August 2014

Aurizon Network

2013 Draft Access Undertaking

Wiggins Island Rail Project

Proposed Revenue and Pricing Treatment

Purpose

The purpose of this paper is to assist stakeholders' understanding of the treatment of the Wiggins Island Rail Project (WIRP) as outlined in Aurizon Network's 2013 Draft Access Undertaking (2013 DAU); submitted to the Queensland Competition Authority (QCA) in April 2013.

This paper discusses how WIRP has been treated in the context of the 2013 DAU. It provides further information to support Aurizon Network's proposal to socialise WIRP within the Blackwater and Moura systems. It does this by:

- discussing the revenue and pricing treatment of WIRP in the context of the 2013 DAU;
- explaining why Aurizon Network set WIRP volume forecasts at 90% of contract for pricing purposes; and
- illustrating how the recommended pricing approach will satisfy the legislative requirements of the QCA under section 138 of the QCA Act.

Background

The Wiggins Island Coal Export Terminal (WICET) is a major infrastructure project involving the construction of a new coal export terminal that will become an integral part of the existing infrastructure at the Port of Gladstone. Built in stages to match forecasted coal export demand, the privately funded terminal aims to deliver 27 million tonnes per annum (mtpa) of new export capacity with the completion of the first stage.[1]

WIRP will create a vital rail link between WICET and mines in the southern Bowen Basin. As outlined in the 2013 DAU[2], WIRP Stage 1 consists of multiple rail infrastructure project segments, which will provide new capacity to support WICET's initial development. These include:

- construction of the Wiggins Island Balloon Loop, which was commissioned in March 2014;
- upgrades to the Bauhinia North Branch;
- Moura system upgrades, including formation strengthening and deviations; and
- North Coast Line (NCL) upgrade.

In addition to the above, seven single line sections in the Blackwater system are to be duplicated as part of the WIRP schedule of works.

These Blackwater duplications were previously endorsed by existing Blackwater system customers and received scope pre-approval from the QCA[3] through the 2008 Coal Rail Infrastructure Master Plan (CRIMP) process.

The completion of these duplications will deliver considerable operational efficiencies to both new and existing Access Holders in the supply chain. In December, 2010, the Gladstone Coal Exporters Executive (GCEE) wrote to Aurizon Network[4], requesting that it;

> *"…recommence the duplication programme for the remaining single line sections of the rail line between Rocklands and Blackwater, as a matter of utmost urgency and continue that programme in a structured manner, until all duplications are complete."*

Furthermore, Aurizon Network identified that the expansion capacity required for WIRP Stage 1 could be provided at a lower overall capital cost if the Blackwater duplications were electrified. If not, additional below

[1] *http://www.wicet.com.au/index.php?id=13*

[2] *Aurizon Network 2013 DAU; Volume 3: Maximum Allowable Revenue and Reference Tariffs; pg. 153*

[3] *Brian Parmenter, Chairperson QCA, letter to Lance Hockridge, 23 April. 2009. QCA File Ref: 254640.*

[4] *GCEE, letter to Lance Hockridge, 14 December. 2010.*

rail infrastructure would be required to deliver the same capacity. In light of these savings, Aurizon Network and WIRP Stage 1 customers agreed that the Blackwater Duplications would be electrified.

WIRP Stage 1 project segments are heavily integrated with the existing mainline infrastructure of the Blackwater and Moura systems. Aurizon Network considers it reasonable to allocate a portion of the Blackwater Duplication costs to the existing Blackwater customers for the purpose of assessing the impact of socialisation. This will be discussed in further detail below.

Approach

During the period of the 2013 DAU, Aurizon Network expects to operationally commission projects that are part of the WIRP Stage 1 scope of works. Aurizon Network has included the capital expenditure forecasts of these projects in its Capital Indicator.

Using the Capital Indicator forecasts, Aurizon Network has calculated an appropriate Allowable Revenue for WIRP infrastructure on a standalone basis.

In setting a price for WIRP infrastructure, Aurizon Network has been guided by the 'price limit' principle[5], which states that Access Charges will be set:

> *"(i) no less than the level that will recover the expected Incremental Costs of providing Access…; and*
>
> *(ii) no more than the level that will recover the expected Stand Alone Cost of providing Access…."*

Within these bounds, there are numerous pricing possibilities. Aurizon Network considers that it has calculated a reasonable pricing outcome for the 2013 DAU, which balances the interests of different stakeholders.

The following sections describe Aurizon Network's proposed approach.

Allocating Capital Expenditure

The Capital Indicator for the 2013 DAU includes capital expenditure associated with WIRP Stage 1. As mentioned above, WIRP Stage 1 consists of multiple rail infrastructure project segments, which are utilised by WIRP customers originating in both the Blackwater and Moura systems.

Aurizon Network has allocated the capital expenditure associated with shared project segments between WIRP_Blackwater and WIRP_Moura customer groupings. The allocation to each grouping has been calculated with reference to the proportion of Gross Tonne Kilometres (GTK) that are associated with volumes contracted under WIRP arrangements.

This methodology is consistent with the way in which Aurizon Network allocates 'system-wide' capital expenditure as part of its annual capital expenditure submissions.

In addition, a significant proportion of capital expenditure for WIRP relates to mainline upgrades that will be utilised by both new and existing customers. Aurizon Network considers it reasonable to allocate a portion of the capital costs associated with the Blackwater Duplications to the existing Blackwater customers. This recognises the fact that these duplications were endorsed as part of the 2008 CRIMP process.

The proposed capital allocation to existing Blackwater customers, for the purpose of assessing the impact of socialisation, is equivalent to 1/7th of the total cost of duplications.

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[5] *Aurizon Network, The 2013 Undertaking, s. 6.3.2 (a), pg. 53. April. 2013.*

Capital expenditure associated with possible future WIRP expansions has been excluded from the 2013 DAU, and will be considered in subsequent regulatory periods, as necessary.

Maintenance and Operating Cost Allocations

As part of the UT4 process, maintenance and operating cost allowances were estimated for each system and for each year of the undertaking period. As WIRP customers also utilise existing mainline infrastructure, Aurizon Network believes it reasonable to allocate a portion of these costs to them.

The maintenance and operating cost allocations made to the relevant WIRP groups are calculated by expressing WIRP GTK as a percentage of total GTK (WIRP and non-WIRP) in the relevant system. This is consistent with the way in which maintenance and operating costs are allocated in the 2013 DAU. As WIRP volumes ramp up across the UT4 period, the cost allocation to WIRP will also increase.

Calculating Maximum Allowable Revenue

The Maximum Allowable Revenue (MAR) attributable to WIRP infrastructure has been calculated using the 'Building Block' approach, consistent with all other assets in Aurizon Network's Regulated Asset Base (RAB). MAR is the sum of:

- Return on Capital;
- Return of Capital;
- Maintenance Costs;
- Operating Costs; and
- Tax.

In order to calculate MAR attributable to WIRP infrastructure, Aurizon Network must first determine an appropriate estimate of the WIRP asset base. This process is outlined above. It must also make assumptions with respect to the first year that WIRP assets will be included in the RAB.

Capital expenditure is normally included in the RAB in the financial year it is operationally commissioned. The estimated commissioning dates of WIRP infrastructure are outlined in Table 1.

Project Segment	Estimated year of Commissioning	Estimated month of Commissioning [6]
Moura System Upgrades	FY2014 & FY2015	August-13 (a) / March-15 (e)
Wiggins Island Balloon Loop [7]	FY2015	Refer footnote 7
Bauhinia North Branch [8]	FY2015	Refer footnote 8
Blackwater Duplications	FY2015 & FY2016	February-15 / October-15 (e)
North Coast Line Upgrades	FY2016	October-15 (e)

Table 1: Estimated operational commissioning of WIRP Stage 1 project segments

Two of the WIRP project segments were commissioned in Financial Year (FY) 2014, with the remainder expected in FY2015 and FY2016.

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[6] *(a) denotes 'actual' commissioning date ; (e) denotes 'expected' commissioning date.*

[7] *Excludes electrification of the Balloon Loop. Major track construction works completed in May 2014 and rail works required for first coal shipments will be commissioned progressively to align with the expected commencement of WIRP operations by end of March 2015.*

[8] *Major track construction works completed in May 2014. Passing loop is expected to be commissioned in line with WICET and customer operations.*

Revenue Deferral

Aurizon Network recognises the cost pressures faced by its customers in a challenging market. As a result, Aurizon Network has proposed the following:

- WIRP capital expenditure commissioned in FY2014 will be deferred for pricing purposes until FY2015; and
- Aurizon Network will defer a portion of its WIRP MAR by applying a revenue smoothing factor.

The smoothing process is structured such that the Present Value (PV) of "unsmoothed" and "smoothed" revenue streams are equal. Aurizon Network solves an initial revenue requirement that, if escalated at a specified annual rate (smoothing factor), will result in a revenue stream that generates the same PV as the unsmoothed revenue stream.

Aurizon Network has proposed that the smoothing factor applied to WIRP MAR, take the contracted volume ramp-up into account. This is achieved by escalating revenue by the percentage increase in contracted volumes year on year.

It is important to note that this approach does not seek to recover WIRP MAR before WIRP volumes commence. The practical impact is that Aurizon Network will delay a portion of its WIRP allowable revenue by aligning revenue recovery to the WIRP tonnage profile.

Volumes for Pricing

Reference Tariffs are determined by splitting MAR among various operational metrics[9] that are derived from the 'QCA approved' volume forecasts (usually expressed in net tonnes). As a result, the level at which volume forecasts are set is an important consideration.

It is important to note that Aurizon Network is subject to a Revenue Cap form of regulation, and does not benefit by under or over stating volume forecasts. Any variances between actual revenue received and the System Allowable Revenue approved by the QCA will be recovered (or returned) to customers via an adjustment to future Reference Tariffs.

In setting a reasonable volume forecast for WIRP, Aurizon Network has taken the following into consideration:

- forecasts for the Blackwater and Moura systems exclusive of WIRP;
- contracted WIRP volumes;
- ramp-up assumptions; and
- the principle of ensuring customers are responsible for the volumes they contract.

The analysis shows that a socialised Blackwater Reference Tariff would be lower than the existing Reference Tariff where WIRP volume forecasts are set at 60% of contract or above. This assumes that 1/7th of the Blackwater Duplication capital costs are allocated to the existing system. However, this threshold could be as low as 40% depending on the assumptions modelled.

For the purposes of the 2013 DAU, Aurizon Network has set WIRP volume forecasts for pricing purposes at 90% of contract. It has chosen to do so because this treatment:

- is similar to the volume forecasts of the existing Blackwater and Moura systems. On average for the period of the 2013 DAU, forecasts for systems (exclusive of WIRP) are:
    - 85% of contract for the Blackwater system; and
    - 90% of contract for the Moura system.

- accounts for the fact that the WIRP volume ramp-up profile is relatively fast;

[9] *For example; net tonne kilometres (NTK), Train Paths, GTK.*

- recognises that WIRP Access Agreements contain Take-or-Pay provisions. If Take-or-Pay is triggered, a WIRP customer that doesn't rail its contracted capacity will be required to pay for their share of the shortfall.

Aurizon Network has taken the above factors into consideration and believes that it is reasonable to set WIRP volumes at 90% of contract. However, Aurizon Network would have no objection to aligning this to the existing Blackwater system forecasts of 85%. Based on this analysis, Aurizon Network also believes that a Take-or-Pay trigger test can be implemented that is equitable for all users.

Average Price Analysis

The analysis indicates that WIRP infrastructure should be socialised within the existing Blackwater and Moura systems.

For the most part, the Blackwater and Moura systems contain common use infrastructure with links to multiple destinations in the Gladstone area; RG Tanna Coal Terminal, Barney Point, Gladstone Power Station, Queensland Alumina Limited and Comalco. Even though some customers may not utilise all of these unloading points, infrastructure linking their mines to each destination is (in the majority of cases) socialised, and as a result each customer makes a contribution to all assets within the system. Given the high degree of integration of WIRP-related projects and the respective existing system, Aurizon Network proposes that WICET should be viewed in the same light as existing unloading points.

The tables below illustrate the results of the average price analysis for the existing systems and WIRP. All figures are expressed in terms of $ per net tonne (NT).

Average Price ($ per NT)	FY2014	FY2015	FY2016	FY2017
Blackwater	$5.72	$5.74	$6.16	$6.69
Moura	$3.78	$4.07	$4.37	$4.57

Table 2: Existing System excluding WIRP

Average Price ($ per NT)	FY2014	FY2015	FY2016	FY2017
Blackwater [incl WIRP]	$5.72	$5.02	$5.83	$6.45
Moura [incl WIRP]	$3.78	$3.78	$4.04	$4.23

Table 3: Existing System including WIRP (Socialised)

Average prices under both situations (WIRP excluded or included) are displayed in Figure 1 below:

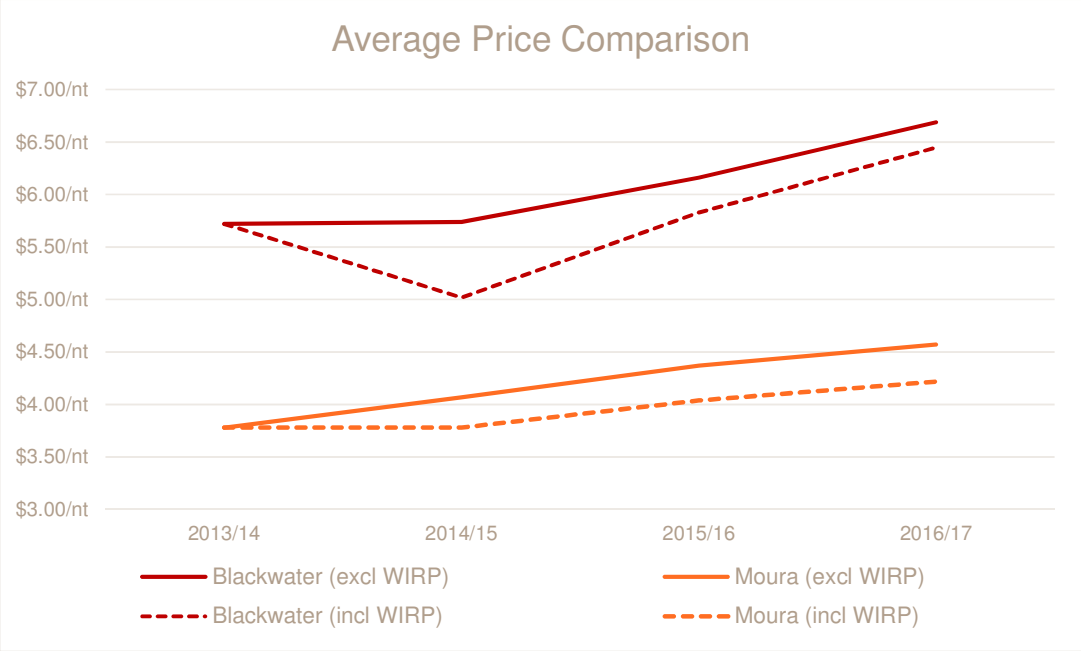

Figure 1: Average Price Comparison with and without WIRP

NB: the results outlined in Tables 2 and 3 above may vary from the average pricing data contained within the public 'UT4 Revenue Model', which is available for download from the QCA's website.