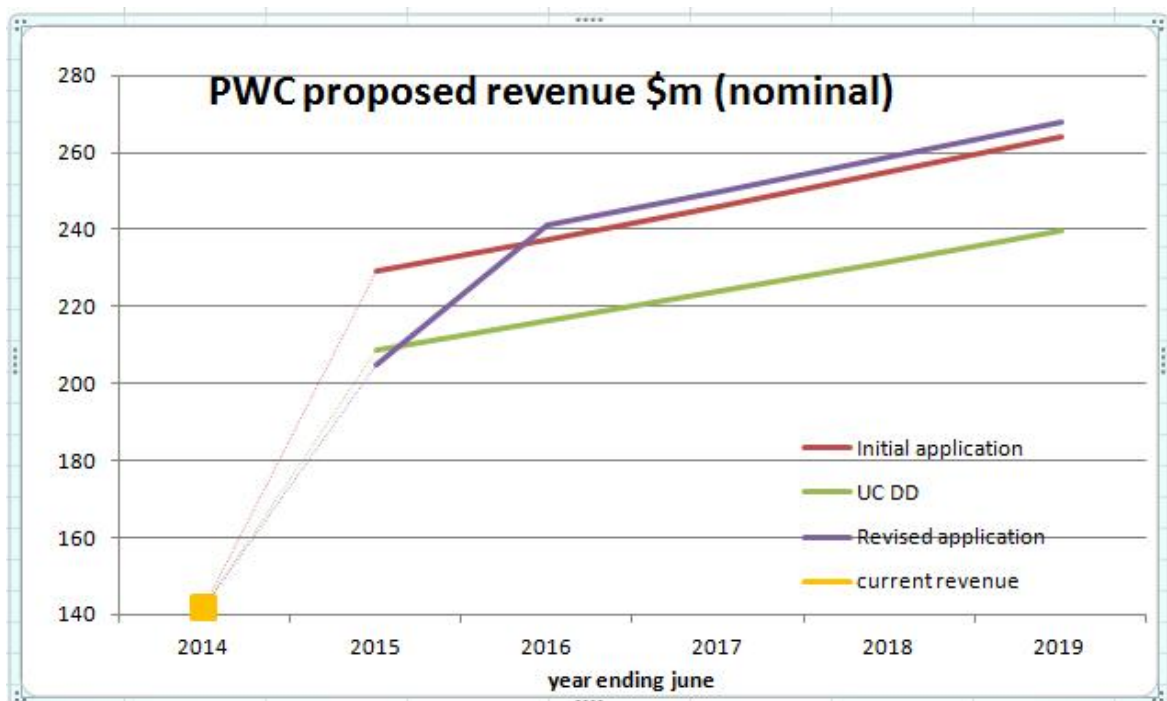
The Northern Territory Major Energy Users (NTMEU) welcomes the opportunity to provide comments on the draft decision by the Utilities Commission (UC) on the application by Power and Water Corporation (PWC) for increases in its regulated revenue allowance for its electricity network.

NTMEU comments are provided below on the draft decision and the PWC networks revised regulatory proposal. The NTMEU expects that the comments provided will be considered along with the comments made in the response to the initial PWC proposal.

2. An overview of the PWC proposal in light of past decisions

2.1 PWC revenue for AA4 compared to historic revenue

The flowing chart shows the additional revenue the PWC is seeking and what the UC draft decision will impose on consumers compared to what the current revenue allowance is.



Source: PWC applications, UC decisions

Overall, both the revised application and the UC draft decision impose a nearly 50% increase in the PWC Network revenue. This massive increase in revenue is despite the UC consultant's (PB Strategic Consulting) assessment that PWC is not efficient and it is the NTMEU view that PWC has operated inefficiently in the past and seeks to continue to do so by essentially seeking to operate on a cost plus basis for the next regulatory period.

The reports provided by PB show that it had considerable difficulty in analysing PWC historic data and this has led to extreme difficulty in identifying where PWC costs are inefficient.

The price shock that consumers will see as a result of the PWC claims and UC review do not reflect what would be expected from an efficient network service provider. Yet the UC seems to be prepared to accept such a massive hike in allowable revenue.

2.2 Historic performance of PWC

During the current period (AA3) a number of reviews have highlighted that PWC Networks has not been operating as an efficient network service provider. In particular, the Davies report was extremely critical of the PWC approach to maintenance of its substations and recommended considerable change. In particular, Davies recommended that condition monitoring of plant should be implemented. PWC advises that the Davies recommendations have now been put into practice but advises that the full effect of these changes (PWC page 18) "...will not be seen for some time."

During the current period (AA3) PWC has significantly exceeded the allowances for opex and capex and at the same time allowed service performance to deteriorate. The reporting by PWC of its historic costs displays such inexactitude that PB, the UC consultants, (a firm well experienced in regulatory reviews) has found it extremely difficult to make sense of the reporting provided by PWC. This lack of clarity and consistency has aided PWC in arguing for increased costs which the consultant had difficulty in justifying when carrying out benchmarking studies.

What is obvious is that consumers are expected to carry the costs for PWC inefficiencies and ineffectiveness and by agreeing that PWC needs to be supported in improving its cost management the UC is complicit in supporting such a process. It is not in the long term interests of consumers that consumers should be required to pay for the past historic incompetence that PWC has displayed.

2.3 Transition to NEM rules and regulation

It is clear that the UC sees the AER is developing a good suite of tools to enable better regulation of monopoly assets such as the PWC electricity network. The NTMEU considers that this move will be beneficial for consumers.

As mentioned in other parts of this submission, the NTMEU considers that PWC is operating on a cost plus basis and appears to consider that consumers should be required to not only pay for past PWC mistakes, but to continue to pay for services well in excess of what is an efficient allowance.

One of the key changes that the AER is now implementing, is improvements to benchmarking for opex and capex. This means that in addition to assessing the efficiency of actual past performance, it will also test the efficiency of the forecasts of opex and capex to ensure that efficiency is improving with time, as is expected. The NTMEU sees that this approach will provide confidence in the allowances provided throughout the regulatory period.

The NTMEU expects that UC will use these AER approaches and tools to assist in assessment of what are efficient allowances for PWC.

2.4 Fee based power factor correction

The NTMEU agrees with the UC and its consultant PB regarding the implementation of a penalty for power factor. The PWC approach imposes not only a charge based on kVA but a penalty for not achieving a set level of power factor as well. A charge based on kVA already requires users with a low power factor to pay for the usage a low power factor imposes on the network, so to impose a penalty as well is double dipping and should not be supported.

The NTMEU recognizes that for users paying for services based on their consumption (kWh) it is difficult to identify what their power factor is at any point in time. The concern the NTMEU has is that without universal demand based metering (such as a smart meter) there will always be customers that have a worse power factor than that set under the distribution code but identifying those that do have such a poor power factor will be "hit and miss". So for every customer identified with a power factor lower than that set in the Code, there will be others that are not identified. Equally, those with a power factor above the limit will not be rewarded for doing so, providing a disincentive to maintain their good power factor.

This means that:

- Those with a low power factor will only be punished if they are identified and it is not clear how PWC will identify such transgression. Such a mechanism is open to misuse.
- Those with a power factor higher than that set in the code will not be incentivised to maintain it and will receive no reward for having a better power factor

The NTMEU supports the UC in rejecting this proposed change.

3. Forecasts

3.1 Demand and consumption

With the use of a revenue cap regulatory control, the forecast of future consumption is less important than under a price cap approach. However, the forecast of changed peak demand is a key driver of forecasts of capex

PWC provided its forecasts for demand which show that demand in Darwin-Katherine and Alice Springs will increase faster than the current trend for standard weather maximum demand (SWMD) and in Tennant Creek will remain static. The UC commissioned its consultant to assess the likely growths of demand and consumption to assess the reasonableness of the PWC forecasts and determined that lower forecasts were more likely to occur than those forecast by PWC. The PWC revised proposal rejects the UC consultant's view and the adjustments made by the UC.

In light of the conflicting views, the NTMEU sought advice on the issue from user groups with which it is affiliated. The advice received is that great care is needed to assess forecasts of growth as the experience from other jurisdictions is that networks have consistently overstated expected demand and consumption and this has resulted in consumers having to pay considerably more than needed whilst the networks garnered considerable benefits from lower than expected forecasts. The fact that AEMO has again recently reduced its forecasts for demand and consumption in the NEM from those forecasts made late last year¹ implies that the current trend of falling demand and consumption is not seeing any reversal as implied by PWC.

The impact of over-forecasting can have considerable impacts on allowances made in the building block approach to revenue setting. For example, for AA3 commencing 2009, Essential Energy in NSW claimed a considerable amount of augmentation capex on the

¹ See <http://www.aemo.com.au/News-and-Events/News/Supply-Demand-Snapshot-February-2014>

basis of expected growth. In practice its capex program shows considerable under-run on the allowance as a result of growth being considerably less than forecast. The actual capex is shown in the following chart

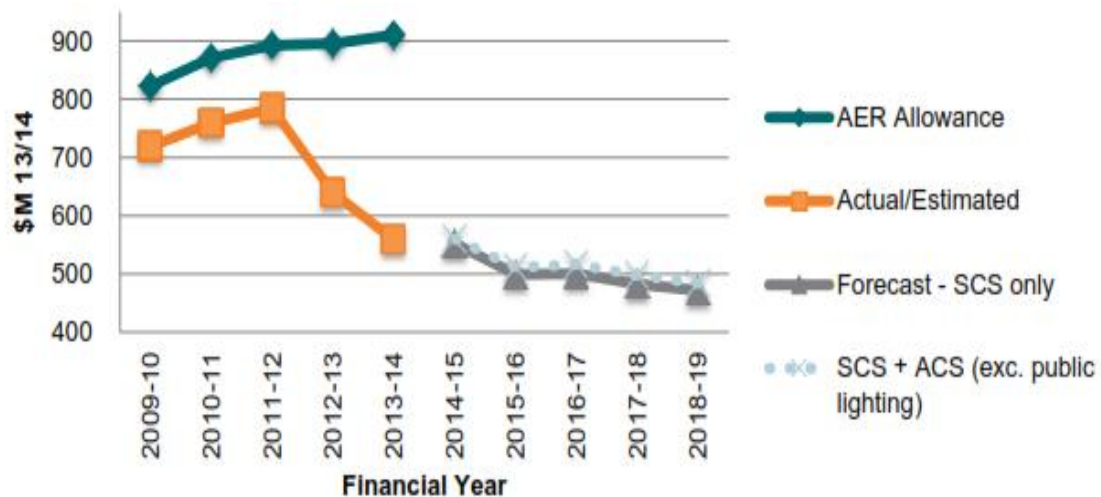


Figure 4-1: Capital expenditure 2009-10 to 2018-19 (\$M, 2013-14)

The bulk of the capex not used related to augmentation projects not required because of lower than predicted demand and, as a result, Essential garnered a massive benefit approaching \$200m over AA3 in not using its capex allowance that it had argued earlier was essential due to growth. What is also important was the observation that although augmentation capex was considerably less than allowed by the regulator, Essential overspent on replacement capex.

The NTMEU affiliates comment that the lesson to be learned is that under the present environment where electricity use is declining for a number of reasons (eg increasing roof top PV driven by the renewable energy target, a high \$A reducing local demand and tourism, high electricity prices driving lower consumption, etc) there is a real risk that networks will overstate their expectations and cause consumers unnecessary costs.

Another factor which was identified by NTMEU affiliates is that government owned networks (such as PWC) have an incentive to over invest as the regulator awards a return on capital which is much higher than the cost of borrowing by the network. This results in the network overspending on capex giving the network (referred to "gold plating" by Garnaut in his report update #8) the ability to reward its government owner with higher dividends from the arbitrage between the cost of capital it is awarded by the regulator and the cost of capital it pays to its related Treasury Corporation².

The NTMEU noted in its response to the initial PWC proposal that it had a view that the forecasts for demand and consumption were overstated based on analysis of historic trends.

The NTMEU sees that PWC disagrees with the UC forecasts and maintains that its original forecasts are correct - AEMO made a similar assertion in November 2013 and yet has revised that forecast considerably downwards only four months later. Equally, the UC effectively observes that, as the issue of the forecasts has only a bearing on the amount of capex to be allowed, it becomes a moot point other than to ensure the augmentation capex is adjusted to reflect probable needs as assessed.

The NTMMEU considers that as PWC has an incentive to overstate the forecasts, the views of the independent reviewer for the capex (PB) should carry more weight than those of PWC.

3.2 Real labour cost increases

PWC stated its increases in labour costs are related to its Enterprise Bargaining Agreement (EBA) and to the Deloitte Access Economics (DAE) real labour price index (LPI) forecasts. The UC has accepted the proposed real price escalation of labour as proposed by PWC.

² The Annual Report for PWC implies that it pays about 5.2% on its borrowings yet the WACC sourced by PWC seeks a cost of debt well above what it pays

The NTMEU is quite concerned that the UC has accepted the PWC proposal unchallenged. In its response to the PWC proposal, the NTMEU expressed its concerns about the use of the PWC Enterprise Bargaining Agreement as the basis for escalating its labour costs and that general labour productivity improvements must be included as part of using labour price indices.

The UC has not commented at all on these issues and has allowed PWC to negotiate its own labour cost adjustments **and to pass these onto consumers unchallenged** and neither has the UC addressed the need for increased labour productivity other than the need to bring the opex allowance to reflect benchmarking analysis.

The PWC labour cost escalation table 7.1 highlights the concern the NTMEU has with accepting the use of an EBA rather than independent labour price indices. In real terms, internal labour for the PWC will increase by 7.2% over AA4 yet external labour will increase by only 5.6%. There is no justification for PWC direct labour to increase by so much over the cost of external labour, accepting the premise that labour costs in the Territory exhibit higher premiums than perhaps apply in the southern states.

The NTMEU considers the UC has been remiss in not addressing either of these two issues and should rectify the omission in its final decision.

3.3 Real material cost increases

As with the real labour cost increases, the UC accepts the PWC assertions about real material cost increases. In its response to the PWC proposal, the NTMEU stated that the weightings for the different elements of the material price movements needs to be explicit and that these should reflect the build up of the capex proposals for them to applied correctly.

NTMEU comments that without the weightings being made explicit, it is possible for the networks to "game" the real price escalation process so that the weightings vary access

arrangement on access arrangement so as to provide the highest real price movement in materials. That this is a real issue is supported by the recent moves by the AER in its new guidelines to establish materials weightings for the "notional electricity network" and apply this in a consistent manner. This will overcome the concern that the weightings are varied by networks in order to maximise the benefits that accrue from materials cost escalations.

In its response to the PWC application, the NTMEU raised other concerns on real price movements for materials that have been ignored by the UC.

The NTMEU considers that the UC needs to carry out a better evaluation of the material cost escalators.

4. The Regulatory Asset Base (RAB)

PWC re-priced its regulatory asset base (RAB) by reassessing the depreciated optimised replacement cost (DORC) of its assets. It then compared this to the roll forward model used previously by the UC and determined that the re-pricing approach is more beneficial to it than the roll forward model used.

The UC has accepted that the re-DORC-ed approach to setting the RAB is acceptable on the basis that (page55):

1. The difference between the two estimates is small
2. The UC had concerns that the original RAB value was based on a flawed assessment of the RAB determined in 1999
3. The SKM assessment³ of the asset base provided greater granularity for the PWC asset base and is apparently more transparent, detailed, and reliable and provides a more stable base for future determinations.

The NTMEU notes that, although the UC determined that the RAB in 2002 was assumed to be \$350m, the new value is now assumed to be fixed at \$930m, an increase in of 165%. If there was an error in the setting of the 2002 estimate, the subsequent changes that have occurred in the RAB mean that the error in 2002 would be miniscule.

The NTMEU considers that the UC has erred in accepting a "re-DORC-ed" estimate of the RAB when it is widely accepted that a DORC estimate is inaccurate in itself and open to error and abuse. This is why all other regulators use the roll forward approach because it is much a more transparent than any DORC approach which is beset by estimates and assumptions. The NTMEU finds it concerning that the UC considers that the use of a DORC approach is transparent - it is not, the roll

³ What is not stated is that in its report to the UC 19 September 2008, ACIL Tasman stated (page 7) that its assessment of the RAB at \$350m at 2002 resulted in a 24% lower RAB than the SKM re-DORC-ed value assessed in 2007

forward approach is much more transparent as it assesses the actual capex added and the depreciation allowed on a clear set of principles. For the UC to state that a reason for accepting the "re-DORC-ed" value is that it is more transparent than the roll forward approach is manifestly incorrect.

To put the RAB into context, the RAB at the start of AA2 was \$372m and at the start of AA3 was forecast to be \$512.8m⁴ a 37.8% increase. At the end of AA3 the RAB will be \$916.35m (Table 7.2 in UC draft decision) which is a further increase of 78.7%, double the previous rate of increase. This increase in RAB bears almost no relationship to the expansion of the network to meet increased demand and implies that some of the capex in AA3 could well be not prudent and/or not efficient. The decision of the UC to accept the re-DORC-ed asset base does not assess whether the past capex was prudent or efficient.

This lack of review for prudence and efficiency also applies the RAB roll forward approach used but at least when a RAB roll forward approach is used, the regulator has the ability to assess whether actual capex was prudent and efficient. The UC has tacitly accepted that the actual capex meets the criteria for rolling into the RAB. However, as the NTMEU noted in its response to the UC at the last revenue reset, the UC consultant (ACIL Tasman) observed in its report to the UC (page 7) that it had not carried out an efficiency audit of the past and current capital expenditures. This means that no assessment has been made of the prudence of the PWC capex since 2002 when the RAB was first established.

There is such concern about automatic roll in of capex, that the new NEM rules require assessment of actual capex for efficiency should the actual capex exceed the regulatory allowance as applies for AA3. This means that an ex post review of capex would be required in the current instance under the new NEM rules as PWC has exceeded the capex allowance. Under the NT rules, capex has to be demonstrably prudent but the use of a re-DORC-ed RAB precludes the UC assessing prudence of actual capex.

In contrast to the UC reasons for accepting the DORC valuation, the NTMEU considers that:

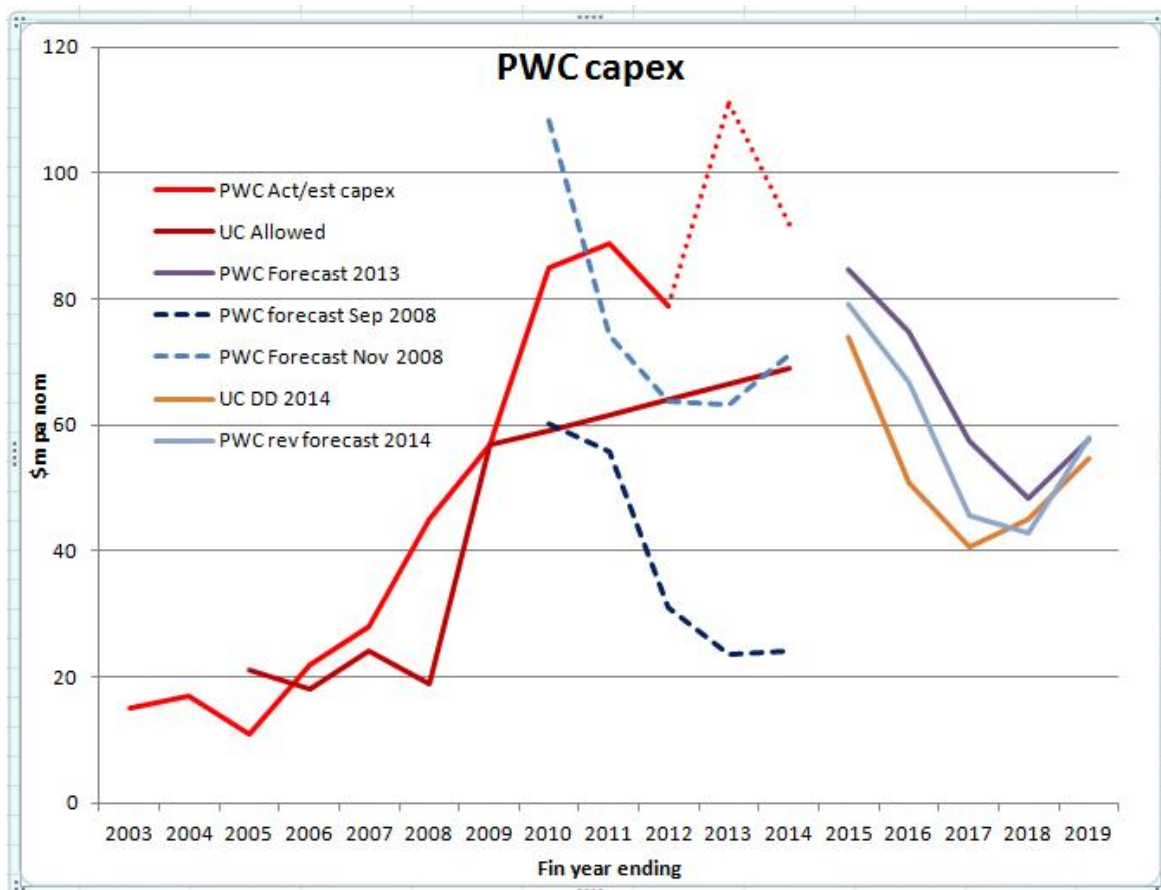
⁴ See ACIL Tasman report to UC 19 September 2009 table 2

1. The difference between the two values is significant as it will increase the costs consumers have to pay for the services provided both now and into the future, and that it will provide PWC with an additional 2% on its return on capital for the next 40 years or so.
2. ACIL Tasman in its report to the UC in 19 September 2008 demonstrates clearly that readdressing a DORC value rather than the roll forward approach introduces a considerable premium to the RAB (see page 3)
3. Even if the 2002 decision had some errors in it, the massive increases in the RAB subsequent have rendered any errors made at that time virtually negligible
4. Whilst greater granularity is provided, this is not a reason to increase the RAB as the granularity can be provided without inflating the RAB to a new DORC value. To assert that the process is more transparent flies in the face of decisions made by other regulators which clearly consider the use of the roll forward model is much preferred because of its transparency.

The NTMEU does not agree that the UC should inflate the RAB based on a new assessment of the PWC RAB using the DORC methodology.

5. Forecast Capex

PWC has forecast it will require capex of \$322.96m for AA4. The UC draft decision trims this to \$265m but PWC considers the UC has erred and that the allowance should be \$292m. The following chart puts these three assessments into context with historic capex.



Source: PWC applications, UC decisions

Capex is primarily driven by the need to augment the network to reflect greater demand, by an increase in customer numbers and by the need to replace assets that are no longer able to reliably perform their function.

The bulk of the draft decision adjustments to the capex claimed by PWC reflect a reduction of some 20% off the augmentation capex and 17.5% of the replacement and reliability capex.

What is concerning is that the bulk of the capex proposed by PWC for AA4 is for replacement and reliability, with these two categories comprising 60% of the capex sought. NTMEU affiliates have seen a similar trend with applications from other networks, where capex identified for augmentation at the last revenue reset is transferred to replacement and reliability capex, resulting in an overall increase in capex used for replacement and reliability. This has provided an argument for the increase in replacement and reliability capex at the next revenue reset.

The AER has identified this trend and is proposing to establish a need for replacement and reliability capex based on asset lives with condition monitoring reports providing a moderating influence. The reason for this is that there was a trend for replacing assets when fully depreciated (and therefore not generating a return on assets) even though the assets were still "used and useful". Condition monitoring reports also provide support for replacing assets that have deteriorated faster than the expected lives.

In its revised application, PWC considers that the UC has erred in reducing the augmentation capex as the forecasts for growth used by the UC underestimate the likely growth and because there are errors in the transition of the UC consultant views into the UC draft decision. The NTMEU does not have sufficient data to be able to comment on the detail of the recommendations to defer specific projects but relies more on the overall historic approach to assessing capex and what has occurred elsewhere to provide a high level view on the reasonableness of the PWC claims.

PWC comments that it has reviewed the detail provided by the UC consultant (PB) and addresses each recommendation of PB on a project by project basis. Effectively, PWC Has

assessed its capex from a "bottom up" approach and argues specific details for each project.

NTMEU members and others operating in a competitive environment cannot operate on such a "bottom up" assessment basis as they have their capital limited; commonly decisions are made at Board level to set a total amount of capex regardless of the claims made by management for capital for specific projects. The NTMEU considers that the UC should take a similar approach to that of a firm's Board and set a maximum capex level based on what capex is available from retained earnings. The NTMEU accepts that the UC had difficulty in identifying what allowance had been provided for capex in AA3. Despite this, the UC has carried out a creditable effort in back casting a capex allowance.

PWC revised forecast is that its RAB will be \$1087.3m at the end of AA4 (table 12.1 PWC revised proposal). This means that over a 10 year period, the PWC RAB will have doubled. This, at a high level, implies that, overall, the amount of capex has been excessive.

However the detail of where capex was used in the current period is essential when assessing what is a reasonable allowance as capex is devoted to a number of different categories. Knowing the categories and how much capex has been dedicated to each is important when assessing future capex needs as past capex in each category assists in assessing future claims. For example replacement capex, compliance capex and reliability capex all reflect a continuum and show (or should show) a year on year consistency. Augmentation capex is driven by the forecast of demand and should reflect this trend.

In the NTMEU examination of the draft decision, PB provides a table of actual and estimated capex under a number of different categories. This is useful in analysing where capex has been used, and when, and how this matches with the PWC forecasts.

Table 7.2 Network capex overview – Staged submission (\$'000 real 2013/14)

Item	Actual			Estimate		Forecast				
	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Network User Initiated	11,999	10,241	10,433	24,311	12,241	9,733	10,663	11,162	12,169	16,167
Augmentation	47,320	45,453	20,321	26,999	26,396	8,292	5,881	7,339	11,257	20,095
Replacement	16,739	21,241	37,536	43,312	52,159	51,744	24,446	40,813	15,312	19,124
Reliability and quality of supply	16,363	17,392	12,140	14,899	2,904	3,548	13,308	7,367	1,855	5,132
Compliance	429	442	413	518	1,074	817	812	708	809	778
Total	92,849	94,769	80,842	110,039	94,775	74,134	55,110	67,390	41,402	61,296
Regulatory Period	473,273					299,333				

Source: Power and Water Corporation, 2013, 'RIN Template Worksheets Definitions, 3.1, 3.4 & 5.4 - Capex Spend, Capex Inputs, Input Cost Escalation ~ (Stage 3)', 3.1 – Working, cost escalators applied to 2009/10 – 2012/13, see C1 Cost Escalators

The table shows that during AA3 augmentation capex reduced as it was realised that the forecast growth was not being observed in the market. To offset the decline in augmentation capex in AA3, PWC started to increase replacement capex, well above the trend of the earlier years with replacement capex estimated to peak in the final two years of AA3.

Forecast augmentation capex reflects the trend of the last years of AA3 where demand is seen to reduce well below that implied by the AA3 forecast growth pattern. It would appear that the forecast augmentation capex for AA4 reflects the reality of lessening demand.

In contrast, the NTMEU is intrigued that replacement capex and reliability capex show such significant variation year on year, such that it appears that PWC is using the opportunity to imply that replacement and reliability capex should be increased above historical levels. Replacement capex for the first 3 years of AA3 averaged \$23.9m pa and was estimated to average \$47.8m pa for the remaining two years reflecting a reducing amount of capex used for augmentation. This implies that the driver for the replacement capex was more related to lower augmentation capex required rather than a need to replace assets at the end of their useful lives.

Consumers expected that the large amount of replacement and reliability capex would have resulted in better service performance yet service standards have not reflected the amount of replacement capex provided. What is concerning is that despite the amount of excessive replacement and reliability capex, consumers are getting worse service rather than better.

The average replacement capex for AA4 is \$30.3m pa with much of it front loaded. The PWC approach to replacement capex shows that they are seeking an increase of over 25% above the actual average recorded for the first three years of AA3 supporting a view that the forecast replacement capex appears to be excessive.

A similar observation can be made regarding compliance capex which has seen a doubling of cost between AA3 and AA4

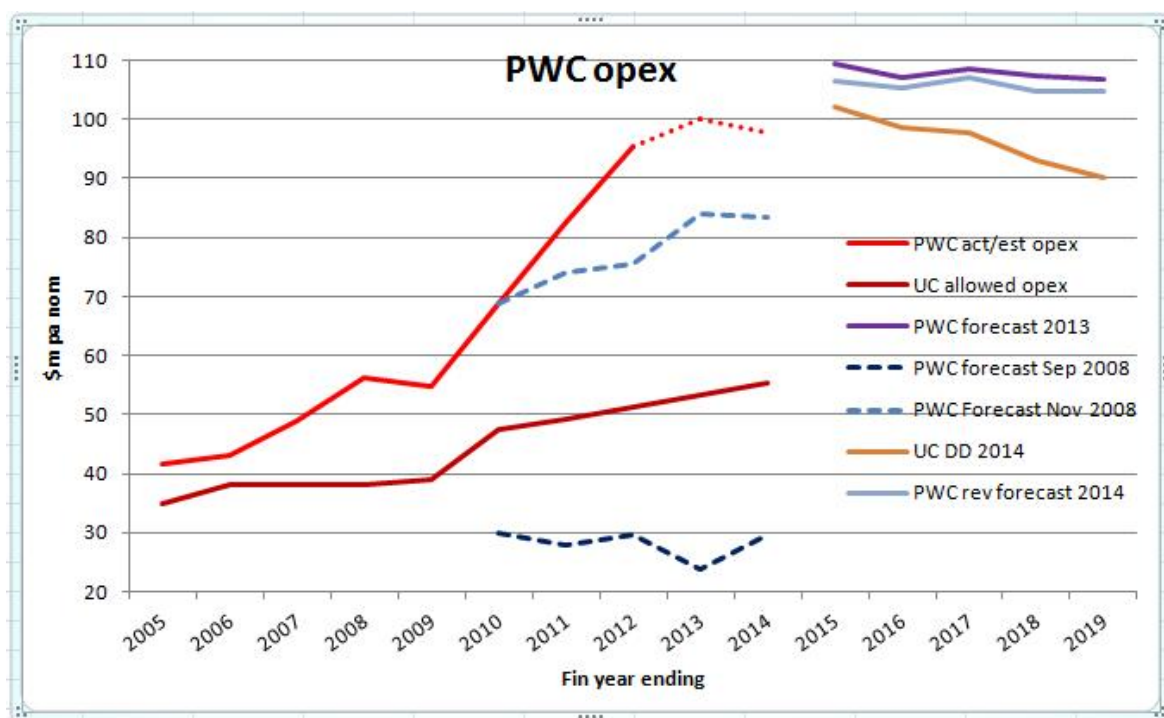
The NTMEU considers that the reduction in capex included by the UC in its draft decision is to be welcomed, but still appears to be inflated for replacement capex and probably compliance capex.

The claim by PWC to increase the capex allowance above that allowed by the UC draft decision does not seem to be justified on a global view. The NTMEU is concerned that PWC arguments are all based on a "bottom up" approach which is recognised as a technique for increasing claims.

The UC has offered PWC the use of "contingent projects" which PWC has accepted - allowing for contingent projects transfers risk from the network to consumers. What is an essential element of contingent projects is that it is recognised that there will be timing issues for projects and on those projects dependent on significantly changed conditions. The NTMEU considers that providing the ability to introduce contingent projects should result in a reduction in claimed capex as the risk to PWC is reduced. However, PWC seems to think that they are entitled to both an unnecessarily high capex allowance and contingent projects.

6. Forecast opex

PWC has forecast it will require a revised opex allowance of \$528.1m for AA4. It has rejected much of the opex reduction considered by the UC to be appropriate. The following chart puts the three forecasts (initial, draft decision and revised) into context with historic opex. The opex allowed by the UC draft decision is also shown.



Source: PWC applications, UC decisions

PWC is still forecasting a further increase in its opex needs for AA4 by some 10% more than it actually used in the last years of AA3. Further, the PB assessment of the opex and maintenance claims highlights some major inconsistencies, both in terms of benchmark performance and in the breakdown of the various sub elements that make up the opex budget.

In its response to the PWC application, the NTMEU noted that, at a high level, for opex to be some 50% of the total revenue, highlights an aspect of concern because comparatively opex is usually closer to 30% of revenue across a range of comparator networks. PB has carried out a detailed assessment of PWC opex to identify why this anomaly occurs.

Such a large increase in opex is also at odds with the age of the network. In the past 10 years the RAB has increased from \$372m at the start of AA2 to \$916.35m at the end of AA3 - an increase of 2.5 times. At the same time the network has not expanded by anything like this due from increases in demand and consumption. The impact of this increase in RAB is effectively to reduce the average age of the network considerably. A network with a young average age should require less opex than one of the same size but older. Despite this large reduction in age, opex has increased and the UC has indicated that an increase in opex is what consumers should pay.

The NTMEU considers that the opex allowance is too high.

6.1 Breakdown of sub-elements and category analysis

In its response to the PWC application, the NTMEU was extremely critical of PWC in that it did not provide a detailed breakdown of the opex that it was claiming or of the historic performance in each of these categories. The NTMEU is pleased that PB has carried out this analysis and in its report provided the following detail

Table 8.2 Total operational expenditure overview – Staged submission (\$'000 real 2013/14)

Category	Actual			Estimate		Forecast				
	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Corporate and shared services	14,844	20,996	21,025	26,927	25,276	23,788	22,534	20,756	20,220	20,230
Service delivery	24,113	29,409	20,869	17,434	16,723	16,650	16,635	16,750	16,735	16,750
Strategy and planning	9,860	11,067	13,878	11,406	12,808	12,833	12,833	12,833	12,833	12,833
System operations	1,501	1,391	4,356	4,852	4,851	4,790	4,790	4,790	4,790	4,790
Metering	3,014	3,037	3,257	3,770	2,973	4,678	4,513	4,442	4,234	4,517
Network management	957	775	1,223	1,481	2,056	2,030	2,030	2,030	2,030	2,030
GSL costs	0	0	0	29	0	1,684	1,522	1,376	1,245	1,127
Regulatory costs	0	0	0	0	0	311	311	311	1,790	804
Other	-	-	-	-	-	-	-	-	-	-
Full retail contestability related costs	-	-	-	-	-	-	-	-	-	-
Total	54,290	66,675	64,608	65,898	64,687	66,764	65,168	63,287	63,878	63,082
Regulatory Period	316,156					322,180				

Source: Power and Water Corporation, 2013, 'RIN Template Worksheets Definitions, 2.1, 2.2, 2.3, 2.4, 5.1 & 5.4 – Operating Exp, Maintenance Exp, Actual vs Forecasts, ~ Stage 4, 2.1 – Working (\$13-14)

Table 8.27 Total maintenance expenditure overview – Staged submission (\$'000 real 2013/14)

Category	Actual			Estimate		Forecast				
	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Preventative Maintenance	3,538	3,748	8,943	6,697	7,375	7,942	7,671	8,216	8,002	8,262
Planned Maintenance	2,631	3,239	5,319	12,517	9,971	13,179	13,277	12,945	12,780	12,438
Unplanned Maintenance	7,168	6,630	14,403	11,750	10,340	10,581	10,642	10,701	10,506	10,225
Vegetation Management	5,670	5,407	5,259	5,213	5,671	7,736	6,669	6,669	6,669	6,669
Specific Maintenance	3,904	3,705	2,631	1,852	330	780	518	518	518	518
Total	22,911	22,729	36,555	38,029	33,687	40,218	38,777	39,049	38,475	38,112
Regulatory Period	153,912					194,628				

Source: Power and Water Corporation, 2013, 'RIN Template Worksheets Definitions, 2.1, 2.2, 2.3, 2.4, 5.1 & 5.4 – Operating Exp, Maintenance Exp, Actual vs Forecasts, ~ Stage 4, 2.2 – Working (\$13-14)

This longitudinal analysis of the sub elements provides some interesting facets on the claim for AA4. PB was able in some areas to identify some sensible explanations for the significant changes between the historical and the forecast costs but not in every case.

The lack of certainty as to allocation of costs, the insufficient data collection and granularity and ability to relate costs to reliability all conspire to prevent a sensible comparison to identify how a base-step-trend approach to opex setting can be achieved. However, despite these shortcomings, the detailed analysis provided by PB is welcomed as it provides some explanation as to why the PWC claim for opex is so out of sync with its comparators.

The criticisms levelled at PWC by PB are most concerning in that these have allowed PWC to seek and effectively obtain allowances that reflect a cost plus approach to setting the opex rather than setting allowances that are efficient. The UC expresses similar concerns in its draft decision to those of PB.

What is absent from the UC draft decision is a requirement that PWC must provide more accurate data provision so that future reviews have the benefit of a better dataset. In this regard the NTMEU notes that under the Better Regulation program the AER requires NSPs to provide much more accurate data on direct costs incurred. If the UC is similarly required to provide such data then this will provide support to the analysis needed at the next reset review.

6.2 Benchmarking

The benchmarking carried out by PB supports the category analysis it completed by identifying that PWC is not efficient (contrary to the PWC assertion from the Huegin analysis) and that PWC needs to be driven a considerable way just to meet the average of its comparators.

A high level benchmark is to assess the relative costs of the main revenue drivers and the NTMEU identified that PWC opex is not efficient based on the relativities between the opex for different electricity NSPs as a percentage of revenue. Typically, opex is ~30% of the total needed revenue yet in the case of PWC, opex is ~50% of revenue. The detailed benchmarking analysis by PB supports this high level assessment.

Implicit in the PB analysis is that labour costs for PWC should reflect a 30% premium to costs to those applying elsewhere. This is cited from one source only (Rawlinson's construction costs for the Territory compared to those in Adelaide) but there is no other source provided for comparison. The NTMEU considers that the UC should seek a wider source of input data to assess the NT premium for costs so that such moderating inputs can be applied in the future with greater confidence.

The NTMEU is a little critical of the PB benchmarking analysis on the basis that it focuses on a limited number of inputs/outputs. The NTMEU would have hoped that PB would have looked at other well used benchmarking tests such as overhead as a proportion of revenue as well as those suggested in the Economic Insights report to the AER⁵ as part of the AER Better Regulation program on benchmarking.

Whilst the NTMEU accepts that the work by PB on assessing the variation between benchmarking (including its further analysis in its letter 4 December 2013) reflects the time available for the task, the NTMEU is aware that the AER has introduced a comprehensive approach to energy network benchmarking. The NTMEU considers that the UC should require PWC to join into the AER benchmarking program and to provide the necessary data to the UC and AER so that more holistic benchmarking can be carried out in the future.

What the analysis by PB and the UC also overlooks is that benchmark of the average of the PWC comparators is not the benchmark for the efficient frontier and PWC should only be provided with efficient costs rather than the average of its comparators. This means that the decision by the UC to "glide path" PWC efficiency to meet the average of its comparators does not mean that PWC costs will then be efficient - what it means is that PWC will be at the average of comparator costs.

⁵ Available at <http://www.aer.gov.au/sites/default/files/Economic%20Insights%20report%20-%20Economic%20benchmarking%20of%20electricity%20network%20service%20providers%20-%2025%20June%202013.PDF>

If the full value of the opex reduction of 27% implied by the PB benchmarking was instituted then opex would be about 40% of the total revenue allowed by the UC in its draft decision. Adjusting this further by removing the 30% cost premium PB identified for being located in the Territory would bring the opex allowance back to about 35% which is within keeping of where it would be expected opex would be relative to revenue. This adds credibility to the opex reduction implied by the PB benchmarking.

The NTMEU is also concerned that the UC proposes to allow PWC an extended time to reach the comparator average efficiency. Despite PB identifying that PWC is at least 27% above average opex (page 5 of the PB "further analysis letter") the UC proposes that PWC only achieve a 10% improvement in opex over AA4 to bring it closer to efficient levels. The NTMEU considers that a 2% pa improvement in efficiency means that consumers will be paying for PWC inefficiency for a considerable time.

The NTMEU also notes that PWC rejects this expectation in its revised application and refers to additional advice from its consultant Huegin. At the heart of the Huegin response on benchmarking (PWC Attachment 10) lies the argument that PWC has no peers for it to be benchmarked against. The NTMEU notes that Huegin provided a similar view to this to the AER as part of the Better Regulation benchmarking program and the AER made it quite clear they did not agree with Huegin on this aspect - the AER pointed out that there are more areas of commonality than there are differences.

The NTMEU points out that an efficient provider in a competitive environment would have to address its inefficiencies in a much shorter time than 5 years or go out of business. For the UC to allow PWC to reduce its opex inefficiencies by just a third and to be allowed to do this over 5 years imposes on consumers an unnecessary cost premium.

This high level assessment reinforces the benchmarking conclusions carried out by PB that PWC allowances for opex are excessive, and need to be significantly reduced from those allowed in the UC draft decision.

7. Service performance

The UC has already set service performance targets for PWC with specific levels for System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI) set as targets for PWC to achieve based on SAIDI and SAIFI measures.

The historical performance of PWC has shown that PWC has generally not met service performance targets in the past and could have difficulties in meeting the improved standards set for AA4. PWC provides data indicating that it expects service performance will generally under-perform the targets for much of AA4.

The NTMEU considers that the UC should couple the new service performance targets with an incentive (such as the Service Target Performance Incentive Scheme - STPIS) that the AER has successfully used in the NEM to assist PWC in achieving the enhanced service performance expected. Such a scheme would reward PWC for out performance (ie pass onto consumers increased costs for better service) and penalise it for underperformance (ie allow consumers to pay a lesser amount for lesser service).

8. WACC

In addressing its claim for a weighted average cost of capital (WACC) allowance, PWC identified a mix of past UC practices coupled with some past AER practices (as used for Aurora - the distribution network in Tasmania) along with some of the recent AER Better Regulation activity currently in draft guideline stages to develop its WACC allowance.

The UC has reverted to the approaches used by regulators prior to the recent changes to the NEM rules and the more recent AER guidelines. The following table lays out the various parameters used in the PWC revenue reset process to date and adds in more recent data from the AER final decision on SP Ausnet Victorian Transmission revenue reset.

Parameter	PWC initial	UC draft decision	PWC revised	AER FD on SP Ausnet
Nominal risk free rate	3.89%	4.13%		4.31%
MRP	6%	6%	6.0%	6.5%
Equity beta	0.8	0.7	0.7	0.8%
DRP	4.11%	3.00%	3.00%	2.48%
Gearing	60:40	60:40	60:40	60:40
Inflation	2.60%	2.51%	2.51%	2.45%
Tax rate	30%	30%	30%	30%
Gamma	0.25%	0.25%	0.25%	0.65
Pre tax nominal WACC	8.80%	8.12%	9.05%	

It is recognised that the MRP, equity beta and gamma applying to SP Ausnet result from the AER WACC decision in 2009 applies only to transmission networks and therefore values used more recently should be implemented. What is important to note is that the AER final decision on debt risk premium (DRP) was calculated at 2.48%, a significant reduction to the DRP used by the AER in the SP Ausnet draft decision which the UC

considered was appropriate. Following the approach used by the UC for the DRP (and accepted by PWC), the NTMEU considers that the actual DRP value used by the AER for the SP Ausnet final decision should be used for the PWC final decision. Even so, this decision will get a considerable benefit by using this value as PWC will still be paying well below the implied cost of debt of ~6.6% as it currently pays just over 5%⁶.

The NTMEU considers that the UC should adjust the risk free rate to that applying in the averaging period before the final decision is made, use the agreed parameters for MRP, equity beta, gearing and gamma and implement the more contemporary value for DRP used in the AER final decision rather than value used in the AER and UC draft decisions.

⁶ The Annual Report for PWC implies that it pays about 5.2% on its borrowings

9. Revenue and pricing outcome

In its initial application PWC sought a step increase in its revenue of 57.2% followed real increases of 1% pa thereafter as shown in table 44. By the end of AA4, PWC seeks a real increase of over 63%

Table 44 – X factors and smoothed revenue for 2014-19 (ODRC) (\$ million, nominal)

Year	2014/15	2015/16	2016/17	2017/18	2018/19
Unsmoothed revenue requirement	\$230.59	\$239.95	\$245.44	\$253.03	\$261.19
X factor	-57.2%	-1.0%	-1.0%	-1.0%	-1.0%
Smoothed revenue requirement	\$229.03	\$237.33	\$245.94	\$254.86	\$264.10

The PWC revised application (table 15.2) marginally reduces the unsmoothed revenue sought (particularly in years 4 and 5) , reduces the step increase in year 1, significantly increases the step increase in year 2 and then maintains a real increase each year thereafter of 1% pa. This results in a cumulative increase by the end of AA4 of some 78%.

Table 15.2 - X factors and smoothed revenue for 2014-19 (ODRC) (\$ million, nominal)

Year	2014/15	2015/16	2016/17	2017/18	2018/19
Unsmoothed Revenue requirement	\$229.45	\$238.93	\$243.62	\$248.14	\$255.43
X factor	-50.59%	-15.00%	-1.00%	-1.00%	-1.00%
Smoothed Revenue requirement	\$204.77	\$241.41	\$249.95	\$258.80	\$267.95

The UC draft decision (table 15.7) reduces the allowed revenue and sets a step increase of over 43% followed by real increases of 1% pa for the other four years resulting in the final year revenue being some 49% above the current revenue.

Table 15.7: Commission conclusion on PWC Networks proposed annual revenue requirements and X factors, including carryover from cost pass through decision (\$M, nominal)

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Unsmoothed annual revenue requirement		210.28	215.44	214.80	215.06	218.37
Carryover adjustment (2013 cost pass through)		7.18	7.76	8.39	9.07	9.81
Total unsmoothed annual revenue requirement		217.45	223.20	223.19	224.13	228.18
Expected revenues (smoothed revenue)	142.01	208.78	216.17	223.82	231.74	239.94
Forecast CPI (%)		2.51	2.51	2.51	2.51	2.51
X factors (%) ^(a)		- 43.42	- 1.00	- 1.00	- 1.00	- 1.00

Source: Utilities Commission, NTRM

^(a) Negative values for X indicate real revenue increases under the CPI-X formula.

Regardless of the approach used (ie the initial proposal, the draft decision and the revised application proposal), the NTMEU considers that the step increase in year 1 provides a massive price shock to consumers and questions whether this is what consumers would want or can afford.

The NTMEU considers that if the UC considers that PWC should receive such a large increase in allowed revenue of about 50% (and the NTMEU considers that something is drastically wrong if such a massive step increase is considered appropriate) then it would be preferable for annual increases to be more consistent.

10. Other Issues

PWC sought to expand its ability to "pass through" additional costs that it considers it might be exposed to during the course of AA4. The NTMEU expressed concerns with the extent of the pass through provisions that are sought over above those allowed by the UC of the 2009 decision.

The UC was specific in its draft decision as to what it would permit as a "pass through" yet PWC has sought to expand its ability to pass through costs to consumers. The only additional "pass through" provision that should be allowed is if and when the NT government separates retail and generation from PWC networks. Even in this instance, PWC networks must quantify what the additional costs it incurs are rather than provide an estimate of them

The UC has also introduced the concept of contingent projects. To a degree this should offset the amount of ex ante capex allowed to PWC. The UC has set strict conditions on what the trigger must be (including limits on materiality) and the NTMEU supports the UC decision in this regard. At the same time, the NTMEU considers that the PWC request to reduce the materiality limits should be rejected because if the limits are set too low, the concept of contingent projects loses effect and allows many more projects to be included as contingent projects. In this regard the NTMEU points out that firms operating in the competitive sector do not have such an ability for "contingent projects". This is a result of capital available for projects is limited so if a new project needs to be implemented than existing projects have to be reprioritised with deferral or even exclusion of previously allowed projects being the result.

The pricing methodology used by PWC was an issue the NTMEU raised in its response to the initial application. The NTEU points out that pricing methodology used for electricity distribution is currently under review by the AEMC as it is recognised that the current

pricing approaches used by distribution networks is flawed. The NTMEU attempted to get greater detail on pricing by PWC but this has not been enforced by the UC.

The NTMEU also notes that pricing in transmission networks is also under review with NSW's TransGrid leading a review process.

The NTMEU considers that the UC must look into the issue of pricing in much greater detail to ensure that pricing is reflective of the costs each customer incurs. Without this certainty of cost reflectivity, inefficient outcomes are likely to occur.