



Northern Sydney Rail Corridor

Submission on compliance with the pricing principles in the NSW Rail Access Undertaking 2017-18

1.1 Contents

1 Introduction 3

2 Asset Valuation Roll Forward 5

3 Ceiling Test 6

4 Key assumptions 7

2 Introduction

The NSW Rail Access Undertaking (the Undertaking) is the framework by which a Rail Infrastructure Owner (RIO) is required to assess requests for access to the NSW Rail Network.

In relation to access pricing, the Undertaking requires RIOs to comply with the Asset Valuation Roll Forward Test, Ceiling Test and Floor Test, on an annual basis.

Table 1: Compliance tests in the NSW Rail Access Undertaking

Test	Description
Asset Valuation Roll Forward Test	<p>The Asset Valuation Roll Forward Test defines the value of the Regulatory Asset Base (RAB) for a particular network, on an annual basis:</p> <ul style="list-style-type: none"> The RAB in year t is given by: $(RAB_{t-1} \times CPI_t) + ADD_t + Capex_t - Dep_t - Disp_t$ Only capital expenditure that relates to the relevant traffic on a standalone basis is to be included. A capital expenditure consultation process is required for all networks.
Ceiling Test	<p>The Ceiling Test requires that access charges set by RIOs do not exceed its Full Economic Costs (FEC) on a standalone basis:</p> <ul style="list-style-type: none"> The FEC on a standalone basis comprises of direct costs, shared costs, depreciation and return on assets. The RIO is obliged to maintain an unders and overs account which keeps track of deviations around the rate of return and if any access seekers breach the Ceiling Test.
Floor Test	<p>The Floor Test requires that access charges set by RIOs must cover the direct costs imposed by the access seekers. Further by sector or group of sectors the access revenue along with line specific CSOs if applicable at least cover full incremental costs. Full incremental costs are defined under the Undertaking as costs that are not incurred if a sector(s) is removed from the network.</p>

Northern Sydney Rail Corridor – RailCorp

In its Final Decision in 2012-13 for the compliance of the Sydney metropolitan rail network with the Undertaking, IPART determined that RailCorp should submit ceiling test information for the Northern Sydney Rail Corridor.

The Northern Sydney Rail Corridor (NSRC) comprises the following 37 sectors in the Metropolitan Rail Network: 400-404, 408-419, 421-429, 438, 445-447, 488-489, 492-496

This submission outlines RailCorp's compliance with the Undertaking for 2017-18 for the NSRC.

Approach

RailCorp has modelled the FEC for the NSRC using the same broad methodology and assumptions as with the Hunter Valley Coal Network.

To estimate the FEC for 2017-18, RailCorp has:

- Estimated a value for the opening RAB based on the book value in Sydney Trains' Fixed Asset Register as there no opening RAB for the NSRC has been established by IPART. This is estimated to be \$3.48 billion as at 1 July 2017
- Rolled forward the value of the RAB to 30 June 2018 taking into account major periodic maintenance capital expenditure, depreciation, disposals and increase in CPI each year, consistent with clause 3, Schedule 3 of the Undertaking

- Apportioned the value of the RAB used to serve coal and general freight users based on the amount of gross tonne kilometres (gtk) hauled by each group of Access Seekers, which allows the estimation of separate RAB values for coal, general freight and combined coal and general freight Access Seekers on a standalone basis
- Determined the optimal configuration of rail infrastructure required to serve all Access Seekers operating in the market for coal and general freight, consistent with clause 2.2(c), Schedule 3 of the Undertaking. This is consistent with RailCorp's assessment of the optimal configuration for the Hunter Valley Coal Network
- Determined the efficient unit costs for operating and maintenance, network control and corporate and system overheads based on the optimal configuration of the rail network. This is consistent with RailCorp's assessment of the efficient unit costs for the Hunter Valley Coal Network
- Modelled the FEC for each of the coal, general freight and combined coal and general freight Access Seekers on a standalone basis, including consideration of an appropriate rate of return and depreciation.

3 Asset Valuation Roll Forward

The following tables show the opening RAB for the NSRC in 2017-18 for the combined coal and general freight, coal and general freight Access Seeker groups. There is currently no opening RAB value for the NSRC and an opening RAB in 2017-18 has been estimated based on book value in the Fixed Asset Register.

Table 2 Estimated Opening RAB for Northern Sydney Freight Corridor, 2017-18 (\$)

RAB Component	Coal	General freight	Combined coal and general freight
Opening RAB	1,360,573,469	2,117,016,330	3,477,589,798
Opening RAB x CPI	27,492,644	42,777,827	70,270,471
Add CAPEX	0	0	0
Add Additions	0	0	0
Less Depreciation	-34,059,616	-52,995,861	-87,055,477
Less Disposals	0	0	0
Closing RAB	1,354,006,497	2,106,798,295	3,460,804,793

4 Ceiling Test

The following tables show the Ceiling Tests for the NSRC in 2017-18 for each Access Seeker group.

Table 3 Ceiling Test for Northern Sydney Freight Corridor, 2017-18 (\$)

Component	Coal	General freight	Combined coal and general freight
Revenue	14,013,677	11,968,620	25,982,297
Maintenance costs	10,728,538	19,567,091	30,295,630
Network control costs	1,042,934	2,316,521	3,359,455
Corporate & system overheads	1,612,692	2,998,055	4,610,747
Depreciation	34,059,616	52,995,861	87,055,477
Return on RAB	80,080,109	124,602,531	204,682,640
Full Economic Cost	127,523,889	202,480,060	330,003,949
<i>Recovery (negative indicates over recovery)</i>	<i>113,510,212</i>	<i>190,511,440</i>	<i>304,021,652</i>
<i>% recovery of full economic cost</i>	<i>11%</i>	<i>6%</i>	<i>8%</i>

5 Key assumptions

Component	Inputs
Opening RAB	<p>The Opening RAB for each year from 2015-16 to 2017-18 has been estimated based on:</p> <ul style="list-style-type: none"> • The Closing RAB as at 30 June 2015 of \$15,093,975 (as determined by IPART in its 2014-15 Final Decision) • Major periodic maintenance capital expenditure, depreciation and disposals in 2015-16 and 2016-17 and 2017-18 • Increases for CPI.
Optimal configuration of rail network	<p>Optimal configuration of the NSRC for Access Seeker operating in a common end market (i.e. the market for the supply and transportation of coal and non-coal freight) on a standalone basis is the current network with:</p> <ul style="list-style-type: none"> • 50% reduction in signalling assets • Removal of all electrification, depots and platforms.
Efficient maintenance costs	<p>Determined an efficient maintenance cost of \$10 per '000 gtk for the NSRC based on an optimal configuration of the rail network:</p> <ul style="list-style-type: none"> • Benchmarking work concluded that the efficient maintenance cost would lie between the estimated unit costs of Aurizon's Moura coal network (\$7.41 per '000 gtk) and Queensland Rail's West Moreton coal system (\$13.18 per '000 gtk) • ARTC NSRC has very large volumes of coal and its enormous economies of scale distort comparisons with RailCorp's NSRC which has very low volumes • Overheads have been applied to each program at 13.7% this is the maintenance recovery rate provided by Sydney Trains for RM, MPM, Capital, External Works internal resource delivery, on the basis that most of these programs are delivered by an internal Sydney Trains resources.
Network control costs	<p>Determined an efficient level of network control costs of \$2.86 per train kilometre:</p> <p>These costs are considered reasonable given that if the separate network control centre were to be established to operate trains on the NSRC it would need to be staffed on a 24/7 basis which would require six network control staff on rotating shifts.</p>

Inflation	As required by clause 3 of the Undertaking, inflation has been calculated as the percentage change in the CPI from the year t-2 to the year t-1 using the average of the ABS Sydney All Groups Consumer Price Index for the four quarters to June in the year t-1 when compared to the average for the four quarters to June in the year t-2.
Rate of return	<p>The Return on RAB has been calculated based on a 5.9% post-tax real WACC, consistent with IPART's Final Decision on its Review of the rate of return and remaining mine life from 1 July 2014.</p> <p>Tax allowance has been estimated consistent with IPART's building block model template (note: for simplicity, straight-line depreciation has been used instead of tax depreciation as a deduction in the calculation of taxable income. Tax depreciation would require the development of a separate tax asset base and maintenance of tax asset lives which are not available for the NSRC).</p>
Depreciation	<p>Depreciation of:</p> <ul style="list-style-type: none"> • The 'Rail infrastructure' asset class has been estimated based on the remaining mine life (i.e. a terminal date of 2044), consistent with IPART's Final Decision on its Review of the rate of return and remaining mine life from 1 July 2014 • All other asset classes have been estimated based on remaining technical life.
Capital expenditure	Only major periodic maintenance capital expenditure has been included in the calculation of the Ceiling Test, as this relates to traffic on a standalone basis, all other capital expenditure has not been included.
Underlying internal costs and volumes data	Sourced from TfNSW databases.