



APPENDIX P

*Proposed Contingent Projects –
1 July 2012 to 30 June 2017
January 2012*

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1 Summary

This Appendix presents Powerlink's proposed contingent projects in accordance with clause 6A.8 of the Rules.

Pursuant to clause 6A.8.1(b) of the Rules, contingent projects may be proposed where:

- They are reasonably required to be undertaken in order to achieve the capital expenditure objectives;
- They are not otherwise provided for (either in part or in whole) in the total of the forecast capital expenditure for the relevant regulatory period;
- They reasonably reflect the capital expenditure criteria; and
- They exceed either \$10 million or five per cent of the value of the Maximum Allowed Revenue (MAR) for the first year of the regulatory period, whichever is the larger amount.

Contingent projects are therefore those which are significant, may arise in the period, but not yet committed and not provided for in the capital expenditure forecast for the relevant regulatory period. Such projects are linked to unique investment drivers such as a major point load rather than to general investment drivers (such as expectations of load growth within a region).

It is not possible to accurately define the scope of proposed contingent projects at this early stage. Therefore, the proposed contingent projects are described by the most likely network development at the trigger level. The trigger level is the event which will result in a transmission network project of value in excess of the contingent project threshold. Should the specified trigger event for a proposed contingent project occur during the regulatory period, detailed planning analyses, project scope, cost estimates and regulatory test consultation will be required before any amendment to the revenue determination is considered by the AER.

Powerlink's MAR (smoothed) for 2012/13 is \$840.0m – as outlined in Table 12.7 of Powerlink's Revised Revenue Proposal. Five percent of the MAR is \$42m, which makes this amount the threshold for a contingent project for the purpose of this Revised Revenue Proposal. Table 1.1 summarises the indicative costs of the contingent projects detailed in this Appendix.

Table 1.1 Indicative costs (\$m 10/11) of Powerlink's contingent projects*

Project Name	Indicative cost* \$m
Western Downs to Columboola 275kV 3 rd circuit	58.0
Columboola to Wandoan South 275kV 3 rd circuit	61.7
Galilee Basin connection shared network works	103.8
North of Moranbah	43.6
South of Moranbah	51.1
Bowen industrial estate	78.7
QNI upgrade (Queensland component)	59.1
Gladstone State Development Area connection shared network works	112.8
Callide to Moura transmission line and Calvale transformer	49.5
N-2 security to essential loads (CBD)	112.0
Ebenezer 330/275/110kV establishment	61.1
FNQ 275kV energisation	85.7
Total indicative cost	919.3

*Indicative cost provided based on the expected network solution. The actual scope will be determined through a RIT-T should the trigger eventuate. There will also be a small incremental associated change to operating expenditure.

2 Western Downs to Columboola 275kV 3rd Circuit

Category: Augmentation

Indicative Cost: \$58.0m (\$ 2010/11)

2.1 Background

The northern region of the Surat Basin in south west Queensland contains extensive coal and gas reserves. Recent customer enquires indicate that new gas supply hubs and mining developments may locate in the Columboola-Wandoan area of the Surat Basin in the near future.

To supply this load Powerlink is establishing two new 275/132kV substations at Columboola and Wandoan South and two new 275kV transmission lines from Western Downs to Columboola and Columboola to Wandoan South. If additional loads connect in the area, or should generation proponents connect in the area, the net import or export may exceed the firm capacity of these 275kV transmission lines.

2.2 Project Overview

This project comprises the construction of a further 275kV double circuit transmission line between Western Downs and Columboola substations, with one side to be strung initially.

Powerlink recommends the project be accepted as a contingent project for the 2013-17 regulatory period because of the uncertainty about the trigger event occurring and the scope and cost of the project.

2.3 Trigger Event

From a high load perspective, the trigger will occur when the net transfer on the transmission system to the Surat area exceeds 850MW, taking into account the availability and market dispatch of existing and future generation.

From a high generation perspective, the trigger will occur for Powerlink to continue to meet its mandated supply obligations when the amount of generation that must be exported from the Surat area exceeds 850MW.

The triggers are therefore:

- Commitment for net demand in the Surat area to exceed 850MW, or net generation export from the Surat area to exceed 850MW; and
- That the additional load will lead to an N-1 overload, or a reduction in transfer capacity resulting in an N-1 overload condition; and
- That Powerlink has completed a RIT-T assessment recommending that augmentation of the shared network be undertaken to address the N-1 overload conditions identified above; and
- That Powerlink has, as required under the RIT-T assessment, considered available network and non-network solutions capable of meeting the identified limitation set out in the Project Assessment Draft Report; and
- The connection agreement includes financial commitment by all customers affected by the net load increase at the connection point(s); and
- That any connection is consistent with Section 5.4A of the Rules; and
- That where Powerlink is successful in finding non-network solutions requiring compensation, Powerlink can seek pass-through of such cost in accordance with Clause 6A.7.2 of the Rules.

These trigger events are specific and capable of objective verification, relate to a specific location or locations, and is probable but too uncertain to include the proposed contingent project in the capital expenditure forecast.

2.4 Project Requirement

The proposed expansion of coal and gas mining developments, or generation connections in the area, will result in net transfer in excess of 850MW into or out of the Columboola-Wandoan area in the Surat Basin. The existing and future transmission system is unable to accommodate this expansion.

The timing, magnitude of the expansion project and transmission requirements are uncertain at this time.

If the trigger event occurs, the proposed contingent project would be required to meet the Rules capital expenditure objectives to efficiently meet expected demand for prescribed transmission services, comply with all applicable regulatory obligations associated with the provision of prescribed transmission services and maintain the quality, reliability and security of supply of prescribed services.

2.5 Contingent Capital Expenditure

The proposed contingent project is estimated to cost \$58.0 million.

This estimate is based on the establishment of a double circuit 275kV transmission line, with one side strung, between Western Downs and Columboola substations.

It is not possible to accurately define the scope of proposed contingent projects at this early stage. Should the specified trigger event for the proposed contingent project occur during the regulatory period, detailed planning analyses, project scope and cost estimates will be required before any amendment to the revenue determination is considered by the AER.

The forecast capital expenditure in the Revised Revenue Proposal does not include any allowance for projects overlapping in scope.

The estimated net contingent capital expenditure exceeds the contingent project threshold of \$42 million.

2.6 Demonstration of Rules Compliance

Powerlink considers that the project should be accepted as a contingent project for the regulatory period as it is:

- not otherwise provided for in the total forecast capital expenditure;
- reasonably reflects the capital expenditure criteria, noting that the costs are an estimate at this point;
- exceeds the contingent project threshold as set out in section 2.5;
- is required to achieve the capital expenditure objectives as set out in section 2.4; and
- has an appropriately defined trigger event as set out in section 2.3.

3 Columboola to Wandoan South 275kV 3rd Circuit

Category: Augmentation

Indicative Cost: \$61.7m (\$ 2010/11)

3.1 Background

The northern region of the Surat Basin in south west Queensland contains extensive coal and gas reserves. Recent customer enquires indicate that new gas supply hubs and mining developments may locate in the Columboola-Wandoan area of the Surat Basin in the near future.

To supply this load Powerlink is establishing two new 275/132kV substations at Columboola and Wandoan South and construction two new 275kV transmission lines from Western Downs to Columboola and Columboola to Wandoan South. If additional loads connect in the area, or should generation proponents connect in the area, the net import or export may exceed the firm capacity of these 275kV transmission lines.

3.2 Project Overview

This project comprises the construction of a further 275kV double circuit transmission line between Columboola and Wandoan South substations, with one side to be strung initially.

Powerlink recommends that the project be accepted as a contingent project for the 2013-17 regulatory period because of uncertainty about the trigger event occurring and the scope and cost of the project.

3.3 Trigger Event

From a high load perspective, the trigger occurs when the net transfer on the transmission system to Wandoan South exceeds 850MW, taking into account availability and market dispatch of existing and future generation.

From a high generation perspective, the trigger occurs in order for Powerlink to meet their mandated supply obligations when the amount of generation that must be exported from Wandoan South exceeds 850MW.

The triggers are therefore:

- Commitment for net demand supplied from Wandoan South to exceed 850MW, or net generation export from the Wandoan South area to exceed 850MW; and
- That the additional load will lead to an N-1 overload, or a reduction in transfer capacity resulting in an N-1 overload condition; and
- That Powerlink has completed a RIT-T assessment recommending that augmentation of the shared network be undertaken to address the N-1 overload conditions identified above; and
- That Powerlink has, as required under the RIT-T assessment, considered available network and non-network solutions capable of meeting the identified limitation set out in the Project Assessment Draft Report; and
- The connection agreement includes financial commitment by all customers affected by the net load increase at the connection point(s); and
- That any connection is consistent with Section 5.4A of the Rules; and
- That where Powerlink is successful in finding non-network solutions requiring compensation, Powerlink can seek pass-through of such cost in accordance with Clause 6A.7.2 of the Rules.

These trigger events are specific, capable of verification, relate to a specific location(s), and are probable but not certain enough to include the proposed contingent project in the capital expenditure forecast.

3.4 Project Requirement

The proposed expansion of coal and gas mining developments, or generation connections in the area, will result in net transfer in excess of 850MW into or out of the Wandoan South. The existing and future transmission system is unable to accommodate this expansion.

The timing, magnitude of the expansion project and transmission requirements are uncertain at this time.

If the trigger event occurs the proposed contingent project would be reasonably required to meet the Rules capital expenditure objectives to efficiently meet expected demand for prescribed transmission services, comply with all applicable regulatory obligations associated with the provision of prescribed transmission services and maintain the quality, reliability and security of supply of prescribed services.

3.5 Contingent Capital Expenditure

The proposed contingent project is estimated to cost \$61.7 million.

This estimate is based on the establishment of a 275kV double circuit transmission line, with one side strung, between Columboola and Wandoan South substations.

It is not possible to accurately define the scope of proposed contingent projects at this early stage. Should the specified trigger event for the proposed contingent project occur during the regulatory period, detailed planning analyses, project scope and cost estimates will be required before any amendment to the revenue determination is considered by the AER.

The forecast capital expenditure in the Revised Revenue Proposal does not include any allowance for projects overlapping in scope.

The estimated net contingent capital expenditure exceeds the contingent project threshold of \$42 million.

3.6 Demonstration of Rules Compliance

Powerlink considers that the project should be accepted as a contingent project for the regulatory period as it is:

- not otherwise provided for in the total forecast capital expenditure;
- reasonably reflects the capital expenditure criteria, noting that the costs are an estimate at this point;
- exceeds the contingent project threshold as set out in section 3.5;
- is reasonably required to achieve the capital expenditure objectives as set out in section 3.4; and
- has an appropriately defined trigger event as set out in section 3.3.

4 Galilee Basin Connection Shared Network Works

Category: Augmentation

Indicative Cost: \$103.8m (\$ 2010/11)

4.1 Background

The Galilee Basin, 450km west of Rockhampton, is an emerging coal region with many significant energy related proposals including multiple coal mines, underground coal gasification and oil and gas exploration.

Mining proponents in the Galilee Basin are proposing to develop several large scale coal mines in the region, which would result in a substantial increase in electricity demand in the next regulatory period. In April 2010, the State Government joined with local authorities to fund a Galilee Economic and Social Impact Study, which is aimed at managing regional growth for the economic and social benefit of the area.

In February 2011, draft terms of reference were released by the Adani Group for the proposed \$10.1 billion Carmichael Coal and Rail project in the Galilee Basin.

In addition Waratah Coal and the Metallurgical Corporation of China plan to build a \$6.15 billion thermal coal project in the Galilee Basin near Alpha.

It is expected that the growth in electricity demand will exceed the capability of the transmission network currently servicing the region. Therefore, to meet the emerging demand growth, Powerlink may need to extend its existing network into the Galilee Basin region to service future developments in this area.

4.2 Project Overview

This proposed contingent project comprises:

- paralleling the existing Broadsound to Lilyvale 275kV single circuit feeders (feeder numbers 833 and 850); and
- construction of 110km 275kV double circuit transmission line, single side strung, between Broadsound and Lilyvale 275kV substations.

Additional power transfer on Powerlink's Stanwell to Broadsound circuits would erode capacity available for power transfer to North Queensland. Depending on the Galilee load profile, it is likely that further stages of the Central to North Queensland (CQNC) intra-connector augmentation, such as CP.02271.2 Stanwell to Broadsound series capacitor project, could be advanced under market benefit analysis.

The planned commissioning of the double circuit 275kV line between Calvale and Stanwell (CP.01705) and the stringing of the second circuit of the double circuit, single side strung, between Stanwell and Broadsound (CP.01156.2) have been assumed to precede this trigger. These augmentations will have to be brought forward if not already in place.

Powerlink considers that the project should be accepted as a contingent project for the regulatory period because of uncertainty about the trigger event occurring and the scope and cost of the projects required to maintain reliability of supply.

4.3 Trigger Event

Network analysis demonstrates that an additional load in excess of 175MW connected to Lilyvale 275kV Substation will trigger the proposed contingent project.

The triggers are therefore:

- Commitment of additional load in excess of 175MW to be connected to Lilyvale 275kV Substation; and
- That the additional load will lead to an N-1 overload, or a reduction in transfer capacity resulting in an N-1 overload condition; and
- That Powerlink has completed a RIT-T assessment recommending that augmentation of the shared network be undertaken to address the N-1 overload conditions identified above; and
- That Powerlink has, as required under the RIT-T assessment, considered available network and non-network solutions capable of meeting the identified limitation set out in the Project Assessment Draft Report; and
- The connection agreement includes financial commitment by all customers affected by the net load increase at the connection point(s); and
- That any connection is consistent with Section 5.4A of the Rules; and
- That where Powerlink is successful in finding non-network solutions requiring compensation, Powerlink can seek pass-through of such cost in accordance with Clause 6A.7.2 of the Rules.

These trigger events are specific and capable of verification, relate to a specific location or locations, and are probable but not certain enough to include the proposed contingent project in the capital expenditure forecast.

4.4 Project Requirement

Expansion in the Galilee Basin is expected to increase load in excess of the trigger event level. The existing transmission system will require significant augmentation.

The timing, magnitude of the expansion project and transmission requirements are uncertain at this time. There is also uncertainty about whether the transmission works to connect the Galilee Basin to the Powerlink network at Lilyvale will be required to provide prescribed transmission services or be limited to negotiated and non-regulated transmission services.

If the trigger event occurs the proposed contingent project would be required to meet the Rules capital expenditure objectives to efficiently meet expected demand for prescribed transmission services, comply with all applicable regulatory obligations associated with the provision of prescribed transmission services and maintain the quality, reliability and security of supply of prescribed services.

4.5 Contingent Capital Expenditure

The proposed contingent project is estimated to cost \$103.8 million. This cost is net of the allowance included for projects overlapping in scope in the Revised Revenue Proposal.

It is not possible to accurately define the scope of proposed contingent projects at this early stage. Should the specified trigger event for the proposed contingent project occur during the regulatory period, detailed planning analyses, project scope and cost estimates will be required before any amendment to the revenue determination is considered by the AER. The above cost does not include any advancement in timing for CQNQ projects which may be proved to be beneficial to the market should the trigger eventuate.

The estimated net contingent capital expenditure exceeds the contingent project threshold of \$42 million.

4.6 Demonstration of Rules Compliance

Powerlink considers that the project should be accepted as a contingent project for the regulatory period as it is:

- not otherwise provided for in the total forecast capital expenditure;
- reasonably reflects the capital expenditure criteria, noting that the costs are an estimate at this point;
- exceeds the contingent project threshold as set out in section 4.5;
- is required to achieve the capital expenditure objectives as set out in section 4.4; and
- has an appropriately defined trigger event as set out in section 4.3.

5 North of Moranbah Area

Category: Augmentation

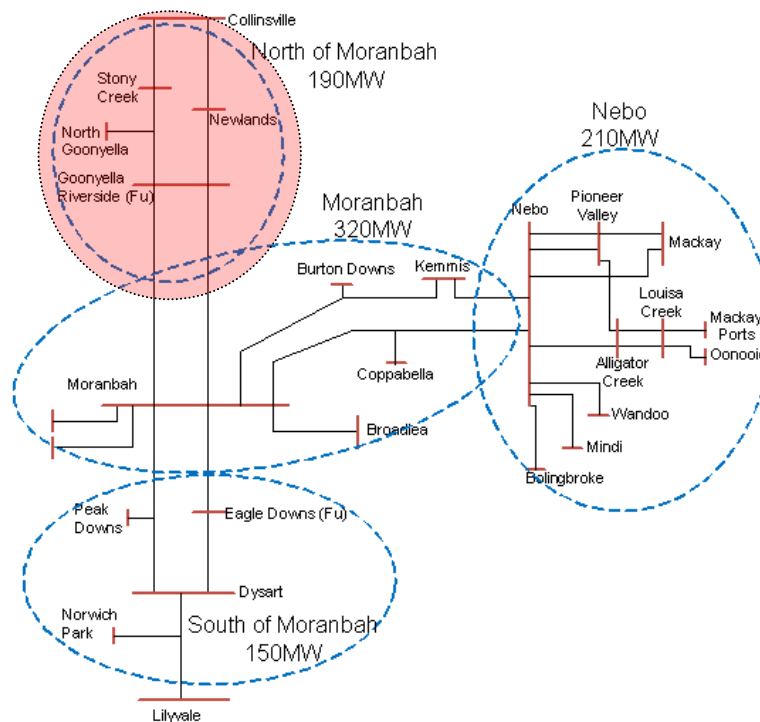
Indicative Cost: \$43.6m (\$ 2010/11)

5.1 Background

The load in the Northern Bowen Basin in the Moranbah area primarily relates to the mining and transportation of coal. The load is concentrated in a band between Newlands and Dysart, which corresponds to a productive coal seam that supplies around half the world's high quality metallurgical coal. Given the importance of metallurgical coal exports to the Queensland and Australian economy, it is particularly important that a reliable electricity supply is maintained to the region.

The following Figure 5.1 shows the relative areas and locations of the substations in the Moranbah area. The North of Moranbah area relevant to this contingent project is highlighted. The stated MW amounts in Figure 5.1 are the relevant area trigger levels.

Figure 5.1 Moranbah area single line diagram representation



The Northern Bowen Basin transmission network comprises the 132kV network south from the Collinsville 275kV substation (excluding the 132kV circuits to Proserpine), west from Nebo 275kV Substation and north from Lilyvale 275kV Substation. Moranbah connects the 132kV circuits from Strathmore, Nebo and Lilyvale, and presently supplies the largest load in the area. A number of 66kV circuits (owned by the DNSP, Ergon Energy, and privately by mining companies) radiate away from Powerlink's 132kV substations to the individual mines located throughout the region.

5.2 Project Overview

This project includes the development of a new substation between Moranbah and Newlands, and establishment of a 132kV transmission line between Moranbah and the proposed new substation.

Powerlink considers that the project should be accepted as a contingent project for the regulatory period because of uncertainty about the trigger event occurring and the scope and cost of the project.

5.3 Trigger Event

Network analysis has demonstrated that, under N-1 conditions, should additional load be connected between Moranbah and Collinsville in the Northern Bowen Basin, and lift the zone peak demand to more than 190MW (84MW above 2010 APR medium growth outlook for forecast levels in summer 2016/17), it will lead to an overload of the Moranbah to Goonyella 132kV circuits.

The triggers are therefore:

- Triggered by additional load connecting to the 132kV network between Moranbah and Collinsville increasing the peak demand to in excess of 190MW, resulting in an overload of the 132kV network between Moranbah and Collinsville; and
- That the additional load will lead to an N-1 overload, or a reduction in transfer capacity resulting in an N-1 overload condition; and
- That Powerlink has completed a RIT-T assessment recommending that augmentation of the shared network be undertaken to address the N-1 overload conditions identified above; and
- That Powerlink has, as required under the RIT-T assessment, considered available network and non-network solutions capable of meeting the identified limitation set out in the Project Assessment Draft Report; and
- The connection agreement includes financial commitment by all customers affected by the net load increase at the connection point(s); and
- That any connection is consistent with Section 5.4A of the Rules; and
- That where Powerlink is successful in finding non-network solutions requiring compensation, Powerlink can seek pass-through of such cost in accordance with Clause 6A.7.2 of the Rules.

These trigger events are specific and capable of objective verification, relates to a specific location or locations, and is probable but too uncertain to include the proposed contingent project in the capital expenditure forecast.

5.4 Project Requirement

Expansion and additional connections of mines in the Northern Bowen Basin will add upwards of 200MW of load onto Powerlink's transmission network. Taking into account existing augmentations, the 132kV capacity into the area, as well as the 275/132kV capacity at Nebo transmission system, will not be able to support the additional connections in the area.

The timing, magnitude of the expansion project and transmission requirements are uncertain at this time.

If the trigger event occurs the proposed contingent project would be reasonably required to meet the Rules capital expenditure objectives to efficiently meet expected demand for prescribed transmission services, comply with all applicable regulatory obligations associated with the provision of prescribed transmission services and maintain the quality, reliability and security of supply of prescribed services.

5.5 Contingent Capital Expenditure

The proposed contingent project is estimated to cost \$43.6 million.

This estimate is based on the development of a new substation between Moranbah and Newlands, and establishment of a 132kV transmission line between Moranbah and the proposed new substation.

It is not possible to accurately define the scope of proposed contingent projects at this early stage. Should the specified trigger event for the proposed contingent project occur during the regulatory period, detailed planning analyses, project scope and cost estimates will be required before any amendment to the revenue determination is considered by the AER.

The estimated net contingent capital expenditure exceeds the contingent project threshold of \$42 million.

5.6 Demonstration of Rules Compliance

Powerlink considers that the project should be accepted as a contingent project for the regulatory period as it is:

- not otherwise provided for in the total forecast capital expenditure;
- reasonably reflects the capital expenditure criteria, noting that the costs are an estimate at this point;
- exceeds the contingent project threshold as set out in section 5.5;
- is required to achieve the capital expenditure objectives as set out in section 5.4; and
- has an appropriately defined trigger event as set out in section 5.3.

6 South of Moranbah Area

Category: Augmentation

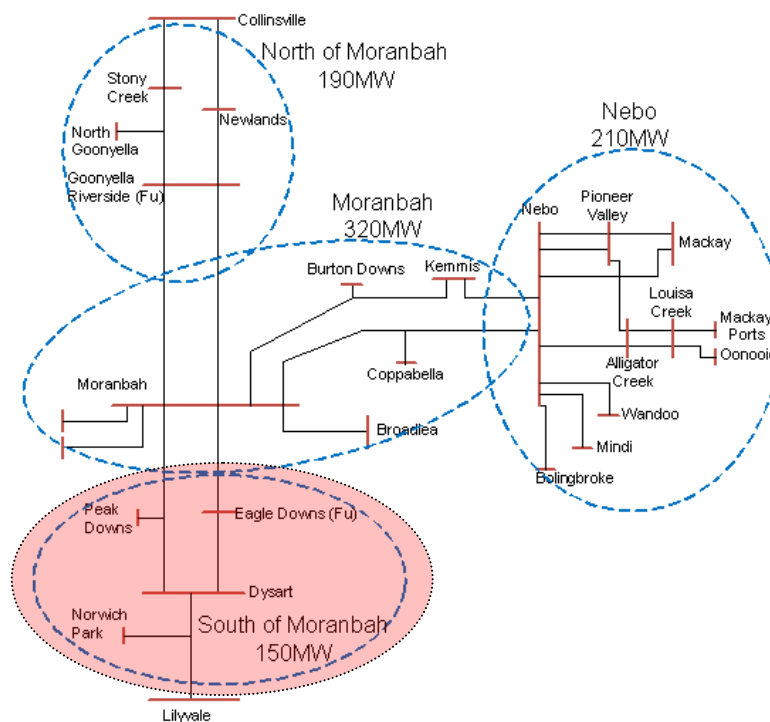
Indicative Cost: \$51.1m (\$ 2010/11)

6.1 Background

The load in the Northern Bowen Basin in the Moranbah area primarily relates to the mining and transportation of coal. The load is concentrated in a band between Newlands and Dysart, which corresponds to a productive coal seam that supplies around half the world’s high quality metallurgical coal. Given the importance of metallurgical coal exports to the Queensland and Australian economy, it is particularly important that a reliable electricity supply is maintained to the region.

The following Figure 6.1 shows the relative areas and locations of the substations in the Moranbah area. The South of Moranbah area relevant to this contingent project is highlighted. The stated MW amounts in Figure 6.1 are the relevant area trigger levels.

Figure 6.1 Moranbah area single line diagram representation



The Northern Bowen Basin transmission network comprises the 132kV network south from Strathmore 275kV Substation (excluding the 132kV circuits to Proserpine), west from Nebo 275kV Substation and north from Lilyvale 275kV Substation. Moranbah is the point at which the 132kV circuits from Strathmore, Nebo and Lilyvale intersect, and presently supplies the largest load in the area. A number of 66kV circuits (owned by the DNSP, Ergon Energy, and privately by mining companies) radiate away from Powerlink’s 132kV substations to the individual mines located throughout the region.

6.2 Project Overview

This project includes the establishment of a 132kV transmission line between Lilyvale and Dysart.

Powerlink considers that the project should be accepted as a contingent project for the regulatory period because of uncertainty about the trigger event occurring and the scope and cost of the project.

6.3 Trigger Event

Committed connections in the Northern Bowen Basin, leading to a total South of Moranbah zone peak demand exceeding 150MW (45MW above 2010 APR medium growth outlook for forecast levels in summer 2016/17), connected to the 132kV network between Moranbah and Lilyvale will lead to an overload of the Moranbah to Dysart to Lilyvale 132kV circuits under N-1 conditions.

The triggers are therefore:

- Triggered by additional load connecting to the 132kV network between Moranbah and Lilyvale increasing the peak demand to in excess of 150MW, resulting in an overload of the 132kV network between Lilyvale and Moranbah; and
- That the additional load will lead to an N-1 overload, or a reduction in transfer capacity resulting in an N-1 overload condition; and
- That Powerlink has completed a RIT-T assessment recommending that augmentation of the shared network be undertaken to address the N-1 overload conditions identified above; and
- That Powerlink has, as required under the RIT-T assessment, considered available network and non-network solutions capable of meeting the identified limitation set out in the Project Assessment Draft Report; and
- The connection agreement includes financial commitment by all customers affected by the net load increase at the connection point(s); and
- That any connection is consistent with Section 5.4A of the Rules; and
- That where Powerlink is successful in finding non-network solutions requiring compensation, Powerlink can seek pass-through of such cost in accordance with Clause 6A.7.2 of the Rules.

These trigger events are specific and capable of objective verification, relates to a specific location or locations, and is probable but too uncertain to include the proposed contingent project in the capital expenditure forecast.

6.4 Project Requirement

Expansion and additional connections of mines in the Northern Bowen Basin will add upwards of 200MW of load onto Powerlink's transmission network. Taking into account existing augmentations, the 132kV capacity into the area, as well as the 275/132kV capacity at Nebo transmission system, will not be able to support the additional connections in the area.

The timing, magnitude of the expansion project and transmission requirements are uncertain at this time.

If the trigger event occurs the proposed contingent project would be required to meet the Rules capital expenditure objectives to efficiently meet expected demand for prescribed transmission services, comply with all applicable regulatory obligations associated with the provision of prescribed transmission services and maintain the quality, reliability and security of supply of prescribed services.

6.5 Contingent Capital Expenditure

The proposed contingent project is estimated to cost \$51.1 million.

This estimate is based on the establishment of a 132kV transmission line between Dysart and Lilyvale substations.

It is not possible to accurately define the scope of proposed contingent projects at this early stage. Should the specified trigger event for the proposed contingent project occur during the regulatory period, detailed planning analyses, project scope and cost estimates will be required before any amendment to the revenue determination is considered by the AER.

The estimated net contingent capital expenditure exceeds the contingent project threshold of \$42 million.

6.6 Demonstration of Rules Compliance

Powerlink considers that the project should be accepted as a contingent project for the regulatory period as it is:

- not otherwise provided for in the total forecast capital expenditure;
- reasonably reflects the capital expenditure criteria, noting that the costs are an estimate at this point;
- exceeds the contingent project threshold as set out in section 6.5;
- is required to achieve the capital expenditure objectives as set out in section 6.4; and
- has an appropriately defined trigger event as set out in section 6.3.

7 Bowen Industrial Estate

Category: Augmentation

Indicative Cost: \$78.7m (\$ 2010/11)

7.1 Background

Electricity demand in the Abbot Point State Development Area (Abbot Point SDA) is associated with infrastructure for new and expanded mining export and value adding facilities. Located approximately 20 kilometres west of Bowen, Abbot Point forms a key part of the Queensland Government's Northern Economic Triangle Infrastructure Plan 2007-2012.¹

A key objective of the plan is to develop a new industrial precinct for large scale industries at Abbot Point, which offers an existing deepwater port facility and is close to significant rail and road links.

7.2 Project Overview

This project comprises the establishment of a 132kV switching substation in the Abbot Point SDA as well as the construction of a 275kV transmission line from Strathmore to Abbot Point SDA, to be initially operated at 132kV.

Powerlink considers that the project should be accepted as a contingent project for the regulatory period because of uncertainty about the trigger event occurring and the scope and cost of the project.

7.3 Trigger Event

An increase in demand in the Abbot Point SDA, and surrounding areas, will result in an overload under N-1 conditions of the Strathmore to Bowen North 132kV feeders. When the committed load to be supplied from the Strathmore to Bowen North 132kV feeders exceeds 215MW (173MW above 2010 APR medium growth outlook for forecast levels in 2016/17), it will trigger this project.

The triggers are therefore:

- Commitment for additional load increasing demand supplied from the Strathmore – Bowen North 132kV feeders to in excess of 215MW; and
- That the additional load will lead to an N-1 overload, or a reduction in transfer capacity resulting in an N-1 overload condition; and
- That Powerlink has completed a RIT-T assessment recommending that augmentation of the shared network be undertaken to address the N-1 overload conditions identified above; and
- That Powerlink has, as required under the RIT-T assessment, considered available network and non-network solutions capable of meeting the identified limitation set out in the Project Assessment Draft Report; and
- The connection agreement includes financial commitment by all customers affected by the net load increase at the connection point(s); and
- That any connection is consistent with Section 5.4A of the Rules; and
- That where Powerlink is successful in finding non-network solutions requiring compensation, Powerlink can seek pass-through of such cost in accordance with Clause 6A.7.2 of the Rules.

These trigger events are specific and capable of objective verification, relates to a specific location or locations, and is probable but too uncertain to include the proposed contingent project in the capital expenditure forecast.

¹ Northern Economic Triangle Infrastructure Plan 2007-2012, p4, Queensland Government – Department of Infrastructure, 2007

7.4 Project Requirement

The proposed Abbot Point SDA expansion will add upwards of 180MW of load onto Powerlink's transmission network. The existing transmission system is unable to accommodate the proposed Abbot Point SDA expansion.

The timing, magnitude of the expansion project and transmission requirements are uncertain at this time.

If the trigger event occurs the proposed contingent project would be required to meet the Rules capital expenditure objectives to efficiently meet expected demand for prescribed transmission services, comply with all applicable regulatory obligations associated with the provision of prescribed transmission services and maintain the quality, reliability and security of supply of prescribed services.

7.5 Contingent Capital Expenditure

The proposed contingent project is estimated to cost \$78.7 million.

This estimate is based on the establishment of a 132kV switching station at Abbot Point SDA, two 132kV feeder bays at Strathmore Substation, and the establishment of a 275kV transmission line from Strathmore to Abbot Point SDA, to be initially operated at 132kV.

It is not possible to accurately define the scope of proposed contingent projects at this early stage. Should the specified trigger event for the proposed contingent project occur during the regulatory period, detailed planning analyses, project scope and cost estimates will be required before any amendment to the revenue determination is considered by the AER.

The forecast capital expenditure in the Revised Revenue Proposal does not include any allowance for projects overlapping in scope.

The estimated net contingent capital expenditure exceeds the contingent project threshold of \$42 million.

7.6 Demonstration of Rules Compliance

Powerlink considers that the project should be accepted as a contingent project for the regulatory period as it is:

- not otherwise provided for in the total forecast capital expenditure;
- reasonably reflects the capital expenditure criteria, noting that the costs are an estimate at this point;
- exceeds the contingent project threshold as set out in section 7.5;
- is reasonably required to achieve the capital expenditure objectives as set out in section 7.4; and
- has an appropriately defined trigger event as set out in section 7.3.

8 QNI Upgrade (Queensland Component)

Category: Augmentation

Indicative Cost: \$59.1m (\$ 2010/11)

8.1 Background

Powerlink and TransGrid published a Final Report in October 2008 relating to the potential upgrade of the interconnection between Queensland and New South Wales.²

The Final Report detailed outcomes of comprehensive technical and economic assessment of feasible upgrade options. Each option will deliver different increments of interconnection transfer capability in accordance with the RIT-T.

The Final Report indicated that installation of series compensation provided market benefits which exceeded the capital cost of the upgrade within the medium and high economic growth scenarios.

The optimum timing of the upgrade was 2015/16 under the most plausible scenario, i.e. medium economic growth using realistic generator bidding behaviour. Based on this timing, Powerlink and TransGrid at that time considered it premature to recommend an upgrade to QNI.

Subsequent to this joint planning study there have been a number of market developments, including new generation investments, expanded renewable energy targets, and the introduction of the RIT-T. In light of these developments, Powerlink and TransGrid have commenced additional studies to evaluate the economic viability and optimal timing of potential upgrades to QNI based on the principles and methodology of the RIT-T.

8.2 Project Overview

The likely upgrade project comprises the installation of two 330kV series capacitors on the Bulli Creek to Dumaresq feeders (8L and 8M) at a new site near the Queensland and NSW border.

Powerlink considers that the project should be accepted as a contingent project for the regulatory period because of uncertainty about the trigger event occurring and the scope and cost of the project.

8.3 Trigger Events

The application of the RIT-T demonstrates that the project delivers positive net market benefits, and that the optimum timing for the project necessitates expenditure during the 2013-17 regulatory period.

The triggers are therefore:

- The publication by AEMO of advice (through the NTNDP or otherwise) to the effect that in its view potential market benefits further QNI augmentation studies (jointly by TransGrid and Powerlink) would be warranted. Any augmentation works would require capital expenditure within the 2013-17 regulatory period; and
- The successful joint application of the RIT-T by Powerlink and TransGrid concluding that a network solution maximises the net economic benefit under the RIT-T, compared to all other credible options across a range of reasonable scenarios is viable based on the principles and methodology of the RIT-T; and
- The financial commitment by the Powerlink and TransGrid Boards to undertake the project; and

² Potential Upgrade of Queensland/New South Wales Interconnector (QNI) – Assessment of Optimal Timing and Net Market Benefits, Powerlink – TransGrid, 2008

- That Powerlink has, as required under the RIT-T assessment, considered available network and non-network solutions capable of meeting the identified limitation set out in the Project Assessment Draft Report; and
- That where Powerlink is successful in finding non-network solutions requiring compensation, Powerlink can seek pass-through of such cost in accordance with Clause 6A.7.2 of the Rules.

These trigger events are specific, capable of verification, relate to a specific location(s), and are probable but not certain enough to include the proposed contingent project in the capital expenditure forecast.

8.4 Project Requirement

The AEMO 2010 National Transmission Network Development Plan (NTNDP) found that installation of series compensation on the Armidale to Dumaresq, and Dumaresq to Bulli Creek 330kV circuits delivered net market benefits under five of ten development scenarios and sensitivities and therefore rated it as requiring 'Early Attention'. The modelling suggested an economic timing of 2014/15 under these scenarios.

The timing, magnitude of the expansion project and transmission requirements are uncertain at this time.

If the trigger events occur, the proposed contingent project would be reasonably required to meet the Rules capital expenditure objectives to efficiently meet expected demand for prescribed transmission services, comply with all applicable regulatory obligations associated with the provision of prescribed transmission services and maintain the quality, reliability and security of supply of prescribed services.

8.5 Contingent Capital Expenditure

The proposed contingent project is estimated to cost \$59.1 million.

It is not possible to accurately define the scope of proposed contingent projects at this early stage. Should the specified trigger event for the proposed contingent project occur during the regulatory period, detailed planning analyses, project scope and cost estimates will be required before any amendment to the revenue determination is considered by the AER.

The estimated net contingent capital expenditure exceeds the contingent project threshold of \$42 million.

8.6 Demonstration of Rules Compliance

Powerlink considers that the project should be accepted as a contingent project for the regulatory period as it is:

- not otherwise provided for in the total forecast capital expenditure;
- reasonably reflects the capital expenditure criteria, noting that the costs are an estimate at this point;
- exceeds the contingent project threshold as set out in section 8.5;
- is reasonably required to achieve the capital expenditure objectives as set out in section 8.4; and
- has an appropriately defined trigger event as set out in section 8.3.

9 Gladstone State Development Area Connection Shared Network Works

Category: Augmentation

Indicative Cost: \$112.8m (\$ 2010/11)

9.1 Background

In December 1993, the Queensland Government established the Gladstone State Development Area (GSDA) under the State Development and Public Works Organisation Act 1971 as an industrial park to attract energy intensive industries, given its proximity to globally competitive electric power. The GSDA originally comprised approximately 6,800 hectares of land at Aldoga, north-west of Gladstone, and was extended:

- in 1997 to include the Yarwun Industrial Estate and a materials transportation and services corridor linking the Aldoga and Yarwun areas to Fisherman's Landing and Wiggins Island wharves;
- in December 2001 to include 4,600 hectares of State owned land adjacent to the Aldoga and Yarwun areas;
- in October 2002 to include 7,355 hectares of land at Targinie; and
- in September 2004, to include eighty-one other Targinie properties comprising 1,860 hectares.

Since then, an area on Curtis Island has been set aside and designated for the production and export of LNG. As a result, in the medium to long-term, there is substantial potential for large scale electricity supply requirements in the Gladstone area. Given the size of the GSDA and Curtis Island LNG industrial precincts, the potential exists for load in the Gladstone area to increase by as much as 2,500 MW over the next 15 to 20 years.

9.2 Project Overview

This project involves the construction of a double circuit 275kV line between Calvale and Larcom Creek substations and the rebuild of the single circuit low capacity 275kV line between Larcom Creek and Calliope River substations.

Powerlink considers that the project should be accepted as a contingent project for the regulatory period because of uncertainty about the trigger event occurring and the scope and cost of the project.

9.3 Trigger Event

Network analysis demonstrates that an additional load in excess of 575MW (above 2010 APR medium outlook forecast levels in summer 2016/17) within the GSDA and/or Curtis Island triggers the proposed contingent project.

The triggers are therefore:

- Commitment of additional load in excess of 575MW (above 2010 APR medium outlook forecast levels in summer 2016/17) within the GSDA and/or Curtis Island; and
- That the additional load will lead to an N-1 overload, or a reduction in transfer capacity resulting in an N-1 overload condition; and
- That Powerlink has completed a RIT-T assessment recommending that augmentation of the shared network be undertaken to address the N-1 overload conditions identified above; and
- That Powerlink has, as required under the RIT-T assessment, considered available network and non-network solutions capable of meeting the identified limitation set out in the Project Assessment Draft Report; and

- The connection agreement includes financial commitment by all customers affected by the net load increase at the connection point(s); and
- That any connection is consistent with Section 5.4A of the Rules; and
- That where Powerlink is successful in finding non-network solutions requiring compensation, Powerlink can seek pass-through of such cost in accordance with Clause 6A.7.2 of the Rules.

These trigger events are specific and capable of objective verification, relates to a specific location or locations, and is probable but too uncertain to include the proposed contingent project in the capital expenditure forecast.

9.4 Project Requirement

The transmission line augmentation between Calvale and Larcom Creek and between Larcom Creek and Calliope River is required to ensure that mandated reliability of supply obligations can continue should loadings in excess of 575MW above forecast levels eventuate within the Gladstone zone.

The timing, magnitude of the expansion project and transmission requirements are uncertain at this time.

If the trigger event occurs the proposed contingent project would be required to meet the Rules capital expenditure objectives to efficiently meet expected demand for prescribed transmission services, comply with all applicable regulatory obligations associated with the provision of prescribed transmission services and maintain the quality, reliability and security of supply of prescribed services.

9.5 Contingent Capital Expenditure

The proposed contingent project is estimated to cost \$112.8 million. This cost is net of the allowance included for projects overlapping in scope in the Revised Revenue Proposal.

It is not possible to accurately define the scope of proposed contingent projects at this early stage. Should the specified trigger event for the proposed contingent project occur during the regulatory period, detailed planning analyses, project scope and cost estimates will be required before any amendment to the revenue determination is considered by the AER.

The estimated net contingent capital expenditure exceeds the contingent project threshold of \$42 million.

9.6 Demonstration of Rules Compliance

Powerlink considers that the project should be accepted as a contingent project for the regulatory period as it is:

- not otherwise provided for in the total forecast capital expenditure;
- reasonably reflects the capital expenditure criteria, noting that the costs are an estimate at this point;
- exceeds the contingent project threshold as set out in section 9.5;
- is reasonably required to achieve the capital expenditure objectives as set out in section 9.4; and
- has an appropriately defined trigger event as set out in section 9.3.

10 Callide to Moura Transmission Line and Calvale Transformer

Category: Augmentation

Indicative Cost: \$49.5m (\$ 2010/11)

10.1 Background

Moura is an existing 132/66kV substation supplied out of Callide Substation via two single circuit 132kV feeders. One feeder goes via Baralaba, which is 40km from Callide. The load around the Moura area is predominantly associated with coal mining.

New mining projects, or expansion of existing mines in the area, will result in increased demand beyond what can be supported on the existing 132kV network.

10.2 Project Overview

This project comprises the establishment of a single circuit 132kV transmission line from Callide to Moura, the installation of a second 275/132kV transformer at Calvale Substation, with 132kV connection from the new Calvale transformer to the Callide 110kV bus.

Powerlink considers that the project should be accepted as a contingent project for the regulatory period because of uncertainty about the trigger event occurring and the scope and cost of the project.

10.3 Trigger Event

Network analysis demonstrates that a load in excess of 80MW (28MW above 2010 APR medium growth outlook for forecast levels in summer 2016/17) on the 132kV network supplying Moura will trigger the proposed contingent project.

The triggers are therefore:

- Commitment of additional load increasing demand supplied from the 132kV network to Moura to in excess of 80MW; and
- That the additional load will lead to an N-1 overload, or a reduction in transfer capacity resulting in an N-1 overload condition; and
- That Powerlink has completed a RIT-T assessment recommending that augmentation of the shared network be undertaken to address the N-1 overload conditions identified above; and
- That Powerlink has, as required under the RIT-T assessment, considered available network and non-network solutions capable of meeting the identified limitation set out in the Project Assessment Draft Report; and
- The connection agreement includes financial commitment by all customers affected by the net load increase at the connection point(s); and
- That any connection is consistent with Section 5.4A of the Rules; and
- That where Powerlink is successful in finding non-network solutions requiring compensation, Powerlink can seek pass-through of such cost in accordance with Clause 6A.7.2 of the Rules.

These trigger events are specific and capable of objective verification, relates to a specific location or locations, and is probable but too uncertain to include the proposed contingent project in the capital expenditure forecast.

10.4 Project Requirement

The proposed new mining or mining expansion projects will add upwards of 20MW of load onto Powerlink's transmission network. The existing transmission system is unable to support this load.

The timing, magnitude of the expansion project and transmission requirements are uncertain at this time.

If the trigger event occurs the proposed contingent project would be required to meet the Rules capital expenditure objectives to efficiently meet expected demand for prescribed transmission services, comply with all applicable regulatory obligations associated with the provision of prescribed transmission services and maintain the quality, reliability and security of supply of prescribed services.

10.5 Contingent Capital Expenditure

The proposed contingent project is estimated to cost \$49.5 million.

This estimate is based on the establishment of a single circuit 132kV transmission line from Callide to Moura, the installation of a second 275/132kV transformer at Calvale Substation, with 132kV connection from the new Calvale transformer to the Callide 110kV bus and is net of the allowance included for projects overlapping in scope in this Revised Revenue Proposal.

It is not possible to accurately define the scope of proposed contingent projects at this early stage. Should the specified trigger event for the proposed contingent project occur during the regulatory period, detailed planning analyses, project scope and cost estimates will be required before any amendment to the revenue determination is considered by the AER.

The estimated net contingent capital expenditure exceeds the contingent project threshold of \$42 million.

10.6 Demonstration of Rules Compliance

Powerlink considers that the project should be accepted as a contingent project for the regulatory period as it is:

- not otherwise provided for in the total forecast capital expenditure;
- reasonably reflects the capital expenditure criteria, noting that the costs are an estimate at this point;
- exceeds the contingent project threshold as set out in section 10.5;
- is required to achieve the capital expenditure objectives as set out in section 10.4; and
- has an appropriately defined trigger event as set out in section 10.3.

11 N-2 Security to Essential Loads (CBD)

Category: Augmentation

Indicative Cost: \$112.0m (\$ 2010/11)

11.1 Background

As part of the review of transmission reliability standards undertaken by the AEMC, it has been recommended that a national framework be established governing the reliability of supply of transmission networks.

As part of these reforms, the AEMC has recommended that reliability standards be determined on a jurisdictional basis, by a body independent of the transmission asset owner.

The greater Brisbane area incorporates essential commercial and industrial loads including the Brisbane CBD, Brisbane airport, Brisbane Port and Australia TradeCoast precinct.

In the event that a review of transmission standards dictates higher standards of reliability than the existing N-1 criteria currently prescribed within Powerlink's Transmission Authority, then the construction of additional transmission infrastructure will be required.

11.2 Project Overview

This project comprises of the construction of a new 275kV cross-river link between Nudgee and Murarrie substations to complete a high capacity transmission ring around the greater Brisbane area. The establishment of the ring substantially increases capacity to meet essential loads within the Brisbane area.

In order to facilitate connection of the Nudgee to Murarrie 275kV transmission circuit, this project includes: establishment of a 275kV bus at both Nudgee and Murarrie substations; and the installation of a third 275/110kV transformer at both Nudgee and Murarrie substations to provide N-2 reliability to the Brisbane airport, Brisbane Port and Australia TradeCoast loads.

Additional transmission infrastructure to facilitate N-2 reliability to the Brisbane CBD may be required, including the establishment of additional 275/110kV substations or the augmentation of existing transmission circuits. The determination of the most economic method to provide higher levels of reliability to the Brisbane CBD will require detailed joint planning studies with ENERGEX.

Powerlink considers that the project should be accepted as a contingent project for the regulatory period because of uncertainty about the trigger event occurring and the scope and cost of the project.

11.3 Trigger Event

The trigger for this contingent project is a change in reliability standards to critical loads within the Brisbane area, including the Brisbane CBD, Brisbane airport, Brisbane Port and Australia TradeCoast precinct.

The triggers are therefore:

- A change in the reliability standards for supply to specific regions or areas as specified in Powerlink's Transmission Authority or other legislative and/or regulatory instruments. The identified critical loads include the Brisbane CBD, Brisbane airport, Brisbane Port and Australia TradeCoast precinct; and
- That Powerlink has, as required under the RIT-T assessment, considered available network and non-network solutions capable of meeting the identified limitation set out in the Project Assessment Draft Report; and

- That where Powerlink is successful in finding non-network solutions requiring compensation, Powerlink can seek pass-through of such cost in accordance with Clause 6A.7.2 of the Rules.

These trigger events are specific, capable of verification, relate to a specific location(s), and are probable but not certain enough to include the proposed contingent project in the capital expenditure forecast.

11.4 Project Requirement

The project involves the construction of transmission infrastructure to provide N-2 reliability to essential loads within the Brisbane area.

The timing of this trigger is uncertain. If the trigger event occurs the proposed contingent project would be required to meet the Rules capital expenditure objectives to efficiently meet expected demand for prescribed transmission services, comply with all applicable regulatory obligations associated with the provision of prescribed transmission services and maintain the quality, reliability and security of supply of prescribed services.

11.5 Contingent Capital Expenditure

The proposed contingent project is estimated to cost \$112.0 million.

It is not possible to accurately define the scope of proposed contingent projects at this early stage. Should the specified trigger event for the proposed contingent project occur during the regulatory period, detailed planning analyses, project scope and cost estimates will be required before any amendment to the revenue determination is considered by the AER.

The forecast capital expenditure in the Revised Revenue Proposal does not include any allowance for this project.

The estimated net contingent capital expenditure exceeds the contingent project threshold of \$42 million.

11.6 Demonstration of Rules Compliance

Powerlink considers that the project should be accepted as a contingent project for the regulatory period as it is:

- not otherwise provided for in the total forecast capital expenditure;
- reasonably reflects the capital expenditure criteria, noting that the costs are an estimate at this point;
- exceeds the contingent project threshold as set out in section 11.5;
- is required to achieve the capital expenditure objectives as set out in section 11.4; and
- has an appropriately defined trigger event as set out in section 11.3.

12 Ebenezer 330/275/110kV Establishment

Category: Augmentation

Indicative Cost: \$61.1m (\$ 2010/11)

12.1 Background

Since 1993 the 5,800 hectare site within Ebenezer and Willowbank areas, south west of Ipswich has been identified for future regional business and industry development in Ipswich City Council planning schemes.

Queensland Department of Infrastructure and Planning identified an urgent need for industries requiring large lots and separation from urban areas in the Western Corridor, stretching from Rocklea in Brisbane through to Ebenezer and Willowbank to register. The industrial land is anticipated to be allocated by 2015.

The Ebenezer regional industrial area is being planned by Department of Infrastructure and Planning and Ipswich City Council to be an industrial estate of Regional, State and National significance that:

- connects to Brisbane, Sydney and Melbourne via essential road and rail infrastructure;
- accommodates a range of low to high impact industrial uses;
- allows for a range of well aligned commercial, retail, administration and community uses;
- provides for medium to large allotments of two hectares or greater; and
- is fully serviced.

Three phases of project structure planning are completed. The last phase is underway and the plan is expected to be published in mid-2011.

12.2 Project Overview

This project involves establishing a 330/275/110kV substation at Ebenezer, west of Ipswich, and operating the Middle Ridge to Ebenezer double circuit line at 330kV.

Powerlink considers that the project should be accepted as a contingent project for the regulatory period because of uncertainty about the trigger event occurring and the scope and cost of the project.

12.3 Trigger Event

Network analysis demonstrates that a load in excess of 125MW in the Ebenezer area will trigger the proposed contingent project.

The triggers are therefore:

- Commitment of load in excess of 125MW around the Ebenezer area; and
- That the additional load will lead to an N-1 overload, or a reduction in transfer capacity resulting in an N-1 overload condition; and
- That Powerlink has completed a RIT-T assessment recommending that augmentation of the shared network be undertaken to address the N-1 overload conditions identified above; and
- That Powerlink has, as required under the RIT-T assessment, considered available network and non-network solutions capable of meeting the identified limitation set out in the Project Assessment Draft Report; and
- The connection agreement includes financial commitment by all customers affected by the net load increase at the connection point(s); and

- That any connection is consistent with Section 5.4A of the Rules; and
- That where Powerlink is successful in finding non-network solutions requiring compensation, Powerlink can seek pass-through of such cost in accordance with Clause 6A.7.2 of the Rules.

These trigger events are specific and capable of objective verification, relates to a specific location or locations, and is probable but too uncertain to include the proposed contingent project in the capital expenditure forecast.

12.4 Project Requirement

The establishment of Ebenezer Substation is required to ensure that mandated reliability of supply obligations can continue to be met should new loads in excess of 125MW above forecast levels eventuate.

The timing, magnitude of the expansion project and transmission requirements are uncertain at this time.

If the trigger event occurs the proposed contingent project would be required to meet the Rules capital expenditure objectives to efficiently meet expected demand for prescribed transmission services, comply with all applicable regulatory obligations associated with the provision of prescribed transmission services and maintain the quality, reliability and security of supply of prescribed services.

12.5 Contingent Capital Expenditure

The proposed contingent project is estimated to cost \$61.1 million.

It is not possible to accurately define the scope of proposed contingent projects at this early stage. Should the specified trigger event for the proposed contingent project occur during the regulatory period, detailed planning analyses, project scope and cost estimates will be required before any amendment to the revenue determination is considered by the AER.

The forecast capital expenditure in the Revised Revenue Proposal does not include any allowance for this project.

The estimated net contingent capital expenditure exceeds the contingent project threshold of \$42 million.

12.6 Demonstration of Rules Compliance

Powerlink considers that the project should be accepted as a contingent project for the regulatory period as it is:

- not otherwise provided for in the total forecast capital expenditure;
- reasonably reflects the capital expenditure criteria, noting that the costs are an estimate at this point;
- exceeds the contingent project threshold as set out in section 12.5;
- is required to achieve the capital expenditure objectives as set out in section 12.4; and
- has an appropriately defined trigger event as set out in section 12.3.

13 FNQ 275kV Energisation

Category: Augmentation

Indicative Cost: \$85.7m (\$ 2010/11)

13.1 Background

Far North Queensland is supplied by a single double circuit 257kV transmission line from Ross to Woree via Chalumbin in addition to a coastal 132kV network. The 132 kV network consists of two 132 kV lines from Yabulu South to Woree.

The Yabulu South to Tully section of the 132kV network includes two circuits on common towers; a straight through circuit constructed at 275kV (Feeder 7132); and a circuit constructed at 132kV connects at Ingham South and Cardwell.

The Tully to Woree section of the 132kV network also includes two circuits on common towers; a straight through circuit constructed at 275kV (Feeder 7301); and a 132kV constructed circuit which connects at El Arish, Innisfail and Edmonton.

In the case where a tower or towers on the 275kV lines are lost as a result of a severe weather event (such as cyclone or electrical storm) or bush fire, supply to Far North Queensland would suffer a prolonged outage. The 132kV network would be unable to cope with the maximum demand of the region due to voltage stability constraints and restoration of the 275kV lines would be delayed due to the difficulty in accessing these lines in the World Heritage Area Wet Tropics.

13.2 Project Overview

This project involves energising one side of the coastal 132kV circuits at 275kV. To achieve this, it is necessary to establish 275kV at Tully and Yabulu South substations, establish a 275kV bus at Woree, and energising the existing 132kV circuits from Ross to Yabulu South, Yabulu South to Tully and Tully to Woree at 275kV.

13.3 Trigger Event

The trigger for this contingent project is a change in reliability standards to critical loads within the North Queensland area including Woree.

The triggers are therefore:

- A change in the reliability standards for supply to specific regions or areas as specified in Powerlink's Transmission Authority or other legislative and/or regulatory instruments. The identified critical loads are in the Far North Queensland area including Woree; and
- That Powerlink has, as required under the RIT-T assessment, considered available network and non-network solutions capable of meeting the identified limitation set out in the Project Assessment Draft Report; and
- That where Powerlink is successful in finding non-network solutions requiring compensation, Powerlink can seek pass-through of such cost in accordance with Clause 6A.7.2 of the Rules.

These trigger events are specific, capable of verification, relate to a specific location(s), and are probable but not certain enough to include the proposed contingent project in the capital expenditure forecast.

13.4 Project Requirement

This project is required to provide increased reliability to Far North Queensland in the event of a major weather event or bush fire damaging the 275kV network to Far North Queensland.

If the trigger event occurs the proposed contingent project would be required to meet the Rules capital expenditure objectives to efficiently meet expected demand for prescribed transmission services, comply with all applicable regulatory obligations associated with the provision of prescribed transmission services and maintain the quality, reliability and security of supply of prescribed services.

13.5 Contingent Capital Expenditure

The proposed contingent project is estimated to cost \$85.7 million.

This estimate is based on the establishment of 275kV at Yabulu South and Tully substations, establishment of a 275kV switchyard at Woree and energising the existing 132kV Ross to Yabulu South, Yabulu South to Tully and Tully to Woree transmission lines at 275kV and is net of the allowance included for projects overlapping in scope in this Revised Revenue Proposal.

It is not possible to accurately define the scope of proposed contingent projects at this early stage. Should the specified trigger event for the proposed contingent project occur during the regulatory period, detailed planning analyses, project scope and cost estimates will be required before any amendment to the revenue determination is considered by the AER.

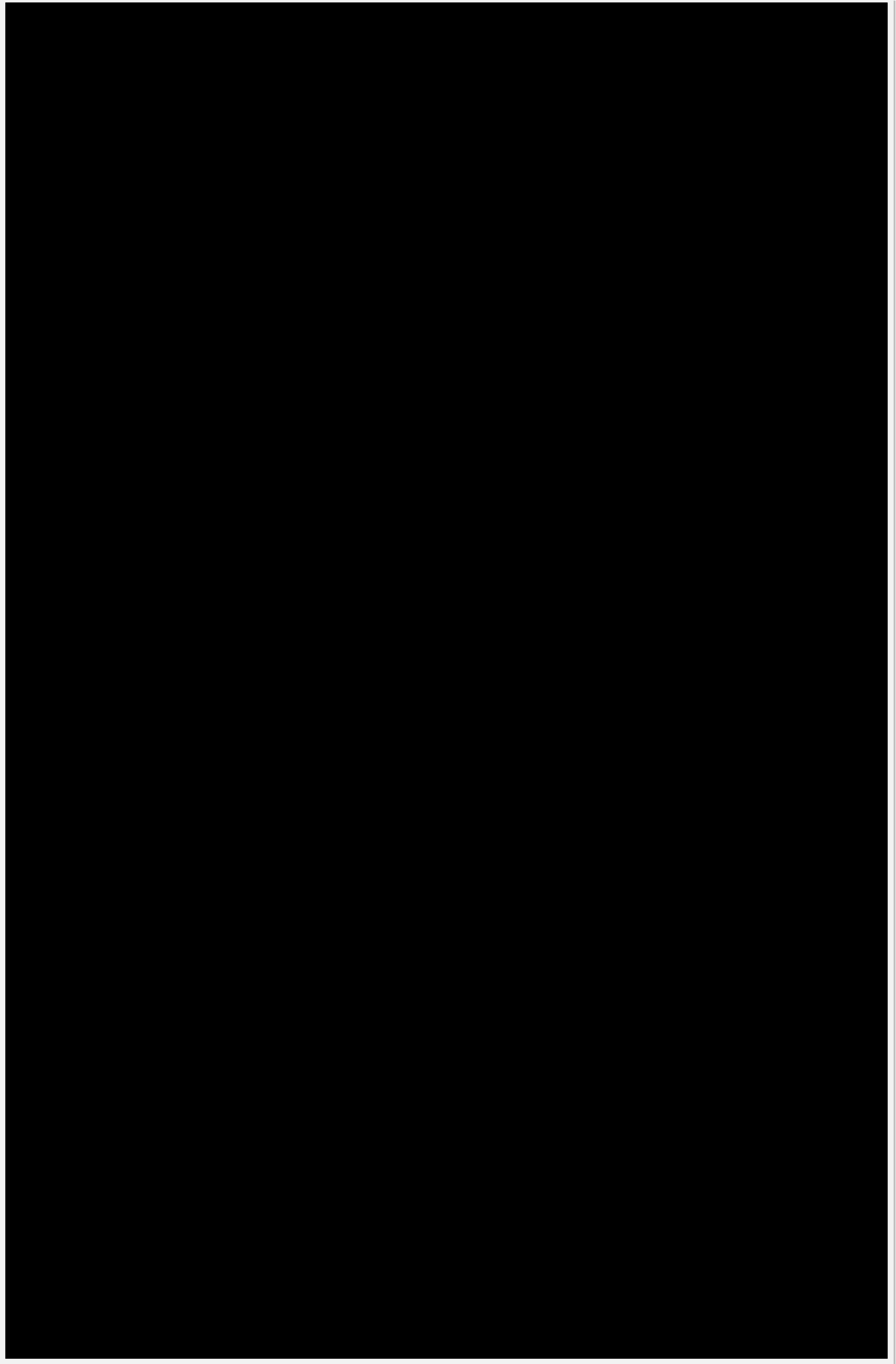
The estimated net contingent capital expenditure exceeds the contingent project threshold of \$42 million.

13.6 Demonstration of Rules Compliance

Powerlink considers that the project should be accepted as a contingent project for the regulatory period as it is:

- not otherwise provided for in the total forecast capital expenditure;
- reasonably reflects the capital expenditure criteria, noting that the costs are an estimate at this point;
- exceeds the contingent project threshold as set out in section 13.5;
- is required to achieve the capital expenditure objectives as set out in section 13.4; and
- has an appropriately defined trigger event as set out in section 13.3.

14 Confidential Project





14.5 Demonstration of Rules Compliance

Powerlink considers that the project should be accepted as a contingent project for the regulatory period as it is:

- not otherwise provided for in the total forecast capital expenditure;
- reasonably reflects the capital expenditure criteria, noting that the costs are an estimate at this point;
- exceeds the contingent project threshold as set out in section 14.5;
- is reasonably required to achieve the capital expenditure objectives as set out in section 14.4; and
- has an appropriately defined trigger event as set out in section 14.3.