



## DIRECTLINK JOINT VENTURE

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6 April 2005

Mr Sebastian Roberts  
General Manager, Regulatory Affairs – Electricity  
Australian Competition and Consumer Commission  
470 Northbourne Avenue  
CANBERRA ACT 2600

Attention: Mr Warwick Anderson, Director - Electricity, Regulatory Affairs Division

Dear Mr Roberts

**Re: Application for Conversion to a Prescribed Service and a Maximum Allowable Revenue to June 2015**

Thank you for providing us with the opportunity to respond to TransGrid's letter of 11 March 2005 and PB Associates' letter of 21 March 2005. These letters raise quite a few issues in relation to our conversion application and so we have prepared a separate response document that is attached to this letter.

During the preparation of our application and subsequent submissions to the Commission, the Directlink Joint Venturers and our consultants Burns and Roe Worley ('**BRW**') have considered the substantive issues raised by TransGrid and PB Associates. In particular, BRW's modelling continues to provide solid evidence that Directlink can provide reliable network support into NSW now and in the future, and, as it is an existing facility, provides the most cost-effective solution to current and emerging network constraints in northern NSW.

In relation to the TransGrid letter, our submission confirms that:

- The potential post-contingent overload of Line 966 has been foreseeable since 2003 based on load forecasts at that time.
  - The current reliance by TransGrid upon load shedding to maintain N-1 network security in northern NSW is undesirable and unnecessary.
  - Capacity in the north and south Gold Coast transmission network is and will continue to be increased to serve the increasing Gold Coast load, and some augmentations are being constructed now and options for others are being considered for the future.
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- A reasonable prediction of these augmentations indicates that the Gold Coast network will have sufficient capacity to enable Directlink to provide network support into northern NSW now and in the future.
- The upgrade of Line 966 cannot be justified when compared with the alternative of Directlink's network support.
- We would be pleased to participate with TransGrid into any investigation into the feasibility of a voltage control scheme to support the mid north coast of NSW.
- Country Energy has expressed the view to the Commission that the only reasonable solution and least overall community cost to maintain adequate N-1 supply to Tenterfield in the event of the dismantling of the Lismore to Tenterfield 132 kV line (to enable the construction of the new Lismore to Dumaresq 330 kV line) is the development of the 132 kV or 330 kV transmission network owned by TransGrid.

In its letter, PB Associates makes a number of claims to support the conclusions in its report<sup>1</sup> on Directlink's alternative projects. None of its claims are supported by technical analysis even though PB Associates has found no fault with BRW's modelling and analysis that strongly supports a contrary view. PB Associates' conclusions are instead based upon selective verbal advice from stakeholders or circumstantial evidence. We make the following points on the issues raised PB Associates' letter:

- PB Associates confirms that its conclusions on the Broadwater cogenerator take no account of a number of critical factors, especially the reluctance of Sunshine Electricity to enter into a network support agreement, which PB Associates could have ascertained during the course of its review.
- Based on an actual analysis of the capacity of the surrounding transmission network, Directlink is very well matched to it.
- The existence of a network support agreement with Powerlink after an open tendering process provides some indication of Directlink's network deferral benefits in Queensland. However, given that no similar process has been concluded in NSW, the absence of a network support agreement with TransGrid provides no indication of Directlink's network deferral benefits in NSW.
- TransGrid can rely on Directlink for network support and does not need to rely on load shedding.
- While we achieved a good level of mutual understanding with TransGrid and Powerlink on BRW's modelling inputs and assumptions, we have never claimed that TransGrid and Powerlink endorse BRW's final conclusions. Differences of opinion are entirely understandable and should be expected. That stakeholders express a different view to the Directlink Joint Venturers' is not evidence by itself that our application is not robust.
- PB Associates has only confirmed its O&M costing methodologies as 'rules of thumb' that are subject to high levels of error and that is only suitable for rough approximations for large integrated transmission networks. PB Associates has found no fault with

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<sup>1</sup> PB Associates, *Review of Directlink Conversion application, Final Report*, 26 November 2004

BRW's detailed project-specific costings. And PB Associates has failed to acknowledge that the Commission considered and rejected such a 'rule of thumb' methodology in the Murraylink case on the basis of PB Associates' own advice at that time.

The Directlink Joint Venturers are particularly concerned that PB Associates has stated that it opposes our conversion application, and that this position may have compromised PB Associates' objectivity. In relation to several issues for Directlink, PB Associates has not provided a balanced view to the Commission, expressed views well outside its brief, relied inappropriately on the technical views of third parties, ignored principles set down in the regulatory test, and even provided advice at odds with that it previously provided for the Murraylink case and its review of TransGrid's capital expenditure program. While the Directlink Joint Venturers can provide a counter-balance to the views put by PB Associates, we believe that PB Associates' had a responsibility to examine all and only the relevant technical facts and precedents, and arrive at reasoned and substantiated conclusions with careful regard to the principles of the regulatory test, and that PB Associates did not discharge this responsibility in a proper manner.

We would be happy to clarify or discuss any of the matters raised in this letter with Commission staff.

Yours sincerely

A handwritten signature in black ink, appearing to read "Dennis Stanley". The signature is written in a cursive style with a large, sweeping flourish at the end.

Dennis Stanley  
Directlink Joint Venture Manager

Encl.



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**SUBMISSION IN RESPONSE TO LETTERS FROM TRANSGRID AND PB ASSOCIATES**

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## TRANSGRID LETTER OF 11 MARCH 2005

### 1. Overloading of Line 966 following an outage of Line 89

#### *Issue:*

TransGrid recognises the potential for Line 966 to be overloaded after the loss of Line 89 and suggests that this condition was unforeseeable because loads in northern NSW have exceeded forecast levels.

#### *Response:*

The potential since 2003-04 for the overloading of Line 966 after the loss of Line 89 (the 330 kV line between Armidale and Lismore), was one of the network conditions that Burns and Roe Worley ('**BRW**') identified through its detailed modelling and analysis, and about which TransGrid was not previously aware. BRW revealed this condition in its report for the revised conversion application<sup>1</sup> and confirmed it by analysing a NEMMCO snap shot file for actual conditions that existed at 15.30h on 20 February 2004.

BRW discussed its findings with TransGrid during the consultation process leading up the preparation of the revised application. While TransGrid was initially publicly silent on this issue, it has now acknowledged in its 11 March 2005 letter to the Commission that BRW's modelling results are correct. TransGrid's initial assessment is that this overloading risk existed for around 200 hours during the 2004-05 summer.

TransGrid's letter could be interpreted to imply that the demand in northern NSW on 20 February 2004 was beyond Country Energy's forecast peaks and, therefore, could not have been planned for. This is not the case. While the total load in the National Electricity Market was at a peak at 15.30h on 20 February 2004, the northern NSW load was within the forecast peaks, as shown in Tables 1 and 2.

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<sup>1</sup> Burns and Roe Worley, Directlink, *Selection and Assessment of Alternative Projects to Support Conversion Application to ACCC*, 22 September 2004, pp. 42-3.

Table 1

**NORTHERN NSW [NON-COINCIDENT] PEAK LOAD FORECASTS  
PUBLISHED BY TRANSGRID IN 2003**

Country Energy Summer Peak Forecasts (MVA)		
	2004	2005
Coffs Harbour	66.4	68.5
Koolkhan 66	51.9	53.2
Lismore 132	155.8	161.3
Country Energy Winter Peak Forecasts (MVA)		
	2003	2004
Coffs Harbour	71.0	73.1
Koolkhan 66	53.6	54.9
Lismore 132	159.1	163.9

Source: TransGrid, NSW Annual Planning Report 2003.

Note:  $MVA = \sqrt{(MW^2 + MVAr^2)}$

Table 2

**ACTUAL NORTHERN NSW LOAD**

	Coincident load at 15.30h, 20 February 2004 (MVA)
Coffs Harbour	73.8
Koolkhan 66	34.0
Lismore 132	142.0

Source: NEMMCO snap shot file.

Given the events of 20 February 2004, the Country Energy load forecasts that TransGrid published in 2003 demonstrate that the potential for Line 966 to be overloaded after the loss of Line 89 was foreseeable from at least July 2003.

## 2. TransGrid relying on load shedding

### *Issue:*

Rather than relying on Directlink, TransGrid indicates that it is relying on load shedding to manage network security and operates its network within its N-1 capability in northern NSW.

### *Response:*

Since BRW modelling and analysis has demonstrated the potential for Line 966 to be overloaded following an outage of Line 89, the Directlink Joint Venturers logically concluded that TransGrid must be relying upon Directlink for network support in far northern NSW.

However, TransGrid has indicated that it would not do this and, instead, it will rely on load shedding.

TransGrid has provided no firm evidence why the implementation of load shedding is the best option in meeting customer expectations given the large economic cost of load shedding to end-use customers and the contravention of planning and operating standards required by Country Energy under its connection agreement, or why it cannot rely on Directlink an existing in-service asset with the capability to provide network support in far northern NSW. Load shedding schemes are usually used as an absolute last resort rather than as a prime network strategy to maintain an N-1 operating condition.

The following provides an example of the possible cost to customers. BRW's modelling shows that, at 15.30h on 20 February 2004, if Line 89 had tripped, 28 MW of load in the Koolkhan area (equivalent to a regional city) would have had to be shed to reduce load on Line 966 to below its sustained emergency rating. The cost to end-use customers would be \$828,800 per hour of supply interruption, based on a value of unserved energy of \$29,600 per MWh. TransGrid has indicated that this condition existed for around 200 hours over the 2004-05 summer. Significantly, at that time, the Koolkhan load was only 34 MVA compared to the forecast peak of 51.9 MVA due to a forced outage of the Country Energy South Grafton substation. Without this outage, it is estimated that the Koolkhan load would have been approximately 50 MVA, which is still within the peak load forecast (as shown in Table 1) but the quantum of load that might have been shed, and the cost to end-use customers would have been considerably higher.

While TransGrid has indicated in its letter that Directlink could play a role in restoring load to interrupted areas, it would be much more appropriate for Directlink to be used to avoid costly interruptions to Country Energy's customers in the first place. We understand that Country Energy has previously indicated its firm views to TransGrid on customer expectations in this region and that it does not consider the use of load shedding as an appropriate network strategy to deal with this issue.

In any case, it is highly likely that NEMMCO will constrain Directlink to flow south to avoid load shedding in the event of the loss of Line 89. This means that TransGrid is effectively relying on Directlink and this could explain why TransGrid is planning to upgrade Line 966 no sooner than 2006-07.

### **3. Capacity of the Gold Coast network**

#### *Issue:*

TransGrid raises doubt as to whether current and future network augmentations in the north and south Gold Coast will provide sufficient southward capacity for Directlink to provide network support into northern NSW. In particular, TransGrid has highlighted the need for additional augmentations in the Tweed area to enable Directlink to provide firm support to the Lismore area at times of high demand, beyond summer 2006-07.

Further, TransGrid might have some concern that, after an outage of Line 89, Directlink's southward flow might be constrained by the need to maintain an N-1 operating state in Queensland.

*Response:*

BRW's modelling of current load and network conditions, and expected future conditions — based on a reasonable view of current and anticipated network augmentations in the Gold Coast area — shows that the Gold Coast network has and would continue to have sufficient southward capacity for Directlink to provide network support into NSW. TransGrid itself has made similar statements in the past<sup>2</sup>:

TransGrid recognises that Directlink would be available for network support to this [NSW] region regardless of its status as a "Regulated" or as an "Unregulated" Network Service Provider. Ongoing Joint Planning with Powerlink has confirmed that sufficient capacity from the north is available for Directlink (potentially) to effectively give network support to NSW up to at least 2010/12. This work was undertaken to ensure TransGrid properly identified any required network augmentations likely to be needed in the current "Regulatory Period" – 2004 to 2009. Joint Planning with Powerlink has not progressed beyond 2010/12 at this stage. Consequently TransGrid cannot comment on Directlink's capacity to provide Network support services to NSW beyond that time. The assumptions are, to some extent, dependent upon plans for future network developments by Powerlink in Queensland. These assumptions could be considered as reasonable under some development options.

The Greenbank augmentation is due for completion in 2006 and Powerlink has indicated to us that the project is well on track for on-time completion. BRW's modelling shows clearly that the Greenbank augmentation with other anticipated augmentations to the Powerlink system will ensure that the northern Gold Coast network will continue to provide sufficient capacity to enable Directlink to provide network support until at least 2017

Additional augmentations will be required in any case to meet the growing load in the Gold Coast as well as the Tweed areas and BRW has always taken this into account in its modelling. This issue was identified during BRW's consultation with Powerlink and TransGrid. As set out in our letter of 14 January 2005, BRW has made a reasoned prediction of the likely outcome of the current joint planning process that will determine the transmission reinforcement projects necessary to meet the demands of the Tweed area in coming years. The same augmentations will provide the capacity needed for Directlink to provide firm network support into the Lismore area. While the joint planning process may in the end choose a different augmentation and timing to that BRW has predicted, the augmentation chosen will increase Powerlink's capacity to supply the Tweed area and alleviate capacity constraints to the north of Directlink in response to the actual rate of load growth in the area.

Powerlink, Energex and Country Energy are considering a range of options; including a third line from Mudgeeraba to the Tweed and/or upgrading of the existing 110 kV lines. Other options being considered include extending Energex's subtransmission network across the Queensland-NSW border and through an inter-distributor transfer arrangement, provide a separate bulk supply point in the Tweed area to cater for Country Energy's load in the northern Tweed and to reduce the loading on the existing 110 kV circuits from Mudgeeraba to Terranora.

The TransGrid letter appears to describe a network scenario where, under peak load conditions, Line 966 is overloaded following an outage of Line 89 and at the same time, Directlink's southward flow is constrained by supply conditions in Queensland where

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<sup>2</sup> TransGrid letter to the Commission of 14 January 2005.



Powerlink's network would be unable to provide full capacity to Directlink. The Directlink Joint Venturers consider that the probability of these events occurring coincidentally is highly unlikely. This scenario is an N-2 situation and TransGrid effectively implying that the far northern NSW network would be treated differently in terms of security of supply planning standards from the remainder of TransGrid network, except for the Sydney central business district. Appropriately, BRW's modelling and analysis has been based on the need to operate Directlink and the surrounding network to achieve an N-1 standard in far northern NSW.

#### **4. Justification of the upgrade of Line 966**

##### *Issue:*

TransGrid has stated its intention to proceed to upgrade Line 966 for the summer of 2006-07 and that it anticipates that a small number of structures will be replaced as part of TransGrid's ongoing asset management strategies.

##### *Response:*

Notwithstanding TransGrid's statement, it has not demonstrated that an upgrade of Line 966 is the best option to address current and emerging network constraints.

BRW's detailed modelling and analysis has demonstrated that Directlink can defer the upgrade of Line 966 and avoid possible overloading following an outage of Line 89. PB Associates recommended this in its January report on TransGrid's capex application.<sup>3</sup> BRW has considered all the matters raised by TransGrid in its letter of 11 March 2005 and its conclusions remain unchanged.

Even if TransGrid does upgrade Line 966, another network constraint will appear in 2007, on which TransGrid has remained silent. BRW modelling clearly demonstrates that the loading of the Koolkhan to Lismore 132 kV line (Line 967) following the loss of the Coffs Harbour to Lismore 330 kV line will exceed its sustained emergency rating of 136 MVA in 2007-08. Directlink can alleviate this constraint as well and defer the proposed Lismore to Dumaresq 330 kV line (and the second Glen Innes to Tenterfield 132 kV line) until 2017, which in the absence of support from Directlink, would need to be implemented to avoid the emerging constraint.

In addition to these overload considerations, voltage collapse at Koolkhan does become a problem beyond 2010-11 and TransGrid has not yet acknowledged this. BRW's modelling has indicated that this collapse can be avoided until 2017 by the use of support from Directlink.

While TransGrid has indicated that a small number of Line 966 pole structures may be replaced as part of its ongoing asset management strategy, TransGrid has not publicly demonstrated any immediate or emerging need to fully upgrade the line over the current regulatory period by presenting specific documented condition assessments.

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<sup>3</sup> PB Associates, *Review of Directlink Conversion Application – Final Report*, 26 November 2004, pp. 9, 79-80.

TransGrid has also not demonstrated that its reliance on load shedding until 2006-07 and the upgrade of Line 966 in 2006-07 are the most efficient or prudent operational and planning strategies. In fact, a more efficient or prudent strategy in terms of the regulatory test principles is for TransGrid to address the potential overload of Lines 966 now and 967 in the future by utilising an existing facility: Directlink's network support. For this reason, the economic benefits that Directlink can generate in terms of avoiding the upgrade of Line 966 from 2003 and of deferring the Lismore to Dumaresq line (and the second Glen Innes to Tenterfield 132 kV line) from 2007 to 2017 should be recognised in the Commission's application of the regulatory test.

## **5. Port Macquarie augmentations**

### *Issue:*

TransGrid sets out the challenges it faces in developing a voltage control scheme that would allow voltages on the mid north coast to be supported from Lismore.

### *Response:*

As indicated in our letter of 10 March 2005, BRW has advised the Directlink Joint Venturers that, subject to confirmation of its technical feasibility, a voltage control scheme could be used with Directlink to alleviate the constraints in the lower north coast to the level necessary to defer the 330 kV development to Port Macquarie. We are pleased that TransGrid is investigating such a control scheme and the Directlink Joint Venturers would be pleased to participate in this investigation to ensure that Directlink has the opportunity to provide any level of network [voltage] support of which it is capable.

## **6. N-1 supply for Tenterfield**

### *Issue:*

TransGrid has stated that a reduction in reliability from present N-1 supply may not be acceptable in light of increasing customer expectations and that Country Energy is responsible in the final analysis to accept the level of reliability required.

### *Response:*

The Directlink Joint Venturers note that a similar view is expressed by Country Energy in its 15 March 2005 letter to the ACCC seeking advice on the retention of N-1 supply to Tenterfield. Country Energy having considered all the available options including non-network solutions to provide alternative backup supply to Tenterfield, its statutory requirements, network planning criteria, and its local knowledge of customer expectations, expresses the following view:

Country Energy as a major customer of TransGrid and the local network service provider responsible for ensuring reliable supply to distribution customers in the area, is of the view that the only reasonable solution and least overall community cost to maintain adequate N-1 supply to Tenterfield in the event of the dismantling of the Lismore to Tenterfield 132 kV line (to enable the construction of the new Lismore to Dumaresq 330 kV line) is the development

of the 132 kV or 330 kV transmission network owned by TransGrid. This may involve duplication of the 132 kV transmission line from Glen Innes or the construction of a new 330/132 kV substation at Tenterfield. The selected option would require joint network planning with TransGrid to ensure that any project development is optimal leading to the lowest possible cost of transmission.

We note that PB Associates has not commented on this view in its 21 March 2005 letter to the Commission.

## **PB ASSOCIATES LETTER OF 21 MARCH 2005**

### **7. Broadwater cogenerator**

#### *Issue:*

PB Associates has advised that the benefits of the Broadwater cogenerator need to be considered because Delta Electricity has told PB Associates that the plant's expected availability is 'in the order of 95%'.

#### *Response:*

In its letter, PB Associates makes it clear again that its whole conclusion that the Broadwater cogenerator can provide reliable network support is based solely upon a single piece of verbal advice from Delta Electricity. It is also clear that PB Associates neglected to examine the issue further to a satisfactory level of detail with Delta Electricity or Sunshine Electricity, or to consider the other critical factors necessary to determine whether the Broadwater cogeneration plant would be technically capable and commercially willing to commit to provide network support to northern NSW sufficient to defer the new 330 kV Lismore to Dumaresq line.

In our letter of 14 January 2005, we stated that BRW (not the Directlink Joint Venturers) considered the Broadwater cogeneration plant and concluded that the plant was technically incapable of providing network support sufficient to meet TransGrid and Country Energy's reliability obligations. BRW advice, in the attached to our 14 January 2005 letter, described the manner in which it had considered the Broadwater plant, the extent of its consultation with TransGrid and Country Energy, and the reasons for its conclusions. We note that PB Associates has not found fault with our views expressed on 14 January 2005 or BRW's advice, nor has it recognised the important documented views of Sunshine Electricity in its letter of 25 February 2005. Sunshine Electricity's views are that the operation of the cogeneration would not provide reliable support to the TransGrid network and that the owners do not intend to enter into a network support agreement due to the financial penalties or indemnities when the units are not available at critical times.

### **8. Directlink well matched to the capacity of the surrounding system**

#### *Issue:*

PB Associates claims that it is required to consider that:

- Powerlink and TransGrid had not included Directlink in their joint planning prior to Directlink construction;
- Country Energy contributed to the project not as an integrated component of its regulated network but as a partner in an entrepreneurial investment deriving income from pool price differentials; and
- The Queensland NSW interconnector ('QNI') was constructed at the same time and commenced operation prior to commission of Directlink.

PB Associates appears to consider these matters are relevant to whether Directlink's characteristics, size and location is well matched to the capacity of the surrounding system.<sup>4</sup>

*Response:*

PB Associates' analysis of parts (not all) of the history of Directlink does not substantiate its previous assertion that Directlink is not well matched the capacity of the surrounding system. In fact, PB Associates makes no mention of the surrounding system at all in its analysis.

Directlink is well matched because this nominal capacity is neither substantially higher nor lower than the capacity of the surrounding system that connects it to the wider transmission network. Directlink has a nominal transfer capability of 180 MW. During periods of low load, the surrounding transmission system allows Directlink to transfer up to its 180 MW rating, subject to flows across QNI in some cases. During periods of peak summer load, constraints in the surrounding system limits flow across Directlink at levels between 103 and 130 MW north and between 87 and 142 MW south from 2005-06 to 2019-20 in the medium (expected) load growth case examined by BRW.<sup>5</sup> This demonstrates excellent matching.

Further, the existence of QNI does not indicate that Directlink is not a highly beneficial network solution. In fact, Directlink can operate along side QNI and still provide substantial economic benefits in terms of both the deferral of major network augmentations in the Gold Coast and northern NSW areas, and in terms of additional inter-regional benefits.

We understand PB Associates' brief for its consultancy was to review our conversion application and advise the Commission on the appropriateness of the alternative projects identified by us for the purposes of a regulatory test assessment. The matters that PB Associates claims here that it must consider prove little relevance to PB Associates' brief other than to demonstrate that dated planning studies do not provide good guidance as to the scope of Directlink's alternative projects.

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<sup>4</sup> PB Associates, *Review of Directlink Conversion application, Final Report*, 26 November 2004, p. 1.

<sup>5</sup> Burns and Roe Worley, Directlink, *Selection and Assessment of Alternative Projects to Support Conversion Application to ACCC*, 22 September 2004, p. 52.

## **9. Formal arrangements for Directlink to provide TransGrid network support**

### *Issue:*

PB Associates places great weight on the absence or existence of formal network support arrangements and the concurrence of TransGrid and Powerlink, as the only material evidence as to whether Directlink's network deferral benefits exist or not.

PB Associates also claims it is required to consider that:

- TransGrid has not entered into formal arrangements with the Directlink Joint Venturers for network support; and
- it has instead incorporated alternative projects into its proposed capital expenditure program submitted to the ACCC.

PB Associates is of the view that the DJV should be pursuing that claim for network support payments with NEMMCO and TransGrid directly rather than through its conversion application.

### *Response:*

The existence of a network support agreement between Powerlink and the Directlink Joint Venturers does provide confirmation that Directlink can provide technical and economic benefits. BRW's detailed modelling and analysis for the conversion application identified the capability of Directlink to provide the necessary network support services to Powerlink to alleviate the emerging constraints in south-east Queensland until the 2005-06 summer.

The network support agreement resulted from a transparent and consultative process commenced and completed by Powerlink during 2003-04 to address emerging network constraints in the Gold Coast. As TransGrid has not completed a similar process to address the current and emerging network constraints in northern NSW, it is inappropriate for PB Associates to infer that the absence of a network support agreement in NSW could cast doubt upon the benefits Directlink can and will provide.

Should PB Associates feel compelled to consider these matters, for it to provide the Commission with a balanced analysis, it is also important that the following points also be considered, most of which we discussed with Commission staff and PB Associates on 4 February 2005:

- the Directlink Joint Venturers have vigorously pursued all the avenues available to them under the current NEM arrangements to formalise arrangements for Directlink's network support with TransGrid and seek a network support payment;
  - (1) by responding to Powerlink's request for information in August 2003 on the emerging network constraints in the Gold Coast and Tweed areas, and as a

successful tenderer, negotiated a network support agreement until the summer of 2005-06, which deferred the Greenbank augmentation by 1 year;<sup>6</sup>

- (2) by responding in detail to TransGrid's request for information on network support solutions in September 2003 — progress of the process to finalise formal arrangements is solely in the hands of TransGrid<sup>7</sup>; and
  - (3) by applying for Directlink to become regulated and provide network support as part of its prescribed service as a legitimate and most commercially prudent course of action;
- as discussed later in this letter, TransGrid is a commercial entity with an incentive to promote its business interests, including the development of its own network; and
  - no avenue exists for the Directlink Joint Venturers to pursue NEMMCO for network support payments other than under a network control ancillary services contract, which already exists and is limited to the provision of reactive voltage support.

Given the substantial challenges, limited avenues, and the barriers the Directlink Joint Venturers face obtaining appropriate payment for the benefits that Directlink can provide through means other than conversion, we find PB Associates' opposition to the conversion application difficult to understand.

## **10. TransGrid can rely on Directlink**

### *Issue:*

PB Associates' claims that TransGrid has stated to it that 'TransGrid cannot rely on Directlink during peak load times'. Subsequently, PB Associates has formed the view that TransGrid is not relying on Directlink for network stability and that TransGrid appears to be managing its network reliability in a responsible manner by using load shedding as a primary network strategy.

PB Associates also quotes part of a sentence in TransGrid's letter of 11 March 2003 as further supporting evidence, which in full reads:

In short, the voltage collapse scenario contemplated by BRW should not arise from a single contingency, and restoration of interrupted load could be facilitated by a number of factors, including the possible availability of support from Directlink.

Based on its acceptance that TransGrid cannot rely on Directlink's network support, PB Associates states that it is incumbent on the Directlink Joint Venturers to demonstrate the benefits that Directlink could provide in reducing interruption times.

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<sup>6</sup> Powerlink Queensland, *Emerging Transmission Network Limitations – Electricity Transfer to the Gold Coast and Tweed Area*, August 2003 and Powerlink Queensland, *Final Report, Proposed New Large Network Asset – Gold Coast and Tweed Areas*, 6 July 2004.

<sup>7</sup> TransGrid, *Emerging Transmission Network Limitations on the New South Wales Far North Coast*, August 2003.

*Response:*

PB Associates has provided no technical basis to support its acceptance of the statement it claims TransGrid made or upon which it should interpret TransGrid's comment on voltage collapse. That is, PB Associates provides no supporting analysis that examines whether these statements have any firm basis, to what voltage collapse scenario TransGrid is referring, and why load shedding is a responsible means of managing network reliability given the alternatives and TransGrid's reliability obligations to Country Energy. Further, PB Associates identifies no shortcomings in BRW's modelling that strongly supports a view contrary to PB Associates'.

A general statement that TransGrid cannot rely on Directlink during peak load times cannot be sustained upon examination of the technical facts. As outlined in section 1 of this letter, BRW's detailed modelling shows clearly that it has taken account of all the constraints affecting Directlink at peak load, that Line 966 would be overloaded for an outage of Line 89, and has demonstrated that Directlink can provide the network support necessary to avoid the upgrade of Line 966 from 2003. Directlink can also provide network support to relieve the potential overloading of Line 967 from 2007-08 and the voltage collapse in the Koolkhan area beyond 2010-11. Through the provision of these services, Directlink is able to defer the proposed Lismore to Dumaresq 330 kV line (and the second Glen Innes to Tenterfield 132 kV line) from 2007 to 2017.

As previously stated in this letter, rather than reducing the duration of load interruptions, the appropriate role for Directlink is assisting TransGrid to avoid interruptions in the first place, and avoid the need for unnecessary load shedding and the associated economic cost to the community.

For these reasons, PB Associates conclusions about the extent to which TransGrid can or does rely on Directlink are weak and our view remains firm.

## **11. Cooperation and mutual understanding with TransGrid and Powerlink**

*Issue:*

PB Associates concludes that the level of cooperation and mutual understanding that the Directlink Joint Venturers achieved with TransGrid and Powerlink was not as we recognised. PB Associates notes that there has not been a consensus of views between the Directlink Joint Venturers, TransGrid and Powerlink with the DJV's assertions, or agreement on deferral benefits offered by Directlink.

Further, PB Associates analyses TransGrid and Country Energy's commercial motivations and concludes that TransGrid can be considered a trusted independent advisor.

*Response:*

When preparing our revised application of 22 September 2004, the Directlink Joint Venturers endeavoured to achieve the highest level of consensus with TransGrid and Powerlink as reasonably possible in two ways.

Firstly, the revised application contained a new expert report from BRW. BRW has prepared this report because the Directlink Joint Venturers recognised Powerlink's concerns as expressed in its Final Report<sup>8</sup> that they were not in a position to bring forward a detailed technical specification for Directlink's post contingent support and satisfy Powerlink on reliability augmentations in the Gold Coast in the limited time that Powerlink had available before the summer of 2006-07.

Secondly, in preparing its new expert report BRW more actively consulted both TransGrid and Powerlink on its modelling inputs and assumptions to avoid any subsequent misunderstandings. Submission of the revised application was delayed to enable TransGrid sufficient time to endorse BRW's inputs and assumptions document. BRW also met with TransGrid to present its results and demonstrate its modelling prior to finalisation of its revised report. In its letter of 14 January 2005, TransGrid confirmed its involvement in assisting BRW's to define its inputs.

The Directlink Joint Venturers has consistently informed the Commission and PB Associates that it achieved a good level of mutual understanding with TransGrid and Powerlink on BRW's modelling inputs and assumptions. We have never claimed that TransGrid fully endorse BRW's final results and conclusions, however we note that during the Commission's consultation process TransGrid stated that it could not endorse BRW modelling results because it had not attempted to replicate BRW's studies. Having said this, BRW has encouraged TransGrid on several occasions to review its modelling and, to the extent this has occurred, TransGrid has found no fault with it. The fact that TransGrid has now acknowledged in its most recent letter to the Commission that Line 966 can be overloaded following an outage of Line 89 is a demonstration of the quality of BRW's modelling work, which has now been confirmed by actual network conditions on 20 February 2004 and during the 2004-05 summer.

The Directlink Joint Venturers agree that there has not always been a consensus of views on some matters with TransGrid on BRW's conclusions. This is entirely understandable and should be expected. As previously highlighted, TransGrid is a commercial entity with an interest in promoting the development of its own network infrastructure and will seek to put forward a case that advances this interest ahead of other proponents. In their report and letter, PB Associates appear to uncritically accept the positions put by TransGrid who may strive against Directlink and barely, if at all, acknowledge this competitive tension. PB Associates gives no indication of how they have taken this into account in critically analysing the information provided by TransGrid, which is heavily relied on by PB Associates in their analysis.

The Directlink Joint Venturers, via BRW, is the only stakeholder in this review that has conducted detailed system modelling of the northern NSW network into future. It is our understanding that TransGrid has not, which may provide some explanation why TransGrid continues to maintain its traditional "network build" views and has been reluctant to confirm the results of BRW modelling in relation to Line 966 until it was recently confirmed by actual network conditions.

PB Associates comments that Directlink's capability to provide network deferral benefits relies heavily upon BRW's modelling. This is completely appropriate. BRW's modelling has

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<sup>8</sup> Powerlink Queensland, *Final Report, Proposed New Large Network Asset – Gold Coast and Tweed Areas*, 6 July 2004.



been consultative, thorough, rigorous, and transparent. PB Associates has had an extensive opportunity to examine the modelling to any extent it wished and has found no fault with BRW's modelling or conclusions; in fact PB Associates explicitly endorsed them.

The role of PB Associates is to objectively assess the Directlink Joint Venturers' conversion application and its supporting technical evidence to determine the basis and strength of its case. Similarly, if stakeholders express a different view than those put forward by the Directlink Joint Venturers, PB Associates must examine the basis and strength of the stakeholder's views from a technical perspective before drawing any final conclusions. That stakeholders express a different view is not evidence by itself that our application is not robust.

It was inappropriate that PB Associates sought to analyse and opine on the commercial motivation of Country Energy and TransGrid to enable it to determine upon whose technical opinion it could rely. The Directlink Joint Venturers have concerns that PB Associates subsequently views TransGrid to be an independent advisor whose opinions can be accepted without scrutiny or substantiation. While TransGrid is an important stakeholder and the source of valuable technical input data, its position as a separate vested interest must also be recognised. Further, PB Associates' conclusions should be based on its own technical well substantiated opinion, not those of a third party.

We also have difficulty understanding why PB Associates concluded that Directlink could defer the upgrade of Line 966 its review of TransGrid's capital expenditure plan<sup>9</sup>, but now puts forward in its letter TransGrid's plan to upgrade the line as evidence that it might not. In the former case, PB Associates considers TransGrid to be a regulatory applicant that must consider alternatives to traditional network development and to select the most efficient option. In the later case, PB Associates appears to consider TransGrid to be a determining body. These positions are obviously inconsistent.

Given that PB Associates itself has found no fault with BRW's modelling, we believe that it remains a very firm basis of our application.

## **12. Estimating the O&M cost of Alternative 5**

### *Issue:*

PB Associates seeks to substantiate the use of 2% of 66% of the 'construction cost'<sup>10</sup> of Alternative 5 as a more appropriate estimate of its operating and maintenance ('O&M') cost in place of BRW's project-specific estimate.

### *Response:*

PB Associates remains unconvincing that its estimate of Alternative 5's O&M cost is appropriate for many reasons.

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<sup>9</sup> PB Associates, *Review of Directlink Conversion Application – Final Report*, 26 November 2004, pp. 9, 79-80.

<sup>10</sup> 'Construction cost' is defined as the estimated capital cost less contingency and interest during construction.

Firstly, PB Associates has only confirmed its 'rules of thumb' methodologies are subject to high levels of error and that are only suitable for rough approximations of the O&M costs of large integrated transmission networks, not for specific assets. Even PB Associates indicates that it is 'not necessarily advocating either of these methodologies as a rigorous identification of operating maintenance costs'.

Secondly, PB Associates states that its methodologies produce estimates that are conservative. Such a statement is meaningless because PB Associates does not acknowledge the high level of error inherent in the estimate.

In particular, PB Associates provides no justification as to why the consideration of TransGrid incremental operating cost methodology is appropriate for Alternative 5. This methodology does not account for the specific characteristics of the project and its technologies. While it may have some application in estimating incremental O&M costs for a transmission network service provider with a large multi-faceted asset base, it is not appropriate for estimation of O&M costs for a smaller scale single asset or stand alone entity.

It should also be noted that PB Associates continues to take no account of the O&M requirements associated with augmentations required for maintenance of an N-1 supply to Tenterfield, for example, a second 132 kV circuit of some 80 km from Glen Innes and associated substation works.

Contrary to PB Associates' assertion, and as stated in our letter of 14 January 2005, TransGrid has advised the Directlink Joint Venturers that it did not advise PB Associates that it would be more accurate to estimate of the annual operating costs of Alternative 5 as 2% of their capital costs (excluding contingency and IDC) than the method BRW used. TransGrid confirmed this in its letter to the ACCC on 14 January 2005 when it noted:

PB Associates have used 2% of the capital cost as their estimate of the O&M costs. The report does not provide any supporting information that explains why this is an appropriate estimate of O&M costs for this asset. [emphasis added]

Further, we understand that PB Associates' brief explicitly required it to have regard to the Murraylink decision when conducting its review of the Directlink alternative projects. In that decision, the Commission considered and rejected the use of a 'rule of thumb' approach for determining the O&M costs for Murraylink. The Commission applied a project-specific technique such as the one BRW used for all Directlink's alternative projects. The Commission did this on the advice of PB Associates in 2003 that O&M expenses vary only minimally with capital costs. Furthermore, the Commission considered it appropriate to treat the estimated costs on a stand alone basis, rather than pertaining to a link owned and operated by an existing network service provider.<sup>11</sup>

In contrast to PB Associates, BRW developed its estimate of the O&M cost of Alternative 5 by examining the specific technical and locational characteristics of the project. BRW did this to increase the robustness and accuracy of its estimate. PB Associates has ignored these factors along with the need for a second supply to Tenterfield to be established. Further, PB Associates has made no assessment of the cost estimate presented by BRW

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<sup>11</sup> Australian Competition and Consumer Commission, *Decision: Murraylink Transmission Company Application for Conversion and Maximum Allowable Revenue ('Murraylink decision')*, 1 October 2003, p. 124.

but has simply replaced it with its own 'rule of thumb' estimate without providing any evidence that it is more accurate, because it is not. BRW's estimate stands as the one determined with the most diligence and accuracy, and it would be inappropriate for the Commission to accept PB Associate's estimate.