

Review of the NSW Rail Access Undertaking

Hunter Rail Access Taskforce submission in response to the Issues Paper

17 December 2021

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1 Executive Summary

The Hunter Rail Access Taskforce (**HRATF**) welcomes this review of the NSW rail access undertaking (**NSWRAU**).

HRATF is an unincorporated user group comprising coal producers operating mines in the Hunter Valley region of NSW, including Bengalla, Bloomfield Group, Glencore Coal, Hunter Valley Energy Coal (BHP), Mach Energy, Whitehaven Coal and Yancoal Australia. All of HRATF's members rely on the Hunter Valley coal rail network (**HVCN**).

The HRATF has been the collective user group through which industry has engaged with the Australian Rail Track Corporation (**ARTC**) and the Australian Competition and Consumer Commission (**ACCC**) in relation to the last two reviews of the Hunter Valley Access Undertaking (**HVAU**), submitted and approved under Part IIIA of the *Competition and Consumer Act 2010* (**CCA**).

The NSWRAU is more than two decades old and HRATF considers that this review presents an important opportunity to update the regime in order to bring it into line with current regulatory best practice.

Access to most parts of the HVCN (i.e. those parts operated by ARTC) is regulated by the ACCC under the HVAU. However the state regime still plays an important role as a potential 'backstop' framework governing access. Indeed, in negotiations with industry in the past, ARTC has indicated that it would consider not renewing its current voluntary access undertaking in order that regulation revert to the state access regime.

Given the important role played by the NSWRAU as a potential alternative regulatory framework for the HVCN, the HRATF strongly endorses the objective of the review – to test whether the NSWRAU remains fit for purpose.

1.1 HRATF's concerns with the current framework for regulation of the HVCN

The first HVAU was approved by the ACCC in 2011. Prior to that time, the HVCN was directly regulated under the NSWRAU.

Over the last decade, the HVAU has evolved through multiple resets and generally worked well for all parties. However, while the terms of the HVAU have been developed in a way that supports the development of the coal sector, the <u>voluntary process</u> for periodic review and re-negotiation of the HVAU at the initiative of ARTC is unsatisfactory and leaves users vulnerable.

While the *Transport Administration Act 1988* (**TAA**) prevents ARTC from withdrawing the HVAU without Ministerial approval, this does not prevent it allowing the HVAU to expire. Unlike other Australian regimes, there is no obligation on ARTC (or any future potential private owner of the assets) to keep the HVAU in place after it expires.

Understandably (given that it has not developed over the last decade through negotiation and engagement), the TAA and NSWRAU operate in a fundamentally different way to the design and operation to the HVAU.

For example, IPART's role under the NSWRAU is limited to determining a small selection of input parameters and conducting *ex post* compliance assessments. Under the Part IIIA process, the ACCC is responsible for approving the entirety of the HVAU (and the supporting agreements) at each reset.

Where IPART detects non-compliance, there also appears to be little that it can do to enforce the obligations of rail network operators. HRATF is concerned that the state regime would do little to constrain ARTC's ability to exercise monopoly power in operating the HVCN. The ACCC, by contrast, has clear enforcement powers under Part IIIA.

HRATF is also concerned that, if regulation of the HVCN reverted to the state regime, many of the operational, governance and process elements that have been developed in the HVAU over the last decade would be lost. These include sophisticated mechanisms for capacity management, supply chain coordination (including with coal terminals at the Port of Newcastle) and user consultation around capacity investment, as well as a set of minimum terms and performance standards.

1.2 Addressing the risks associated with regime switching

HRATF considers that the following amendments should be made to the NSW rail access regime to reduce the risks associated with switching between the Commonwealth and State regimes:

- 1 Enhancements to the NSW rail access regime including an increased role for IPART in approving access arrangements and a stronger compliance and enforcement framework. This would substantially reduce the incentive for ARTC to switch (or threaten to switch) regimes. Potential enhancements to the NSW regime are discussed below.
- 2 As suggested by IPART, the TAA should be amended to prevent ARTC from using the expiration of its HVAU as a trigger to unilaterally switch regimes. Amendments could be made to section 99C of the TAA to provide that, where a rail infrastructure owner has given an undertaking under Part IIIA of the CCA, it must not allow that undertaking to <u>expire</u> except with the approval of the Minister. Section 99C could also include a requirement for the Minister to consult with users, the ACCC and IPART in relation to any request by a rail infrastructure owner to switch back to the NSW regime.
- 3 The NSW regime should also provide for transitional arrangements to be developed and to apply in the event that the Minister approves any proposal by ARTC that would have the effect of shifting regulation from Part IIIA to the NSWRAU. Such arrangements would grandfather the existing commercial position of parties under access agreements and maintain the status quo under the HVAU (as last approved by the ACCC) until such time as a new and replacement set of access arrangements was approved by IPART.

1.3 The form of regulation under the NSW regime should be calibrated to the economic characteristics of the relevant rail infrastructure

HRATF agrees with IPART's observation that the form of regulation under the state regime should be appropriately calibrated to the risk of market power (or monopoly power) being exercised.

Currently, the NSWRAU is not appropriately calibrated. While it does contain some specific measures for the Hunter Valley network, overall the NSWRAU is far too 'light touch'. Where a network operator has a high degree of market power, the NSWRAU does not provide any meaningful constraint on the exercise of this power. This has been demonstrated by the ability of RailCorp / TAHE to repeatedly breach the revenue ceiling rules and ignore IPART's asset life determinations, with little consequence.

The Issues Paper refers to the gas pipeline regulatory framework as an example of how the form of regulation can be tailored to reflect the risk of market power (or monopoly

power) being exercised. Under the National Gas Law and Rules, a pipeline may be subject to varying degrees of regulation, depending on the various economic factors which influence the degree of market power that it holds. Monopoly gas pipelines are typically subject to 'full' regulation, involving periodic review and approval of access arrangements. Pipelines will only be subject to more light-handed regulation (e.g. a negotiate / arbitrate regime) where they are subject to some competitive constraint.

Similar to the approach under the National Gas Law, IPART should be able to undertake a 'form of regulation' assessment for different parts of the NSW rail network, to determine the appropriate degree of regulation to be applied. This form of regulation assessment could have regard to factors such as:

- the presence and extent of any barriers to entry in markets in which below-rail services are provided; and
- the presence and extent of any substitute, and the elasticity of demand, in a market in which below-rail services are provided.

Consistent with the approach adopted under the gas pipeline regulatory framework, a light-handed negotiate / arbitrate regime should only apply to those parts of the NSW rail network where there is a lower risk of monopoly power being exercised. This could include parts of the network where there is competition from road transport.

However a stronger form of regulatory oversight would need to apply to parts of the network where there is a greater risk of market power (or monopoly power) being exercised. This would include the HVCN, given the absence of any real competitive alternatives available to Hunter Valley coal producers.

1.4 The appropriate form of regulation to apply under the NSW regime where there is a higher risk of market power being exercised

While the HVAU model has generally worked well in delivering outcomes that are acceptable to ARTC and users, this model also has its shortcomings. As discussed above, a key shortcoming of this model is that it is voluntary. A further related issue that has arisen in recent HVAU reviews is a lack of transparency around ARTC's pricing and revenue models. Due to the voluntary nature of the regime and the absence of any requirement for ARTC to provide its models for review by the ACCC and other stakeholders, ARTC has been able to put its position on pricing on a 'take it or leave it' basis, without offering up its models as a basis for negotiation.

HRATF considers that an appropriate model for regulation of pricing for monopoly below-rail infrastructure under the NSW regime could take elements of the HVAU model, but with improvements to address the known shortcomings of that model. Improvements could be modelled on the framework that applies to monopoly gas pipelines.

HRATF considers that a framework for access to those parts of the NSW network where IPART has determined that a stronger form of regulation should apply should include the following elements:

- below-rail operators would be required to periodically (say, every five years) submit a proposed access arrangement to IPART for approval. The access arrangement proposal would need to identify reference services and for each reference service, propose a reference tariff and other terms and conditions on which the service will be provided;
- a proposal would need to be accompanied by relevant modelling and such information as is necessary for IPART and stakeholders to understand the basis for

the proposed reference tariff(s). Where IPART considers that it requires further information to assess the proposal, it could require the operator to provide that information;

- IPART would be required to consult on the proposal and either approve it as submitted, or approve it with amendments to address any shortcomings;
- IPART's assessment of the proposal could be guided by a set of criteria, similar to those that apply to assessment of Part IIIA undertakings (or alternatively a more prescriptive set of rules and criteria); and
- where an operator has consulted with users and obtained their support for elements of the proposal, this would be a relevant matter for IPART to take into account when deciding whether to approve it.

1.5 Access pricing principles

In section 6 of this submission, we provide comments on the appropriate approach to key pricing parameters and methodologies, including methodologies for determining the appropriate rate of return and asset lives.

A key concern for the HRATF is to ensure that the approach to determination of pricing parameters is transparent, principles-based and internally consistent. For example, the approach to determining the rate of return should be based on robust and well-accepted methodologies, and any assumptions around risk should be consistent with other elements of the pricing model (such as the approach to asset lives).

The HRATF considers that this can be achieved through the form of regulation proposed in this submission. Regular access arrangement reviews would provide the opportunity for all pricing parameters to be reviewed and reset in a transparent, evidence-based and consistent manner.

HRATF looks forward to engaging with IPART throughout the review around improvements to the regime. We would be happy to meet with IPART to discuss any of the proposals set out in this submission.

2 Background

2.1 HRATF

The HRATF is the unincorporated user group for the HVCN. The HRATF includes the following coal producers that each operate coal mines in the Hunter Valley:

- Bengalla (part of the New Hope Group);
- Bloomfield Collieries;
- Glencore Coal;
- Hunter Valley Energy Coal Pty Limited (BHP);
- Mach Energy;
- Whitehaven Coal; and
- Yancoal Australia.

The HRATF was formed in 2009 and has led industry engagement with ARTC in relation to access regulation for the HVCN over the past decade.

2.2 Current arrangements for the Hunter Valley Network

Most parts of the HVCN are operated by ARTC under a 60-year lease and operating arrangements put in place with the State of New South Wales. The remaining parts are operated by the state-owned Transport Asset Holding Entity (**TAHE**).

A combination of Federal and State regulatory regimes govern access to the HVCN. Specifically:

- ARTC is currently subject to a voluntary access undertaking (the HVAU) approved by the ACCC under Part IIIA of the CCA, which has been in place since 2011. The 2011 HVAU was recently reviewed by the ACCC and extended (with some amendments) until the end of 2026. As the current undertaking approaches expiry, ARTC may (but is not required to) submit a replacement undertaking for the ACCC's approval.
- In parallel, ARTC also remains subject to NSW regulation under the TAA. However under the TAA, the NSWRAU will only apply to the Hunter Valley Coal Rail Network if there is no voluntary undertaking in place under Part IIIA of the CCA. Prior to becoming regulated by the ACCC in 2011, the NSWRAU applied to the Hunter Valley Coal Rail Network. This default "back stop" regime will automatically reapply to ARTC if the HVAU is withdrawn by ARTC or expires and is not replaced.
- Those parts of the HVCN operated by TAHE are subject to the NSWRAU.

ARTC has a degree of optionality under this framework, particularly as the current HVAU approaches expiry. ARTC could choose not to renew its current undertaking and instead revert to regulation under the NSWRAU, simply by allowing the existing HVAU to expire.

The threat of reversion to the NSWRAU was explicitly made by ARTC as a negotiating tactic with HRATF and the ACCC during the HVAU renewal process in 2016-17. In that case, ARTC used the threat as a means of extracting commercial outcomes (such as a

higher cost of capital allowance) that went beyond what was proposed by the ACCC in its draft regulatory determination. HRATF understands that similar threats were made by ARTC in its negotiations with the ACCC and other stakeholders during the process for renewal of the ARTC interstate access undertaking, completed in late 2018.

Both IPART and the ACCC have publicly criticised the manner in which the current arrangements provide ARTC with an ability to use regulatory uncertainty as a point of leverage in negotiations with regulators and industry. The ACCC recently stated in the context of its approval of an extension of the ARTC Interstate Access Undertaking:¹

The 2008 IAU and 2011 HVAU are both entirely voluntary access undertakings submitted by ARTC under Part IIIA of the Act. The ACCC has become increasingly concerned with the appropriateness of this regulatory framework, particularly where ARTC submits applications shortly before the expiry of an existing undertaking.

Therefore, while the NSWRAU does not currently apply to the Hunter Valley Coal Rail Network, HRATF has a strong interest in ensuring that it remains fit for purpose. If the NSWRAU reflects a robust and effective regulatory framework, this should reduce the risk of ARTC using threats of reversion to the NSWRAU as a negotiating tactic with HRATF and the ACCC in any HVAU renewal process. This will also provide HRATF members with a degree of certainty that effective regulation will continue in the event of a reversion to the NSWRAU. This will in turn support efficient investment by users of the HVCN and efficient operation of the coal export supply chain.

2.3 HRATF strongly supports the IPART review of the NSW regime

The current NSWRAU is now more than two decades old. HRATF considers that it is no longer fit for purpose and in need of a thorough independent review.

The key concern expressed by stakeholders is that the NSWRAU does not impose a sufficient constraint on the exercise of monopoly power by rail network owners, and does not appropriately protect the interests of those who require access to rail infrastructure in NSW. Indeed IPART itself has expressed the view that the NSWRAU is not meeting the needs of stakeholders. The specific concerns expressed by IPART, the ACCC and other stakeholders include:²

- the framework for enforcing compliance with the NSWRAU is inadequate;
- there is limited guidance to arbitrators on arbitrating any price disputes under the NSWRAU, which diminishes the efficacy of the negotiate / arbitrate model;
- it is not effective in addressing network interface risks, standards and performance;
- it does not effectively balance the interests of access providers and users;
- · it does not adequately protect users from monopoly pricing; and
- it constrains above-rail operators who use network infrastructure (i.e. haulage providers such as Pacific National) from modifying their operations to improve productivity and innovation.

HRATF therefore strongly supports this review of the NSW rail access regime, and we hope that it will deliver meaningful reform.

¹ ACCC Final Decision, ARTC application to vary the 2008 Access Undertaking, 28 February 2019, at page 12.

² IPART, Final Report: Rate of Return and Remaining Mine Life 2019-2024, July 2019, p 28.

3 Current commercial and market context

The HVCN comprises 37 track segments that serve the coal miners in the Hunter Valley region. 32 of those segments are leased and operated by ARTC, and are used by coal miners to transport coal to the Port of Newcastle for export. The remaining 5 segments are owned and operated by TAHE, and while they are primarily used to transport coal to the Eraring and Vales Point power stations, they can also be used by nearby mines to transport coal to the Port of Newcastle for export.³

The economic usefulness of the HVCN is therefore largely linked to the ability of coal miners to extract and export high-quality black thermal coal from the Hunter Valley region (at present, 88 percent of the coal from the region is thermal, with the remainder being semi soft coking coal used in steelmaking)⁴. More specifically, the usefulness of the HVCN is linked to:

- international demand for high-quality black thermal coal;
- competitiveness of coal from the Hunter Valley; and
- ability to acquire new mining tenements and develop new mines to replace mines reaching the end of their useful lives.

3.1 Long-term demand for high-quality black thermal and metallurgical coal

The primary target markets for coal from the Hunter Valley are in Asia. As shown in Figure 1 below, while coal exported from the Port of Newcastle is primarily destined for relatively mature markets such as Japan, China and South Korea, it is also used by high-growing Asian markets such as India and Vietnam.⁵

³ https://www.ipart.nsw.gov.au/sites/default/files/documents/final-report-review-of-rate-of-return-and-remaining-mine-life-from-1-july-2019-9-july-2019.pdf

⁴ https://www.accc.gov.au/system/files/Note%20on%20single%20commodity%20risk%20redacted_0.pdf

⁵ https://www.transport.nsw.gov.au/data-and-research/freight-data/port-of-newcastle



Figure 1 Hunter Valley coal export destinations (2020)

Source: Port of Newcastle 'Trade Report 2020.'6

Following COP26 in Glasgow, all Asian countries that import coal for power generation announced a range of policy initiatives intended to reduce coal-fired power generation. We have summarised those policy initiatives for seven countries that are major importers of Hunter Valley coal in Table 1 below. In summary, although Governments from these seven Asian countries have pledged to reduce investment into coal-fired power generation, many of these pledges are focussed beyond 2050 and are targeted specifically to generators outside each country.

⁶ https://www.portofnewcastle.com.au/wp-content/uploads/2021/04/Port-of-Newcastle-Trade-Report-2020-DRAFT-3-2.pdf

Country	Co	al related pledges
Japan	•	Stop financing coal-fired power generation projects abroad.
	•	Phase-out its most inefficient coal-fired power plants.
China	•	Not build new coal-fired power projects abroad.
South Korea	•	Stop issuing permits for new unabated coal-fired power generation.
	•	Cease new construction of unabated coal-fired power generation projects.
	•	Pledged to stop public funding for coal-fired power generation.
Taiwan	•	Net zero carbon emissions by 2050.
India	•	Net zero carbon emissions by 2070.
	•	Accepting 'Climate Investment Funds' ⁷ funding to transition away from coal power.
Vietnam	•	Cease to issue new permits for new unabated coal-fired power generation.
	•	Cease new construction of unabated coal-fired power generation projects.
Philippines	•	Stop public funding for coal-fired power generation.
	•	Not accepting new applications for coal-fired power generation projects.
	•	Accepting 'Climate Investment Funds' funding to transition away from coal power.

Table 1 - COP26 pledges by Asian countries Hunter Valley coal exports to

Source: COP26,⁸ Al Jazeera.⁹

Indeed, the International Energy Agency (IEA) stated policy scenario envisages a gradual decline in thermal coal demand in Asia, shown in Figure 2. From 2020 to 2050, the IEA forecasts under the 'stated policies scenario' that electricity generation from coal in the Asia Pacific will gradually drop from 7,406 TWh in 2020 to 5,594 TWh in 2050, equating to a 0.9% drop per year. The drop is mainly driven by decreases in coal generation in China, partially offset by increases in South East Asia.

⁷ Climate Investment Funds is a multilateral investment fund designed to provide financing to developing countries accelerate low-carbon and climate resilient development.

⁸ 'Global Coal to Clean Power Transition Statement'

⁹ Hanna Duggal 'What Has Your Country Pledged at COP26?' Al Jazeera, November 2021. Available at: https://www.aljazeera.com/news/2021/11/14/infographic-what-has-your-country-pledged-at-cop26





Source: IEA World Energy Outlook 2021

The gradual nature of the shift away from coal generation is evidenced by the number of coal generation projects planned and committed in the Asian countries that import Hunter Valley thermal coal. While some projects in the pipeline will be replacing retiring generation, there is sufficient overall growth in coal fired capacity to underpin demand for coal. For example:

- Japan is currently building new coal fired generators to increase capacity by 12%, from 48GW to 54GW.
- Indonesia is currently building 11GW of coal generation capacity;
- Vietnam plans to increase coal generation capacity by 138% compared with current levels by 2030; and
- Philippines currently has committed to a 4.5GW increase in coal generation capacity by 2024, a 50% increase from current levels.

3.2 The cost competitiveness of thermal coal will continue to have a strong bearing on its demand

It is unlikely that the Asian markets which are the primary customers of coal mined in the Hunter Valley and exported via the HVCN will see the same declines in coal generation as have occurred in Australia or other advanced economies. There are a number of reasons for this.

First, electricity market design in Australia is different to most Asian countries (except the Philippines). The Australian market shifts the risk of asset stranding to investors. This means that when renewables (in combination with storage or other firming options) become cheaper, they can push out coal generation while also reducing the prices that consumers pay.

By contrast, in most Asian markets the risk of asset standing sits with consumers, since most generation is underwritten through long-term capacity contracts. Hence, even if renewables become cheaper, electricity service providers have little incentive to retire the

existing coal generation early since they will remain locked into contractual obligations to those generators. In effect, consumers would have to pay both for the stranded and new assets. The only way in which renewable generation could crowd out the existing and still functioning coal plants is if the total cost of renewables plus firming is lower than just the fuel cost of coal generation. In that case, Asian electricity service providers can save money by idling the existing coal plants (while continuing to make the contracted capacity payments) and switching to new renewables. However, such significant cost savings remain unlikely.

While the Asian countries that use Hunter Valley coal have made longer-term pledges to reduce reliance on coal generation, outside of policy intervention the realisation of those pledges depend on the economics of coal compared with renewable energy sources. Each Asian country will have different challenges to implement renewable energy. For example, Japan's mountainous geography means Solar PV is twice as costly as in a country like Germany.

3.3 Hunter Valley coal mines are likely to be economically viable even in a flat or gradually declining global black coal market.

Coal is a globally traded commodity. While prices will move around in the short term due to imbalances between supply and demand, over the medium to long term, coal prices will be largely be based on the Long-Run Marginal Cost (LRMC) of coal production. Assuming an environment where global demand for coal remains flat and no new mines have to be developed, global prices will be set by the cost of the incremental production from the marginal mine – that is, the highest-cost mine that needs to produce to meet total global demand. As long as a mine has a lower production cost than the marginal incremental production cost, then demand will exist for that mine.

In this context, the relevant question to consider is where the Hunter Valley mines sit on the global cost curve. Figure 3 below charts below show the thermal coal global cost curve developed by Wood Mackenzie, a specialist consultancy. Specifically, this figure shows the relative position of the Hunter Valley mines compared with mines from around the world.

Figure 3 shows the cost competitiveness and efficiency of Hunter Valley coal. We can see that more than half of Hunter Valley coal producers lie on the bottom half of the cost curve.

In addition to their cost competitiveness, Hunter Valley mines produce a high energy, low ash thermal product which is more efficient in the amount of energy generated per unit of carbon emissions. On the assumption that carbon emissions are priced in the future, the cost competitiveness of Hunter Valley coal compared to other coal producing regions would be enhanced.





Source: Wood Mackenzie, Dataset November 2021

The cost curve analysis shows that a catastrophic and systematic decline in coal demand is needed prior to affecting mines from the Hunter Valley. In fact, global consumption would need to fall by more than half. Such a collapse requires a much more fundamental and rapid shift in the global use and cost of energy production than what's currently anticipated, even with the remarkable acceleration in renewable energy investment, decline in its cost and various national policies to promote decarbonisation. Such a shift will also need to take into account the fact that as high-cost coal mines close in line with the drop in demand, coal becomes cheaper, hence any alternative technology will need to be even more cost competitive.

We note that the Wood Mackenzie cost curve needs to be interpreted with caution. It shows the incremental cost of additional production, which can vary over the life of a mine and would tend to decline with scale of production. Some Hunter Valley mines are at the beginning of development, such as the preparation of a long-wall. This would lead to a higher incremental cost than an existing mine in full production. As a result, the extent of dispersion across the cost curve for Hunter Valley mines may not be due to its overall cost structure, but the stage of production it is in.

3.4 It appears unlikely that NSW Government will change its policy on new coal mine tenements and licenses

Australia has committed to net zero by 2050 at COP26 in Glasgow. However, there is no evidence that this commitment will further constrain the ability or the willingness of NSW Government to issue new mine tenements and licenses. The approval process for mine expansions and new mines is already stringent and has been well tested in courts. Hence, it is unlikely that regulatory restriction flowing from Australia's international commitments would prevent Hunter Valley coal mines from continuing to develop known resources in the region as long as global demand continues.

¹⁰ The data and information provided by Wood Mackenzie should not be interpreted as advice and you should not rely on it for any purpose. You may not copy or use this data and information except as expressly permitted by Wood Mackenzie in writing. To the fullest extent permitted by law, Wood Mackenzie accepts no responsibility for your use of this data and information except as specified in a written agreement you have entered into with Wood Mackenzie for the provision of such of such data and information.

Australian policy-makers have signalled that the Net Zero 2050 commitments are unlikely to affect coal production. At COP26, Federal Energy Minister Angus Taylor said '[Australia's Net Zero Plan] will not shut down coal or gas production...¹¹ The NSW Resources Minister Matt Kean said that in October 2021 the NSW Government will not impede the Coal mining industry, and that '[coal mining jobs] are not going to be impact by domestic policy makers. They're going to be determined by changes in international markets.¹²

3.5 Carbon capture and storage

With carbon capture and storage, coal fired generation and other uses of coal could continue to operate even under conditions of net zero emissions. Although carbon capture and underground storage would impose additional cost burdens, carbon capture and storage is essential to delivering carbon emission reductions under the IEA policy scenarios. This is a technology which is recognised as essential to delivering carbon emission reduction and which can bring about a prolonged role for coal in electricity generation or other current uses.

4 Relationship between the NSW and Commonwealth regimes

Under the lease entered into between the State Rail Authority of NSW and ARTC on 4 June 2004, it was required to submit an access undertaking to the ACCC under Part IIIA. The ACCC accepted an access undertaking from ARTC in 2011 and so, from that point, the HVAU replaced the NSW statutory undertaking as the regulatory framework governing those parts of the HVCN operated by ARTC. However, the lease does not require ARTC to *keep* an undertaking in place under Part IIIA, and it would be open to ARTC to simply allow the current undertaking to expire without submitting a replacement. Indeed, if the current HVAU (as extended) is allowed to expire in 2026, the HVCN will again become subject to the state rail access undertaking.

Without sufficient warning and appropriate planning – and in the absence of improvements to the state access regime – a sudden shift back to the state-based regulated would be disruptive to the industry and undermine the stable and effective regulatory and commercial framework that has developed under the HVAU. As discussed in section 5, HRATF is concerned that the state regime is outdated, under-developed and provides inadequate protection against the risk of rail network operators exercising monopoly power. In the absence of improvements to the state regime and/or appropriate transitional mechanisms, a sudden shift back to the state regime could substantially undermine certainty and investor confidence in the Hunter Valley.

HRATF's concern with the 'voluntary' nature of existing arrangements was highlighted during the 2017 renewal process for the HVAU. At a very late stage in the consultation process, ARTC threatened to withdraw from the HVAU and revert back to the state regime. Confronting the possibility of a shift to regulation under IPART at such a late stage of the consultation process was extremely disruptive to the negotiation process and something we wish to avoid in the future. A similar tactic was also used by ARTC during the most recent HVAU renewal process.

HRATF agrees with IPART that this is a critical issue which needs to be addressed, particularly given the prospect of ARTC privatisation.

¹¹ Angus Taylor MP, "Australia's plan to reach our net zero target by 2050." Available at:

https://www.minister.industry.gov.au/ministers/taylor/media-releases/australias-plan-reach-our-net-zero-target-2050¹² Matt Kean MP speaking on ABC RN Drive, October 2021. Available at:

https://www.abc.net.au/radionational/programs/drive/nsw-announces-billions-to-attract-clean-energy-investment/13584414

4.1 Scope for greater alignment of the State and Commonwealth regimes, to reduce the incentive for forum shopping

The incentive for ARTC to switch regimes, and its ability to credibly threaten a switch, could be reduced if:

- the NSW rail access regime is of comparable coverage and operation to the HVAU;
- IPART has robust powers of enforcement; and
- appropriate transition arrangements are in place to ensure that the status quo is maintained, pending approval by IPART of the replacement regime/undertaking.

In section 4 we propose a number of enhancements to the NSW regime to improve its effectiveness and give IPART greater powers around approval of access arrangements, compliance monitoring and enforcement.

4.2 TAA amendments to prevent switching without Ministerial approval

IPART notes that amendments could be made to the TAA to limit scope for regime switching.¹³

HRATF agrees that amendments should be made to section 99C of the TAA to provide that, where ARTC has given an undertaking under Part IIIA of the CCA, it must not allow that undertaking to *expire* except with the approval of the Minister (given with the concurrence of the Premier). In practice, this would mean that ARTC would need to periodically submit a replacement Part IIIA undertaking or extension proposal that is acceptable to the ACCC, unless it obtains the approval of the Minister to revert back to the NSW regime.

Section 99C could also include a requirement for the Minister to consult with users, the ACCC and IPART in relation to any request by ARTC to switch back to the NSW regime.

4.3 Potential transitional mechanisms

In addition to a requirement for Ministerial approval for regime switching, the state regime could also provide for transitional arrangements in the event that approval is granted.

As discussed further below, the HVAU includes a range of governance mechanisms, user consultation processes and standard access terms that have been developed through industry engagement and ACCC oversight over the past decade. In the event of a transition to the NSW regime, it is important that these elements not be lost.

In section 5 we propose a form of regulation for those parts of the NSW network where there is a higher risk of market power being exercised (e.g. the HVCN) which would involve periodic review and approval of access arrangements by IPART. If this form of regulation were to be available under the NSW regime, many of the governance and consultation mechanisms which currently sit in the HVAU could be incorporated into an IPART-approved access arrangement. However, it is likely to take some time after switching to the NSW regime for the first access arrangement to be approved by IPART.

HRATF would therefore propose a transitional mechanism whereby the commitments under the HVAU (as last approved by the ACCC) continue to apply until such time as IPART approves the first access arrangement under the NSW regime.

¹³ Issues Paper, p 41.

5 Form of regulation and non-price matters

5.1 The form of regulation under the NSW regime needs to be fit for purpose

The Issues Paper recognises that the form of regulation may need to be different depending on the characteristics of the infrastructure and services to which it is applied. In particular, the Issues Paper notes that "*the regulator's involvement should be proportional to the risk of using market power*".¹⁴

HRATF agrees with this observation and considers that it is particularly important to bear in mind when considering the appropriate regulatory settings for different parts of the NSW rail network. The degree of market power held by network operators, and the risk of that market power being exercised, would seem to vary widely across different parts of the network.

In particular, the economic characteristics of HVCN differ from those of many other parts of the NSW network. The Issues Paper notes that in many parts of the NSW rail network, there is competition from road transport and spare capacity.¹⁵ These are not features of the HVCN. Unlike many other parts of the NSW rail network, the HVCN is subject to little (if any) competitive constraint. For example, development approvals and other constraints generally prevent mines from transporting coal for export via the Port of Newcastle by way of road haulage.

The form of regulation under the NSWRAU needs to be appropriately tailored to reflect these differences. Stronger regulatory oversight is likely to be necessary for the HVCN compared to other parts of the NSW network.

The potential for privatisation of the HVCN should also considered in the design of regulatory arrangements. Recent experience at the Port of Newcastle has shown that the risk of monopoly power being exercised is likely to increase when assets are privatised. It is for this reason that the ACCC has argued strongly for appropriate regulatory frameworks to be in place *before* monopoly assets are privatised.¹⁶ This means that the form of regulation for the HVCN needs to be designed to provide a robust constraint on the exercise of monopoly power regardless of ownership, including meaningful enforcement mechanisms.

5.2 Process for determining the appropriate form of regulation

The Issues Paper refers to the gas pipeline regulatory framework as an example of how the form of regulation can be tailored to reflect the risk of market power (or monopoly power) being exercised.

Under the National Gas Law and Rules, a pipeline may be subject to varying degrees of regulation, depending on the various economic factors which influence the degree of market power that it holds (e.g. the presence and extent of any barriers to entry, and the availability of substitute services).¹⁷

It should be noted that true *monopoly* gas pipelines are typically subject to 'full' regulation under Part 8 and 9 of the National Gas Rules (**NGR**) and not the limited negotiate/arbitrate model referred to by IPART and set out in Part 23 of the NGR. This involves a full and periodic AER review of the pipeline access arrangement and *ex ante*

¹⁴ Issues Paper, p 17.

¹⁵ Issues Paper, p 17.

¹⁶ For example: Rod Sims, 'ACCC perspectives on transport issues', speech to the Australasian Transport Research Forum, 30 September 2019.

¹⁷ National Gas Law, s 16.

AER regulation of reference tariffs using a codified building block methodology and predetermined WACC parameters.¹⁸

Simply, if a gas pipeline is found to have true monopoly characteristics, it is subject to full, *ex ante* and effective economic regulation of tariffs and access. Pipelines are only subject to more light-handed regulation (e.g. a negotiate / arbitrate regime with information disclosure requirements under Part 23 of the NGR) where some competitive constraint exists because of other pipelines that serve the same demand centre.¹⁹ Even then, the ACCC has raised concerns that the light-handed Part 23 framework may not be fully effective.²⁰ The HRATF therefore submits that care needs to be taken before assuming that Part 23 provides a new regulatory 'silver bullet' for access regulation.

However, we consider that one longstanding feature of the National Gas Law has been shown to be effective – in which the 'form of regulation' is calibrated to reflect the nature of the asset. Similarly, IPART could undertake a 'form of regulation' assessment for different parts of the NSW rail network to determine the most appropriate degree of regulation to be applied.

This form of assessment could have regard to factors such as:²¹

- the presence and extent of any barriers to entry in markets in which below-rail services are provided; and
- the presence and extent of any substitute, and the elasticity of demand, in a market in which below-rail services are provided.

Consistent with the approach adopted under the gas pipeline regulatory framework, a light-handed negotiate / arbitrate regime should only apply to those parts of the NSW rail network where there is a lower risk of monopoly power being exercised because of a competitive constraint, such as road substitution.

However, a stronger and orthodox form of *ex ante* regulatory oversight would apply to parts of the network where there is no effective competitive constraint and therefore a greater risk of market power (or monopoly power) being exercised. This would include the HVCN, given the absence of any meaningful competitive alternatives available to Hunter Valley coal producers.

5.3 The appropriate form of regulation for the HVCN

HRATF considers that, in the event that the HVCN (or parts of it) become subject to the NSWRAU, IPART should take a greater role in approving – on an *ex ante* basis – the terms of access, including the pricing model. Such an approach would be appropriate in light of the HVCN's monopoly characteristics.

HRATF does not consider that the current NSWRAU 'annual compliance' model is appropriate for a monopoly asset such as the HVCN.

¹⁸ WACC parameters and methodologies are determined by the AER through a separate 'rate of return instrument' process ahead of the access arrangement review: National Gas Law, Chapter 2, Part 1, Division 1A.

¹⁹ An example of this is the Moomba to Sydney Pipeline (owned by APA) and the Eastern Gas Pipeline (owned by Jemena) which both deliver gas to Sydney.

²⁰ ACCC, Gas Inquiry 2017-2020: Interim Report, section 6.7 (p 160ff).

²¹ These factors are based on the form of regulation factors in s 16 of the National Gas Law.

This current model is only marginally more effective than 'price monitoring' and has a number of clear shortcomings, including:

1 **The current model does not provide an effective constraint on the exercise of monopoly power**. The NSWRAU, in its current form, does not give sufficient powers to IPART to prevent excessive pricing or other abuses of monopoly power by rail network operators. IPART's role is limited to reviewing – on an *ex post* basis – the operator's compliance with the asset roll forward principles and the ceiling test. IPART cannot determine allowable revenue or reference tariffs, and even where it identifies non-compliance by the operator, there is nothing that IPART can do about it.

The recent history of compliance reviews for the RailCorp / TAHE portions of the HVCN illustrates the deficiency in this model. IPART has identified noncompliance in several of its recent reviews, and yet it can do nothing to force the operator to comply. For example, IPART identified non-compliance with the ceiling limit in 2017-18, and noted that *"this is not the first compliance review where we have found that revenue for the HVCN has exceeded the ceiling amount"*.²² TAHE continued to breach the ceiling limit throughout 2018-19 and 2019-20 – by 22% over the two years – yet IPART could only note these findings and *recommend* remedial action by TAHE.²³

- 2 **IPART's role in determining pricing parameters is too limited**. IPART's role in determining key pricing parameters and cost inputs is currently very limited, focusing on just two input parameters, WACC and remaining mine life. While these two parameters are very important, they are by no means the only inputs that should be subject to regulatory oversight. IPART also needs to be given a role in reviewing the efficiency of operating expenditure, capital planning processes, tariff structures and non-price terms (e.g. performance standards and capacity management processes).
- 3 **Greater attention needs to be given to capital planning processes**. The capital expenditure consultation rules in the NSWRAU are at very high level, and do not meaningfully define the process that needs to be undertaken by rail operators in relation to new capacity investment.²⁴ Under the NSWRAU, it is largely left up to the operator to decide how it will consult with users. This may be contrasted with the well-defined industry consultation process in the HVAU (discussed below).

In the following sections, we identify some improvements that would need to be made to the NSW rail access regime in order for it to be fit for application to a monopoly asset such as the HVCN.

5.4 Pricing model

Under the NSWRAU, the rail network operator is largely left to determine the pricing model it will apply, subject only to compliance with the revenue ceiling rule and use of the IPART-determined WACC and RML (although, as noted above, even these rules are often not complied with). There is no requirement for the pricing model to be subject to industry consultation or approved by IPART in advance of it being applied.

The HVAU model (supported by the Part IIIA legislative framework) has several advantages over the NSWRAU model. Most importantly, there is now a well-established process for the HVAU pricing model to be developed in consultation with users and

²² IPART, Rail access: Compliance statement RailCorp HVCN 2015-16 to 2017-18

²³ IPART, TAHE compliance – Hunter Valley Coal Network 2018-19 to 2019-20: Final Report, November 2021.

²⁴ NSWRAU, Schedule 3, clause 3.4.

approved by the ACCC. There is also a well-understood set of criteria that the ACCC must apply in in deciding whether to approve a proposed pricing model.²⁵

The HVAU model has generally worked well in delivering outcomes that are acceptable to ARTC and users. However this model also has its shortcomings. As discussed above, a key shortcoming of this model is that it is voluntary. A further related issue that has arisen in recent HVAU reviews is a lack of transparency around ARTC's pricing and revenue models. Due to the voluntary nature of the regime and the absence of any requirement for ARTC to provide its models for review by the ACCC and other stakeholders, ARTC has been able to put its position on pricing on a 'take it or leave it' basis, without offering up its models as a basis for negotiation.

HRATF considers that an appropriate model for regulation of pricing for monopoly below-rail infrastructure under the NSW regime could take elements of the HVAU model, but with improvements to address the known shortcomings of that model. Improvements could be modelled on the framework that applies to monopoly gas pipelines under Part 8 and 9 of the NGR.

HRATF considers that a framework for determination of pricing for access to monopoly below-rail infrastructure in NSW should include the following elements:

Element	Possible precedent
Below-rail operators would be required to periodically (say, every five years) submit a proposed access arrangement – including a pricing proposal – to IPART for approval.	NGR, rule 46 (initial access arrangement) and rule 52 (periodic revisions).
Access arrangement proposal would need to specify reference services.	NGR, rule 47A – in particular, see 47A(15) (reference service factors).
For each reference service, the access arrangement proposal would need to specify a <i>reference tariff</i> and other terms and conditions on which the service will be provided.	NGR, rule 48.
A proposal would need to be accompanied by relevant modelling and such information as is necessary for IPART and stakeholders to understand the basis for the proposed reference price(s). Where IPART considers that it requires further information to assess the proposal, it could require the operator to provide that information.	NGR, rule 43: access arrangement proposal must be accompanied by access arrangement information; regulator may require the proponent to submit further information. NGR, rule 72 (requirements for access arrangement information).
IPART would be required to consult on the proposal.	NGR, rule 58.
IPART would either approve the proposal as submitted, or approve it with amendments to address any shortcomings.	NGR, rule 62 and rule 64.

²⁵ CCA, s 44ZZA(3).

Element	Possible precedent
IPART's assessment of the proposal could be guided by a set of criteria, similar to those that apply to assessment of Part IIIA undertakings. ²⁶	CCA, s 44ZZA(3). NGR, Part 9.
Alternatively, the NSW rail access regime could include a more prescriptive set of rules for determining reference tariffs – similar to those in Part 9 of the NGR.	
Where an operator has consulted with users and obtained their support for elements of the proposal, this would be a relevant matter for IPART to take into account when deciding whether to approve it.	Under the National Electricity Rules (NER), the extent of customer engagement is a relevant matter for the AER to take into account when assessing operating and capital expenditure forecasts: NER, cll 6.5.6(e)(5A); 6.5.7(e)(5A); 6A.6.6(e)(5A); 6A.6.7(e)(5A).

5.5 Capacity and investment frameworks, performance standards and other non-price terms

Through the various collective negotiation and ACCC approval processes under Part IIIA, sophisticated frameworks have been developed for industry consultation around capacity management and investment. Section 5 of the HVAU sets out the capacity management framework and provides for engagement by ARTC with the Hunter Valley Coal Chain Coordinator (**HVCCC**) and other supply chain participants around determination of system parameters, capacity analysis and management of capacity shortfalls. The capacity investment framework is set out in sections 7 – 11 of the HVAU, and includes detailed processes for consultation with industry (represented by the Rail Capacity Group) and options for user funding. IPART has previously expressed support for these elements of the HVAU framework, noting that there are many matters on which the industry group is both directly affected and better informed than the regulator.²⁷

The HVAU also includes a set of minimum terms and performance standards for the ARTC-operated portions of the HVCN. These include:

- an indicative access holder agreement setting out standard terms of access, and an obligation on ARTC to offer access in accordance with these standard terms;²⁸
- frameworks for capacity management, capacity trading, network connection and network transit management;
- requirements for ARTC to periodically report on its network performance against a set of key performance indicators that are set out in Schedule D of the undertaking;²⁹ and

²⁶ CCA, s 44ZZA(3).

²⁷ IPART submission to ACCC on its 8 January 2016 Consultation Paper, February 2016, p 2.

²⁸ HVAU, cl 3.14 and Annexure A.

²⁹ HVAU, cl 13.1.

a framework for ARTC and access seekers to negotiate KPIs to be included in an access agreement, guided by a set of principles.³⁰

HRATF considers it critical that, in the event that the ARTC-operated portions of the HVCN come under the NSW rail access regime, these elements of the HVAU framework be preserved.

In addition to any transitional mechanism, there should be scope for these elements to be integrated into any state-based access arrangements on an enduring basis. This could be achieved through the access arrangement approval mechanism discussed above – as well as approving a pricing model and reference tariffs as part of a periodic access arrangement review, IPART could also approve non-price terms and performance standards consistent with those that have been developed in the HVAU. Indeed, this is how Part 8 of the NGR operates in practice for fully regulated gas pipelines – the approved access arrangement will include standard non-price terms and performance metrics, usually in the form of an approved reference service agreement.

5.6 Compliance and enforcement

The current NSWRAU compliance framework is plainly inadequate. It does not give sufficient powers to IPART to force compliance with the terms of the undertaking, nor does it allow IPART to impose appropriate sanctions for non-compliance.

IPART's recent experience in trying to compel RailCorp / TAHE to comply with the revenue ceiling rules demonstrates some of the shortcomings on the NSWRAU. RailCorp / TAHE has exceeded the ceiling limit in each of the last three years, by a material amount (between 19% and 26%). In its 2017/18 review, IPART noted that this was not an isolated instance of non-compliance, but rather was consistent with a pattern of non-compliance by RailCorp with the NSWRAU ceiling limits – RailCorp had consistently failed to comply with the ceiling limit between 2011/12 and 2014/15. Non-compliance would appear to have become more flagrant in recent years, with TAHE also refusing to adopt the asset life assumptions determined by IPART.

Year	IPART compliance finding
2019-20	Non-compliant. TAHE's access revenue exceeded full economic cost by \$1.3 million (around 19%). TAHE also failed to comply with the asset roll-forward principles and did not apply the asset lives determined by IPART.
2018-19	Non-compliant. TAHE's access revenue exceeded full economic cost by \$1.7 million (around 25%). TAHE also failed to comply with the asset roll-forward principles and did not apply the asset lives determined by IPART.
2017-18	 Non-compliant. RailCorp's access revenue exceeded full economic cost by \$1.8 million (around 26%). IPART noted in its report that: "This is not the first compliance review where we have found that revenue for the HVCN has exceeded the ceiling amount. We share the concerns of stakeholders that the NSW regime has not been effective in dealing with this."

³⁰ HVAU, cl 13.2.

IPART's compliance and enforcement powers need to be brought into line with those available to regulators under other access regimes. For example:

- under Part IIIA, the ACCC can apply to the Federal Court for orders directing compliance with the terms of an undertaking and/or directing the service provider to provide compensation in connection with a breach;³¹
- under the gas pipelines regime discussed above, civil penalties can apply where a service provider fails to submit an access arrangement proposal³², fails to provide adequate supporting information³³, or fails to meet various other access obligations.³⁴ These requirements of the NGR are mostly classified as 'Tier 2' civil penalty provisions, carrying a maximum penalty of \$1.4 million per breach, plus \$71,800 for each day that the breach continues.³⁵

6 Access pricing principles

6.1 Remaining mine life and depreciation

The approach to setting the depreciation allowance is a key issue for the regulation of HVCN. HRATF recognises that the current level of investment in the rail network is unlikely to be required by future industries once the coal resources are fully used up. Hence, it is reasonable to set the economic life of the network to the economic life of the coal industry in the Hunter Valley in order to avoid stranding risk.

This poses two questions:

- What is the economic life of the coal industry in the Hunter Valley?
- How should economic life of the HVCN be measured relative to the life of the industry in the Hunter Valley.
- (a) Measuring the future of Coal in the Hunter Region

As discussed previously in the submission, Hunter Valley is well positioned to supply the long tail of remaining global demand for coal, even as that demand eventually begins to decline. This suggests there is strong reason to expect that the known coal reserves in the Hunter Valley will not become stranded and should be expected to be extracted.

The key—and the most reliable—source of information on the total amount of coal that can reasonably be expected to be extracted in a region is the JORC estimate of Marketable Reserves for each mine in the area. Marketable Reserves are defined as beneficiated or otherwise enhanced coal product where modifications due to mining, dilution and processing are taken into account in assessing the economic value of the extracted resource. Marketable Reserves intend to represent a clear, transparent and independent estimate of the total amount of coal that can be economically extracted from the mine and sold, estimated in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). The JORC code is described in detail in Box 1.

³¹ CCA, s 44ZZJ.

³² NGR, r 46 and r 52.

³³ NGR, r 43.

³⁴ NGR, Part 11.

³⁵ National Gas Law, s 3A(1)(b).

Box 1

The JORC Code is a professional code of practice that sets minimum standards for Public Reporting of minerals Exploration Results, Mineral Resources and Ore Reserves.

The JORC Code provides a mandatory system for the classification of minerals Exploration Results, Mineral Resources and Ore Reserves according to the levels of confidence in geological knowledge and technical and economic considerations in Public Reports.

Coal resources estimated using the JORC code is undertaken through a holistic and robust assessment. The assessment must take into account:

- Environmental factors, such as the amount of waste rock, waste dumps and residue storage
- Market factors, such as demand for coal, consumption trends, customer and competitor analysis, and price and quantity forecasts.
- Economic viability of mining the coal; and
- Social factors and stakeholders such as native title claims.

Public Reports prepared in accordance with the JORC Code are reports prepared for the purpose of informing investors or potential investors and their advisors. They include, but are not limited to, annual and quarterly company reports, press releases, information memoranda, technical papers, website postings and public presentations of Exploration Results, Mineral Resources and Ore Reserves estimates.

Source: www.jorc.org

The JORC code provides a reliable basis for regulated reporting. Under the Corporations Act 2001 (Cth) (Corporations Act) and the Australian Securities and Investments Commission Act 2001 (Cth) (ASIC Act), a mining company must have reasonable grounds for making a statement about future matters, which includes a statement regarding ore reserve and mineral resource estimations. Relevant professional and industry standards must be taken into account in assessing whether reasonable grounds for making a statement exist, which in this case is the JORC code. A company listed on the Australian Securities Exchange (ASX) must also comply with the ASX Listing Rules. The reporting framework for listed mining entities in Chapter 5 of the ASX Listing Rules is underpinned by the JORC Code.

Reports made under the JORC Code must be prepared by or under the direction of, and signed by, a 'competent person'. A 'competent person' is a minerals industry professional who is a Member or Fellow of the Australasian Institute of Mining and Metallurgy, or of the Australian Institute of Geoscientists, or of a 'Recognised Professional Organisation' listed on the JORC and ASX websites.

Under the Corporations Act, an offence is committed where a company knowingly makes a materially misleading statement in a document required by the Corporations Act or lodged with or submitted to ASIC, or knowingly omits information from the document which makes it materially misleading. An offence is also committed if the company has not taken reasonable steps to ensure that the statement was not misleading or did not omit information which would make it misleading. Separately, the ASX can require a listed company to take corrective action if the company has breached the Listing Rules. The ASX may suspend trading in a company's securities or terminate a company's listing. Further, the ASX is required to notify ASIC if it suspects that a listed company has committed a significant contravention of the Listing Rules or that the company (or any of its officers) has contravened the Corporations Act. ASIC may then consider whether or not criminal or other regulatory action in relation to a breach is to be taken.

Given the current coal market context and its future outlook, it is reasonable to question whether that Marketable Reserves remains an appropriate way to measure the amount of the coal resource that will requires the HVCN. The main concern is that Marketable Reserves may not take into account uneconomic coal resources, either because it is unprofitable to extract or through external forces, such as accelerated decarbonisation, means loss of demand.

Marketable Reserves represents a rigorous and holistic assessment of coal resources that can be profitably extracted and sold. As described in Box 1, estimates of Marketable Reserves take into account the current and future demand of coal, the competitive position of the mine's coal in terms of product quality, and the extent of resources that can be profitably extracted. An example of this is the Narrabri North mine owned by Whitehaven Coal. Marketable Reserves decreases from 98 Millions of Tonnes (MT) in 2020 to 81 MT in 2021, due to a change in mining approach and partial reduction in coal quality.³⁶

Overall, users strongly believe that a total measure of Marketable Reserves derived from the official filings by mining companies operating in the Hunter Valley represents the best measure of the total resource that will be extracted in the region—and which will require the use of rail. Hence, the most reliable and logically consistent way to analyse the economic life of coal rail is by relying on the Marketable Reserves data and on current and planned annual railed tonnage as a measure of the extraction rate. Marketable reserves effectively represent the amount of coal that is ready to be shipped and sold to customers. Hence, using actual railed tonnage as the denominator will ensure that both the numerator and the denominator use the same underlying concept. In addition, actual annual railed tonnage is easily measurable and verifiable.

(b) Methodologies for converting estimated resource extraction into economic life of the network

There are two methodologies to estimate the economic life of the HVCN. The first is IPART's current approach of the Longest Living Substantial Mine (LLSM). The LLSM approach estimates economic life by reference to the longest lived mine on a railway line that produces sufficient coal to economically sustain that line. The second is ACCC's approach of the Weighted Average Mine Life (WAML). The WAML approach estimates economic life by estimating the RML of each mine on a railway life, and weighting the total by the Marketable Reserves of each mine. Both approaches apply straight line depreciation.

The LLSM approach produces a stable, relatively low rate of depreciation that attempts to minimise fluctuations in total depreciation. What this means is that as shorter lived mines expire, while the total amount of depreciation remains the same more is allocated to the remaining mines. IPART noted that the rationale for the LLSM approach is that it better reflects operating decisions of a railway line as shorter-lived mines close. ³⁷ We note that

³⁶ Whitehaven Coal 'Coal Resources and Coal Reserves Update' ASX announcement. August 2021. Available at: https://whitehavencoal.com.au/wp-content/uploads/2021/08/Whitehaven-Coal-Limited-Resources-and-Reserves-August-2021.pdf

³⁷ IPART, IPART submission to ACCC on its 8 January 2016 Consultation Paper, February 2016

the LLSM approach requires a degree of judgement of what constitutes 'substantial', hence may raise stranding risk if that judgement is inaccurate.

The WAML approach produces an initially higher rate of depreciation, which then reduces as shorter lived mines expire. Although the WAML approach leads to a total depreciation path that is high initially and declines over time, the amount allocated to each mine is relatively stable. This is because as total depreciation decreases, the total amount of remaining mines decrease as well.

A depreciation approach that best advances economic efficiency should best promote two outcomes. First, it should lead to recovery of depreciation consistent with the costs that each coal mine causes. Second, it should lead to investors being able to recover the full cost of their investment. Taken together, it means coal miners who cause more capex should pay more depreciation, and that the total amount of depreciation recovered should equal to investment made in order to meet the financial capital maintenance principle.

WAML approach generally appears to meet the above criteria better. The WAML approach leads to an allocation of depreciation that's more proportionate to the costs each mine causes. Both approaches address the "death spiral risk". Under WAML, as remaining mine life is re-assed at each period, the remaining mines are expected to carry the proportionately the same depreciation as the already retired mines have already contributed. Hence, the depreciation allowance in each period is likely to be sustainable. The LLSM approach relies on careful identification of the substantial mine that is able to carry a higher level of remaining depreciation. There is a greater risk of error in the LLSM approach, and hence higher risk.

The HRATF notes, however, that the depreciation allowance and the approach to setting the rate of return need to be considered together. IPART currently combines LLSM approach—which extends depreciation—with an approach to setting the rate of return which tends to average returns over longer period of times. By contrast, the ACCC favours a more contemporaneous WACC methodology combined with WAML. The HRATF would be concerned if the logical link were broken, with IPART adopting WAML while retaining its approach to the rate of return.

6.2 Rate of return

The rate of return for an asset should reflect the benchmark return a regulated business should earn commensurate to its risks. The rate of return is typically estimated by reference to a weighted average cost of capital. Required yields for debt and equity capital are estimated on a benchmark basis that reflects the risk profile of the regulated business, and are combined together based on a benchmark capital structure to estimate the rate of return. Indeed, this is the approach IPART takes.

The risk profile of the rail lines subject to the NSW RAU are not uniform. This is because the rail lines are used for a variety of purposes, ranging from metropolitan trains, leisure travel, to freight of varying types of cargo. Each type of use carry different levels of risk. For example, the risk of the Country Regional Network is likely to be greater than the HVCN, because its end-user operates in a riskier and more competitive environment than coal miners, whom have no other choice but to use the HVCN.

We understand that applying a single WACC to the entire NSW RAU may be administratively simpler, however we don't believe it is appropriate. It is conceptually inconsistent to estimating a WACC reflecting of an asset's underlying risk profile. It can lead to revenue ceilings that are inappropriate for the level of risk experienced by the underlying asset. In this context, we suggest that IPART should apply a differentiated WACC that reflects the different risk profile of the NSW rail network. This means for the HVCN, a WACC that reflects its coal risk should be applied. We also support IPART adopt a WACC that's consistent, to the extent possible, with the ARTC portion of the HVCN. This is because of the similarities in the underlying risk profile of both TAHE HVCN and ARTC HVCN.

6.3 Calculating costs on a stand-alone basis for the ceiling test, and relevance of floor test

The floor and ceiling tests have three economic purposes in Economic Regulation. First, ensure that revenue doesn't exceed the stand-alone costs of a service such that excessive profits are earned. Second, ensure revenue doesn't fall below incremental costs of a service such that it is being cross-subsidised. Third, while operating within the floor and ceiling limit, the regulated business continues to be incentivised to efficiently use its assets and invest prudently. Given the significant volumes on the HVCN, the first and third objective are most important to the HVCN. While the floor test remains an important concept for the NSW RAU, it is unlikely to be relevant for the HVCN.

The key revenue ceiling issue faced by IPART on the TAHE HVCN is that the stand-alone cost of a hypothetical TAHE HVCN is not reflective of reality. The TAHE HVCN operates as part of a broader passenger rail network, and because of this the TAHE HVCN incurs additional costs that otherwise it would not if it was a stand-alone coal railway line. As a result, undertaking a ceiling test by only considering HVCN as a stand-alone railway line may under-estimate its full costs.

Although we don't have a view on how to improve the ceiling test for the TAHE HVCN, we note that the revenue ceiling test is unlikely to have an impact on the operational efficiency and investment incentives of the HVCN.

The HVCN has two main mechanisms to ensure operational efficiency and capital investment occurs. This is the Hunter Valley Coal Chain Coordinator (HVCCC) and Rail Capacity Group (RCG) respectively. Members of the HVCCC and RCG include ARTC, Port of Newcastle, train operators and coal miners, whom work together to ensure the coal supply chain is operating efficiently, and capacity constraints are addressed. As a result, improvements to the ceiling and floor test are unlikely to have an impact on operational efficiency or investment incentives.

6.4 Regulatory asset base

The purpose of DORC valuation in regulation is to set a starting Regulatory Asset Base (RAB) that is reflective of a workably competitive environment. That RAB is then used for the purposes of regulating revenue or prices reflective of a workably competitive environment.

Any asset valuation to set a RAB should only be done once, and be rolled forward in accordance with depreciation and inflation indexation. This is the standard approach applied by Economic Regulators such as the Australian Energy Regulator and the Queensland Competition Authority. Regular revaluations can lead to significant economic problems such as:

- windfall gains or losses this is due to adjustments to the RAB due to exercise of regulatory judgement rather than investment or depreciation;
- greater price uncertainty where prices are set in accordance to a RAB value; and
- increased regulatory risk due to the extent of regulatory judgement that must be applied.

We do not believe this would support IPART's principles of efficiency and regulatory certainty.

6.5 Operation of the unders and overs account

ARTC's Hunter Valley Access Undertaking provides a comprehensive set of guidance on the operation of the unders and overs account, including annual compliance testing. We believe there should be consistency in the approach to unders and overs accounting, particularly since the NSW RAU and ARTC HVAU affect the same HVCN. We would encourage IPART to work with the ACCC to ensure there is consistency in operation and guidance of unders and overs accounting.

Allowing loss capitalisation for new infrastructure

As IPART had already identified, the issue loss capitalisation attempts to address is a disincentive to invest because of delays in when assets are developed and when that capacity is used. We believe such a situation can reduce overall economic efficiency because it may lead to hesitancy of miners developing new tenements.

However, we don't believe such an issue is significant given the operation of the RCG. As noted above, the RCG works together to identify capital investment needed for the efficient operation of the Hunter Valley coal supply chain. This includes both the amount of capital investment and timing of that investment. We believe the operation of the RCG reduces the need for a loss-capitalisation mechanism.

We suggest that IPART encourage stakeholders of the HVCN to participate in the RCG, in order to solve any capacity issues.