



TAHE's compliance for its Hunter Valley Coal Network – 2020-21

16 May 2022

The NSW Rail Access Undertaking (the 'Undertaking') provides for third party access to certain parts of the NSW rail network. It limits the amount of revenue that rail owners can charge these third-party businesses to use the network. Rail owners cannot receive more revenue than the economic costs of providing the service.¹

IPART is required to assess the Transport Asset Holding Entity's (TAHE) annual compliance with the Undertaking.² This compliance assessment relates to the 2020-21 financial year for TAHE's Hunter Valley Coal Network, which is made up of 5 sectors of the Hunter Valley Coal Network between Newstan Junction and Woodville Junction (Figure 1).

Prior to 1 July 2020, these sectors of the Hunter Valley Coal Network were owned by RailCorp. On 1 July 2020, RailCorp was renamed TAHE and restructured to be a statutory State-owned corporation.³ This is our first assessment of TAHE's compliance with the Undertaking for the Hunter Valley Coal Network since this restructure.

Figure 1 Map of TAHE's Hunter Valley Coal Network (blue shaded area)



IPART acknowledges the Traditional Custodians of the lands where we work and live. We pay respect to Elders, past, present and emerging. We recognise the unique cultural and spiritual relationship and celebrate the contributions of First Nations peoples.

Summary of our decision

TAHE submitted its compliance proposal for its Hunter Valley Coal Network to us in December 2021.⁴ It made some errors in applying the remaining life to calculate depreciation and indexation of the asset base, which are used to calculate the economic costs of providing the Hunter Valley Coal Network. TAHE resubmitted its [compliance proposal](#) in February 2022 to correct for these errors.

Based on TAHE's revised proposal, we have found that TAHE has complied with the ceiling test in the Undertaking for its Hunter Valley Coal Network for the 2020-21 compliance year.

Across all access seekers, TAHE under recovered its costs of servicing the combined coal and freight group of access seekers on the network by \$2.2 million in 2020-21, after reducing charges for coal customers by 20% in 2020-21. Previously, RailCorp had over-recovered revenue from its access seekers for many years resulting in a cumulative over-recovery balance of \$11 million. TAHE's under-recovery in 2020-21 has reduced this cumulative balance to \$8.8 million as at June 2021.⁵

In February, we made a [Draft recommendation](#) that TAHE should attempt to return the over-recovery to a zero balance within the next 12 months, consistent with the requirements of the Undertaking.

TAHE has proposed to instead maintain prices at current levels below the ceiling to return the over-recovery balance to zero over four years, noting the emerging issues around whether it will be able to recover the value of its assets.⁶ In particular, at the time we released our Draft decision, Origin Energy announced the closure of Eraring Power Station in 2025 – bringing forward the expected closure date by 7 years.⁷

This could have an impact on the ceiling test in the future (if the asset life of the track is brought forward and so the depreciation allowance increases), and the access fees that could be allowed by the Undertaking in the future.^a

The Undertaking is not currently sufficiently flexible to promptly address these circumstances. We are currently conducting a [separate review of the Undertaking](#) to ensure that it remains fit for purpose, including options that recognise the significant uncertainties in the coal industry and the possible impact on prices the Undertaking allows.

Because there is a possibility that the current Undertaking could allow for higher access charges to be negotiated in the future, we consider that TAHE's approach of maintaining prices at current levels below the ceiling has some merit until:

- IPART's review of the Undertaking is finalised, and
- the impact on the ceiling as a result of the recent changes in the coal industry is better understood.

TAHE's proposed approach may lead to less price volatility for access seekers and reduce the financial risk of asset stranding, compared to returning the over-recovery within 12 months.

^a Delta Energy's Vales Point power station also relies on potential coal transported via TAHE's Hunter Valley Coal Network. Delta Energy's plans to close the Vales Point power station remain unchanged, with a notional 2029 closure date. See [Eraring Closure has no impact on future of Vales Point](#), February 2022.

We are recommending that TAHE conduct the required consultation with its access customers on the approach to its unders and overs policy and submit it to IPART for approval as required under clause 4(t) of Schedule 3 of the Undertaking within 12 months.

Final Decisions



1. TAHE has complied with the ceiling test for its Hunter Valley Coal Network, as it received less revenue than the economic costs of providing the infrastructure for each group of access seekers.



2. TAHE has complied with the asset valuation roll forward principles in the NSW Rail Access Undertaking for its Hunter Valley Coal Network in 2020-21. These are used to calculate TAHE's economic costs.

Final Recommendations



1. That TAHE establishes an unders and overs account policy in consultation with access seekers and submits it to IPART for approval as required under clause 4(t) of Schedule 3 of the Undertaking within 12 months.

1 How we assessed compliance

The Undertaking requires TAHE to demonstrate that it has complied with the ceiling test for its Hunter Valley Coal Network.⁸ This test requires that for any access seeker, or group of access seekers, access revenue must not exceed the full economic costs of providing access on a standalone basis.⁹

To assess TAHE's compliance with the ceiling test we:

- Considered whether TAHE applied the test to the relevant access seekers or groups of access seekers.
- Considered whether TAHE had correctly calculated the full economic costs of the Hunter Valley Coal Network on a standalone basis for each of those groups. This included testing whether TAHE had complied with the asset roll forward requirements in the Undertaking. We compared TAHE's calculations against our own assessment of costs.
- Compared access revenues received by TAHE, with our calculations of full economic costs for each group.

The ceiling test is failed if revenues exceed costs for any of those groups.

2 Relevant access seekers

TAHE submitted ceiling tests conducted on 3 different groups of access seekers:

1. Combined coal and general freight
2. Coal
3. General freight.

We find the 3 groups proposed by TAHE are appropriate. Both coal and general freight access seekers need to use the same assets. This means the full economic cost is similar for each group, differing only by the extent that direct costs (i.e. variable maintenance costs) are different.

Passenger services also use this network as part of their operations on TAHE's wider metropolitan rail network. In 2020-21 TAHE did not charge these passenger services for use of the network, and so there was no breach of the ceiling test for these access seekers.

3 Assessment of costs and revenue

We consider that applying the ceiling test on a standalone basis requires estimating costs for a hypothetical network that is purpose-built and optimised for that group of access seekers. The actual costs of the existing infrastructure are not relevant unless they are efficient for a group of access seekers.^b Specifically, any extra costs that are driven by passenger trains must be excluded from the ceiling test for a group of coal or freight-only access seekers. TAHE applied the theoretical standalone freight only network model as guided by the Undertaking and consistent with our 2019-20 decision.¹⁰

b The measure of economic costs is not dependent on the entity that actually incurs these costs. For example, if maintenance costs were incurred by Sydney Trains or NSW Trains instead of TAHE, they would still be included in the measure of full economic costs.

TAHE calculated the full economic costs for each group of access seeker on a standalone basis (Table 3.1). It included the following cost components:

- Maintenance costs
 - TAHE applied the same general approach that we used in our 2019-20 decision.¹¹ It used the benchmarking data provided by SNC Lavalin^c to determine the benchmark fixed maintenance costs (per km of track) and variable costs (per thousand gross tonne kilometres (gtk)) (Table 3.3).
 - TAHE's proposed maintenance expenditure in 2020-21 is slightly higher than our own estimates (Table 3.3), however we consider TAHE's estimates to be reasonable. The difference is due to TAHE using CPI to index the 2019-20 costs, while we applied a maintenance cost index (MCI).^d The Undertaking doesn't specify how rail owners should estimate maintenance costs.
- Network control costs
 - TAHE has proposed network control costs of \$2.89 per train kilometre.^e It has applied the same rate per train of kilometre to the coal and general freight access seekers, consistent with our 2019-20 decision. This reflects the fixed nature of these costs.
- Corporate and system overheads
 - TAHE has used IPART's 2019-20 estimate of an efficient level of corporate and system overheads equal to 9.2% of the sum of maintenance and network control. This is derived from industry benchmarking we commissioned in 2009-10.¹² This 'mark-up' approach is generally accepted industry practice. We would not expect the percentage of costs allocated for corporate and system overheads to increase over time for an efficient firm.
 - TAHE expressed concern that our 9.2% estimate underestimates efficient overhead costs, however, it has applied this rate for the purposes of calculating corporate and system overheads.
- Depreciation
 - TAHE has used the correct RAB value in the prior year to calculate depreciation (Table 3.2).
 - It has then applied the correct rate of depreciation to the Regulatory Asset Base (RAB). This is discussed in more detail in section 3.2.

^c RailCorp contracted SNC Lavalin to estimate efficient costs for the 2015-16 to 2017-18 compliance assessments.

^d The Maintenance Cost Index was developed as part of our [2010-11 review of RailCorp compliance with the NSW Rail access Undertaking](#). We engaged [Sapere Research Group](#) who developed the Maintenance Cost Index in July 2013. We have since applied the maintenance cost index to increase maintenance costs overtime in our compliance assessments for RailCorp (now TAHE).

^e This cost estimate was escalated by CPI to be in nominal terms for 2020-21.

- Return on assets
 - TAHE has calculated the RAB for 2020-21 according to the roll forward principles in the Undertaking (Table 3.2). It must use the RAB in the prior year plus the CPI increase on that prior RAB, plus capital expenditure in the given year, less depreciation and any asset disposals in the given year.
 - TAHE has then applied the correct rate of return to the average of the opening and closing values of the RAB. The rate of return is set by IPART in our 5-yearly review.

Table 3.1 TAHE's ceiling test (\$)

| | 2019-20 | 2020-21 |
|--------------------------------|------------|------------|
| Combined | | |
| Maintenance costs | 4,549,757 | 4,461,392 |
| Network control costs | 571,250 | 579,837 |
| Corporate and system overheads | 471,133 | 463,793 |
| Depreciation | 670,499 | 682,145 |
| Return on assets | 734,670 | 708,762 |
| Full economic cost | 6,997,308 | 6,895,929 |
| Access revenue | 8,299,762 | 4,741,291 |
| Cost recovery | 1,302,454 | -2,154,638 |
| Coal only | | |
| Maintenance costs | 4,172,581 | 4,072,231 |
| Network control costs | 571,250 | 579,837 |
| Corporate and system overheads | 436,432 | 427,990 |
| Depreciation | 670,499 | 682,145 |
| Return on assets | 734,670 | 708,762 |
| Full economic cost | 6,585,433 | 6,470,965 |
| Access revenue | 6,655,240 | 3,219,801 |
| Cost recovery | 69,807 | -3,251,164 |
| General freight | | |
| Maintenance costs | 4,132,601 | 4,174,641 |
| Network control costs | 571,250 | 579,837 |
| Corporate and system overheads | 432,754 | 437,412 |
| Depreciation | 670,499 | 682,145 |
| Return on assets | 734,670 | 708,762 |
| Full economic cost | 6,541,775 | 6,582,796 |
| Access revenue | 1,644,522 | 1,521,490 |
| Cost recovery | -4,897,253 | -5,061,306 |

Note: The figures for 2019-20 are from our 2019-20 final decision.

Source: TAHE, *Revised Hunter Valley Coal Network submission 2020-21*, February 2022, Table 4, p 5.

Table 3.2 TAHE's Asset roll forward valuation for combined coal and general freight access seekers (\$)

| | 2019-20 | 2020-21 |
|-------------------|------------|------------|
| Opening RAB | 14,080,485 | 13,642,901 |
| Opening RAB x CPI | 232,915 | 142,083 |
| Add CAPEX | 0 | 0 |
| Add Additions | 0 | 0 |
| Less Depreciation | -670,499 | -682,145 |
| Less Disposals | 0 | 0 |
| Closing RAB | 13,642,901 | 13,102,839 |

Note: The figures in 2019-20 are from our 2019-20 final decision.

Source: TAHE, *Revised Hunter Valley Coal Network submission 2020-21*, February 2022, Table 2, pp 3-4.

3.1 Maintenance costs

As noted above, the assessment of the ceiling test on a standalone basis requires estimating costs for a hypothetical network that is purpose-built and optimised for that group of access seekers. This is because groups of access seekers should not pay more than it would cost them to build their own network for their use. This would provide an incentive to undertake inefficient new investment in new track to reduce their costs – when it could just use the existing assets.

In its submission to our Draft decision, TAHE said that it continues to support the position it has applied the theoretical standalone freight network methodology correctly as required by the Undertaking.¹³ However it also stated that it:

- ...remains of the opinion that the maintenance rates nominated by IPART are low in the context of a mixed traffic network dominated by the passenger task. Notwithstanding this difference of opinion TAHE has applied the maintenance rates nominated by IPART noting that a review of the Undertaking is being undertaken¹⁴ [as set out in Table 3.3].

For future reviews, IPART would be interested in any additional cost information on maintenance costs to serve coal and freight operators. However, to the extent that maintenance costs are higher due to passenger operations, these costs should not be borne by freight and coal operators. They should be instead recovered from passenger operators.

Table 3.3 Maintenance costs by access seeker group

| | IPART's final decision 2019-20 | TAHE's proposal 2020-21 | IPART's estimate 2020-21 | Difference |
|--|--------------------------------|-------------------------|--------------------------|------------|
| Unit rates | | | | |
| Fixed maintenance cost (per km of track) | 72,220 | 73,306 | 72,732 | |
| Variable cost (per thousand gtk) | 1.66 | 1.68 | 1.67 | |
| Total maintenance costs | | | | |
| Coal | 4,172,581 | 4,072,231 | 4,041,491 | 1% |
| General Freight | 4,132,601 | 4,174,641 | 4,143,530 | 1% |
| Combined (all access seekers) | 4,549,757 | 4,461,392 | 4,402,931 | 1% |

Note: The figures in the 2019-20 are from our [2019-20 final decision](#).

Source: TAHE, *Revised Hunter Valley Coal Network submission 2020-21*, February 2022, Table 5, p 7, Table 6, p 8, and IPART analysis.

3.2 Depreciation

Depreciation must be calculated on a straight-line basis using the estimate of the remaining mine life set by IPART. We determine the remaining mine life every 5 years.¹⁵ We last reviewed it in 2019 and set a terminal date of 2040, based on the best available information.¹⁶ This results in a remaining mine life of 20 years in 2020-21, which was applied by TAHE.

In response to our Draft decision, TAHE submitted that:

- The recent announcement by Origin of the closure of the Eraring Power Station in 2025 has highlighted to TAHE the emerging issues related to the asset life of the TAHE component of the HVCN and specifically the opportunity to recover the value of this asset.¹⁷

When the Undertaking was drafted back in 1999, it was anticipated that the asset life of the rail infrastructure would mainly depend on the level of coal deposits, and the economic life of coal users' facilities, like power stations, that may use coal transported on the sectors. However, now we are seeing that the remaining useful life is more likely to be driven by reduced demand or loss of markets for coal in future.¹⁸ This is much more difficult to predict.

If the network stops being used earlier than 2040, this presents a financial risk of stranded assets – meaning that TAHE will not be able to recover the full capital costs of the network (through its depreciation allowance). An earlier terminal date would mean that TAHE could recover more of its capital costs each year, and so it would be able to negotiate higher access fees accordingly. However, the Undertaking does not allow IPART to accept stakeholder-proposed alternative asset lives between mine life reviews. IPART's decision on the remaining mining life is in effect until 2024.¹⁹

We are currently conducting a [separate review of the rail access Undertaking](#) to ensure it remains fit-for-purpose, including that there is sufficient flexibility to respond to the uncertainty around the future of coal.

4 TAHE's unders and overs account

When the Undertaking was established, it was recognised that it may be impractical to set access prices in a way that would always avoid over-recovery of full economic costs. This is because prices must be set before the eventual tonnage for the year is known. Prices set with an expectation of low tonnage will generate too much revenue if tonnage turns out to be high (and vice versa).

In order to adjust for these inadvertent under or over-recoveries of the ceiling revenue, the Undertaking provided for an unders and overs account. The expectation was that the net balance of this account would remain close to zero, even though it might fluctuate from time to time.

While we are not required to assess compliance with the unders and overs account, we must have regard to the operation of the unders and overs account as part of our compliance reviews.

4.1 The unders and overs account balance

We agree with TAHE's proposal that the cumulative balance of the unders and overs account as at 30 June 2021 is an over recovery of approximately \$8.8 million (Table 4.1). This is a reduction in the balance of \$2.2 million from 30 June 2020.

To calculate the cumulative balance of the unders and overs account we start with the closing balance we determined as at 30 June 2020. We then add the difference between the revenue and the full economic costs for 2020-21 to determine the closing balance of the unders and overs account as at 30 June 2021.

TAHE also submitted unders and overs account balances for the other 2 groups of access seekers.

Table 4.1 Unders and overs account (\$)

| | Combined | Coal | General freight |
|-----------------------------|------------|------------|-----------------|
| Balance at 30 June 2020 | 10,955,852 | | |
| 2020-21 revenue minus costs | -2,154,638 | -3,251,164 | -5,061,306 |
| Balance at 30 June 2021 | 8,801,213 | | |

Note: The balance as at 30 June 2020 is from our [2019-20 final decision](#).

Source: TAHE, *Revised Hunter Valley Coal Network submission 2020-21*, February 2022, Table 11, pp 12-13.

4.2 Returning the unders and overs account balance to zero

To reduce its cumulative over-recoveries to date, TAHE has reduced prices by 20%²⁰, which results in prices below the ceiling. We made a [Draft recommendation](#) that TAHE should attempt to return the over-recovery to a zero balance within the next 12 months, consistent with the requirements of the Undertaking.²¹

However, as highlighted in the section above, there is significant uncertainty around the future of the Hunter Valley Coal Network. This uncertainty has increased with the announcement that Eraring Power Station will be exiting the market significantly earlier than anticipated.²²

While, the impacts could be small,^f the exit of significant users earlier than anticipated could also result in:

- capital costs of the infrastructure not being fully recovered through access charges (through the depreciation allowance), and/or
- the Undertaking allowing for higher access charges to be negotiated in the future, if capital costs need to be recovered over a shorter period of time, and from a lower number of access seekers.

Because of the possibility that the ceiling could increase in the future, TAHE's approach to reducing the over-recovery by maintaining prices below the ceiling would lead to less price volatility, compared to returning the over-recovery balance within 12 months. It would also reduce the financial risk of asset stranding.

However, TAHE is required to consult with access seekers on its proposed approach.²³

It could also consider options, such as the one raised by Qube logistics in its submission to our Draft decision. Qube Logistics proposed that TAHE work with rail operators to efficiently invest the over-recovery in network infrastructure to support movement of coal and general freight along the Main Northern line corridor.²⁴

We are recommending that TAHE conduct the required consultation and submit its unders and overs policy to IPART for approval is required under clause 4(t) of Schedule 3 of the Undertaking within 12 months.

5 Compliance with the 'floor test'

To ensure that efficient rail operators are able to recover the avoidable costs of providing access to a third-party access seeker, access charges must at least cover the direct costs of this service.^g This requirement protects against the one access seeker's direct costs being funded by other access seekers and taxpayers. It forms part of the requirement known as the 'floor test'.

In 2020-21, TAHE did not charge Sydney Trains and NSW Trains for accessing its networks, including the Hunter Valley Coal network.^h This means that the direct costs of the services were not covered by the access fees, and so the floor test was likely not met for these operators on TAHE's networks.ⁱ

From 1 July 2021, TAHE entered into new agreements with Sydney Trains and NSW Trains, which includes charges for accessing the rail infrastructure. We will consider whether these access charges comply with the Undertaking in our next compliance reviews after the end of the 2021 financial year.

f For example, it is possible that Vales Point could increase its volumes and potentially extend its closure date.

g In addition, the full incremental costs of any particular train line should be recovered by access charges and any targeted line sector government funding ('community service obligations' or 'CSOs'). The full incremental costs include variable maintenance costs, and network control cost that rail owners could avoid if access for these services were not provided. The Floor Test is set out in clause 1a of Schedule 3 of the Undertaking.

h This was consistent with previous practice. However, on 1 July 2020, TAHE became a stand-alone state-owned entity, and so Sydney Trains and NSW Trains are now third-party access seekers.

i There are no penalties associated with breaching the floor test.

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- ¹ NSW Rail Access Undertaking, Schedule 3, 1(l).
 - ² NSW Rail Access Undertaking, Schedule 3, 5(b).
 - ³ TAHE, Annual Report Volume 1 2020–21, p 23.
 - ⁴ See TAHE, Hunter Valley Coal Network Submission 2020-21, December 2021.
 - ⁵ TAHE, *Revised Hunter Valley Coal Network submission 2020-21*, February 2022, pp 12-13.
 - ⁶ TAHE submission to IPART Draft decision, pp 5-6, 30 March 2022.
 - ⁷ Origin, [Origin proposes to accelerate exit from coal-fired generation](#), 17 February 2022.
 - ⁸ NSW Rail Access Undertaking, Schedule 3, 5(a)
 - ⁹ NSW Rail Access Undertaking, Schedule 3, 1(l).
 - ¹⁰ IPART, *TAHE compliance – Hunter Valley Coal Network 2018-19 to 2019-20*, Final Report, November 2021, pp 7-8.
 - ¹¹ IPART, *TAHE compliance – Hunter Valley Coal Network 2018-19 to 2019-20*, Final Report, November 2021.
 - ¹² IPART, *Compliance with the NSW Rail Access Undertaking RailCorp HVCN, 2009/10*, Final Report, August 2012, p 14. and Sapere Research Group, *A ceiling test protocol for RailCorp – prepared for IPART*, November 2011, p 12.
 - ¹³ TAHE submission to IPART Draft decision, p 5, 30 March 2022.
 - ¹⁴ TAHE submission to IPART Draft decision, p 5, 30 March 2022.
 - ¹⁵ NSW Rail Access Undertaking, Schedule 3, clause 3.2(c)(iv).
 - ¹⁶ IPART, *Rate of return and remaining mine life 2019-2024*, Final Report, July 2019.
 - ¹⁷ TAHE submission to IPART Draft decision, p 5, 30 March 2022.
 - ¹⁸ IPART, *Review of the NSW Rail Access Undertaking - Issues Paper*, November 2021, p 31.
 - ¹⁹ IPART, *Rate of return and remaining mine life 2019-2024*, Final Report, July 2019, p 24.
 - ²⁰ TAHE submission to IPART Draft decision, p 5, 30 March 2022.
 - ²¹ NSW Rail Access Undertaking, Schedule 3, clause 4(e).
 - ²² Origin, [Origin proposes to accelerate exit from coal-fired generation](#), 17 February 2022.
 - ²³ NSW Rail Access Undertaking, Schedule 3, clause 4(t).
 - ²⁴ Qube submission to IPART Draft decision, 25 March 2022, p 1.