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Total Environment Centre

Submission to the AER

Powerlink Revenue Determination 2013-2017

Response to Powerlink's Initial Revenue Proposal

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Introduction

Total Environment Centre welcomes the opportunity to comment on the *2013-2017 Powerlink Revenue Proposal* and provide advice to the AER on the matter.

Powerlink's 2013-2017 Revenue Proposal is an excellent example of how NSPs 'game the system' during revenue determinations. That is, they manipulate the rules and procedures which have been put in place to protect consumers, and instead use them to increase their profits. NSPs do this through 'creative accounting' — practices which, while they may follow the letter of the rules of standard accounting practices, certainly deviate from the spirit of those rules and the public interest. Creative accounting in revenue proposals is characterised by excessive complication, and the use of novel ways of presenting key data such as expenditure, income, liabilities, risk, projected demand, and the impacts of price increases on consumers.

The purpose of all this is to influence the readers towards the interpretations desired by the authors: that they are supplying electricity as efficiently as possible, and that the massive revenue increases they propose are justified.

Below we examine how these methods are employed in Powerlink's Revenue Proposal. We also present a clearer presentation of the extent to which Powerlink's revenues are increasing, and the impacts they will have on electricity consumers, using Powerlink's own data.

Powerlink's 2013-2017 Revenue Proposal

Powerlink states that it is "the most cost-effective transmission entity in the NEM". In order to support this claim, Powerlink has used techniques of creative accounting throughout its 2013-2017 Revenue Proposal to justify profligate increases in expenditure, obscuring the impacts on consumers while exaggerating its efficiency and the need for its expenditure.

Increases of the magnitude asked for by Powerlink are contrary to the National Electricity Objective and the long term interests of consumers. They are illustrative of just how out of step Network Service Providers are with delivering efficient, sustainable, and legitimate services to consumers of electricity.

TEC will deliver more analysis to the AER on this process in due course. In the meantime, below are the key points that the AER should address in its draft determination.

Overview of Increases in Revenue

Below is the revenue for the proposed regulatory period, in comparison to the current and previous regulatory period.

Table 1: Historical and Proposed Revenue

	Previous Regulatory Period (6 years)		***Current Regulatory Period (5 years)***		***Proposal for Next Regulatory Period (5 years)***	
	Total	**Average per year**	**Total**	**Average per year**	**Total**	**Average p.a.**
Revenue	$2.37bn	**$396M**	$3.34bn	**$668M**	$5.94bn	**$1.2bn**
CapEx	$1.04bn	**$173M**	$2.85bn	**$570M***	$3.947bn	**$790M**
Opex	$509M	**$85M**	$751M	**$150M**	$1.094bn	**$219M**

***(average annual Capex to date is $530M)**

These statistics reveal some disturbing trends:

Powerlink's proposed average annual revenue is over **3 times** the average revenue in the previous regulatory period. Their proposed final year revenue ($1.446bn) is approximately twice the 2010/11 revenue ($734M) and 4.5 times the revenue in the first year of the previous period ($318M).

Powerlink is proposing to spend approx 4.6 times the average annual capex of the previous regulatory period, and approx 1.5 times the average capex spend of the current period.

Powerlink's proposed average annual opex is approx 1.5 times the average opex for the current regulatory period. The proposed opex of $254M in the final year is around 4 times the first year's opex in the previous regulatory period ($65M).

If we compare the above revenue statistics, we see that the proposed Return on capital (WACC X Asset Value) of $4.2 billion accounts for approx 71% of Powerlink's proposed revenue.

Most importantly for consumers, however, is that Powerlink's proposed revenue will **almost double** the network charges that consumers face from **$15.88/MWh to $31.3/MWh** over the next 6 years (2010/11 to 2016/17). We discuss this in further detail in the next section.

Price Increases - The Impact on Consumers

Section 11.5 (p. 113) of the Powerlink 2013-2017 Revenue Proposal states that "average transmission charges are estimated to increase in nominal terms from around $15.83 per MWh in 2011/12 to $21.72 per MWh in 2016/17."

According to these figures, this is an increase of 37%.

However, Powerlink's annual network charges are dependent on two factors:

1. Powerlink's annual revenue; and
2. the annual energy delivered to consumers (MWhrs).

According to the Revenue Proposal, Powerlink's revenue is proposed to approximately *double* in the next 6 years from $734M in 2010/11 to $1.446bn in 2016/17. However, Powerlink makes deliberately does not discuss its assumed energy delivered (MWhrs) in its presentation of its price increases (although it claims to have submitted them to the AER on a "confidential basis"). However, based on publically available energy consumption trends, Powerlink's price trends are as follows:

Table 2: Detailed Historical and Proposed Revenue and Historical and Forecast MWh Delivered

Previous Regulatory Period

	2001/02	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**
Revenue ($M)	346	367	391	427	488	531
MWhrs delivered	40297	41264	43270	44357	45609	46025
$/MWh	**8.59**	**8.9**	**9.03**	**9.62**	**10.7**	**11.54**

Current Regulatory Period

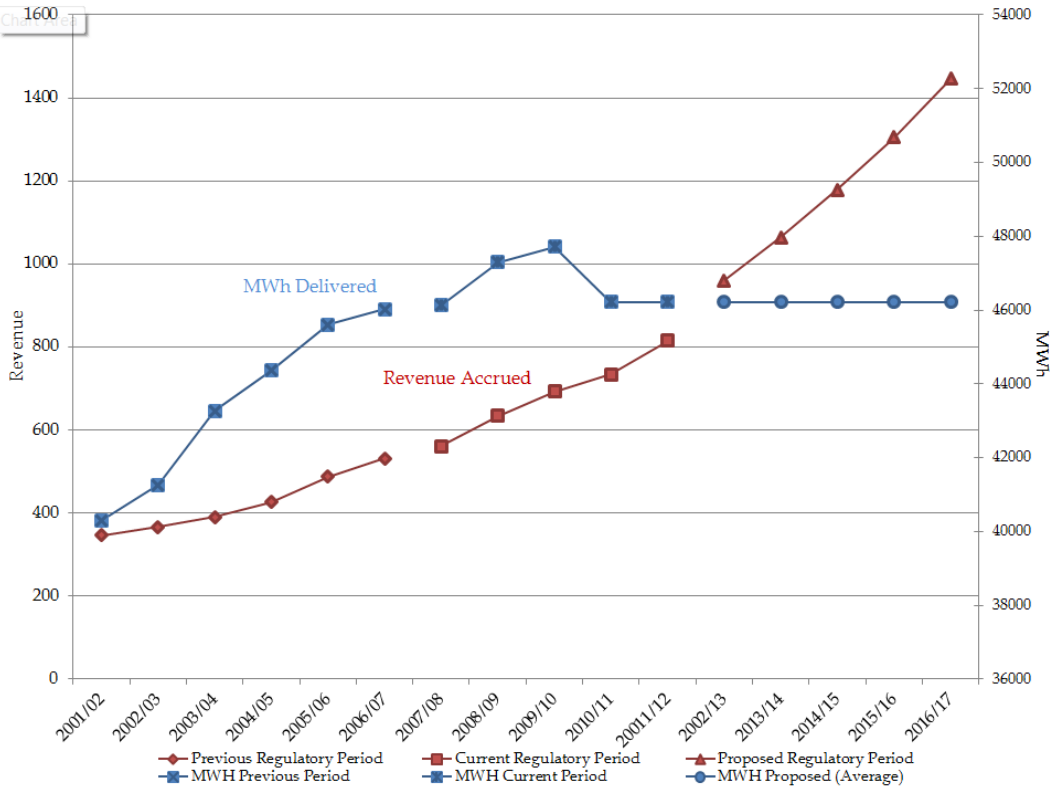
	2007/08	**2008/09**	**2009/10**	**2010/11**	**20011/12**
Revenue ($M)	561	634	693	734	815
MWhrs delivered	46125	47303	47720	46217	46217
$/MWh	**12.16**	**13.4**	**14.52**	**15.88**	**17.63**

Proposal

	2002/13	**2013/14**	**2014/15**	**2015/16**	**2016/17**
Revenue ($M)	960.6	1064	1178.5	1305.3	1445.7
MWhrs delivered*	46217	46217	46217	46217	46217
$/MWh	**20.8**	**23.02**	**25.5**	**28.25**	**31.3**

*** MWhrs delivered 2010/11 through 2016/17 are the average forecast.**

Figure 1: MWh Delivered versus Revenue Accrued (and proposed)



This graph illustrates that Powerlink's prices (TUOS charges) will double from $15.88/MWh in 2010/11 to $31.30/MWh over the next 6 years.

This is a 97% increase in the amount consumers will pay for Powerlink's services — almost three times greater than the amount that Powerlink has indicated.

Powerlink does not mention this increase in its Revenue Proposal. Instead, it only presents the impact it will have on domestic retail prices:

"Powerlink estimates that the increase in transmission charges under this Revenue Proposal will add approximately $2.34 to the typical quarterly residential electricity bill of $393, or a nominal electricity price increase of approximately only 0.6% per annum."[1]

This deliberately obscures how much Powerlink is increasing its prices and whether they are justifiable: as transmission costs represent around 10% of the domestic retail price for electricity, this heavily dilutes its proposed price increases, attempting to divert attention from NEM assessment requirements.

Were all Network Service Providers to double their revenue, consumers would be faced with massive increases to their bills. Powerlink justifies this increase in revenue increases because of increased operating expenditure (opex) and capital expenditure (capex), brought about because of projected increases in the demand for electricity. However, as we will see, Powerlink has used excessive complication and novel ways of presenting key data in order to provide this justification.

[1] Powerlink (2011) *2013-2017 Powerlink Queensland Revenue Proposal*, p.114

Instances of creative accounting

- Powerlink deliberately diverts attention from its proposed price increases by presenting them in terms of their impact on **domestic retail prices.** Given transmission comprises approximately 10% of the domestic retail price, Powerlink's proposed price increases are heavily diluted. The document never attempts to present this increasing trend.

- As previously discussed, Powerlink's proposed expenditure increases will approximately double its prices over the next 6 years. That is, they will increase by 97%. Powerlink makes no attempt to highlight this in the document.

- If Powerlink's prices increase by 97% over six years, this equates to an average annual increase of 12%. Powerlink, however, presents its price increases as "only some 0.6%/annum". This is a grossly deceptive, misleading and inaccurate statement and does not indicate the magnitude to which Powerlink is increasing its own revenue.

- Powerlink deliberately avoids any discussion on energy consumption trends and its energy delivered assumptions in the calculation of its price impacts. **It simply assumes a growth in energy consumption of over 30 times the trend of the past 5 years.** Despite the fact that the magnitude of this increase makes it almost anomalous, Powerlink makes no attempt to properly justify it.

- Powerlink over-emphasises and exaggerates its network growth drivers and deliberately ignores drivers that will reduce the need for network expenditure.

- Powerlink suggests that the proposed CapEx is "following a similar trend to the current period", yet the proposed capex is 50% greater than the average annual spend in the current regulatory period, and 360% higher than the average CapEx spend approved in the previous period.

- Powerlink's suggests that that "the age profile of its network will not materially change over the next regulatory period", despite the fact that it proposes a capital expenditure of around $4 billion — equivalent to the average Regulated Asset Base of the current period.

- There is a misleading presentation of trends throughout the proposal by selective and inconsistent use of nominal and 2011/12 dollars. For example, in Table 1.3, Powerlink's total proposed CapEx is $3,946.8M, not $3,488.3M as indicated. The table makes misleading use of 2011/12 dollars in an attempt to create the impression that the proposed Capex is lower than it is.

- On page 14, Powerlink suggests that its "forecast controllable operational expenditure follows the trend of the actual operating expenditure in the current period". However, its annual proposed opex is approximately 50% more than the average annual opex in the current regulatory period and almost 3 times the average annual opex of the previous regulatory period. Figure 1.6 is used to support this statistic, which selectively uses 2010/11 dollars and introduces 'new operational expenditure requirements' without explanation of what those requirements are.

- NSPs usually select an 'efficient base year' from the current determination period as the reference "from which to forecast future operating expenditure". Powerlink has selected 2009/10 as their 'efficient base year', despite the fact that it features expenditure at twice the level of 2005/06.

- Powerlink states that there were no 'one-off' items in the current regulatory period, but many in the next. The validity of this claim is further weakened by the fact that many of the future 'one-off' items listed on page 90 are actually ongoing/recurring expenditure items, or 'one-off' items for the current regulatory period. For example:
    - Tower refurbishments have been stated as a 'one-off' item, despite the fact that they are undertaken as part of ongoing maintenance (Powerlink incurred tower refurbishment expenditure in 2009/10, for instance).
    - Office accomodation has been stated as a 'one-off' item, despite the fact that Powerlink has already constructed significant office accommodation at Virginia and Narangba, and are in the process of building another multi-storey, toll-free car park. TEC will seek to examine more of Powerlink's office accommodation expenditure in its supplementary submission.
    - Powerlink paid an external consultant (RPS) to perform Climate Change Investigations during the 2009/10 financial year. Therefore this should have been identified as a 'one-off' item in 2009/10, not future years.
    - The revenues and costs of maintaining the South —West Queensland Extension are non-regulated and are paid for by the generators, and should not be included as part of Powerlink's 'one-off' item expenditure.

- Powerlink makes exaggerated and irrelevant claims regarding the likelihood and impact of its generator connection augmentations (e.g., South —West Queensland Extensions). These developments are predominantly non-regulated and are paid for directly by generators and are irrelevant to Powerlink's regulatory submission. In any case, the major developments are also in areas where Powerlink's grid is already well established.

- Powerlink makes many statements which claim it faces 'unique circumstances', yet all other TNSPs and DNSP's also claim to have unique circumstances in their regulatory submissions. All of these "unique" factors have a **cost increasing impact.** Powerlink does not provide any quantitative justifications for the cost impacts of these "unique circumstances" in the Proposal.

- Powerlink uses greenwash to improve its image in its treatment of climate change issuse. It states that it supports 'a lower emissions NEM' on the front cover of the proposal, as well as throughout the body of the document. However, the content overwhelmingly deals with the use of fossil fuel gas generation, and mentions 'renewables' only once.

- The scale factors quoted by Powerlink in this Revenue Proposal are double what they should be. Powerlink claims that network maintenance is "almost a one-for one increase", despite the fact that newer assets, while much more expensive than existing assets, require less maintenance. **The scale factor for transmission asset maintenance should be around 40-50%, not 95% as claimed**. In addition, the actual Network Operations Scale Factor for the industry would be around 10%, not 40% as claimed as a large component on Network Operations costs are non-labour costs. Powerlink uses ITOMS results as the indicator for its efficiency.

However, the ITOMS results presented in the submission are not a valid indicator of operational efficiency for various reasons:

- They only benchmark the **direct labour costs** of selected maintenance activities, which accounts for less than 10% of Powerkink's controllable opex
- They do not include indirect costs (if they did, Powerlink would benchmark very poorly as their overhead and corporate support costs are much higher than other Australian TNSPs)
- There are large discrepancies between the cost allocation methodologies applied by the ITOMS participants.

- Powerlink justifies its cost increase drivers qualitatively (in narrative form) with minimal quantification.

- The document constantly references "Powerlink Data" as its data source, and makes only limited reference to public data. This provides us with no further context or reference to be able to assess its validity. We understand Powerlink's data is generally not accepted by other industry participants including Energex and Ergon. For example, as per its previous submission, Powerlink makes claims throughout its proposal on the "robustness" of its network and project planning processes. We understand these claims would not stand up to external scrutiny from within the industry.

Incomplete data

In addition to the above instances of creative accounting, the proposal lacks some significant information required to properly assess its claims. Most of Powerlink's claims are not transparent and are extremely difficult to assess due to the lack of information provided.

An inordinate amount of key information has been provided to the AER on a "confidential basis". But Powerlink is a monopoly company that is owned by the government of Queensland. Why does a company which faces no competition for its network services and is supposed to operate in service of the people and the government of Queensland require this level of confidentiality? While it may partially be to provide confidentiality to those market participants (generators) who do face competition, the majority of this confidentiality is clearly to avoid public and consumer scrutiny of this information and its underlying assumptions.

To ensure a fair and transparent public consultation process the AER must insist on this information being made explicit and publicly available, and should extend the public consultation period accordingly.

Projected Demand

According to Powerlink's 2011Annual Planning Report, over the 5 year period from 2005/06 to 20010/11 the energy delivered by Powerlink's network will have increased by approximately 1.3%. This is an average growth rate of around 0.2% per annum.

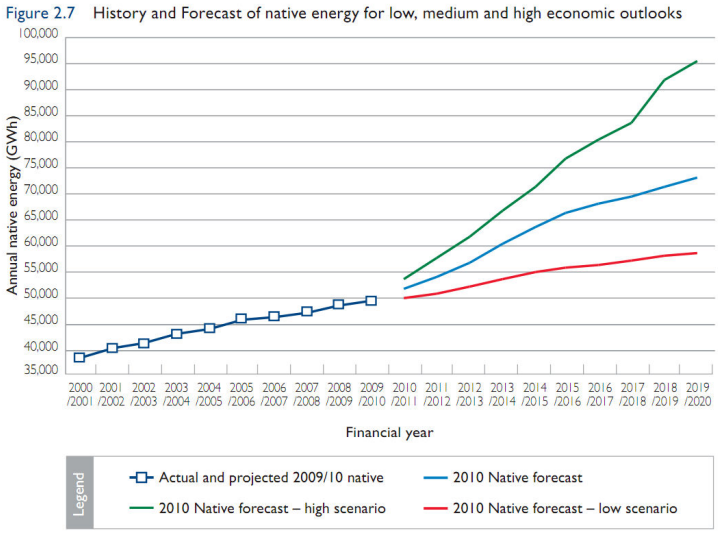
Powerlink's Annual Planning report then projects that energy consumption over the next 5 years will jump by 35% (approx 6%/annum).

This means Powerlink is assuming an annual growth rate of over 30 times the average growth rate of the previous 5 years

This increase in demand is inconsistent with the opinion of government experts and independent electricity industry analysts. For instance, as indicated in the *Garnaut Climate Change Review Update 2011*, over the past three years there has been a considerable deceleration in the growth in Australia's electricity consumption. Most analysts are projecting that average energy consumption and peak demand has plateaued and is now reducing. This is due to many factors, including increasing market saturation of air conditioners, a downturn in production because of the GFC, some moderation of energy usage by consumers in response to higher prices, and increases in energy efficiency and distributed generation.

This trend is evident in Figure 3, taken from Powerlink's own 2011 Annual Planning Report. It shows that its native energy dropped in 20010/11. The graph also illustrates how out of step the forecast scenarios are with current trends.

Figure 2: History and Forecast Native Energy from Powerlink's 2011 Annual Planning Report



Exaggeration of Risk

Powerlink is a monopoly company, and so faces no competition for its services in supplying transmission infrastructure. Transmission NSPs like Powerlink are regulated via a revenue cap, which means it also faces no 'volume risk'. Instead, Powerlink's revenue is fixed throughout the regulatory period, and so Powerlink's network charges (c/kWhr) will simply be *much higher* th it has presented in its proposal.

Powerlink's business value has increased from around $1bn in 1995 when it was first incorporated to well over $6bn today. An analysis of the return on owner's equity over this period would demonstrate an astronomical return on equity. Essentially, since the beginning of the first determination period, **Powerlink has tripled its business value and profitability while facing absolutely no market risk whatsoever.**

In a time of financial uncertainty when resources are stretched, why should a monopoly government-owned network company be given such massive rewards? The massive increases in business value and profitability suggest major flaws in the regulatory regime and the regulatory allowances of the past 2 regulatory periods.

Reliability

Powerlink makes use of the 2004 Somerville Report to argue that "the desire for high levels of reliability… is paramount", but use of the this is irrelevant and misleading — the report was focused only on distribution issues (mainly in relation to Energex) in context to how the market was eight years ago. Transmission reliability standards are very different from distribution standards. Each state has its own transmission reliability standards. The setting of these standards is based on highly conservative engineering approaches rather than a probabilistic cost-benefit approach, resulting in higher standards than necessary.

As indicated by Ross Garnaut in his 2011 Update, transmission reliability standards are developed from a parochial, state-centric, viewpoint. Interstate connections, which could deliver improved reliability and other market benefits (e.g. increased competition between generators) must be economically justified through a much more rigorous process. This has resulted in excessive intra-state investments proceeding at the expense of inter-state connections; i.e. parochial self interest has driven local over-building at the expense of national networking.

The submission also deliberately avoids disclosing the substantial bonuses Powerlink received during the current regulatory period under the performance incentive scheme. The targets are clearly set too low (providing substantial bonuses for simply achieving historical levels of reliability) and are subject to manipulation. Meaningful "stretch targets" need to be applied to ensure that consumers are not simply paying an incentive bonus for the better performance that the increased investments should provide in any event.

Capital Expenditure

Table 3: Historical and Proposed Capex

Previous Regulatory Period

	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	Average/year
ACCC Allowance	155	178	187	229	198	91	173M
Actual Spend							

Current Regulatory Period

	2007/08	2008/09	2009/10	2010/11	20011/12	Average/Yr	Total
AER Allowance	719	680	463	528	462	570	2853
Actual Spend	652	617	442	410		530	?

Proposed CapEx

	2012/13	2013/14	2014/15	2015/16	2016/17	Average/Year	Total
Proposed Allowance	920	933	710	756	628	790	3947

As previously stated, Powerlink's proposed CapEx of $3,947 billion would result in them spending approx 1.5 times the average CapEx spend of the current period and approximately 4.6 times the average annual CapEx of the previous regulatory period.

Powerlink has struggled to spend the massive increase in CapEx allowance it secured for the current regulatory period. To date Powerlink is $270M underspent. However Powerlink is proposing to undergo a massive "catch up" in 2011/12 to ensure that it exceeds its regulatory allowance for the period.

Powerlink claims it will spend almost $800M in capital expenditure in 20011/12, which is around twice as much as it spent in the previous two years and almost twice as much as the regulatory allowance for the year. This massive spend is clearly not driven by needs, but is simply driven by attempting to spend the regulatory allowance and to increase its opening asset base for the next regulatory period. We look forward to providing the AER with examples of this in our updated submission.

Powerlink's proposed Capex expenditure is 'front-end' loaded as per its previous regulatory submissions with almost 50% of the spend in the first 2 years. It suggests that there are "contingent projects" valued at around $1.66bn. To provide context, this is the equivalent to replacing the entire South Australian transmission network.

As per its previous regulatory proposals, Powerlink's justification of its proposed augmentations focuses on "scenarios" to divert attention from, and avoid scrutiny of, the prudency and timing of the individual projects being proposed.

Powerlink's discussions on peak demand growth focus on residential demand which only accounts for around 30% of its network load.

Powerlink's proposal makes numerous exaggerated and irrelevant claims regarding the likelihood and impact of its generator connection augmentations (e.g., South — West Queensland Extensions). These developments are predominantly non-

regulated, are paid for directly by generators and therefore are irrelevant to Powerlink's regulatory submission. Additionally, the major developments are in areas where Powerlink's grid is already well established.

As per the previous regulatory period, **Powerlink's proposed replacement Capex expenditure represents a replacement of over 20% of its regulated asset base over the next 5 years — a rate of over twice the underlying need**.

It is clear that alternatives to network augmentation (demand management and embedded generation), have *not* been genuinely considered by Powerlink, despite their obligations to do so.

Network and Project Planning Process

As per its previous regulatory proposals, Powerlink's justification of its proposed augmentations focuses on "scenarios" to divert attention from, and avoid scrutiny of, the prudency and timing of the individual projects being proposed. In addition:

- The individual projects are not justified against objective planning criteria.
- There is also no discussion of the timing of individual projects, and whether this is optimum, or if some could be cost effectively deferred.
- The basis for the cost estimates of the individual projects is also not discussed in detail.
- These cost estimates need to be independently reviewed to ensure the prices are realistic and efficient.

The Woologa-Cooroy Project

As per its previous submission, Powerlink makes claims throughout its proposal on the "robustness" of its network and project planning processes. We dispute this, and as an example refer to the Woologa-Cooroy project.

During the network and project planning consultation for the Woologa-Cooroy project, Powerlink made multiple numerous public statements regarding the absolute urgency and necessity of this project., They are on record for saying that if this project did not go ahead with urgency, it would be a 'lights out' situation, and asserted this over the many years for which this project was planned.

Despite this urgency, Powerlink cancelled this project two weeks ago due to "minor changes to its network load flows." If we are to take them at their word, this means Powerlink is incapable of satisfactorily forecasting future levels of demand and planning appropriate levels of network augmentation, the size of the Wolloga-Cooroy project.

Either this is the case , or Powerlink uses inflated rhetoric and creative accounting to justify unnecessary network augmentations. We understand it is well known within the industry that this project was delayed because its justification is highly questionable and suggest Powerlink did not wish to have its poor process of justification attracting attention by the AER during this regulatory determination process.

Delaying such a project due to "minor changes in load flows" obviously puts all of Powerlink's claims about the robustness of its network planning and project justifications, and their timing, into serious doubt.

TEC looks forward to providing the AER with more information on the Woologa-Cooroy Project as part of its supplementary submission.

Asset Replacement

Approximately one third of Powerlink's proposed CapEx is for asset replacement. As per its previous proposal, Powerlink provides a diagram (Figure 1.20) which attempts to create the impression that most of its assets are due for replacement. A diagram based on the number of assets is misleading if it does not indicate the cost of those assets — some assets may be valued at $10k, whereas other may be valued at $10M.

Powerlink's proposed replacement capex expenditure represents a replacement of over 20% of its regulated asset base over the next 5 years. The current regulatory period also included a similar rate of capex expenditure.

Most transmission assets have average lives of 40-50 years, which on average, would result in replacing approximately 10% of the asset base over a 5 year period. Yet, Powerlink is consistently replacing its assets at over twice this rate. The AER needs to perform an in-depth analysis of Powerlink's proposed asset replacements.

Operating Expenditure

Table 4: Historical and Proposed Capex

Previous Regulatory Period

	2001/02	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**
Controllable OpEx	65M					
MWhrs Delivered	40297	41264	43270	44357	45609	45900
$/MWh	1.61					

Current Regulatory Period

	2007/08	**2008/09**	**2009/10**	**2010/11**	**20011/12**
Controllable OpEx	111.2	121.6	132.4	143.3	152.9
MWHrs Delivered	46125	47303	47720	46217	46217
$/MWh	2.43	2.57	2.77	3.01	3.31

Proposed Regulatory Period

	2002/13	**2013/14**	**2014/15**	**2015/16**	**2016/17**
Controllable OpEx	174.1	186	199.8	215.9	233.2
MWhrs delivered	46217	46217	46217	46217	46217
$/MWh	3.77	4.02	4.32	4.67	5.05

Based on Powerlink's proposal, its Opex/MWhr will more than triple from the start of the previous regulatory period to the end of the next regulatory period.

As stated at the beginning of our submission, Powerlink's proposed average annual opex of $219M is:

- over 1.5 times the average annual opex in the current regulatory period; and
- almost 3 times the average annual opex of the previous regulatory period.

The proposed annual opex for the final year ($254M) equates to around 4 times its annual opex at the start of the previous regulatory period ($65M).

Powerlink's 2013-2017 does not highlight this increase when measuring its efficiency. Instead, Powerlink selectively focuses on the Opex/RAB ratio as its key efficiency measure. Due to its major increases in network expenditure in recent years, this ratio significantly favours Powerlink, due to high asset values and lower operational and maintenance costs associated with newer assets.

Even using this ratio, the Revenue Proposal states that Powerlink's opex/RAB ratio will increase from 2.45 to 2.54 over the next regulatory period. This deprecation in efficiency can be seen by the fact that Powerlink's opex/RAB is higher in 2008/09 than it was in 2001/02. Powerlink *doubled* its regulated asset base during this period.

Why has Powerlink suffered a decrease in efficiency despite this massive investment? With increased investment, an efficient business would have experienced a significant decline in its opex/RAB ratio, yet Powerlink's ratio has remained reasonably constant.

Before making a determination on this Revenue Proposal, Total Environment Centre recommend the AER conduct an analysis of Powerlink's operational expenditure over the past two regulatory periods to identify that whether it has squandered any 'economies of scale' in opex reductions that it should have realized given such rapid growth in their asset base.

Pass Through Costs

As stated by the EUAA during Powerlink's last Revenue Determination, "all businesses in Australia face similar cost pressures to Powerlink but are not able to pass through such costs via a regulatory determination; they might pass through some proportion but must also look to make greater efficiencies in their operations or lose competitiveness and market share."
These comments are still highly relevant for this application.

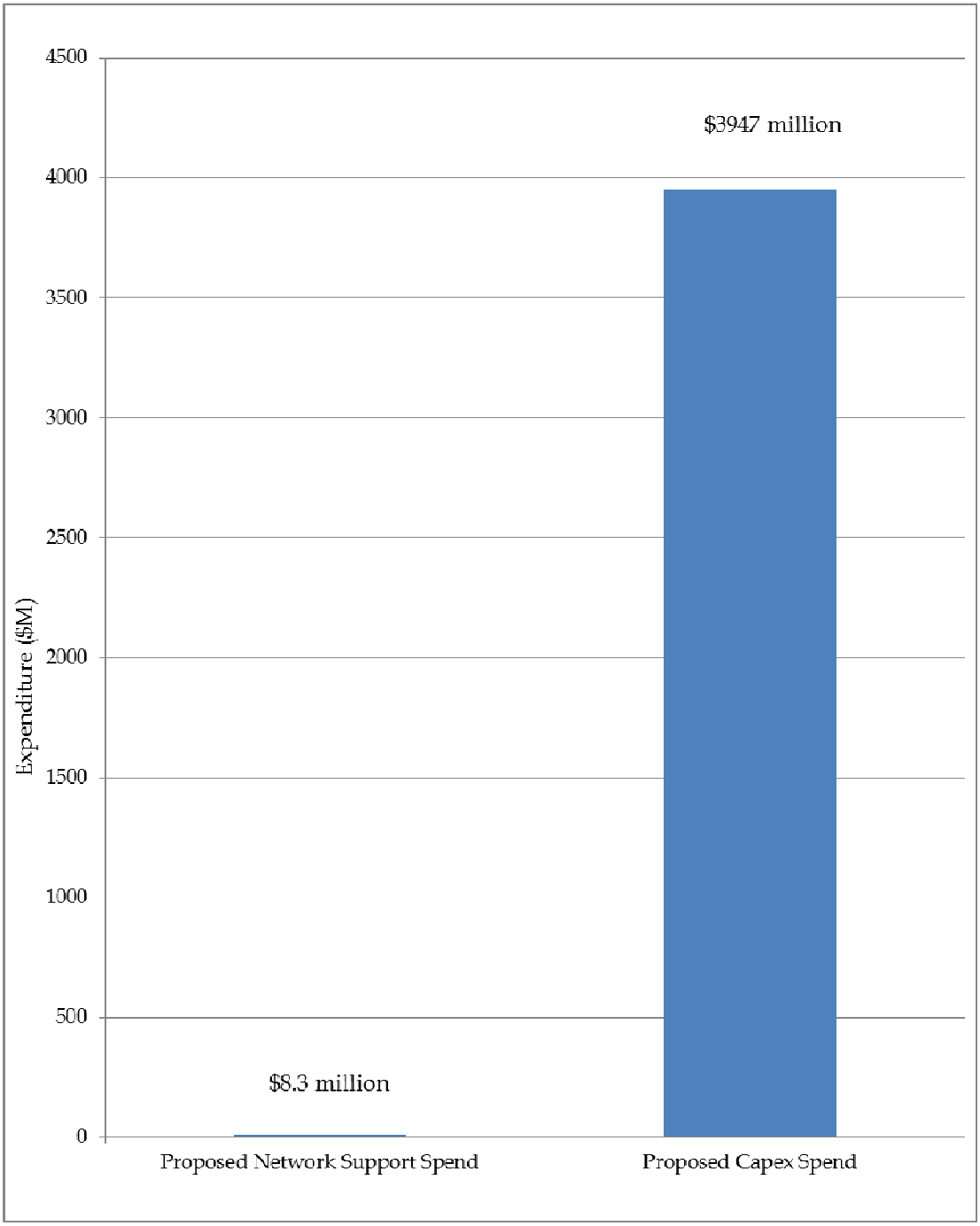
Should any pass-through costs be accepted by the AER, consumers would expect the AER to ensure that cost reductions (not just cost increases) are also passed through.

Demand-side Participation and Network Support

In section 9.6.10, Powerlink outlines its 'forecast network support expenditure' over the next regulatory period. This is expenditure associated with non-network solutions which "can include local generation, co-generation, demand side response and services from a Market Network Service Provider."

Over the next period it will spend just $8.3 million dollars on network support. This is just 0.2% of the amount it will spend on capex, which is valued at $3947 million. This is illustrated in Figure 3, below.

Figure 3: Proposed network support spend vs. proposed capex spend



This is down from the 2007 AER Powerlink Revenue Cap determination, which provided for $80.04 million of network support — a decrease of 90%.

Given Powerlink has forecast massive increases in peak demand over the next regulatory period, how can it possibly justify this atrophic rate of demand-side investement?

Moreover, this figure only includes instances where Powerlink is obligated to invest in network support as part of the RIT-T. While Powerlink states that it "is required through the RIT-T process to consider non-network options as an economic means to

defer network investment", it is also obliged by the NEO to consider network support *wherever* it is more economically efficient at providing electricity services in the long term interests of consumers than network augmentation.

Despite this the Revenue Proposal states "Powerlink has not identified any other network support services for the next regulatory period" — *nothing* outside of what it is obliged to do under the RIT-T.

The AER is obliged to only allow the costs of network augmentation where they can be shown to be the lowest cost alternative. Lower cost alternatives are available for many of Powerlink's proposed projects. Powerlink has breached its obligations under the NEO by failing to consider these alternatives.

Energy Efficiency

As stated previously, Powerlink assumes a growth in energy consumption 30 times the average of the past 5 years. This is the primary justification for its massive increase in capital expenditure.

The second justification is "supporting a lower emissions NEM". The Revenue Proposal states:

"During the next regulatory period, Queensland's transmission network will require continued investment to reliably meet the State's economic growth and to support a lower emissions National Electricity Market."

However, Powerlink makes no mention of energy efficiency throughout the entire Regulatory Proposal. Energy efficiency is the lowest cost form of climate change abatement. It can reduce average and peak demand, which in turn increases reliability and security of supply.

Although Powerlink makes no reference to energy efficiency in its Regulatory Proposal, research conducted by Total Environment Centre has revealed Powerlink is aware of energy efficiency.

In July 2009, Powerlink issued several information sheets on climate change issues. They are available on their website at the time of writing.[2]

In *Information Sheet 04: Energy efficiency, renewable energy and the Queensland transmission network*, Powerlink states:

"Energy efficiency initiatives are beneficial in that they will help reduce a household or business' daily electricity consumption and their carbon footprint. However, energy efficiency initiatives generally have a minimal impact on the *peak demand* for electricity…"

Powerlink states that the reason why energy efficiency has minimal impact on summer peak demand is because:

[2] http://www.powerlink.com.au/asp/index.asp?sid=5056&page=CommunityEnvironment/environment&cid=5370&gid=588

- "Summer peak demand occurs on hot, humid days, during the hours between 8am and 9pm, with the absolute peak typically occurring around mid-to-late afternoon"; and
- "The least cost abatement measures (e.g. energy-efficient lighting and water heating) reduce electricity consumption at times that are generally outside the daylight/peak demand hours."

The statements in these documents are designed to deliberately distort the truth and mislead the audience. Energy-efficient lighting and water heating may not feature at all during summer critical peak in Queensland and Powerlink has specifically picked these 'least cost' abatement measures to deliberately distort this. It is also obvious that initiatives such as building insulation and ventilation efficiency — which are *cost negative* — and air-conditioning and refrigeration efficiency can *substantially reduce peak demand* and should feature significantly in a lower emissions NEM.

By stating "energy efficiency initiatives generally have minimal impact on the peak demand for electricity" Powerlink has placed itself in opposition to Queensland and Federal government policy. It not only runs contrary to proven research, it runs contrary to simple logic.

Energy efficiency refers to the use of less energy to produce the same outcome or level of output, (or increasing the level of output from the same amount of energy). Greater energy efficiency means less electricity is needed to produce the same outcome (such as cool a room on a summer peak), both on average and during times of peak demand.

The *Report of the Prime Minister's Task Force on Energy Efficiency* states that "improved energy efficiency in the Australian energy market should reduce energy demand and electricity peak demand, which in turn would reduce the need for new electricity infrastructure investment and the associated retail electricity costs." It goes on to say that a modelled hypothetical national energy savings initiative has been shown to reduce peak demand by up to 1400MW relative to reference scenarios by 2020.

The Queensland government *Queensland Energy Management Plan (2011)* states that it "will also assist Queensland households, businesses and industry respond to the energy challenges of the future — including emissions reduction and management of peak demand — through energy efficiency, energy conservation and demand management."

The Federal Minster and Parliamentary Secretary for Climate Change and Energy Efficiency, Greg Combet and Mark Dreyfus, have stated that the Federal government is supporting investigation "of better demand side participation and energy efficiency by the AEMC which provides opportunities to reduce the growth of peak demand [and] which has contributed to […] rising network costs".[3]

The approach of the AEMC is demonstrated by a presentation that Commissioner Brian Spalding recently gave at the NSW Solar and Renewable Energy Summit, which states that "peak load can be impacted by demand side participation (DSP)"

[3] Available at: http://www.climatechange.gov.au/minister/greg-combet/2011/media-releases/May/mr20110505.aspx

which he states as including demand management, energy efficiency and embedded generation.[4]

The Institute for Sustainable Futures and Energetix prepared a report for the Department of Climate Change and Energy Efficiency this year which demonstrates that more efficient buildings could cut peak demand spending across the NEM by up to $16.7 billion.[5] These findings are further validated by research conducted by GPT, Investa, Stockland, and Colonial, which finds that as a building's energy efficiency increases, the building's peak demand inherently falls.[6]

This is also contrary to the policy of other Queensland NSPs. Ergon's submission to the Prime Minister's Task Force on Energy Efficiency states:

> "There is a clear and undisputed relationship between peak demand and network investment, and subsequently electricity prices. This relationship underpins Ergon Energy's interest in developing the market for, and in, demand management strategies and technologies, and is a relationship that must be examined by the Task Group if a holistic, step change improvement in energy efficiency is to be achieved along the supply chain…"
>
> "Like many network companies, Ergon Energy's peak demand is largely driven by increases in the penetration and size of air conditioning units and other lifestyle appliances. This gives rise to a peak demand that is short, and occurs predominately over the summer months…"
>
> "**Energy efficiency measures can deliver affordability benefits for end-users, greenhouse gas emissions reductions, and overall energy reductions on electricity networks, and if approached holistically and strategically, can also deliver significant peak demand reductions that in turn provide further emissions reductions and end-user savings in the mid to long term.**"[7]

Total Environment Centre emphasises this point for several reasons. We believe that Powerlink's statements about energy efficiency epitomize its approach to dealing with customers and regulators. It makes gross misrepresentations in order to distort the opinion of its audience so it can excessively profit.

Secondly, these quotes demonstrate how removed Powerlink is from mainstream policy on climate change and energy, how this is unfair to other Queensland NSPs, and undermines the policy of the Queensland government.

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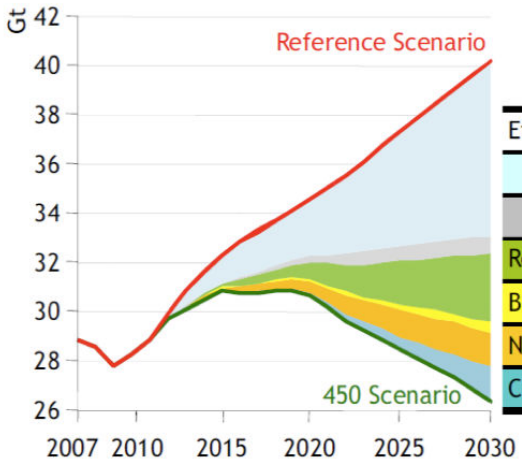
[4] Available at: http://www.dtiris.nsw.gov.au/__data/assets/pdf_file/0010/398926/spalding-presentation.pdf
[5] Available at: http://www.climatechange.gov.au/what-you-need-to-know/~/media/publications/buildings/building_our_savings-pdf.pdf
[6] Available at: http://www.greenbuildingsalive.com/blog/2011/06/22/Peak-demand-tackled-by-Greener-Buildings/
[7] Available at: http://www.climatechange.gov.au/government/submissions/pm-task-group/~/media/submissions/pm-taskforce/papers/16-ergon-energy.ashx

Finally, it also highlights the fact that Powerlink makes no genuine attempt to invest in, nor, importantly, *to account for*, increased energy efficiency in future electricity supply and how much this could affect the validity of its expenditure.

Energy efficiency is predicted by key energy forecasters and analysts as the primary technique to mitigate carbon emissions, yet Powerlink makes no mention of it in this document. For example, the IEA predicts end use and power plant energy efficiency measures to comprise 65% of CO2 abatement in 2020, and 57% in 2030 (for the whole world economy) in a 450ppm scenario.[8]

Figure 4: IEA projected abatement

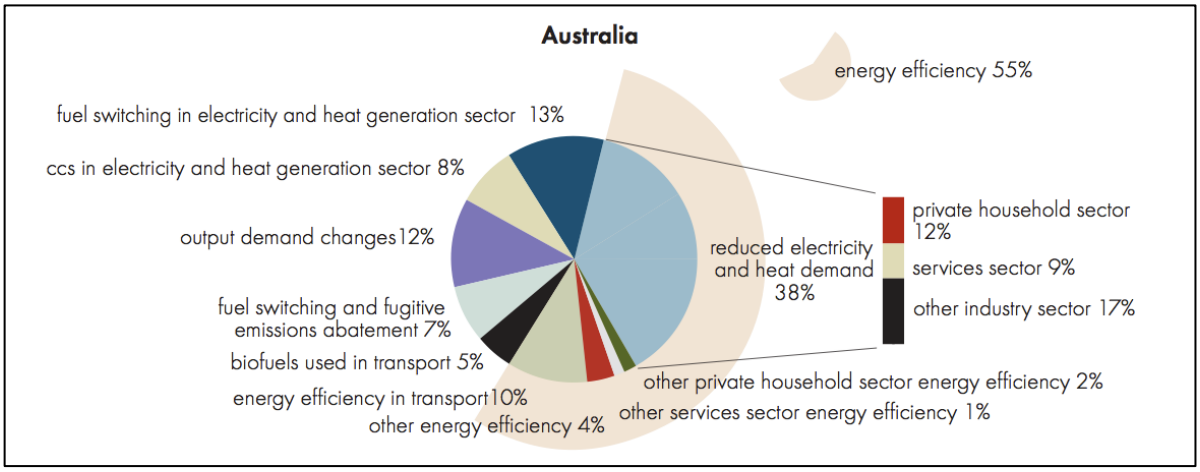


	Abatement ($Mt CO_2$)		Investment ($2008 billion)	
	2020	2030	2010-2020	2021-2030
	65%	**57%**		
Efficiency	2 517	7 880	1 999	5 586
End-use	*2 284*	*7 145*	*1 933*	*5 551*
Power plants	*233*	*735*	*66*	*35*
Renewables	680	2 741	527	2 260
Biofuels	57	429	27	378
Nuclear	493	1 380	125	491
CCS	102	1 410	56	646

[8] IEA (2009) *World Energy Outlook 2009: Executive Summary* International Energy Agency, France, p.8 Available at: http://www.worldenergyoutlook.org/docs/weo2009/WEO2009_es_english.pdf

In its 2007 publication Technology: Toward a Low Emissions Future, ABARE predicts energy market energy efficiency to comprise 38% of technological abatement of GHG emissions, plus another 12% for reduced output demand:

Figure 5: 'Greenhouse gas abatement in the ABARE enhanced technology scenario, relative to the reference case at 2050, percentage contribution, by source'



Has Powerlink made any genuine attempt to factor in energy efficiency when forecasting its demand and capital expenditure for this proposal, given they have assumed massive increases for both?

'Supporting a Lower Emissions NEM"

Despite the fact that Powerlink has said that it supports a 'lower emissions NEM' on the front cover of the Regulatory Proposal, we can find only one mention of 'climate change' in the document — in its application for funding to do more research on the impacts of climate change on the operation and maintenance of the network.

Given Powerlink is building assets with lives of 40 years or more, we have doubts as to the amount to which Powerlink has factored in the impact of renewable generation in the future energy mix. It looks at the carbon price trajectory until 2020, but fails to discuss the current agreed reduction of 60% in emissions from 2000 levels by 2020, as well as the 80% reduction currently being proposed by the Federal government. Given the electricity sector is Australia's largest source of carbon emissions and already has multiple state and federal laws and regulations governing emissions from the sector before a national carbon price is applied, this is a massive oversight on the part of Powerlink.

The report deals heavily with fossil fuel gas generation while we can find only one reference to 'renewable' in the entire document — and even then, only in the executive summary. It does not make reference to how natural gas can only be considered a transition source of generation pending the viability of carbon capture sequestration. It also refers to the developments of coal-seam gas as 'low-emissions' despite massive grassroots opposition nationally and internationally, and significant questions about fugitive and life cycle emissions.

How much has Powerlink paid to produce this Revenue Proposal?

Powerlink does not disclose how much it has spent on this revenue proposal and to which accounts it has been booked.

Total Environment Centre recommends the AER investigate how this Revenue Proposal has been accounted for, and the amount which it has cost electricity consumers.

'Power' in the NEM

Moreover, this figure further highlights the problem that consumers of electricity face with this Revenue Proposal and the energy market more generally — the current rules and regulations are heavily stacked in favour of companies like Powerlink. NSPs are able to dedicate significant resources towards the production of these documents, spending millions of dollars on their preparation. They also have the advantage of being able to start preparing them months or years in advance of the regulatory determination period.

The AER, on the other hand, has only 60 days to respond to lengthy and complex revenue proposals. The length of Revenue Proposals for NSPs on average is increasing exponentially. While Powerlink's main Revenue Proposal document is only 129 pages, it is accompanied by 18 appendices totalling 589 pages, over 2500 pages worth of publically available supporting documents, as well as other key documents of indeterminate length which have been submitted to the AER in confidence.

As such, the discretion that the AER has to consider the economic efficiency of NSP investments is far more limited.

Based on past determinations, even if the AER blocks unreasonable revenue proposals there is about a 60% likelihood that they will be approved if they are referred to the Competition Tribunal, effectively neutering any power held by the AER to block inflated proposals by monopoly network companies.

In its *Final Report on Changes in Regulated Electricity Retail Prices from 1 July 2011,* NSW IPART said it was "concerned that the cumulative effect of the economic regulation aspects of the NER skews the AER's decisions towards higher prices and potentially inefficient outcomes."

IPART said that in its view, the current regulatory framework:

- "may constrain the AER's ability to apply what it considers to be the best estimate of the efficient operating and capital costs";

- "may provide strong incentives for network business to invest capital in the network because the prescriptive requirements of the NER may lead to excessive returns";

- "allows the businesses to earn a return on all capital invested regardless of its efficiency and prudency, by requiring the AER to roll all capital expenditure into the asset base without any ex post review"; and

- "provides opportunities for the businesses to target particular issues through the appeal process."

However, the AER does have regulatory powers under the current NER to investigate the claims that we have raised in this submission, and it does have the power to stop Powerlink's attempt to game the system against the long term interest of consumers.

Moreover, the Queensland government as the major shareholder of Powerlink and as a member of COAG has the power to solve these issues. Yet, as a shareholder, they also 'profit' through the accrual of royalties. The more that Powerlink is able to game the system, the more revenue is also generated for the Queensland government.

Essentially, these royalties constitute an indirect form of taxation — an extremely inefficient and regressive form of indirect taxation.

Whether or not it is because the AER can't act or won't act on these issues, and whether or not the Queensland government is complicit or ignorant of Powerlink's behaviour, this determination will test whether the National Electricity Market and those organisations which are responsible for governing it are truly functioning in the long term interests of the people of Australia.

Total Environment Centre looks forward to advising both the AER and other government agencies on this and other NEM processes.