Ref. 2/902/5

15 December 2006

Mr Mike Buckley
General Manager, Access Branch
Australian Energy Regulator
PO Box 1199
DICKSON ACT 2602

Dear Mike,

QUEENSLAND TRANSMISSION NETWORK SUPPLEMENTARY REVENUE PROPOSAL FOR THE PERIOD 1 JULY 2007 to 30 JUNE 2012

Powerlink submitted its Revenue Proposal for the period from 1 July 2007 to 30 June 2012 to the Australian Energy Regulator (AER) on 3 April 2006, requesting the AER to determine its transmission network revenue cap for the period commencing 1 July 2007, in accordance with its responsibilities under the National Electricity Rules.

New and relevant information has emerged since Powerlink submitted that Revenue Proposal. The details of this new and relevant information are set out in the attached Supplementary Revenue Proposal. The information results in revisions to Powerlink's forecast capital expenditure for both the main ex-ante capital allowance and for contingent projects. Consequential adjustments also need to be made to operating expenditure allowances.

Powerlink acknowledges that the timing of this Supplementary Revenue Proposal relative to the AER's Draft Decision does not allow this information to be taken into account in that Draft Decision. This new and relevant information must however be taken into account in the Final Decision for Powerlink revenue cap for the period commencing 1 July 2007.

Powerlink's prime contact throughout this process continues to be Merryn York, who can be contacted on (07) 3860 2143.

Yours sincerely,

Gordon H. Jardine
CHIEF EXECUTIVE

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POWERLINK QUEENSLAND

QUEENSLAND TRANSMISSION NETWORK SUPPLEMENTARY REVENUE PROPOSAL

for the period 1 July 2007 to 30 June 2012

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Supplementary Revenue Proposal

1. Introduction

Powerlink submitted its Revenue Proposal to the Australian Energy Regulator (AER) on 3 April 2006. This proposal covered Powerlink Queensland's regulated electricity transmission network for the 5-year period from 1 July 2007 to 30 June 2012.

In its Revenue Proposal, Powerlink identified a number of emerging issues which had not been fully analysed, and foreshadowed the possible need for a Supplementary Revenue Proposal. There have subsequently been a number of significant "changes in circumstances" which impact Powerlink's required allowance for capital expenditure in the coming regulatory period, with consequential impacts on operating expenditure.

Powerlink's capital expenditure forecast for the coming regulatory period was based on the "ex-ante" framework outlined in the SRP. This framework includes a main ex-ante allowance which covers most or all expected investments during the regulatory period, plus a contingent projects allowance which covers a small number of large and uncertain investments that may arise during the period but which depend upon a future trigger event.

To address the uncertainty surrounding future load growth and generation development in Queensland, Powerlink engaged independent consultants to conduct wholesale market modelling to identify plausible generation patterns for the Queensland region over the next 10 years. A total of 40 plausible scenarios were developed based on themes associated with demand growth, changes in inter-regional trade, generation from the PNG gas pipeline and potential changes in greenhouse arrangements.

In order to determine Powerlink's forecast capital expenditure requirements, detailed network planning studies were undertaken for each of these 40 scenarios to identify load driven projects which would ensure that mandated reliability obligations could be maintained as the load grows. Joint planning studies were also undertaken with the distributors connecting to Powerlink's network to identify additional connection works required. A plan of non-load driven projects was developed which took account of the network's age and condition, improvements to security and access and other investments necessary to maintain effective operation of the transmission system.

The proposed capital expenditure forecast was the probability weighted sum of investments associated with each of the 40 scenario-based network development plans. Non-network investments were also forecast for the next regulatory period.

Table 1.1 shows the total capital expenditure amount included in Powerlink's Revenue Proposal submitted 3 April 2006.

Table 1.1: Total capital expenditure amount included in Powerlink Revenue Proposal.

$m 06/07	2007/08	2008/09	2009/10	2010/11	2011/12	Total
Total Capital Expenditure[1]	546.31	543.02	456.10	466.49	437.32	**2,449.24**

At a meeting with Powerlink in Melbourne on 12 September 2006, the AER confirmed that it was obliged to take account of "new and relevant information" in reaching its determination on Powerlink's Revenue Proposal. New and relevant information has emerged since submission of the Revenue Proposal on 3 April 2006. As a result of this new information, Powerlink's forecast capital expenditure for both the main ex-ante capital allowance and for contingent projects need to be adjusted. Consequential adjustments also need to be made to operating expenditure allowances.

This Supplementary Revenue Proposal identifies the relevant changes to Powerlink's future capital expenditure needs. Powerlink is providing this new and relevant information to be taken into account by the AER in making its Final Decision.

Powerlink also intends to respond separately to the AER's Draft Decision, including in relation to the future capital expenditure allowance.

2. Developments for CQ-SQ grid section

Powerlink reviewed the development plans associated with the Central Queensland-Southern Queensland (CQ-SQ) grid section to appropriately model the balance of flows on QNI and Directlink in the planning analysis. Proposed changes to the development plans and associated capital expenditure forecasts were discussed with PB Associates during its review of Powerlink's Revenue Proposal.

2.1 Background

In order to determine Powerlink's forecast capital expenditure requirements, detailed network planning studies were undertaken for the CQ-SQ grid section under each of the 40 ROAM generation scenarios to identify transmission capacity upgrades of this

[1] Powerlink Revenue Proposal, Table 10.1.

grid section required to meet Powerlink's mandated reliability obligations as the load grows.

The relevant scenario dependent projects for each generation scenario involve expenditure over the regulatory period for one or a combination of the following:

- Dynamic compensation at Gin Gin/Palmwoods;
- Auburn River Switching Station; and/or
- Calvale to Halys 275kV Double Circuit Line.

The development plan for each scenario takes account of the most economic outcome for development in that particular scenario. Hence, the augmentation solutions vary both in timing and quantum across the 40 scenarios.

2.2 Review of capex forecast

The analysis conducted by Powerlink was provided to PB Associates during its review. Revised development plans were prepared for each of the generation scenarios and a revised probability weighted capex forecast determined. The impact of this revision on total forecast capex is outlined in Table 2.1. To the extent that these adjustments have not already been incorporated in the AER's Draft Decision, they will need to be incorporated in the Final Decision.

Table 2.1: Impact of CQ SQ grid section review on total forecast capital expenditure

$m 06/07	2007/08	2008/09	2009/10	2010/11	2011/12	Total
Change in total Capex – Revised CQSQ	-21.35	-60.66	5.99	33.42	1.57	**-41.03**

3. Update to capital cost estimates

3.1 Assets under construction

Powerlink's Revenue Proposal included a number of capital projects which will be under construction at the transition from the current to next regulatory periods. The Revenue Proposal separately identified the expected capex incurred on these projects up to the end of the current regulatory period (30 June 2007), and that expected to be incurred in the coming regulatory period (i.e. after 30 June 2007) on those particular projects.

The capital cost estimates for those projects have now been updated to reflect recent increases in input costs. For example, in the time since estimates were prepared for approval of those projects (during the second half of 2005) the cost of tower steel has

increased by at least 15%, copper 100% and aluminium for conductor 40%. Unsurprisingly under those circumstances, the capital cost estimates for these projects are now significantly higher than previously estimated. Powerlink strongly believes that these cost increases have arisen from factors outside its control, and are indicative of the well publicised cost blowouts being experienced in a range of industries in Australia at the present time, particularly in the high growth States of WA and Queensland. Cost increases between 25 and 100% are routinely reported. As recently as 6 December it was reported[2] that the estimated cost of the Ipswich bypass had doubled since last year.

Powerlink has recently (under separate cover) advised the AER of the latest (higher) estimate for capex in the current (2006/07) financial year. With the AER's change to as-incurred recognition of capex, higher costs on capital projects which are under construction as at 30 June 2007 need to be included in the capital expenditure forecasts for those projects in the early part of the coming regulatory period. The impact of these cost increases on capital expenditure in the next regulatory period for projects under construction as at 30 June 2007 is shown in Table 3.1.

Table 3.1: Impact of increased costs on projects under construction as at 30 June 2007

$m 06/07	2007/08	2008/09	2009/10	2010/11	2011/12	Total
Change in total Capex - increased cost of projects under construction	88.01	61.77	6.11	-0.22	-0.09	**155.58**

3.2 Cost increases for future projects

Based on the capital cost estimates obtained by Powerlink very recently on a range of transmission line and substation projects (as discussed in 3.1 above), Powerlink has had to revise its unit costs for future capital projects. For example, since the end of 2005 when the estimates were prepared for the Revenue Proposal, the cost of tower steel has increased by 25% and there has also been an increase of up to 25% in the cost of aluminium, which is used in line conductors. Under those circumstances, the capital cost estimates for all future projects are now higher than previously forecast also due to factors outside Powerlink's control.

The capital cost estimates for future projects have now been updated, to reflect recent increases in input costs. The impact of these unit rate increases on the forecast capex requirement is shown in Table 3.2.

[2] The Courier Mail, 6 December 2006, p1.

Table 3.2: Impact of unit rate increases on total forecast capital expenditure

$m 06/07	2007/08	2008/09	2009/10	2010/11	2011/12	Total
Change in total Capex - increased unit rates for future projects	10.37	24.97	30.40	32.71	27.06	**125.52**

4. Revised probability of generation from PNG gas pipeline

4.1 Emerging issues

The Papua New Guinea (PNG) Gas Project participants are currently ExxonMobil (39.4% - Esso Highlands Limited as project operator), Oil Search (44.2%), AGL (10.0%), MRDC (3% - a PNG company representing landowner interests) and Nippon Oil Exploration Limited (3.4%).

Significant (adverse) developments in the PNG Gas Pipeline project have occurred in recent months, both in terms of the inability to secure firm customer contracts and in terms of a blowout of costs. It has been reported that the cost of the project has blown out by more than 50% over the past 18 months, to more than $5 billion. AGL has decided to withdraw from the Front End Engineering and Design (FEED) activities on the Australian component of the proposed PNG to Queensland gas pipeline, and write-off FEED costs incurred to June 30, 2006. The PNG Gas Project participants are now considering the implications of the AGL decision on the overall project, as expressed in a recent Courier-Mail Business News article[3]:

> *"EXXON Mobil is expected to consider a plan this week for a staged development of a gas pipeline from Papua New Guinea to Australia, in what could be the "last hope" for the stalled project."*

The article quotes JP Morgan saying:

> *"Exxon may not be willing to back the proposal because rising construction costs have reduced the project's profitability."*

It is now expected that if this project were to proceed, an alternative route for the pipeline will occur, whereby the pipeline would stop at Mount Isa instead of going down the Queensland coast.

[3] Courier Mail Business News, 18 September 2006.

In addition, recent reports in the Age[4] suggest that development of the Papua New Guinea gas pipeline has been pushed back to around 2015.

In short, the PNG project is now not expected to result in any associated generation developments in the Townsville area in the coming regulatory period.

4.2 Way forward

Generation development from the PNG pipeline was considered in determining Powerlink's original capex forecast. ROAM included generation arising from the PNG pipeline as one of the theme sets for development of scenarios for the capex forecasting. The Revenue Proposal was developed using scenarios which assigned a 50% probability to generation in the Townsville area arising from the pipeline. This also meant there was only a 50% probability that such generation from the pipeline would not occur.

Powerlink's Revenue Proposal contained 20 scenarios with PNG pipeline related generation modelled, mostly as a notional Townsville South 400MW CCGT in 2010/11. A 400MW CCGT at Esk and a Gladstone B1 400MW CCGT also occur for the PNG scenarios under all load scenarios.

The impact of such PNG pipeline related generation on Powerlink's capex forecast is a delay in the timing of, or a reduction in the scope of grid augmentation between central and northern Queensland which may be offset by increases in the need for augmentation between central and southern Queensland.

In light of the significant rises in the forecast capital costs of the PNG project, the delayed history of the project, and the latest proposal to route the pipeline inland, combined with competing CSM resources and the difficulties still ahead with securing customer contracts, it is now considered that PNG pipeline related generation will not occur during the timeframe allowed for in the network development plans and capital expenditure forecasts provided in Powerlink's Revenue Proposal.

Powerlink considers that the PNG theme set should now be assigned a zero percent probability for the coming regulatory period in assessing Powerlink capital expenditure requirements, and the capex forecast should be re-evaluated based on that probability.

[4] Age, Business News, p2, 8 December 2006.

4.3 Review of capex forecast

The capex forecast has been re-evaluated by assigning a zero percent probability to the development of generation associated with the PNG pipeline within the coming regulatory period.

The impact is more grid augmentation between CQ and NQ, and less augmentation between CQ and SQ. The net impact of this revision on the total probability weighted capex is shown in Table 4.1.

Table 4.1: Impact of PNG Probability review on total forecast capital expenditure

$m 06/07	2007/08	2008/09	2009/10	2010/11	2011/12	Total
Change in total Capex – PNG theme set	-0.25	2.60	36.17	18.39	-0.13	**56.78**

5. 2006 Demand Forecast

In accordance with the National Electricity Rules (NER), Powerlink has obtained summer and winter demand forecasts over a ten-year horizon from Distribution Network Service Providers (DNSPs) based on their post winter 2005 review, and from directly-connected customers, at each connection supply point in Powerlink's transmission network. These forecasts have been published as the 2006 demand forecast in Powerlink's Annual Planning Report 2006.

Given that Powerlink's Revenue Proposal was based on the 2005 demand forecast, it is now necessary to include any changes arising from the 2006 forecast which is also "new and relevant information".

5.1 Comparison with 2005 demand forecast

The 2006 forecast has a higher demand growth rate for summer over the next five years, than the 2005 forecast. There is also a small increase in the forecast growth rate for annual energy delivered from the transmission grid and from embedded scheduled generators, although a significant step increase in forecast energy is evident in the early years.

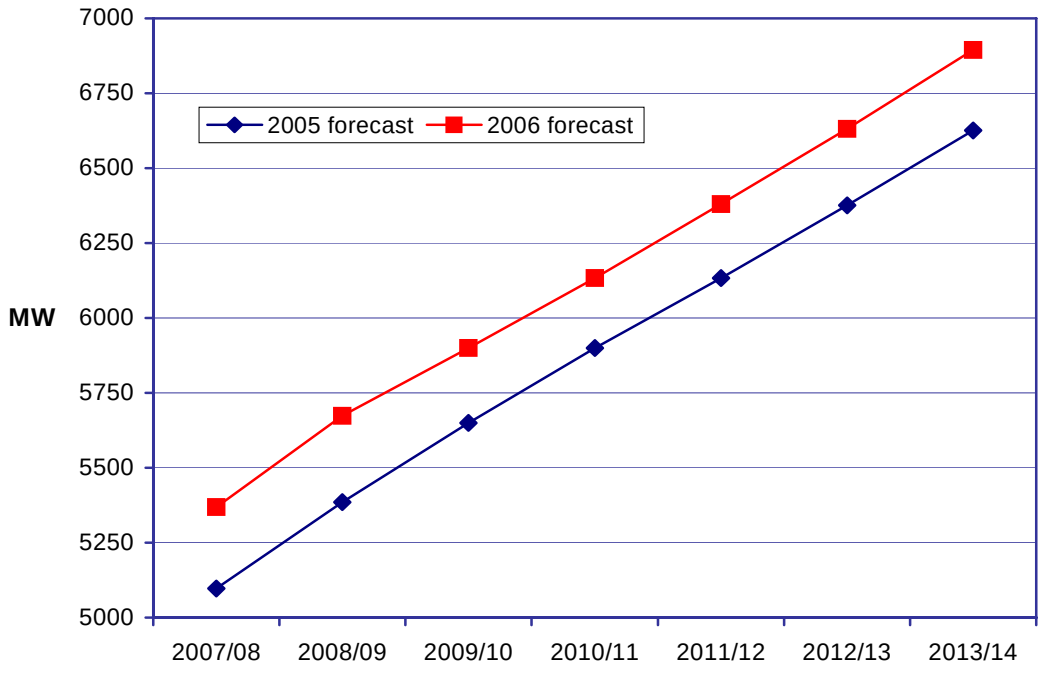
New installations of domestic air-conditioning and upgrade of existing units in south-east Queensland has continued at record levels. The rate that occurred during 2005 even exceeded the record levels observed in 2004. Government surveys indicate that air conditioning penetration has increased from 31% to 56% over the period November

2001 to May 2005. A consequence of this increased penetration is an increase in the demand/temperature sensitivity of the load. Analysis has shown that in south-east Queensland, load sensitivity has grown from 67MW per˚C to 170MW per˚C over the same period. Since the 2005 load forecast, this sensitivity has increased from 118MW per˚C to 170MW per˚C, reflecting the higher rate of penetration in 2005 compared to 2004.

There has also been recognition that resurgence in south east Queensland population growth rates over the period 2002-2004 to levels last seen in the early 1990's (2.5% to 3% per annum), has raised the level of underlying population growth expected for the next ten years.

Figure 5.1 shows both the 2005 and 2006 summer peak demand forecasts for south east Queensland[5]. The net impact of the increased demand is about one year advancement in demand levels. That is, a certain level of peak demand occurs one year earlier in the 2006 forecast than it did in the 2005 forecast. This has a consequential timing impact of advancing the need for augmentation of the Queensland transmission network.

Figure 5.1: 2006 South East Queensland Summer Peak Demand Forecast



5.2 Review of Capex Forecast

The development plan for each of the generation scenarios has been revised based on the 2006 demand forecast. From these development plans, a revised probability weighted capex forecast has been determined. The impact of this revision on total forecast capex is shown in table 5.1. These adjustments assume that the capex has already been adjusted for the CQ-SQ revision (Table 2.1), the higher input costs (Tables 3.1 and 3.2) and the revised probability of the PNG pipeline theme (Table 4.1).

Table 5.1: Impact of 2006 load forecast review on total forecast capital expenditure

$m 06/07	2007/08	2008/09	2009/10	2010/11	2011/12	Total
Change in Total Capex – 2006 load forecast	55.12	54.42	-57.27	50.33	26.40	**129.00**

6. NEMMCO High Speed Monitoring Requirement

NEMMCO has scoped a project to install National Electricity Market (NEM) wide high speed monitoring (HSM) facilities. NEMMCO has advised that it considers the project is justified by providing enhanced capabilities to NEMMCO and TNSPs in the areas of:

- Facilitating investigations of system incidents;
- Provision of field data/measurements to enhance modeling of the power system; and
- Enhancing NEMMCO's situational awareness in cases where low power system damping is detected.

NEMMCO has written to Powerlink advising that it is of the view that the HSM project is necessary to allow it to discharge its market and power system security functions, and as such, would satisfy the requirements under Rule 4.11.1(d).

NEMMCO suggested its requirement could be satisfied by utilising TNSP infrastructure already in place or planned for installation over the next two to three years. NEMMCO and Powerlink have investigated the suitability of Powerlink existing monitoring systems and those planned for installation. Unfortunately in Powerlink's case, the equipment is either not suitable or the quantities being monitored do not match NEMMCO's requirements. To meet NEMMCO's requirements, Powerlink will need to install additional monitoring equipment with connections to the NEMMCO requested quantities. As Powerlink was not aware of the specific details of NEMMCO's

[5] South East Queensland 10% probability of exceedance summer peak demand forecast for medium economic growth.

requirements at the time of its Revenue Proposal, this monitoring equipment was not included in the capex forecasts originally submitted. The estimated additional capital expenditure requirement is shown in Table 6.1.

Table 6.1: Additional capital expenditure for NEMMCO HSM project

$m 06/07	2007/08	2008/09	2009/10	2010/11	2011/12	Total
Capital expenditure for NEMMCO HSM project	0.43	1.28	0.64	-	-	**2.35**

7. Total future capital expenditure

Powerlink believes that its total ex-ante capital expenditure allowance should be adjusted for the impacts of this new and relevant information, as outlined above in items 2 (unless already incorporated in the draft determination), 3, 4, 5 and 6 and as shown in Tables 2.1, 3.1, 3.2, 4.1, 5.1 and 6.1.

8. Contingent Projects

Contingent projects are those which are significant, likely to arise in the period, but not yet committed. Such projects are linked to unique investment drivers such as major point loads rather than to general investment drivers (such as expectations of load growth within a region).

Powerlink included 10 contingent projects in its Revenue Proposal, and intends to comment separately on any issues or decisions relating to those projects which the AER chooses to identify in its draft determination.

8.1 Desalination plant in South East Queensland

In early 2006, the Queensland government announced plans for establishment of a desalination plant at Tugun on the Gold Coast. The Queensland government committed to taking all necessary steps to facilitate construction of the desalination plant in August 2006 with a Water Amendment Regulation under the Water Act 2000. The Gold Coast City Council affirmed commitment to the plant on 30 October 2006.

The electricity demand of the desalination plant is forecast to be 32MW by late 2008 (target commissioning date) and 64MW by late 2010. Powerlink therefore considers that a contingent project associated with a desalination plant in south east Queensland has been triggered.

Energex and Powerlink have been considering the electricity supply arrangements for the Tugun desalination plant. The local supply arrangements for the plant will be implemented by Energex. Powerlink will be required to undertake or advance upstream works to maintain transmission capacity at 110kV from Mudgeeraba to Currumbin, from where Energex will take supply for the plant. Upstream works will also be required to maintain adequate 275/110kV transformer capacity, and to maintain 275kV capacity into the Gold Coast/Tweed area. Powerlink will need to undertake those upstream works. The impact on the network development requirement is currently being assessed through joint planning activities. Powerlink will provide information regarding the impact of the contingent project on the capital and operating expenditure forecasts once that work has been completed.

It should also be noted that further desalination plants may also be established at other locations in south east Queensland during the coming regulatory period. The AER's Final Decision should therefore also include (in addition to the Tugun plant) contingent projects for supply to possible future desalination plants .

8.2 Augmentation of supply to SEQ

In this Supplementary Revenue Proposal, Powerlink is providing the AER with clarification on the triggers for the contingent project associated with augmentation of supply to south east Queensland. This contingent project relates to a material (at least 40%) variation to the timing of generation planting in south east Queensland (SEQ) resulting in a significant change in generation patterns in SEQ and transmission flows which are not within the range of outcomes in the probabilistic scenarios.

The probabilistic scenarios which form the basis of Powerlink's Revenue Proposal include a variety of assumptions about generation developments in the south east Queensland area. The main elements of the SEQ generation arrangements included closure of the existing Swanbank B power station (4x120MW) in 2010 or 2011 and additional generation (labelled Swanbank F in the ROAM scenarios) between 2009 and 2011. Of the 40 scenarios considered, there are 18 scenarios where Swanbank B retires 1 year earlier than when Swanbank F is in service, 11 scenarios where these occur coincidentally, and 11 scenarios where Swanbank B retires the year after Swanbank F is in service.

Due to the very high demand to be supplied in the south east Queensland area, variation in the timing of the retirement of Swanbank B (earlier), the planting of Swanbank F or an equivalent (later), or both, will materially increase network flows into the south east Queensland area across the transmission network. Under these circumstances, additional network capacity will be required to maintain reliability of supply to the area. Should both triggers occur, the required contingent project would need to be more substantial.

The contingent project would therefore need to be triggered by any of these changes in timing, and would be triggered twice if changes to the timing of both these south east Queensland generation plant matters occur. Powerlink therefore considers this situation should be recognised by reference to two potential triggers. A revised entry for Table 6.14 is shown below.

Table 8.1: Revised entry for Contingent project – augmentation of supply to SEQ

Project Name	Trigger	Indicative cost $m
Augmentation of supply to SEQ	Two triggers associated with significant changes in generation pattern in SQ	60 - 200

9. Changes to compensation payments for easements

In recent times, some property owners affected by proposed new transmission lines have lobbied the government for changes or additions to compensation arrangements for easements on land and levy arrangements for the use of land. Existing provisions provide for a single, upfront payment to the landholder in exchange for an easement in perpetuity.

Those lobbying for change are seeking an annualised payment, which is the form of payment used by providers of some other infrastructure services e.g. mobile phone towers. The change being suggested may result in annualised payments which have a materially higher NPV than the existing upfront payment.

In October 2006 the Sydney Morning Herald reported[6]:

> *"The ACT Government is planning to introduce a 'utilities network facilities' charge from January 1 next year. The amount will be calculated by applying a rate per kilometre."*

A Queensland action group going by the name of "Aussies for a Fair Go" recently called on the Premier of Queensland to implement easement compensation based on "annual commercial agreements" rather than the current single upfront payment arrangement.

Implementation of either of these practices would result in additions to Powerlink's costs which are fundamentally outside its control. Conceptually, these changes are similar to "tax change" events, for which pass through arrangements are already available – both in the Rule issued by the AEMC[7] and in practice. Indeed SPAusNet had a tax on land imposed upon it during its current regulatory period and for which a pass through arrangement is in place.

Given these precedents and the clear intention that exogenous changes such as these should be allowable pass throughs, Powerlink is therefore seeking that the AER's Final Decision include a "pass through" event to cover such a change should it arise during the coming regulatory period.

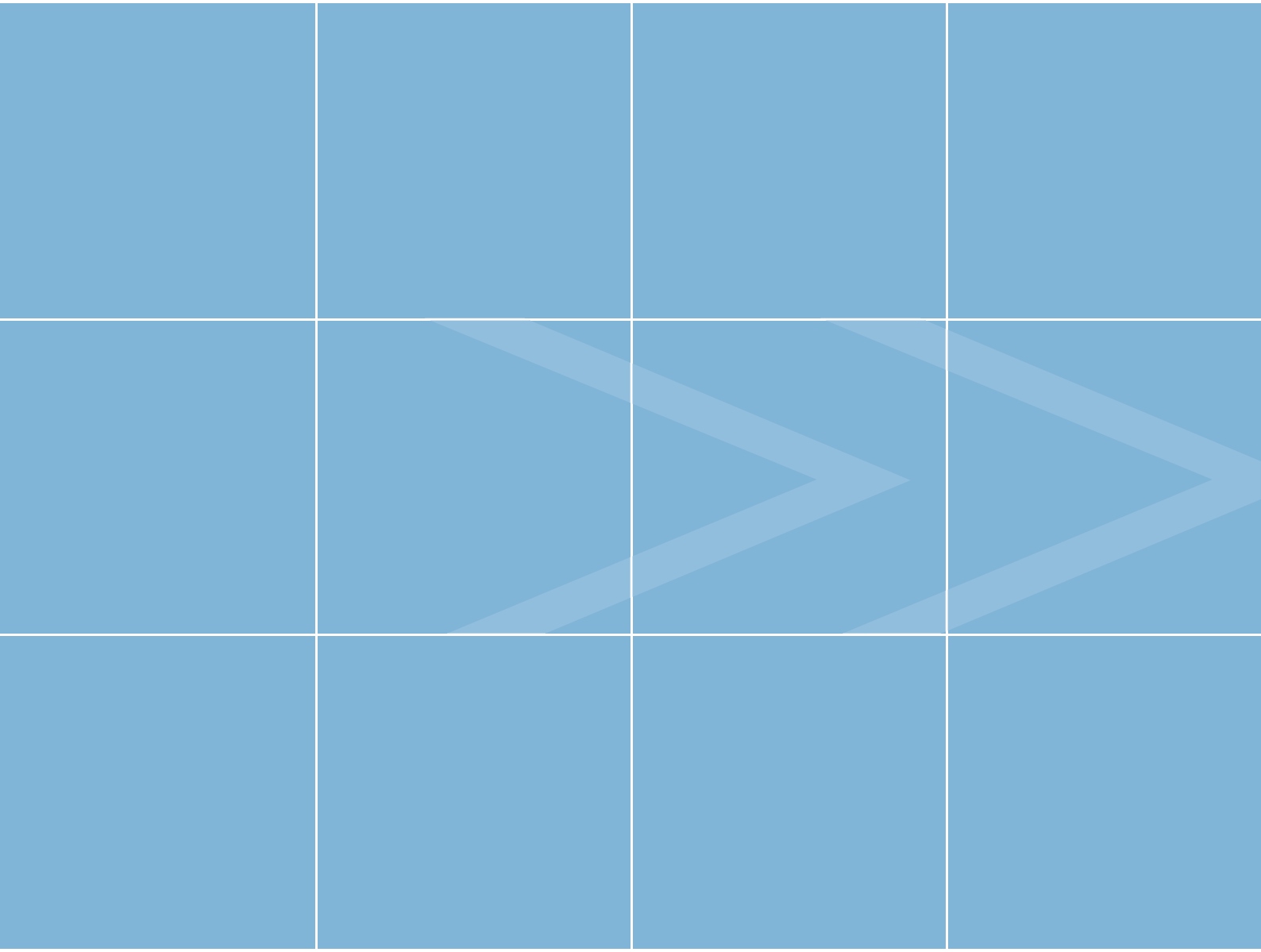
10. Conclusion

This Supplementary Revenue Proposal relates to the provision of prescribed services that are provided by means of, or in connection with, a transmission system that is owned, controlled and operated by Powerlink. The period to which this Supplementary Proposal is to apply is 5 years from 1 July 2007 to 30 June 2012 and it is to be read in conjunction with the Revenue Proposal submitted on 3 April 2006.

As noted, it is based on new and relevant information.

Powerlink hereby submits this Supplementary Revenue Proposal dated 15 December 2006 to the AER for its consideration in making its Final Decision.

[6] Sydney Morning Herald, 16/10/06.
[7] National Electricity Amendment (Economic Regulation of Transmission Services) Rule 2006, 16 November 2006.



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