Revocation of declaration of the shipping channel service at the Port of Newcastle

Response to NERA report

Prepared on behalf of Glencore Coal Pty Ltd

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Executive Summary

NERA Economic Consulting (NERA) prepared a brief, high level report for the National Competition Council (NCC) as part of the NCC's consideration of whether declaration of the shipping channel service provided by Port of Newcastle Operations Pty Ltd (PNO) at the Port of Newcastle (Port) would be likely to satisfy the criterion set out in section 44CA(1)(a) of the *Competition and Consumer Act 2010* (Cth) (CCA) in respect of the coal tenements market and to respond to our report dated 4 February 2019 lodged on behalf of Glencore.

On 8 April 2019, the NCC published NERA's report and invited written submissions.[1] Synergies has been instructed by Glencore to provide a report in the time available which responds to the issues raised by NERA.

The primary matter for consideration in determining whether or not there is a loss of competition in the coal tenements market in a future absent declaration is (a) whether PNO will have the incentive to impose significantly higher port charges and (b) the effect of higher port charges in the dependent market for coal tenements.

While we and NERA agree that PNO, as an infrastructure monopolist, has an incentive to maximise profits, NERA places considerable weight on an expectation that PNO will impose future price increases that do not limit coal volumes or distort investment incentives in the coal tenements market. However, we consider that a comprehensive assessment of PNO's incentives to exercise market power must consider the extent to which the profit impact of such lost coal volumes may be compensated by the profit impact of significantly higher prices for the coal volumes that can be expected to continue to be exported, particularly from existing mines. In this regard, we have demonstrated in this submission that, as an infrastructure monopolist, the potential increase in PNO's profitability from increasing prices and accepting the consequential loss in volumes far outweighs the potential increase in PNO's profitability from maintaining or increasing volumes.

Whilst PNO may have no direct incentive to damage volumes or distort investment incentives, this is to be an expected and indeed inevitable consequence of a profit maximising firm pursuing that objective in the absence of any effective pricing constraint. This reflects that the potential for future significant price increases will create an expectation of higher costs and risks for investors in future coal mines, reducing the economic viability of new and prospective mining developments in the Newcastle catchment area, particularly for smaller companies who are less diversified and have

[1] See http://ncc.gov.au/application/consideration-of-possible-recommendation-to-revoke-declaration-of-service-a/4

fewer available pathways to finance. The resulting reduction in the number of potential buyers of tenements will lessen rivalry for the acquisition of tenements, resulting in a lessening of competition in this market.

The critical issue that will affect participants in the tenements market is their perception of the risk that PNO will introduce substantially higher prices, as opposed to whether or not PNO actually intends to do so. The history of this matter, where the Tribunal has found that PNO significantly increased charges without any change in costs or any consultation with users and where such increases have been found by the ACCC to exceed its view of reasonable cost recovery, and where PNO has vigorously argued against any form of regulatory constraint on its charges, has highlighted to users the nature and extent of Port pricing risks they bear (particularly if the declaration is revoked). In this context, the mere existence of a credible scenario where such adverse pricing outcomes are possible creates significant pricing uncertainty and risk that must be borne as an additional, and unavoidable cost by participants in the coal tenements market.

At a more granular level, as explained in this response submission, Synergies:

- disagrees with NERA's view that the likely adverse effect on future coal mining investment resulting from PNO's reputation if it were to impose a significant price increase, will constrain PNO from charging substantially higher prices;
  - we consider that a proper consideration of PNO's incentives requires comparing the effect on PNO's expected profits rather than simply considering the effect on future coal volumes;
  - we demonstrate that the additional revenue from charging a substantially higher price will far outweigh the likely revenue gain from any additional new demand or increased longevity of demand that may eventuate at a much lower price, and so charging a higher price will be consistent with PNO maximising profits;
- disagrees with NERA's view that the coal tenements market is wider than the Newcastle catchment region;
  - NERA's approach in its brief, high level report is not sufficiently rigorous to fully assess this market for competition purposes and, as a consequence, NERA's conclusions on geographic scope are flawed. NERA's view does not take into account the significant regional and country differences that exist between coal tenements in the Hunter Valley and those in the various Asian Pacific countries, making them far less substitutable than NERA presupposes. We reiterate our view that the geographic boundary of the market is the Newcastle catchment region, and note that this is consistent with the

geographic boundary taken by the NCC in its Statement of Preliminary Views ('NCC's preliminary view'). Our approach is consistent with that of the Queensland Competition Authority in its review of the declaration at the Dalrymple Bay Coal Terminal (DBCT), and is also consistent with the approach taken by the Tribunal in the Fortescue matter as well as the Federal Court and High Court in relation to iron ore tenements in that matter;

- disagrees with NERA's argument that increased cost and risk of mining operations would lead to a reduction in the value of tenements but does not mean a lessening of competition;
  - we consider that the higher costs and risks would disproportionately impact smaller producers and more marginal tenements, resulting in smaller producers being less likely to acquire tenements;
  - standard auction theory shows that a reduction in the number of bidders for tenements would lead to lower acquisition prices, and a lessening of competition in the tenements market;
- disagrees with NERA's argument that PNO would be unable to set a price just below the level that would make Newcastle coal producers' operations unviable;
  - given PNO's incentives to charge a substantially higher price that is consistent with maximising profits, we consider the future threat of regulation is not a credible constraint, which the NCC already noted in its preliminary view;
  - NERA's argument that removing the existing regulation (via declaration) on the basis that regulation (via an alternative stated based regulation) would pose a credible threat and act as a constraint on PNO's market power seems circular, if not, somewhat counter-intuitive, particularly if the declaration is revoked. There is no credible basis for NERA's assertion given the absence of any action or indication of an intention to take action from the NSW Government in response to PNO's past price increases.

Contents

1 Introduction

1.1 Background and instructions

Synergies Economic Consulting (Synergies) has been assisting Glencore Coal Pty Ltd (Glencore) in its response to the National Competition Council (NCC)'s consideration of the application submitted by Port of Newcastle Operations Pty Limited (PNO) to the NCC on 2 July 2018 to have the existing declaration of the shipping channel service at the Port of Newcastle revoked.

The NCC released its Statement of Preliminary Views on 19 December 2018 which concluded that criterion (a) and (d) established in s 44CA of the *Competition and Consumer Act 2010* (Cth) (CCA) are not satisfied and therefore indicated that it proposes to recommend to the designated Minister that the declaration be revoked.[2]

Synergies' report of 4 February 2019 disagreed with the NCC's preliminary view on the basis that the NCC had not properly considered the manner in which and extent to which PNO will be incentivised to maximise profits in a future without declaration. As a consequence, we concluded that the NCC had not appropriately assessed the risk associated with the strong likelihood that substantially higher port charges will materially reduce the investment incentives for coal tenement buyers in the Newcastle catchment region and impact adversely on competition in the coal tenements market.

The NCC has since commissioned a brief, high level report by NERA to assist its consideration of whether declaration would be likely to satisfy criterion (a) in respect of the coal tenements market.

NERA provides opinion on three key aspects:

- PNO's incentives to impose significantly higher charges, with particular respect to a "coal tenements" market;
- likely consequences of PNO's market power for competition, particularly in a "coal tenements" market; and
- the reasonableness of Synergies' price analysis of February 2019 which considered the level of price increases PNO would find profitable under various levels of coal prices.

[2] NCC (2018), pp.79-80.

1.2 Report structure

The primary issue for consideration in determining whether or not there is a loss of competition in the coal tenements market in a future absent declaration is (a) whether PNO will have the incentive to impose significantly higher port charges and (b) the effect of higher port charges in the dependent market for coal tenements.

Synergies has adopted the following structure for this report:

- Section 2 – sets out our response to NERA's analysis about PNO's incentives to increase prices in which we demonstrate that NERA has not adequately considered the extent to which PNO's incentives are aimed at maximising profits, and not as they argue, to maximise coal volumes — this distinction has important implications for our respective views about the impact of port charges on resource values of coal tenements and the state of competition in the coal tenements market;
- Section 3 – presents our response to NERA's views about the effect of declaration of competition in the coal tenements market in which we first show that NERA's assessment is based on an inappropriately wide definition of the geographic scope of the coal tenements market. We then show that NERA has not had sufficient regard to the effect that higher port access charges will have on tenement values and therefore to the attractiveness of those tenements for potential purchasers; and
- Section 4 – we respond to NERA's assessment of our earlier pricing analysis in which we maintain our view that the factors identified by NERA do not provide any credible constraint on PNO's ability to adopt considerably higher prices.

2 PNOs' incentives to exercise market power

The NCC has previously established that PNO has market power in respect of coal exports through its shipping channels, which NERA assumes is correct.[3] Synergies endorses this view. We also agree, consistent with our previous reports, with NERA's view that as an infrastructure monopolist, PNO's incentive is to maximise profits.

The main point of disagreement between Synergies and NERA relates to how PNO will most effectively maximise its profits, and our points of disagreement are summarised as follows:

- we consider that PNO's profit maximising incentive will most effectively be achieved through PNO increasing its prices and accepting potential, consequential impacts of reduced volumes;
- NERA, argue, without empirical assessment, that PNO's profit maximising objective will require PNO to encourage further investment in coal mining such that it will act as a constraint on PNO imposing substantial price increases.

While PNO may have no direct incentive to undermine competition in the coal tenements market, this is an inevitable economic consequence of PNO's incentives to target profit maximisation through price increases, for the reasons discussed in Section 3.

2.1 NERA's views on PNO's incentives

NERA accepts that PNO's incentive is to maximise profits from the shipping channel service, and accepts that for a firm with market power, this is generally different to maximising the volume or quantity of shipping utilising the service.[4]

NERA also accepts that PNO is a monopolist in respect of shipping services for existing coal mines in the Newcastle catchment.[5] That means PNO is able to charge a substantially higher price from existing coal mines than those currently imposed. Indeed, as Synergies has previously argued, PNO is able to extract economic rents from existing coal mines where, once investment in the mine is sunk, coal volumes

[3] NCC (2018), para 6.26; NERA (2019), para 7.

[4] NERA (2019), para 11.

[5] NERA (2019), paras 4, 15.

(particularly for inframarginal producers) are relatively insensitive to changes in port charges.[6]

However, in assessing PNO's incentives to exercise market power (that is, to impose a substantially higher price), NERA limits its analysis to a qualitative review of the potential impact on volumes, in particular, volumes from future coal mines[7], rather than on PNO's profits. It claims that:

- in setting prices, PNO will account for the potential reductions in future coal output, including both reductions in current coal volumes as well as from potential future mines; and
- a tenement market that was not competitive would have fewer tenement transactions and so fewer mines developed, reducing coal volumes across the port.[8]

On this basis, NERA concludes that PNO has a positive incentive to encourage coal mine investment. The accepted fact that PNO increased its Port charges by up to 60% in 2015, at a time when coal prices had fallen dramatically and some coal mines were operating with negative cash margins, does not support the view that PNO's pricing decision was based on incentivising coal mine investment.[9]

2.2 Synergies' response

We agree with NERA's view that, in setting prices, PNO will take into account the potential reductions in future coal output, including both reductions in current coal volumes as well as reductions from potential future mines. However, we consider that the result of such assessment will be quite different from that suggested by NERA.

NERA relies on the Hilmer Report to argue that where the owner of an essential facility is not vertically integrated, it will usually have little incentive to deny access because maximising competition in vertically related markets maximises its own profits.[10] This,

6 Synergies (2019), p.35.

7 NERA (2019), paras 15, 16, 40.

8 NERA (2019), para 10.

9 Glencore's 2015 application for declaration noted that the Port of Newcastle Ops published price increases and changes to the charging regime effective from 1 January 2015 resulted in an increase in prices for coal vessels of approximately 60% for Handymax, Panamax and Post Panamax vessels and 26% for Capesize vessels. As a direct result of this increase, Glencore estimated that the Port of Newcastle Op's revenue from navigation charges would increase by approximately 40%, or at least $20m per year compared to the 2012/13 Annual Report for the Port of Newcastle. See Glencore (2015), Application for a declaration recommendation in relation to the Port of Newcastle, May 2015, p.14.

10 NERA (2019), para 9.

in our view, overlooks an essential point in the context of the current debate— that PNO has no incentive to avoid distorting markets where it profits from doing so.

A comprehensive assessment of PNO's incentives to exercise market power must consider the extent to which the profit impact of such lost coal volumes may be compensated by the profit impact of higher prices for the coal volumes that can be expected to continue to be exported particularly from existing mines. In other words, it is necessary to assess whether it is in PNO's interest to charge a higher price from existing coal mines notwithstanding that this would likely deter volume, including that resulting from investment in future coal mines, compared to PNO charging a lower price that would encourage continued volumes from existing mines as well as future mine development. This is particularly important where, as accepted by the NCC, demand for the channel service is known to be relatively price inelastic.[11]

In this regard, Synergies' previous analysis has demonstrated that PNO's profits would continue to increase even in the face of increases in port charges by $12.50/t, notwithstanding that this would lead to a loss in volume, with potential volume losses increasing as coal prices decrease. We have previously assessed that, at the 5-year average coal price of AU$95/t, coal export volumes could be expected to fall to 153mtpa from the current volume of 159mtpa[12] (note, we respond to NERA's assessment of this analysis in Section 4). Wood Mackenzie's most recent forecast indicates an improved price outlook compared to 2018, with Newcastle thermal coal prices forecast to range from US$78-97/t or AU$111-139/t (2019$s) over the next ten years,[13] indicating that there may be even less impact on demand over this timeframe from a $12.50/t price increase.

A simple calculation shows that PNO could potentially earn revenue[14] of about $1,995 million per annum from increasing port charges by $12.50 per tonne (that is a port charge of $13.03 per tonne applied to a volume estimate of 153 mtpa), which dwarfs the revenue of:

- about $84 million per annum, if PNO were to charge its current price to existing coal volumes (that is, $0.53 per tonne to 159mtpa throughput realised in 2017[15]); or

11 NCC (2018), p.25.

12 Synergies (2019), p.20.

13 Wood Mackenzie forecast for 'FOB Newcastle @ 6,000 kcal/kg NAR, market', April 2019; Synergies conversion from USD to AUD based on current exchange rate of 0.70. This compares to Wood Mackenzie's August 2018 forecast for that same coal type, which ranged from US$72-86 over a ten year timeframe.

14 Since costs of providing shipping services are largely fixed, we have focused on revenues rather than profits.

15 NCC (2018), para 6.31

- about $113 million per annum if PNO were to charge its current price to the highest total coal export volume expected by Wood Mackenzie over the current declaration period, comprising coal volumes from existing as well as future coal mines over that period (that is, $0.53 per tonne to 214 mtpa throughput[16]).

Assuming as the discount factor the WACC the ACCC determined in the arbitration determination, at current prices and maximum foreseeable volumes, PNO will need to earn revenue for an additional approximate 27 years[17] in order to match the revenue from a $12.50 per tonne price increase applied for a single year.

This simple calculation confirms that the incentives for PNO to charge a substantially higher price are strong even knowing that this is likely to result in some loss of current volumes as well as have the effect of discouraging investment in future coal mines (or demand from new coal mines) and accelerating the expected pace of decline in future coal exports. As a result, it is insufficient to simply assume, as NERA has done, that PNO's commercial incentive for coal exports at a higher volume and for a longer period will outweigh the commercial benefit that it would receive from price increases.

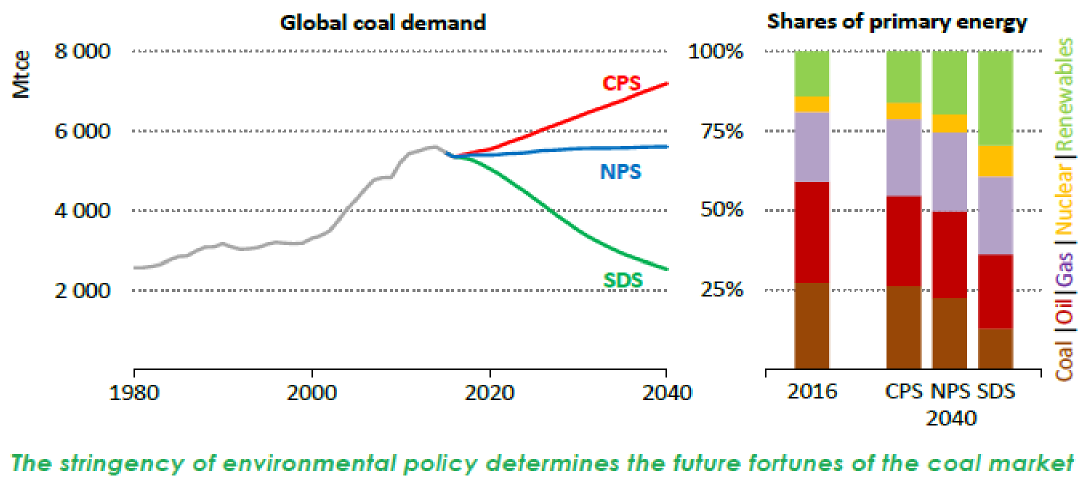
Therefore, we disagree with NERA that competition for future coal mines will effectively constrain PNO from imposing significantly higher charges. Rather, our quantitative analysis demonstrates that PNO will be strongly incentivised to charge a significantly higher price to existing coal mines and accept the consequential loss in volume.

This is particularly the case given the significant uncertainty in future demand. The International Energy Agency, for example, has forecast a range of long-term scenarios of world coal demand up to 2040. These scenarios are shown in the figure below and the projected outcomes vary widely.

16 NCC (2018), para 6.31; Synergies (August 2018), pp. 22-23.

17 The ACCC determined a real post-tax WACC of 3.93 per cent (ACCC, Final Determination: Statement of Reasons, Access dispute between Glencore Coal Assets Australia Pty Ltd and Port of Newcastle Operations Pty Ltd, 18 September 2018, p. 165. Noting that at the end of the first year the revenue from increasing port charges by $12.50 per tonne would be $1,995 million compared to the maximum foreseeable revenue of $113 million at current prices, we calculated the additional years it would take for the present value of an ordinary annuity of $113 million per year to equal the difference between $1,995 million and $113 million, which produced 27.4 years.

Figure 1 Global coal demand



Note: CPS = Current Policies Scenario; NPS = New Policies Scenario; SDS = Sustainable Development Scenario.

Source: International Energy Agency (2017), World Energy Outlook 2017, p.208

Briefly, under its current policies scenario (which is based on measures already in force), global coal demand is projected to expand rapidly. Under its new policies scenario, there is a projected dampening of growth prospects over the next 25 years. Under the sustainable development scenario, goals of this scenario (which include significant reductions in air pollution) are not compatible with unabated coal use, and thus, global coal demand is expected to decline over the outlook period.[18]

The uncertainty of the future demand outlook for PNO is reflected in Wood Mackenzie's most recent forecast for Newcastle thermal coal exports,[19] which anticipates that:

- under Wood Mackenzie's base case price forecast, total exports of thermal coal from Newcastle will decline from 136.5mt in 2019 to 127.0mt in 2030;
- however under Wood Mackenzie's high scenario price forecast, total exports of thermal coal from Newcastle decline more substantially to 114.3mt by 2030 on the basis that the higher prices trigger the development of large thermal coal mines in Queensland, displacing new Hunter Valley developments.

In each case, Wood Mackenzie's total coal exports include volumes anticipated from new Hunter Valley mining developments, demonstrating that new investment remains important to the longevity of the Hunter Valley coal industry.

18 International Energy Agency (2017), World Energy Outlook 2017, p.208.

19 Wood Mackenzie, April 2019

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Given this uncertainty, PNO may legitimately consider that its commercial interests are better promoted by earning higher profits on the existing, more certain, volumes, and foregoing future profits on the uncertain volume associated with new mine developments.

In any case, if volume impacts became significant, it would be possible for PNO to react by changing its pricing arrangements to limit the potential for a reduction in volumes. For example, it could uniformly reduce prices and/or provide long term commitments on price, if it considered that this was likely to promote throughput. Alternately, it could introduce price discrimination in order to encourage new mines, for example by entering into long term agreements with a producer in a similar manner as will occur with Glencore upon finalisation of the current arbitration, or by offering a simple rebate on shipping charges to selected coal mines based on demonstrated throughput. Notwithstanding the NCC's preliminary view that PNO is unable to price discriminate, we consider that PNO has the ability and incentive to price discriminate, and in considering such actions, is unlikely to be concerned about inducing distortions in competition amongst Hunter Valley coal producers.[20]

We note that the NCC's preliminary view that PNO is unable to price discriminate between mines, primarily reflected that PNO's customers are usually the ship owners and agents, not individual mines and that PNO will not have sufficient visibility over the source of coal loaded onto most vessels to be able to set charges so as to expropriate profits from individual mine investments.[21]

However, given PNO's strong commercial incentives to exercise market power to increase profits absent declaration, it may engage in third degree price discrimination and divide the coal market on the basis of signals that are observable and verifiable (such as the age of mine, JORC reserve of a mine[22] or location of a tenement). Although PNO may apply a uniform price to ship owners and agents, it could implement a rebate mechanism associated with the observable and verifiable signals to price discriminate

20 Indeed, the ACCC arbitration outcome will induce a distortion amongst coal producers in the Hunter Valley if that arbitration outcome is not available to all coal producers.

21 NCC, December 2018, para 6.117.

22 The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ('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. Public Reports prepared in accordance with the JORC Code are reports prepared for the purpose of informing investors or potential investors and their advisors. See http://www.jorc.org/.

between existing mines and new mines, and between tenements being developed, which may distort competition in the tenements market or even in the coal market.

3 Effect of declaration on competition in coal tenements market

NERA provides an opinion on the market definition for the tenements market and the effect that revocation of the declaration may have on competition in that market. NERA adopts a much wider market definition (being at least Australia wide and potentially as broad as the Asia Pacific) than that taken by the NCC in its preliminary view where the geographic dimension of the tenements market was limited to the Newcastle catchment area. NERA concludes that PNO does not have an interest in undermining development in new mines, but even if it did, it is not 'convinced' that there would necessarily be a material reduction in competition in the tenements market.[23]

In contrast, we consider that the maximum geographical scope of the tenements market is confined to the Newcastle catchment area, and that substantial increases in port charges will increase the cost and risk of coal production in this area resulting in a reduction in the attractiveness of future development. As we have previously highlighted, similar to investors in the residential housing market, prospective bidders for coal tenements are likely to have less interest in purchasing tenement rights when they assess that their expected returns will be materially lower in the face of rising costs which cannot be mitigated. This in turn most likely means a material loss in competition in the coal tenements markets and less efficient outcomes for existing tenement holders where coal resource values are reduced.[24]

Hence, the most significant impact of PNO's profit maximisation will fall on the tenements market, with higher costs and risks of mine development leading to a smaller pool of bidders for available tenements resulting in a material lessening of competition in this market.

3.1 Market definition

3.1.1 NERA's views

While NERA accepts that each tenement is specific to one location, it argues that the market for coal tenements is likely to encompass a geography that is wider than the Newcastle catchment, at least as wide as Australia, and potentially as broad as the Asia Pacific.[25] This is because a tenement's ultimate value is derived from its sole use as an

23 NERA (2019), para 29.

24 Synergies (February 2019), p.8.

25 NERA (2019), para 24.

input into the production of supply for the coal export market. NERA further argues that because the coal export market is most likely global, it 'does not make sense' to consider the tenements market to be limited to the Newcastle catchment.[26]

3.1.2 Synergies' response

We do not agree with NERA's approach nor its conclusions on the market definition for the coal tenements market. In our view:

- NERA does not consider aspects of a market definition for tenements which is consistent with accepted competition practice;
- when assessing the geographic scope of the market, NERA only considers options available to tenement buyers, and does not adequately account for the options available to tenement sellers, who as we have previously established in earlier submissions have no option but to sell to a buyer reliant on export through the Port of Newcastle; and
- by establishing a market definition that encompasses the Asia-Pacific region, NERA's definition is not consistent with previous regulatory decisions relating to tenement markets.

We further note that NERA's views are not consistent with the NCC's Preliminary View which has taken the geographic dimension of the tenements markets to be the Newcastle catchment area.[27]

SSNIP analysis to inform market definition

NERA's approach to considering the geographic dimension of the tenements market does not appear to adopt an analytical approach that is consistent with accepted competition analysis.

In our 8 August 2018 report, we applied a purposive approach in defining the market for coal tenements connected to the Port of Newcastle, where the purpose of the market definition is to identify the area in which market power could potentially be exercised.

The most common analytical tool for assessing the scope of markets is the "hypothetical monopolist" small but significant non-transitory increase in price (SSNIP) test. This test has been commonly applied in Australia and other jurisdictions. At the heart of this test is the scope for substitution. The test starts by considering the relevant product being

26 NERA (2019), para 24.

27 NCC (2018), p.52, para 6.146.

provided, and assuming a hypothetical monopolist for that product or region. The question then asked is whether the hypothetical monopolist could profitably increase prices by a small but significant and non-transitory amount, assuming the terms of sale of other products are held constant. If the answer is yes, the market is no wider, but if the answer is no then other products or regions are added to the definition until a profitable price increase could occur.

NERA does not appear to perform such an analysis, but asserts that, as potential investors in tenements are not linked to a specific location (or to coal mining at all), the geographic scope of the tenements market is broad, and could be as broad as the geographic scope of the dependent market for coal exports.

NERA's view about the substitutability of coal tenements in different regions makes no allowance for the fact that other parts of the Asia Pacific region have very different characteristics to those in the Newcastle catchment. Indonesian tenements, for example, produce low energy coal in a politically unstable, developing nation. Chinese tenements also produce a significantly different coal type, with investment opportunities limited by a restricted foreign investment policy. As a result, the investors in the various different countries are expected to be markedly different, such that it is unlikely to be the case that many potential buyers of tenements in the Newcastle catchment would also seek to invest in other Asia Pacific countries. In particular, junior Australian miners/explorers may be unlikely to have the resources or mandate to participate in these other markets.

Furthermore, in our 8 August 2018 report, we conducted a detailed assessment of the geographic limitations of the coal tenements sector between different regions within Australia. We noted that even within Australia, there are significant differences between coal types and quality (i.e. thermal coal is predominately mined in NSW while coking coal is predominantly mined in Queensland), and the extent of access to, and cost of, logistics infrastructure (noting that the most substantial thermal coal deposits in Queensland are located in the Surat and Galilee basins, which have limited, if any, existing available transport infrastructure).[28] These factors will influence the extent to which buyers will see tenements in different regions as direct substitutes.

Further, putting aside the question of the extent to which tenements in different regions are substitutes from a buyer's perspective, NERA has not given any consideration to the limited options available to tenement sellers, who as we have previously established in earlier submissions have no option but to sell to a buyer reliant on export through the Port of Newcastle.

[28] Synergies (August 2018), p.44.

For all of these reasons, we consider this analysis by NERA to be inadequate and not sufficiently rigorous to fully assess this market for competition purposes. As a consequence, NERA's conclusions on geographic scope are flawed.

Our previous submissions on the geographic dimension of the tenements market presented evidence to support the view that the dependent market was confined to the Newcastle catchment level (at its broadest level), and that it is likely that it comprises smaller regional markets in the areas of the Hunter Valley/Western Basins and the Gunnedah Basin. We reached this conclusion on the basis of assessing the location of customers, sales and the geographic boundaries that limit trade.[29]

A key factor in our consideration of the geographic boundaries of this market was our application of a Hypothetical Monopsony Test – this is an application of the logic in the standard Hypothetical Monopolist Test, but assessing market power from the perspective of a monopsony. This means that seller substitution takes the place of buyer substitution in the standard Hypothetical Monopolist Test, while other buyers take the place of substitution on the supply side. In this instance, we defined the hypothetical monopsonist as a buyer of tenements who is linked to the Port of Newcastle export supply chain. Linking the hypothetical monopsonist to the Port of Newcastle supply chain is appropriate, given the purpose of the assessment is to consider the impact that declaration of the Port of Newcastle shipping channel will have on competition in dependent markets.

On the basis that sellers have no option but to sell to a buyer linked to supply through the Port of Newcastle, it follows that a monopsony buyer of tenements linked to the Port of Newcastle could profitably reduce the prices paid for those tenements, relative to the outcome of a competitive market on the buyer side.

Tribunal decision in FMG Decision

NERA's proposition that the geographic scope of the tenements market is at least as wide as Australia and potentially as broad as the Asia Pacific is also not supported by regulatory precedent.

As the Tribunal stated in its consideration of the Fortescue Metals Group (FMG) matter[30]:

> Most of the experts accept that the market for tenements is at least Pilbara-wide. Dr Fitzgerald supported a global market and pointed to the prevalence of international investors in joint venture arrangements. By the same token, many investors in

[29] Synergies (August 2018), p.40 and Synergies (October 2018), p.9.

[30] Australian Competition Tribunal (2010), Fortescue Metals Group Limited [2010] ACompT 2, 30 June 2010, p.258

> tenements only participate in Australia. Further, as Mr Houston pointed out, differences in the scale and quality of resources, and different regulatory requirements and business environments, mean that businesses most likely characterise their operations on a region-by-region basis, rather than a global basis. We believe that the market is most likely Pilbara wide, and not global for the reasons given by Mr Houston.

Our definition of the geographic market for tenements is consistent with the region by region approach adopted as the most likely geographic market by the Tribunal.

3.2 Impact on competition in the tenements market

3.2.1 NERA's views

NERA examines the effect of revocation on its defined market for coal tenements and reaches the following conclusions:

- firstly, NERA's characterisation of the current process for allocating tenement rights in NSW would seemingly imply that the scope for competition is very limited;
- nevertheless, NERA considers that PNO would not exercise market power in a way that would reduce the attractiveness of mining in the Newcastle catchment, and hence reduce competition in the tenements market;
- even if PNO was to set prices in a way that did reduce the attractiveness of future mining in the Newcastle catchment, NERA considers there would not necessarily be a material reduction in competition in the tenements market; and
- finally, NERA concludes that price reductions in the tenements market are not an indication of a lessening of competition but more a reflection of the lower value of the mining project.

3.2.2 Synergies' response

Scope for competition in the tenements market

NERA describes the allocation process for tenement rights in NSW as one that is essentially administrative in nature; such that an exploration licence is most commonly awarded administratively (except in the case of strategic releases). It also notes that trading in tenements, while possible, is rare.

This would seemingly imply that there is limited potential for competition in the coal tenements market. Synergies does not agree with this inference, based on our understanding of the process for allocating tenement rights. There are two frameworks (1) an operational allocation framework and (2) a strategic release framework:

- under the operational allocation framework, an existing tenement holder may seek an operational allocation, however a market interest test applies. This test for valid interest applies through an expression of interest process that includes a Gazettal notice. If no market interest is identified, then an allocation may be awarded to the applicant, subject to meeting other essential requirements. Where valid market interest is identified, details of the application will be referred to the 'Advisory Body for Strategic Release' to consider the most appropriate process;[31] and
- under the strategic release framework, applicants that meet the prequalification criteria will progress into an auction and be required to submit a work program and a bid price. A reserve price, based on recovery of the state's costs in assessing and releasing the area, will be set for the auction. The reserve price will not be disclosed at this point. If the reserve price is met, the application with the highest bid will be considered for the granting of the prospecting title. If the reserve price is not met, a second auction will take place where the reserve price is disclosed to all pre-qualified bidders.[32]

As we noted in our 8 August 2018 report, while the NSW Government is yet to release new exploration permits under this process, it is anticipated that the market may evolve similarly to that in Queensland, where the Queensland Government periodically releases exploration areas for tender. A competitive process is held for the allocation of those permits, with allocations based on established criteria including the bidder's technical credibility and planned exploration program.[33] Therefore, we consider that there is considerable scope for future improved competition in the coal tenements market as a result of the NSW Government's recent reforms.

Impact of increasing port charges in tenements market

As explained in section 2, PNO will have a strong incentive to exercise market power by substantially increasing port charges even if that has the effect of discouraging investment in future coal mines (or demand from new coal mines). Indeed, as Synergies

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31 NSW Planning and Environment (2017), Guidelines for coal exploration licence applications for operational allocation purposes, November 2017, v1.1.

32 NSW Planning and Environment (2017), Strategic Release Framework for Coal and Petroleum Exploration Fact Sheet, December 2017.

33 See the Queensland Government's Mineral and Coal exploration guide at https://www.dnrme.qld.gov.au/__data/assets/pdf_file/0017/241190/mineral-coal-exploration-guideline.pdf

has previously demonstrated, PNO is able to extract economic rents from existing coal mines where, once investment in the mine is sunk (whether in the form of irreversible investments in coal mining facilities or take or pay commitments to infrastructure), coal volumes (particularly for inframarginal producers) are relatively insensitive to changes in port charges. As explained in our 4 February 2019 report, this effectively results in a transfer of resource rents from the sellers of coal tenements and ultimately the State of NSW when it sells new coal tenements (from lower tenement values) to PNO shareholders (as a result of higher service charges).[34]

It is relevant to understand how the expectation of a substantial increase in the PNO charge would lessen competition in the tenements market and lower the value of coal tenements, all other things remaining unchanged.

The expectation that PNO has an ability and an incentive to impose significantly higher charges would increase the expected cost and risk of operating coal mines and lower the expected returns of coal mining projects in the Newcastle catchment, all other things remaining unchanged. NERA accepts this argument as it notes that 'because the PNO charge is a cost to a coal miner, an increase in the PNO charge would lower the expected net present value of a mining project to which a tenement relates'.[35]

Lower anticipated returns will, in and of themselves, be expected to reduce the value of tenements. However, the higher expected costs and risks of operating coal mines will also be likely to reduce the number of parties willing to bid on tenements, with a particular impact on smaller companies or on companies with a lower risk appetite. An expected reduction in the number of potential buyers of tenements will lessen rivalry for the acquisition of tenements, which we consider will further lower the value of tenements.

However, NERA disagrees with this outcome, stating that 'the lower value of the tenement would reflect the lower value of the mining project, not a loss of competition in the tenement market'.[36] In support of that opinion, NERA invokes auction theory to argue that the withdrawal of relatively high cost miners would not make much difference to the selling prices. NERA states that:

> Therefore the withdrawal of the relatively high cost miners (who because of their high costs would have relatively lower valuations of the tenements) would not make much

[34] Synergies (2019), pp.32-33.

[35] NERA (2019), para 30.

[36] NERA (2019), para 30.

> difference to the selling prices, unless those withdrawing bidders happened to have among the highest valuations. This seems unlikely as presumably the bidders with the lowest valuations would drop out first.[37]

NERA's position appears to assume that the increase in costs and risks resulting from increasing port charges applies equally across all miners, and that a reduction in the anticipated returns from a mine will simply result in the highest cost miners withdrawing from the process. However, as we have previously observed,[38] uncertainty over future port charges is likely to lead to reduced investor confidence and commitment to new coal mining projects in the Newcastle catchment, meaning that some pathways to securing finance are no longer available or only available at significantly higher cost. These consequences will particularly impact smaller and more marginal coal producers, who have fewer available pathways to finance and are less well placed to withstand the consequences of a tighter investment environment.

Therefore, where there are no credible constraints on PNO's ability to increase Port prices, the resulting increased investment uncertainty is likely to have a greater cost impact on smaller miners than on larger, more diversified companies. In other words, this Port pricing risk may materially contribute to some bidders becoming relatively higher cost miners.

Nonetheless, even if the miners that are discouraged from bidding for tenements were relatively high cost miners regardless of the impact of Port pricing risk, we are able to show that the withdrawal of these bidders can still result in a lessening of competition in the tenements market.

NERA's auction theory argument assumes that the bidder values are commonly known for everyone. However, in reality, their values are their own private information. Indeed, it is a standard result in auction theory that, in private value auctions, a reduction in the number of bidders would reduce the expected sale price of the auctioned item due to a lessening of competition.

For instance, a Productivity Commission (PC) report into the role of auctions notes:

> The auction price is affected by the strength of bidding competition, which depends on the number of bidders and the profile of bidders' valuations … As the number of bidders increases, bidders generally need to bid closer to their own valuations to win an auction. Consider the situation in which a particular bidder has the highest valuation; a new competitor may have a valuation higher than those of the other

37 NERA (2019), para 37.

38 Synergies (August 2018), p.57.

existing bidders. The entry of this new competitor does not affect the outcome that the highest-valuation bidder wins; however, it may increase the second highest valuation among bidders and therefore the required payment for the winner. Consequently, the price is expected to rise with an increased number of bidders.[39]

Furthermore, when entry is deterred due to an exogenous effect (where lower value bidders do not participate), the expected sale price from an auction would be lower as compared to the benchmark where all potential bidders are expected to participate. This is shown as a model in the summary box below. The effect of excluding lower value bidders from the auction is less competition, and reduced revenue to the auctioneer.

Box 1 Economic model of auction price setting

As an example, consider 4 bidders who has independently and uniformly distributed private valuations over [0,1] for the object to be sold. Consider two scenarios, in the first scenario all bidders participate in a First-Price Auction, and in the other scenario only the ones that have values greater than 0.5 will participate in the auction. The first scenario is well known and it will bring an expected revenue of 0.6 to the auctioneer (i.e. expected second-highest value, see Auction Theory book by Vijay Krishna.) In the second scenario, the expected selling price will be

$$\left(\left(\frac{1}{2}\right)^4 + 4\left(\frac{1}{2}\right)^4\right) \times 0 + 6 \times \left(\frac{1}{2}\right)^4 \times \frac{2}{3} + 6 \times \left(\frac{1}{2}\right)^4 \times \frac{3}{4} + \left(\frac{1}{2}\right)^4 \times \frac{4}{5} = \frac{93}{160} \simeq 0.581$$

(where the first term represents the case where there are 0 or 1 bidders bidding; the second, third and fourth terms represent the cases where there are 2, 3 and 4 bidders bidding respectively) which is less than 0.6. Since revenue equivalence theorem applies in this model, this would be true for all other standard auctions (where the highest bidder wins) including second-price auctions.

More generally, the following is true.

Proposition 1: Suppose there are n bidders whose private values are independently and identically distributed over [a,b]. The revenue in any standard auction is strictly higher than in a standard auction where bidders whose values are smaller than some c ϵ [a,b] cannot participate in the auction.

Source: Synergies analysis

The PC report further notes:

> Despite the exclusion of low-valuation bidders, the auction outcome may remain efficient because only high-valuation bidders have any prospect of winning. However, the revenue from auction is expected to fall with a reduced number of bidders. By containing the costs of entry and bidding, the seller can attract bidders, and thereby strengthen bidding competition and increase potential revenue.[40]

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39 Chan, C., Laplagne, P. and Appels, D. (2003). The Role of Auctions in Allocating Public Resources, Productivity Commission Staff Research Paper, Productivity Commission, pp. 18-19.

40 Chan, C., Laplagne, P. and Appels, D. (2003), p. 40.

Therefore, NERA's argument that price reductions in the tenements market are not an indication of a lessening of competition is not sound.

NERA also argues that a competitive tenements market is one in which the tenements are allocated to the most efficient miners/explorers. NERA states that 'even if the value of tenements was reduced because of PNO's pricing, the tenements are likely to be allocated to the most efficient miners/explorers'.[41]

As we noted above, the impact of PNO's pricing risk will not present evenly for all miners, with smaller producers more likely to be adversely affected. The presence or absence of smaller coal producers is particularly significant, as it tends to be those smaller companies who carry out the more marginal coal projects which do not attract the attention of the major producers, because for example they do not provide sufficient scale for major producers to generate an acceptable return.

The importance of smaller producers and more marginal coal projects to the investment pipeline in the Newcastle catchment area is clearly evident from the list identified by PNO in its application for revocation of July 2018, of proposals to develop coal mines in the Newcastle catchment area. As we have previously shown, these development proposals are largely either from new coal producers, or in the Gunnedah Basin, which is generally accepted to be a more marginal development area given the significantly higher transport cost to port.[42] In these circumstances, a reduction in the number of bidders for a tenement, for example resulting from the exclusion of such smaller miners from the bidding process, may result in the development of some tenements simply not being progressed.

The emerging importance of junior miners is evident in the Queensland coal sector, where it is the junior miners who are promoting innovative, low cost solutions. Aurizon Network's customer base in the Central Queensland Coal Network are seeking alternative, less capital-intensive solutions, to generate additional coal production. Larger mining companies are seeking operational changes to increase capacity with minimal capital outlay, and junior miners are seeking low capital solutions to allow them to commence railing and subsequently start generating cashflow.[43]

Moreover, even if NERA's economic argument were correct, it is not a correct interpretation of the 'promote a material increase in competition' test under section 44CA(1)(a) of the CCA.

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41 NERA (2019), para 39.

42 Synergies (August 2018), p.58.

43 Aurizon Network (2018), Response to QCA UT5 Draft Decision, March 2018, p.9.

For instance, the NCC stated in its Declaration of Services guide:

> 3.30 There are a number of ways the use of market power in the provision of the service for which declaration is sought by a service provider may adversely affect competition in a dependent market. For example:
>
> - a service provider with a vertically related affiliate may engage in behaviour designed to leverage its market power into a dependent market to advantage the competitive position of its affiliate
> - where a service provider charges monopoly prices for the provision of the service, those monopoly prices may suppress demand or restrict entry or participation in a dependent market, and/or
> - explicit or implicit price collusion in a dependent market may be facilitated by the use of a service provider's market power. For example a service provider's actions may prevent new market entry that would lead to the breakdown of a collusive arrangement or understanding or a service provider's market power might be used to 'discipline' a market participant that sought to operate independently.[44]

The second dot point is directly relevant to this matter. As explained above, PNO will have a strong incentive to charge a substantially higher price in respect of shipping services for existing coal mines in the Newcastle catchment. The risk of a substantial increase in the PNO charges would discourage some miners from participating in the coal tenements market, particularly impacting on smaller miners or more marginal tenements, which would lessen competition and lower the value of coal tenements, all other things remaining unchanged.

In a future absent declaration, the resulting consequences of reduced attractiveness of investments in the coal tenement market and the consequential impact of a material lessening of competition could negatively compound an already 'grim' outlook for Newcastle thermal coal exports based on analysis from the Institute for Energy Economics and Financial Analysis. With an expectation of a long term contraction in global demand for coal and rising stranded asset risks, the Institute identifies a number of key issues facing the NSW thermal coal industry, including 'major investors and financial institutions are turning away from coal at an accelerating rate…'.[45] Any reduced incentives to invest in coal tenements in the Newcastle catchment is expected to

[44] National Competition Council. (April 2018), Declaration of Services, A guide to declaration under Part IIIA of the Competition and Consumer Act 2010 (Cth), version 6, pp. 33-34, para 3.30.

[45] Institute for Energy Economics and Financial Analysis (2018), New South Wales Thermal Coal Exports Face Permanent Decline – Grim Outlook Prompts the Need for a Planned Transition, November 2018, p.3.

seriously undermine an already challenging outlook for miners, and particularly for smaller miners, who are less able to diversify and manage their risk exposure.

4 Synergies price analysis

NERA disputes our earlier price analysis contained in our 4 February 2019 report. We presented evidence of the potential magnitude of the profit maximising price that could theoretically prevail in a future absent declaration which showed that even under a low coal price assumption, port charges could increase by around $12.50/t before profits would start to decline.[46] While we did not intend to suggest that PNO would levy charges at this price,[47] we considered it was important to base the analysis of the potential harm resulting from revocation of the declaration on a clear understanding of the range of potential pricing outcomes that reflect PNO's commercial objectives.

NERA disagrees with our methodology and argues that such a pricing strategy would not be plausible for PNO and that the profit maximising price is likely to be lower than this level. They further argue that our approach does not place any weight on the threat of regulation.

We disagree with NERA's position, for the reasons outlined below.

4.1 Profit maximising price

4.1.1 NERA's views

NERA does not agree with the methodology we had used to estimate the monopoly (without declaration) prices that PNO could potentially set.

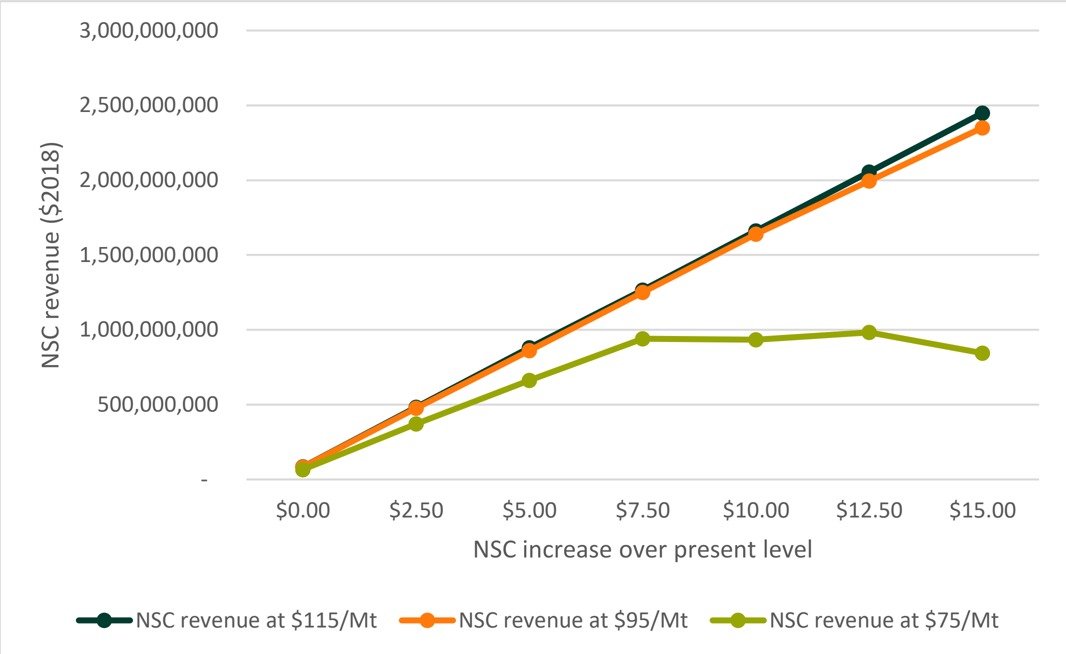
By way of summary, to obtain an estimate of the indicative magnitude of a profit maximising price, we had undertaken a high level assessment based on the Wood Mackenzie data utilised in our previous submissions. The assumed incremental increase in the Navigation Service Charge (NSC) had been added to the total cash cost for each mine as measured by Wood Mackenzie. This allowed us to ascertain the threshold coal price at which a given coal operation is expected to be priced out of the market. We then added up the total coal volume (across all producers) that is expected to be produced at that price, in order to determine the relevant quantity for the revenue calculation. The estimated revenue from the NSC is then derived as this expected quantity multiplied by the total NSC (the base NSC of $0.53 plus the modelled increase). In our view, this analysis was conservative since coal logistics relating costs (rail access, rail haulage and export coal terminal services) are typically contracted under long term take or pay terms, meaning these costs are effectively sunk, notwithstanding their inclusion in cash costs).

46 Synergies (2019), p.20.

47 Synergies (2019), p.20.

Figure 2 (re-produced from our 4 February 2019 report) shows that the point at which each of the identified NSC increases ranging between a $2.50/t increase up to a $15/t increase was expected to lead to an increase in revenue (which, for PNO, broadly equates to profit given an environment of mostly fixed costs), at prevailing coal prices of AU$75/t, AU$95t, and at AU$115/t. These price scenarios are conservative, compared with Wood Mackenzie's most recent forecast of the Newcastle thermal coal price which ranges from US$78-97/t or AU$111-139/t (2019$s) over the next ten years.

Figure 2 Profit maximising scenarios under various coal prices and Navigation Service Charge (NSC) increases



Source: Synergies

NERA argues that this pricing approach is not rational and is inconsistent with PNO's incentives as it would cause a reputation to develop that PNO is likely to appropriate revenues accrued by miners to recover sunk costs, which would deter future mining investments.

Instead, it argues that a profit maximising price is likely to be lower than the level indicated in our analysis. NERA indicates that a more plausible pricing strategy for PNO is to price up to the gap between the expected export coal price and the *total* costs of Newcastle coal producers, including unrecovered sunk costs.

4.1.2 Synergies' response

NERA does not quantify nor provide supporting analysis to substantiate its claim that the profit maximising point is likely to be lower than the indicative level which Synergies had earlier presented. Further, while NERA argues that PNO would more plausibly price up to the gap between the expected export coal price and the *total* costs of Newcastle coal producers, including unrecovered sunk costs, standard economic theory does not support the view that a profit maximising infrastructure monopolist would adopt this approach. NERA's basis for this position is its view that PNO's commercial incentive for coal exports at a higher volume and for a longer period will outweigh the commercial benefit that it would receive from price increases, which we demonstrated in Section 2 is not supported by the available data.

In any case, the critical issue that will affect participants in the tenements market is their perception of the risk that PNO will introduce substantially higher prices, as opposed to whether or not PNO actually intends to do so. The history of this matter, where the Tribunal has found that PNO significantly increased charges without any change in costs or any consultation with users, and where such increases have been found by the ACCC in the recent arbitration of the access dispute between PNO and Glencore to exceed the ACCC's view of reasonable cost recovery, and has vigorously argued against any form of regulatory constraint on its charges, has highlighted to users the nature and extent of Port pricing risks they bear (particularly if the declaration is revoked). In this context, the mere existence of a credible scenario where such adverse pricing outcomes are possible creates significant pricing uncertainty and risk that must be factored into, and borne as an additional, and unavoidable cost by participants in the coal tenements market.

4.2 Constraints on PNO's pricing behaviour

4.2.1 NERA's views

NERA claims that our approach to estimating the extent to which profit maximising prices implies significant price increases are theoretically possible in a future without declaration does not place any weight on the threat of regulation.

NERA points to the Ports and Maritime Administration Regulation 2012 (NSW) as providing a "degree of transparency" (SOPV [6.4.1]) over PNO pricing. It also offers the absence of a previous price increase of this size as evidence that existing price restraints have been effective at suppressing the port's profits by a substantial amount.[48]

[48] NERA (2019), para 50.

4.2.2 Synergies' response

Contrary to this view, our previous reports have considered, at length, the factors that could potentially constrain PNO's profit maximising behaviour (see for example Synergies' 8 August 2018 report, section 2.3.4).

In that report, we specifically considered the threat of regulatory oversight. As part of the original declaration proceedings, PNO (and NSW Treasury) both submitted that the ability of PNO to increase prices is constrained by legislative price monitoring arrangements, specifically the *Ports and Maritime Administration Act 1995* (NSW), *Ports and Maritime Administration Regulations 2012* (NSW) and the *Independent Pricing and Regulatory Tribunal Act 1992* (NSW).[49] However, both the Tribunal and the NCC have acknowledged that the existing NSW price monitoring regime provides effectively no constraint on pricing practices, and as such, the regime would be highly unlikely to meet the requirements for certification under the National Access Regime.

Therefore, to suggest, as NERA does, that the absence of significant price increases is evidence of existing restraints working, is without foundation and not supported by any of the conventional regulatory opinion. As we have identified previously, the ACCC's view is that price monitoring, in general, is not an effective constraint on monopoly power.[50]

While we do not consider that the existing price monitoring regime provides any effective constraint on PNO's exercise of market power, we agree that a credible threat of more heavy handed regulatory responses to the exercise of monopoly power can provide such a constraint. The risk of declaration under the National Access Regime has historically been one such credible constraint. However, we consider that revocation of the existing declaration will remove this threat.

We agree that the possibility of heavy handed regulation by the NSW Government provides an alternate potential regulatory constraint. However, we note that the NSW Government strongly resisted introducing more intrusive regulation prior to its port privatisation program and has not publicly responded in any way to PNO's conduct to date. Therefore, the nature of and prospect of such regulatory intervention appears highly uncertain and most likely would entail a considerable time lag resulting in economic damage in the meantime.

49 PNO (2015), Submission in response to Glencore's application to the National Competition Council, 18 June 2015, p.14. see also NSW Treasury (2015), Glencore's application for Declaration of Shipping Channel Services at the Port of Newcastle, June 2015, p.5

50 Synergies (August 2018), p.30.

As we have previously stated, absent regulation, the only factor that will effectively constrain PNO's incentives to increase prices is the responsiveness of volumes; that is, price will increase towards a level at which demand is no longer inelastic such that volumes are materially affected. In this respect it is a basic economic condition that a monopolist will set prices based on the elastic part of the demand function that it faces. Although the simple monopoly textbook model may not exactly apply, the basic principle of increasing prices if demand is inelastic should not be controversial.[51]

[51] Synergies (2019), p.18.

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