Australian Energy Regulator

Queensland Electricity Transmission Revenue Reset

Powerlink Application

A response

by

An Energy Consumers Group operating in Queensland (the GROUP)

August 2011

Assistance in preparing this submission by the GROUP was provided by Headberry Partners Pty Ltd and Bob Lim & Co Pty Ltd.

The content and conclusions reached are the work of the GROUP and its consultants.

CONTENTS

Exec	cutive summary	3
1.	Introduction and overview	4
2.	Debt risk premium	12
3.	Debt and equity raising costs	16
4.	Service Standards and STPIS	18
5.	Demand forecasting	20
6.	Сарех	25
7.	Орех	30

Executive Summary

The Energy Consumers Group operating in Queensland (the GROUP) welcomes the opportunity to comment on the AER's draft decision on Powerlink's transmission revenue reset application and on Powerlink's revised application.

The Powerlink application was an ambit claim that would have resulted in imposing considerable harm to consumers. The AER has recognised the ambit nature of the application and in its draft decision, sought to provide cautious restraint on the very substantial cost claims across the board. However, we believe that whilst the AER draft decision is a move in the right direction for consumers, the AER is still providing more revenue to Powerlink then past performance would indicate is fair and efficient.

In particular, we consider that the AER has erred in giving away consumers` money to Powerlink as a result of its DRP decision.

Insufficient attention has been given to the price elasticity effects of prevailing higher prices on future demand.

Capex and Opex decisions are still too generous against the background of significant underspending during the current access arrangement period as well as when benchmarked against historical trends. Of equal concern is the decision to approve service performance targets that are too soft especially when seen in context with more revenue provided to Powerlink.

We note the Queensland Government is very concerned with the rising retail electricity price levels. Yet, there is a strange irony in that Powerlink, a government owned network business, is vigorously pursuing an aggressive application and revised application for cost increases that are largely unjustifiable and, in the case of debt costs claims, clearly made up as the estimated costs are considerably higher than the actual rate that Powerlink is able to borrow from the QTC.

The Powerlink revised application, whilst substantially lower than its initial application (largely due to lower risk premium) is disappointing. Powerlink continues to demand revenues without justification and the arguments presented are not of a substantive nature.

We are also concerned that Powerlink is seeking expenditure claims that appear to be driven by the emerging needs of new customers in the mining and LNG sectors by requiring existing customers to pay.

1. Introduction and overview

1.1 The GROUP

The GROUP is an alliance of a number of large electricity using companies operating in Queensland and in other regions of the NEM. The GROUP's initial submission was provided by the following companies: Visy, BOC, Orica and Incitec Pivot.

The GROUP provided a detailed response to the Powerlink application and in that response had provided its views about many of the claims made by Powerlink. The AER has provided its draft decision on the Powerlink application and has accepted (or not as the case may be) the GROUP's arguments as to why the Powerlink application was excessive. In response to the AER draft decision, Powerlink has provided a revised application for the AER to review prior to publishing its Final Decision.

In this response, rather than reiterate its detailed views on all aspects of the Powerlink application and the AER draft decision, views are provided on a number of quite specific elements of the revenue reset, including the revised application.

1.2 The benefit to Powerlink for under-running capex and opex in AA2

By under-running its capex and opex allowances in AA2, Powerlink was able to generate savings against its revenue approaching \$100m over the period of the second regulatory period (AA2). In addition, Powerlink paid an interest on its debt of about 6.0% whereas the regulatory allowance was greater than this by about 100 basis points. This provided Powerlink an additional \$150m in profit in addition to the \$100m from under-runs, giving a total better return of some \$250m; this is equivalent to an under spend on allowed revenue of nearly 8%, more than tripled the expected cash return the AER considered was appropriate.

To put this 8% premium into terms that affect consumers, it means that an extra \$1/MWh was added to the average notional tariff charged by Powerlink. This is a well established method of regulatory gaming and the AER must rectify this as it is in a position to do something about it in this present review.

1.3 A high level review of the AER draft decision and the Powerlink revised application

1.3.1 Overall revenue

The AER draft decision realigned the Powerlink claim for revenue to a level that it considered to be efficient. Powerlink has responded by seeking a starting revenue similar to that of the AER but one which increases at much the same rate as in its initial application – one that is increasing much faster than that of the AER.



Source: AER/ACCC FDs, AER DD, Powerlink applications

The chart shows the real revenue for Powerlink extending back to 2001/02 and using that point as a reference. When seen in terms of the trend in past revenue, the second period (AA2) shows a distinct upward bias compared to the first period (AA1). When the estimated revenue for 2011/12 is excluded, the starting point of the DD proposed revenue appears consistent with historic trends and its trend replicates the underlying growth rate of the first regulatory period (AA1). This lower growth rate reflects a lower WACC being used in the draft decision for AA3.

In contrast, the initial application and the revised application both show there is a dramatically increased rate of revenue for AA3. Also of considerable interest is the much reduced claim for revenue between the initial application and the revised application. Whilst some of this can be attributed to the use of a lower WACC in the revised application, this reduction does not explain the massive reduction in the starting revenue claim.

Neither the AER draft decision nor the Powerlink revised application provide consumption data which could be used to convert the allowed or claimed revenue to be converted to a notional tariff which consumers generally use to assess the acceptability of a revenue reset review outcome. This must be rectified to enable a reality check on Powerlink claims.

The following figure shows the movement of the average nominal tariff over time, using consumption data from AEMO ESoO 2011 and revenue allowances provided in AER and ACCC decision for historical data.



Source: PL applics, AER DD, AEMO ESoO 2011

As displayed in the AER draft decision, its assessment implies a static nominal average tariff for AA3 (implying a fall in real terms) whereas the initial application showed a very high average nominal tariff. The revised application shows a rising average nominal tariff over time but one which shows a 4% increase in the latter years in real terms.

There is great concern that the AEMO forecast consumption data significantly overstates what might occur and, if lower consumption forecasts are used, this then would increase the average nominal tariffs, reinforcing the view that the Powerlink applications, and the AER draft decision, deliver considerably higher prices to consumers than is alleged.

The AEMO forecast of consumption shows a significant rise in the future, as the following figure shows, well above the long term trend. The long term trend does not take into consideration the dampening effects on consumption of higher electricity prices and the impacts of government energy efficiency and carbon emission reduction policies, implying that even the long term trend might be considered to be overstated.



When the long term trend consumption forecast is used, the outcome of the average nominal tariff calculation shows a marked and continuing increase in the tariff which is quite at odds with the stated impact of the AER draft decision, which the AER considered provided an essentially flat future average nominal tariff for consumers. This disparity is clearly shown in the following figure.



The concern that the GROUP has is that the Powerlink tariff (as it showed in its presentation to the AER draft decision forum), whether based on the AER draft decision or on its revised application, is much higher than it need be, being much



closer to the equivalent tariffs in SA and Tasmania than its closer equivalents in Victoria and NSW.

Source: AER decisions, AER PL draft decision, PL revised application, WP application

It is quite clear that the initial application had a considerable element of ambit claims within it. So in overall terms, the GROUP considers that the starting point of the AER draft decision revenue is possibly appropriate, but the considerable increase over time reflects some elements that are over stated. These are discussed in more detail later in this submission.

1.3.2 Overall capex

The AER draft decision shows a significant reduction in capex compared to the initial claim by Powerlink. The revised application also shows a 5% reduction in capex compared to the initial application, whereas the AER draft decision shows a reduction of a third.



Sources: Powerlink applications, PL APR 2010, ACCC/AER FDs, AER DD

The AER draft decision reflects the trends of the actual capex excluding the very high estimated capex for 2011/12. As the expected growth of demand remains relatively constant over the decade and a half (albeit with a small upturn for the next five year period), it is difficult to equate the massive upturn in capex proposed by Powerlink in its initial and revised applications...

Overall, the MEU considers that the AER draft decision allowance for future capex is consistent with historic usage of capex, especially as it reflects the actual usage of opex in AA2. The fact that Powerlink underspent, by a considerable margin, the allowed capex for AA2 raised the concern about Powerlink's real underlying needs.

In its revised application, Powerlink discusses a number of issues it has with the AER draft decision, especially in relation to growth assets. Powerlink discusses in its revised application (and in its initial application) the need for considerable expansion of the network to accommodate the large number of coal and LNG projects contemplated in its area. The GROUP recognises that these projects will require considerable investment for them to receive their needed power supplies, but the GROUP makes the observation that these new projects should not receive a benefit from existing users of the networks. As the AER has pointed out in its connection agreements discussion papers and draft guidelines, new connections to the shared networks should not receive a benefit at the expense of other consumers. The GROUP sees that these new projects should be paying for their connections (and any augmentations needed to the shared network) as new connection charges and not as a cost to be added to those carried by existing customers. Powerlink points out that a significant amount of the increased demand is attributable to these new

projects. The GROUP, therefore, considers that the current level of capex allowed for the shared network, should not be increased to accommodate the demand increases for these new projects¹.

On an overall assessment, the AER draft decision allowance for capex would appear to be appropriate provided new connections are not being cross subsidised by existing consumers.

1.3.3 Overall opex

Whilst the AER draft decision shows an opex allowance significantly lower than that initially claimed by Powerlink, it does not reflect historical trends for opex.



Sources: Powerlink applications, ACCC/AER FDs, AER DD

The AER draft decision allows a 10% step increase in opex compared to current actual allowances. As Powerlink underspent its opex allowance by between 5 and 10% in AA2, it would suggest that increased efficiencies by Powerlink should have resulted in a much lower starting opex level than the AER draft decision has allowed.

¹ It needs to be recognised that these new projects are related to exporting Queensland's mineral resources into a buoyant world market. In contrast, manufacturing firms who have already sunk their capital are faced with increased competition from low cost imports and significant government imposts.

The Powerlink revised application effectively retains the same opex claim as in the initial application, but now an allowance for network support has been added to the initial claim. It is apparent that Powerlink has rejected the AER's generous views on what constitutes a reasonable opex allowance and is persisting with its inflated opex claim.

The GROUP considers that as Powerlink has been subject to an EBSS on its opex allowance and as Powerlink has under-run by a considerable margin its opex allowance for AA2, there is little justification for there to be such a high step increase in the opex allowance, let alone the 10% increase provided in the AER's DD.. In its response to the Powerlink application, the GROUP provided considerable analysis to highlight where the Powerlink application was overstated. The Group would urge the AER to scrutinise the claims by Powerlink more thoroughly than was done in its DD.

1.3.4 WACC

The GROUP recognises that the WACC elements which drive the final value of the WACC are essentially fixed except for the debt risk premium (DRP). The GROUP discusses the value used by the AER for DRP below, but comments that the AER has permitting the use of a DRP level well above the cost of debt that Powerlink incurs.

The GROUP observes that in recent revenue resets, the AER has reduced the market risk premium (MRP) from the 6.5% set at the time of the WACC review to 6.0%. The GROUP accepts that 6.5% is the MRP value that the AER must notionally use for the Powerlink review but raises the point that the use of the 6.5% results in an overstated WACC; this is an inefficient cost that consumers should not have to pay.

The GROUP considers that the AER must recognise this overstatement in its analysis of the WACC development, especially as there is great concern that the use of the DRP by the AER, also overstates the actual costs that Powerlink will incur.

1.3.5 Overall assessment of the revised application

The GROUP is concerned that many of the arguments provided in the revised application by Powerlink are not of a substantive nature in terms of supporting the need for the costs that it considers are needed. Rather Powerlink has resorted to arguments that are ostensibly based on a legal nature, pointing out that the AER is wrong to have taken the view it has. These arguments are in terms of the legal right of Powerlink to have the allowances it claims rather than Powerlink proving that its claims are justifiable in terms of the need.

The entire approach to regulation in the energy sector is all about setting the most efficient allowance to provide the service. If the AER allows a cost in the regulatory allowances because the regulated firm can raise a legal argument for its inclusion, rather than one based on the need for the cost, then the AER has failed to ensure that the costs its allows are efficient.

2. Debt risk premium (DRP)

Clause 6A.6.2(b) of the National Electricity Rules (NER) requires:

"The rate of return for a *Transmission Network Service Provider* for a *regulatory control period* is the cost of capital as measured by the return required by investors in a commercial enterprise with a similar nature and degree of non-diversifiable risk as that faced by the *transmission* business of the provider and, subject to any revised values, methodologies and levels arising from a review under paragraphs (f)-(j), must be calculated as a nominal post-tax *weighted average cost of capital (WACC)* in accordance with the following formula:"

$$WACC = k_e \frac{E}{V} + k_d \frac{D}{V}$$

Clause 6A.6.2(e) of the NER requires:

"The debt risk premium for a *regulatory control period* is the premium determined for that *regulatory control period* by the *AER* as the margin between the annualised nominal risk free rate and the observed annualised Australian benchmark corporate bond rate for corporate bonds which have a BBB+ credit rating from Standard and Poors and a maturity equal to that used to derive the nominal risk free rate."

At its most basic, these two clauses of the NER seeks to ensure that the debt risk premium reflects the benchmark cost of a 10 year bond issued on the Australian market by a commercial enterprise with a credit rating of BBB+ and a risk profile "with a similar nature and degree of non-diversifiable risk as that faced by the *transmission* business of the provider".

It is widely accepted that the NER requirement that the debt risk premium to be used for developing the WACC is not workable. The reasons for this are that:

- The market just does not provide the necessary data to comply with the requirement to value corporate bonds for BBB+ rated firms over the required timeframe of 10 years.
- What data there is, is consistently of a shorter duration (usually less than seven years). Statistically viable representative values are predominantly of durations less than five years.
- The bond market in the longer dated bonds is very illiquid and the quantity of bonds issued cannot provide a statistically viable representative value.
- There are no other firms "with a similar nature and degree of non-diversifiable risk as that faced by the *transmission* business of the provider" that issue corporate bonds on the Australian market, mainly because over 80% of the regulated electricity networks acquire their debt from State Treasuries which all have AAA credit ratings and do not need to access their debt from the open market.
- The issue of what is the "benchmark corporate bond rate" for 10 year BBB+ bonds is not resolved as there is no organisation that issues such data.

• To use what data there is in the market requires considerable manipulation and extrapolation to estimate what an outcome might be.

The regulated firms employ many consultants to provide opinions on how to make the unworkable NER provide an outcome that maximises the debt risk premium. The AER invests untold hours in attempting to rationalise the impossible. All this is carried out at enormous cost and which is passed onto consumers either in the regulated tariffs or through taxation which funds the ACCC/AER.

Powerlink and other regulated bodies have provided arguments to justify a debt risk premium (DRP) to be as high as possible and have acquired many consultant opinions as to how the NER (and NGR) can be manipulated to achieve the highest possible value. The AER has attempted to rationalise an outcome which it considers more closely fits the intent of the unworkable rule. The Australian Competition Tribunal has also been critical of continuing to use the unworkable rule.

In the analyses by all the parties involved, great reliance is placed on the Bloomberg fair value indices as the surrogate benchmark of the market. In its report to the AER on corporate bonds, Oakvale Capital² advises that the way Bloomberg develops its "fair value indices" (and hence its fair value curves) is proprietary and its calculation method is not available for examination. Oakvale also comments (page 25) that:

"Bloomberg often uses composite quotes (i.e. where they believe the market should be), whereas market practitioners use pricing models and actual data flow for pricing and this is deemed more reliable."

This observation provides a clear reason why Bloomberg values might be higher than actual observed values (such as the APT bond issue in 2010) as an expectation of "what should be" tends to provide an overstated view of the market when compared to actuality. That the regulated firms, their consultants and the AER consider that a value based more on "what the market should be" compared to what actually occurs is of major concern as it provides an overstatement of actuality, and therefore results in an inefficient outcome.

From an electricity consumer's viewpoint, the debate on how to calculate any answer from the unworkable NER has the appearance of those trying to calculate "How many angels can dance on the head of a pin?"³ but with serious overtones because the outcome has demonstrably shown that based on the tortuous machinations to try to achieve an outcome apparently based on the NER, the regulated firm will receive a higher debt risk premium than the actual cost of debt the regulated firm incurs. A review of annual reports makes it patently obvious to all that the cost of debt that

² Report on the cost of debt during the averaging period: The impact of callable bonds prepared for the Australian Energy Regulator by Oakvale Capital *February 2011*, available at http://www.aer.gov.au/content/item.phtml?itemId=743246&nodeId=0f5838fb66548ffd4f6da102a2dbee43&fn=Oakvale%20Capital%20Limited%20-%20Consultant%20Report%20-%20Impact%20of%20Callable%20Bonds.pdf

³ See http://en.wikipedia.org/wiki/How_many_angels_can_dance_on_the_head_of_a_pin%3F

regulated firms actually incur is considerably less than the cost of debt the firms seek in their applications and what the AER calculates.

In the case of Powerlink, this comparison is even more odious. Powerlink is required to access its debt from Queensland Treasury Corporation (QTC). This is also sensible because QTC can lend funds to Powerlink at a cost considerably below that which a privately owned firm with a similar credit rating and risk profile could get funds from the market. This state of affairs is demonstrated in the following chart which shows Powerlink historic debt raising costs and the new allowance provides by the AER.



Source: AER DD, Powerlink applications

The Queensland Government advised via email Ms Kerry Connors of the Consumer Advocacy Panel on 2 December 2010 in response to a statement made by The Energy Consumers Coalition of South Australia (ECCSA) that:

"[T]he Competition Principles Agreement requires a notional charge to be applied to the cost of debt for all GOCs. As a party to the Agreement, the Queensland Government has previously notified its GOCs of the application of a Competitive Neutrality Fee (CNF) to all borrowings and financial arrangements in the nature of debt obligations. The CNF is individually determined for each GOC in accordance with its stand alone credit rating and the market cost of debt, to ensure that the cost of funds paid by a GOC is equivalent to a similarly rated private sector entity."

This advice clearly shows that the QTC is required to add a competition premium to the cost of debt it provides Powerlink to ensure competitive neutrality and to reflect the cost of debt its GOCs would obtain commercially. The GROUP provided evidence (based on Powerlink annual reports) in its response to the Powerlink application that the cost of debt incurred by Powerlink evidenced a debt risk premium in the range of 40-90 bp for the three years of 2007/2008, 2008/09 and 2009/10. In

2010/11 the DRP for Powerlink was 84 bp. This clearly supports the AER decision to grant a DRP of 114 bp in its last review of Powerlink revenue. Even at 114 bp, Powerlink gained greater revenue than it needed to carry the cost of its debt

Initially, in its new application, Powerlink claimed a DRP of 434 bp. The AER draft decision argues that the DRP should be 319 bp. Powerlink in its revised application argues for a DRP of 391 bp. Powerlink provides a number of consultant reports to disprove the approach used by the AER in its draft decision to support of its higher figure.

What the debate on the DRP totally overlooks is that Powerlink sources its debt not from the open market but from Queensland Treasury Corporation and that Powerlink already has a line of credit with QTC for the provision of debt for the future. This approach is demonstrably efficient, which is a requirement of the National Electricity Law (NEL). The NEL does not permit allowances for electricity firms to be inefficient as this runs counter to the National Electricity Objective (NEO).

If the AER permits the DRP to be set at 319 bp, it will be granting Powerlink an unnecessary increase in allowed revenue of nearly \$500m over the next five years *for effectively no rational reason.* Put another way, this unnecessarily high DRP will require consumers to pay 8% more in their transmission charges than is efficient, adding well over \$1/MWh to the average tariff.

The AER is required to ensure electricity network charges are efficient. Including such a high DRP clearly is inefficient and provides Powerlink with revenue for a purpose which it has not earned.

3. Debt and equity raising costs

3.1 Debt raising costs

In its application, Powerlink sought \$20.3m to reimburse it for the costs in raising debt. The AER draft decision reduces this to \$18.9m. In fact, Powerlink will not incur any of these costs as it already has established a line of credit with QTC. This is clearly stated in its annual report for 2010/11 on page 24

"The Consolidated Entity's and the parent entity's main interest rate risk would normally arise from long-term borrowings. However, under lending arrangements offered by Queensland Treasury Corporation (QTC), the Company's borrowings within its client specific pool approximate a fixed rate loan and consequently are insensitive to movements in interest rates. Other long-term borrowings are fixed rate loans for a specific period and are also insensitive to movements in interest rates.

The Consolidated Entity and the parent entity borrow exclusively from QTC, a Queensland Government owned corporation. QTC manages the borrowings on behalf of the Consolidated Entity and the parent entity within agreed predetermined benchmarks."

In its final decision for AA2, the AER allowed Powerlink over \$12m for debt raising costs, but in fact Powerlink spent just above \$1m in this period, granting Powerlink an unearned revenue of some \$11m.

By providing Powerlink with reimbursement for costs that it will not incur, the AER has contravened the requirement of the clause 6A.6.6(c)(1) of the Rules, which requires the operating cost must reasonably reflect

"...the efficient costs of achieving the operating expenditure objectives;"

To provide for costs that do not occur is not efficient let alone mindless.

The AER justifies allowing Powerlink to claim debt raising costs on the basis that this is what an entity might incur should it seek debt from the wider commercial market. That Powerlink has a line of credit established with QTC (at a cost well below the costs of raising funds in the open market) is totally overlooked.

There is no specific requirement in the NER that states that cost of raising debt must be that which would be incurred if the entity were to seek funds from the open market. The AER is fully aware that Powerlink has a line of credit from QTC, which is an entity also owned by Powerlink's owner. To allow a fee to be paid to an affiliate requires the AER to firmly establish that the cost has been incurred. In this case the cost has not been incurred.

To allow for debt raising costs which have not occurred to be added to Powerlink's revenue, is not efficient. To include this as a cost merely increases Powerlink's profitability and, as Powerlink is owned by the Queensland Government, this inclusion of an unnecessary charge becomes a form of disguised indirect taxation.

As Powerlink had an actual expenditure in AA2 for just over \$1m, using AA2 costs as the basis for future costs, the AER should only grant Powerlink some \$1-2m for debt raising and no more. To allow any more, is not an efficient cost and is contrary to the Rules.

3.2 Equity raising costs

In the Final Decision in 2007, the AER granted Powerlink an allowance of nearly \$15m (\$'11) for the costs of raising the equity needed to continue its operations and provide for the needed capital implicit in the approved capex program. That Powerlink did not actually raise any additional equity is evident from its Annual Reports. At the end of FY06, contributed equity was \$401m and at the end of FY11, the contributed equity was still \$401m.

In fact, Powerlink used retained earnings and acquired additional debt to provide for the necessary capital required. This approach is what is used by firms operating in the competitive market. Such firms are quite loath to issue more shares to raise equity as this dilutes returns to existing shareholders.

Powerlink claimed equity raising costs in its initial application of some \$24.7m The AER in its draft decision rejected this amount and considers that its costs for raising equity will really be \$0.9m based on using a cash flow analysis developed by AGP. The AER avers that this approach more closely reflects what a prudent operator would require.

The GROUP agrees that the test for assessing equity raising costs needs to reflect prudency. Powerlink has provided its own level of prudency in the current (AA2) regulatory period where it was able to provide the needed capital without increasing the amount of invested equity.

As with the provision of debt, the costs for raising equity is not defined in the NER as being calculated using a specific method – the regulator is required to identify what costs are prudent and delivers an efficient outcome. The approach developed by AGC and used by the AER reflects the approach used by a prudent firm operating in a competitive market.

To use the approach proposed by Powerlink merely increases the costs to consumers and provides Powerlink with another source of unearned and unnecessary revenue and is therefore inefficient.

4. Service Standards and STPIS

The AER draft decision increased the targets for the service standard incentives yet still provided targets that Powerlink consistently outperformed over the past 4 years. The revised application basically retains the service standard targets listed in the initial application so Powerlink has effectively rejected any commentary provided by the AER in its draft decision. As the following table shows, the AER draft decision provided the basis for Powerlink to garner a bonus from the STPIS without doing anything different to its past performance.

Parameters	Historic performance	AER Proposed values				Better for Powerlink
		Collar	Target	Сар	Weighting % MAR	
Transmission circuit availability (%)				2	_	
Transmission line availability	98.9	97.60	98.76	99.92	0.10	yes
Transformers availability	98.8	98.27	98.76	99.24	0.10	yes
Reactive plant availability	97.5	94.45	97.15	99.84	0.15	yes
Peak transmission circuit availabilitv Loss of supply event frequency (no.)	98.78	98.31	98.76	99.20	0.10	yes
>0.75 (y) system minutes	0.5	2	1	0	0.15	yes
>0.10 (x) system minutes	3.75	6	4	2	0.30	yes
Average outage duration (minutes)					_	
Average outage duration	800	1306	859	412	0.10	yes
Market Impact of Transmission Congestion	1423		1442	le.	hi.	yes

The GROUP's view is that the AER draft decision provides Powerlink with the opportunity to gain a reward from the STPIS based on the AER view on performance, yet Powerlink considers that it is entitled to provide lower performance because of its increased need to take more plant out of service because of its expanded refurbishment program.

What Powerlink (and the AER) fails to recognise is that in the commercial world, refurbishment is not accepted as a reason to not provide the service expected from a supplier. Neither is the investment of new capital in new plant. There is an expectation in the commercial world that service performance will not be affected at all, although some exceptions might be made due to exogenous causes. Service performance and quality in the commercial world are expected to continually improve – standing still is effectively regarded as providing reduced service and quality.

As the STPIS is intended to replicate commercial pressure to improve service performance and quality of product, there must be continual improvement in the

service performance if the provider wishes to get a bonus. This means that service targets have to be challenging and not be subject to lesser performance because the provider is carrying out some refurbishment or augmenting the network. What consumers ultimately want is a "no break" supply of electricity, regardless of cause. It is the challenge to the network provider to deliver this, and when it does the consumer is prepared to pay a bonus. Consumers are not prepared to pay a bonus for lesser performance than has been previously provided.

Powerlink also fails to recognise that its network has grown considerably in the past decade and therefore whilst its refurbishment and augmentation programs might cause some disruption, this disruption will be measured over a larger base. Thus as there has been significant augmentation using newer and more reliable plant, there is an expectation that it should deliver improved performance when measured over the entire (and larger) network. Implicitly, this means that service measures should improve marginally as a result of the new equipment and larger base of operation.

Overall, the GROUP considers that the AER has provided Powerlink with the basis for earning a bonus from the STPIS. The GROUP considers that maintaining past performance into the future should not be the basis for setting targets in the STPIS but there should be continual improvement.

The targets set by the AER actually result in the expectation of a reduction in service performance. At the same time, the costs of providing the service are increasing ie there are costs increase for reduced service. This is totally counter to the expectation of consumers of a competitive service where there is an expectation of cost reductions with improved service. Neither the AER nor Powerlink have justified why Powerlink should be allowed to reverse the trend that competition brings.

5. Demand forecasting

The accurate forecasting of demand provides the basis for establishing the need for capex to augment the network. The AER draft decision (coupled with the report from its consultant) sees that the Powerlink initial view of demand growth was significantly overstated. Powerlink in its revised application reduced the forecasts dramatically but not to the same levels as the AER considered was appropriate.

Actual regional demands (with the addition of the peak to date (13 February 2012) show that there is a clear trend of past actual peak demands which is much lower than the forecasts used in setting Powerlink capex.



Source: AER draft decision, PL APR 2011 update

Powerlink and the AER both provide extensive reasoning as to why their estimates of future demand are correct. It is telling that after the AER provided its reasons (many of which Powerlink disputes) for setting its expected demand well below the initial forecast provided in the initial application by Powerlink, Powerlink's revised application reduces the expect peak demand.

In this regard, the figure 6.10 in the Powerlink revised application provides a telling indication about historic forecasts. Powerlink forecasts have consistently overstated expected growth in demand and this raises the basic question – "has Powerlink again overstated expected growth in demand?"



Figure 6.10: Powerlink demand forecasts¹⁵⁹

Analysis of the year on year growth in demand over the past decade indicates that the greatest single step increase in demand was 11% between 2002/03 and 2003/04, and the next highest step annual increase was 7.5% between 2007/08 and 2008/09 and between 2010/11 and 2011/12. Actual annual changes, year on year is shown in the following figure.



Source: GROUP analysis from Powerlink APR data and NEM Review data for 2011/12

Source: Powerlink APR's, 2005 - 2011.

The step increase to the 2011/12 peak is 7.5%, one of the highest in the past decade. The forecast step increase to 2012/13 by the AER is 12%, and the PL revised application shows a step increase of nearly 14%. The initial application had a step increase of nearly 19%.

The figure shows that for no two consecutive years has the step increase exceeded 5% growth for both years, ie a year with a growth higher than 5% has always been followed by a year with growth less than 5%. This would indicate that after seeing a high growth in 2011/12, there is an expectation that the annual growth for 2012/13 would be less than 5%. However, all forecasters indicate an annual growth rate more than has been seen in the past decade. As the highest growth in demand over a two year growth has been less than 15%, this would indicate that accepting there has been a 7.5% increase in demand growth between 2010/11 and 2011/12, the most that growth might be to 2012/13 might be another 7.5%. On this basis the demand in 2012/13 is likely to be no more than 9300 MW, significantly less than all the forecasts provided to date. This analysis is consistent with an anecdotal view that use of electricity is being impacted by many exogenous influences.

Over the past decade the average annual growth in demand was 3.5%. Excluding the step increase between 2011/12 and 2012/13, Powerlink considers that demand will increase over the next five years at an annual rate of between 5.0% and 5.2%, whereas the AER forecasts an annual rate increase of 3.7%. Excluding the 2012/13 step increase, historic trending supports the AER forecast annual growth

Another feature of this analysis is that there is a trend line implying that annual growth in Queensland demand is falling, albeit by a small amount. This trend line is consistent with anecdotal evidence that the increasing prices for electricity are having a dampening effect on both electricity consumption and on demand.

The following figure from NEM Review supports that electricity consumption growth in the NEM is indeed flattening and in some regions falling.



This fall in consumption is being driven by recent and prospective higher power prices, drives by governments to increase efficiency in energy usage and reduce carbon emissions and by increasing financial pressures on industry and residential consumers. None of the forecasts developed by Powerlink, the AER and the consultants employed by both in this review appears to have addressed the fact that these pressures will impact forecasts of growth in electricity usage.

In fact, as the following figure shows, AEMO is forecasting a dramatic increase in consumption in Queensland, a consumption expectation well in excess of the long term trend. The impact of this differential is significant to consumers as was explained in section 1.3 above and raises deep concerns as to the validity of the various forecasts of demand provided by the many experts involved.



Source: AEMO 2011 ESOU

Whilst it is recognised that the forecast of consumption is not critical to the development of a revenue cap reset review, there are two aspects that this issue raises:

- Errors in the forecast consumption can provide a biased view as to the impact on consumers
- It raises concerns as to the validity of the peak demands that are provided and then used to develop capex plans for the regulatory period.

Overall, the GROUP considers that the forecasts of demand by Powerlink do not reflect historic realities and that as Powerlink has consistently over-estimated future demand, there is considerable concern about using the Powerlink forecasts. In this regard, it is also recognised that Powerlink has a vested interest in over estimating future growth as the regulatory approach provides greater rewards to network owners for investing in new assets.

The trend analysis by the GROUP also indicates that although the AER forecasts of growth in demand during the next period reflects historic trends (and perhaps overstates these as there is a clear lessening of demand seen in Queensland and in other NEM regions), the AER assessment for the demand in 2012/13 significantly overstates the likely demand in that year.

6. Capex

The AER draft decision reflects the amount of capex used in the current (AA2) regulatory period. This is best shown in the following figure.



Sources: Powerlink applications, PL APR 2010, ACCC/AER FDs, AER DD

The main difference between the AER draft decision and the Powerlink applications (initial and revised) lies with the augmentation projects contemplated by Powerlink, especially the decision to build a 500 kV power line but operate it initially as a 275 kV power line. Powerlink also takes issue with the AER over the application of an estimation risk factor, impact of carbon costs and inclusion of a productivity improvement in labour utilisation.

6.1 Productivity, labour rates and forecasting error

The GROUP members all operate in a competitive market. They know that productivity has to improve with time or the firm will go out of business. Consistently regulators (the AER/ACCC and the state based regulators) all have instituted a requirement that forecasts of labour for opex and capex must reflect an improvement in labour productivity. At the same time, the AER is convinced there is a need to reflect that labour costs will increase in real terms over a regulatory period.

In recent times, the AER has used assessments made by Access Economics to combine both a labour cost increase with a productivity increase to ensure that both facets for the cost of labour have been incorporated into the capex and opex forecasts.

This approach requires the costs to be based on unit costs applying at the time of the benchmark year and applying the productivity adjusted labour forecast to the unit rates. In its revised application, Powerlink seems to recognise the principle behind the approach used by the AER but considers it to be flawed in practice. Powerlink comments that the AER approach cannot be used as the AER does not know what aspects of productivity improvement have been already included in the forecasts.

On the face of it, the Powerlink argument would appear to have some validity, but in practice, the Powerlink argument loses strength as the costs on which Powerlink develops its forecasts must be based on real values (unit rates) that can be substantiated. If Powerlink has used unit rates for forecast work that have already had productivity built into them, then the unit rates are not demonstrably efficient. The whole purpose of the EBSS is to ensure that the base year reflects efficient costs, and this includes the unit rates which can be derived from work carried out in the base year.

The GROUP agrees with the AER approach that productivity has to be included in the forecast of future labour costs and recognises that, in principle, the DAE approach to future labour costs is appropriate.

Powerlink provides its reasons for suggesting that AWOTE rather than LPI be used for setting future labour rates. The AER has now used LPI (published by Access Economics for many years and has provided arguments as to why this measure is preferred over other measures. The GROUP has identified that other regulated firms have sought a change in the measure (presumably because the outcome is more favourable) and the AER has been consistent in not accepting change. For regulatory consistency, the GROUP considers that unless it can be proven that there is a flaw in the use of LPI then it is best that there be consistency rather than changing the measure.

The GROUP is of the view that forecasting any future costs is a fraught exercise. To overcome the errors that inevitably occur in forecasting, the GROUP remains of the view that there should be no attempt to build into allowances forecast movements in labour and materials, and rely purely on general inflation to address future movements in costs as was done in the early years of regulation. In support of this view, the GROUP highlights the massive errors the AER has made in forecasting in the past. For example the forecasting of the \$A/\$US exchange rate clearly demonstrates the forecasting errors that can occur.

The following figure plots the forecast values of the exchange rate over time by the AER and compares these to actual values. The purpose of showing this is not to discredit the AER but to show how wrong forecasts can be and the impact that a wrong forecast can cause.



Source: RBA, AER decisions

6.2 Estimation risk factor

The GROUP agrees with the AER regarding the exclusion of an estimation risk factor that Powerlink had included in its forecast capital costs. Experience of the GROUP members in forecasting future costs supports the AER arguments. The GROUP recognises that costs for future works are based on unit costs that have been developed over a period of time and these are continually refined as more and better data from more recent projects is added to the data base.

The data base would include varying unit rates from different projects for the same work due to the unique nature of each project. Therefore within each unit rate for work there is a range of outcomes that could apply to a new project. To deliberately bias this unit rate by adding an estimation error does not recognise that the future project work could be constructed for less than the historic unit rate due to the nature of the new project. Equally the new project could cost more. Biasing unit rates only provides an unearned premium to the actual costs of a project.

However, despite this variability within the unit rates, over time and over a number of projects, the "unders and overs" should cancel out, resulting in the average costs reflecting the unit rates used to develop the project cost. This philosophy underpins the very reason for developing unit rates for estimation purposes in the first place.

6.3 Carbon Price Trajectory

The GROUP recognises that there will be an impact on the future demand and consumption of electricity in Queensland as a result of the introduction of a carbon price. The impact of increasing the price of electricity will be to reduce the demand and consumption of electricity although it recognised that increasing a higher carbon reduction target will require more generation connections, and make others redundant.

The GROUP agrees with AER that the likely capex needs of Powerlink should reduce as the likelihood of the government increasing carbon reduction targets in the period for AA3 is not high. In this regard, it must be accepted that this review is about setting the capex needs for the next five years. Over this time, the Government views on carbon pricing and renewable energy targets are quite fixed. To look beyond this time frame (beyond 2016/17) is premature in the extreme.

The explanation provided by Powerlink in its revised application does not recognised that with higher carbon reduction targets, the greater will be reductions in demand and consumption, providing a strong offsetting to increased costs for new connections.

6.4 275 kV powerlines built to 500 kV specifications

The GROUP agrees with the AER that there is no justifiable reason for consumers during the next period (AA3) having to pay for the building of powerlines to 500 kV specifications but operated at 275 kV.

Whilst the current Rules provide for the automatic roll forward of actual capex incurred in a regulatory period into the next period, there is no requirement in the Rules for oversized assets to be built now for later use. In fact to provide deliberately oversized assets runs counter to the current rules that capex must be demonstrably efficient. It is not efficient to deliberately overspend now to accommodate current needs.

In the original code, the value of the assets provided was to be optimised – that is, the value of the assets was to be valued to meet the actual needs of the network rather than the capacity of the network. This has resulted in the past in the regulatory asset base being reduced to recognise that capacity provided in the network but not used or usable, should be optimised to reflect the cost to provide the assets needed for the current and forecast needs likely to be seen in the regulatory period.

The GROUP notes that this issue has been addressed in a recent rule change proposal⁴ by the Major Energy Users and currently under review by the AEMC. We recommend that the arguments provided in that rule change proposal reflect the views of the GROUP in this regard.

⁴ see <u>http://www.aemc.gov.au/Electricity/Rule-changes/Open/Optimisation-of-Regulatory-Asset-Base-and-Use-of-Fully-Depreciated-Assets.html</u>

The GROUP fully supports the AER approach and arguments in not allowing this inflated capex proposal of a \$544m premium for this augmentation to be included in the allowed capex for AA3.

6.5 Reductions in demand forecasts

In section 5, the GROUP provides an argument that the AER forecast increases in demand are on the high side of realistic – certainly the Powerlink revised demand forecast is still far too high.

The GROUP notes that the AER has reduced the forecast capex to accommodate its lower forecast demands. The GROUP considers that the AER should look to further reduce the forecast demands and provide revised and lower forecasts for capex to accommodate the lower demands indicated by the GROUP's analysis.

7. Opex

A review of the history of Powerlink opex provides a telling story. Consistently Powerlink has claimed more opex than it required. In the current period (AA2) Powerlink significantly under-run its opex allowance. This is shown clearly in the following figure.



Sources: Powerlink applications, ACCC/AER FDs, AER DD

The opex allowance in AA2 was subject to an EBSS program as required by the Electricity Law. The importance of this EBSS cannot be overstated. It is intended to provide an incentive to the regulated firm to reduce its opex to the most efficient level and provide a starting point for setting the next period opex. The EBSS allows the regulated firm to retain the benefit of any under-run in the regulatory period and to receive a benefit in the next regulatory period. Because consumers have paid the regulated firm a bonus for reducing its opex, there is a strong expectation that the opex set for the next period will reflect the actual opex incurred in the period.

The first concern to consumers, at a high level, is that the AER draft decision provides a step increase in opex from the "base year" opex of over 15% and Powerlink's revised opex claim still seeks a 20% step increase. The second concern to consumers, again at a high level, is that in the current period, Powerlink opex remained relatively constant over the entire 5 year period. In the forecast, the AER is allowing after the large step rise an additional 2% pa real increase in opex and Powerlink (in both the initial and revised application) wants over 5% real increase pa.

There is obviously a clear disconnect between what consumers consider Powerlink is able to achieve based on past performance and the views of the AER. Powerlink considers even more is needed and has rejected the AER views on what constitutes efficient opex in their entirety.

In its revised application Powerlink seeks to assure the AER that its controllable opex did not significantly under-run the allowance. The fact that there was an overall and significant under-run still provided Powerlink with considerable financial benefit. This indicates that the allowances for other aspects (like debt raising costs) were grossly over-allowed. This issue is addressed in section 3 above. In regard to savings in the provision of network support, this aspect (like debt raising costs) is not entirely outside of Powerlink control either. Powerlink has the ability to implement capex alternatives to network support. If network support is used but was not allowed for, Powerlink can claim a cost pass through for the network support cost and still retain the benefit of not using capital that may have been allocated for addressing the network need. To claim that these costs are not controllable is not entirely the case.

7.1 Base year

Powerlink provides extensive commentary on why its preferred choice of base year is preferred to that of the AER. The GROUP is concerned that Powerlink has selected an earlier year than the AER because it provides Powerlink with a benefit in terms of opex allowances. The GROUP tends to agree with the AER that a later year provides a better indication of the impact of the EBSS in reaching efficient costs. The GROUP also considers that nominating one single year as the base year can distort the outcome and considers that costs incurred over a number of years provides a better indication of the underlying cost.

The GROUP agrees with the AER that benchmarking indicates that the costs for the base year the AER selected would support a view that the costs incurred in that base year would appear to be efficient when compared to the costs of the other four TNSPs.

7.2 Step changes

The GROUP previously provided its views on the step changes proposed by Powerlink in its response to the Powerlink application. The GROUP notes that the AER generally agrees in most of the assessments made in its response although tower painting is seen by the AER as a step change.

The GROUP considers that as Powerlink has been operating the transmission network for many years, the decision to commence a program to paint the towers is not a new feature, although it might be new work that Powerlink has now decided to implement in AA3. The GROUP considers that if Powerlink had decided not to undertake this activity in earlier years then some of the savings that Powerlink has accrued as a result of less tower painting should now be recovered in some way. The GROUP considers that generating a profit in earlier years by avoiding carrying

out essential maintenance and then requiring payment again in a later period, is not an efficient approach to setting an appropriate opex level. That this can occur is because the AER has permitted Powerlink to claim opex cost levels on a hybrid approach.

The following four charts show the main cost drivers of opex. These show that the AER has, to a degree, accepted that the rate of change in cost for latter years reflects historic trends (accepting that the AER has accepted there should be an allowance for tower painting).

What is most concerning to consumers, is the very large step changes permitted from the base year and the start of period AA3. These step changes are quite significant and bear little resemblance to the AER commentary on step changes. Field maintenance sees a step change of 20%, operational refurbishment sees a massive increase of over 40%, maintenance support sees a 10% rise and asset management support a 5% increase. None of these step changes reflects historic trends although the increases in later years in the period accepted by the AER do reflect historic trends. Such an outcome is totally inconsistent both within the cost structures and what an EBSS would deliver.

The revised application by Powerlink merely maintains its views espoused in the initial application.



Source: AER DD, Powerlink applications



Source: AER DD, Powerlink applications



Source: AER DD, Powerlink applications



Source: AER DD, Powerlink applications

7.3 Network support

The following chart shows the change in network support costs over time and into AA3. In its initial application Powerlink included a modest amount for network support but the AER draft decision considered there was no need to include any amount for network support. In its revised application, Powerlink has increased the amount of network support, rather than decrease it.



Source: AER DD, Powerlink applications

Network support is a credible and lower cost alternative to network augmentation. This means there is a connection between the capex allowance and the allowance for network support. Despite this connection, regulators have permitted a pass through of costs when an NSP has decided to replace a proposed network augmentation with network support, although when doing so the regulator has not required a compensating reduction in the capital cost to reflect the lower amount of capex incurred.

Most TNSPs develop their capex needs on a deterministic approach and therefore at a regulatory reset it is readily obvious where network augmentation has been avoided by using network support.

Powerlink operates a probability capex assessment methodology. This means that there is no certainty that any one of the capital projects it includes in its assessment will or will not be included in the capex allowance. Therefore, there can be no certainty that the capex needed for a specific network augmentation is or is not included in the final capex allowance.

Network support is intended to alleviate the need for immediate network augmentation and the augmentation that is avoided can be clearly identified. However, If there is no specific capex allowance for the project that the network

support is designed to replace, there can be no certainty that the network support claimed will or will not be needed.

On this basis the GROUP agrees with the AER that there is no requirement to include an allowance for network support.