Port of Newcastle Operations ability and incentive to exercise market power and its impact on competition in Newcastle catchment coal tenements market

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Executive Summary

Criterion (a) focuses on whether access as a result of declaration would promote a material increase in competition in market(s) other than the market for the service. Specifically, the focus is on whether efficient entry and efficient participation by firms in a dependent market would likely be promoted in a future with declaration compared to a future without declaration.

Port of Newcastle is the only facility coal miners in the Newcastle catchment can use to export coal into relevant overseas markets, and Port of Newcastle Operations Pty Ltd (PNO) has control over that natural bottleneck facility.

As a commercial entity, PNO has an incentive to maximise profits.

PNO's conduct to seek to negotiate bilaterally with coal producers and its actions to refuse to collectively negotiate is a significant departure from the arrangements assumed by the National Competition Council (NCC) of uniform, transparent pricing in its previous assessment. PNO has signalled that the arrangements assumed by the NCC in its previous assessment are not in its best interests., and it has sent a clear signal that potential coal producers would not have transparency of terms provided by PNO to other users.

This conduct demonstrates that PNO has the ability and incentive to set access terms as per a user's circumstance, and there will be an imbalance of negotiating power between PNO and coal producers.

In the context of the coal tenements market, a decision to enter (or re-invest) involves substantial sunk investments.

In a future without declaration, PNO's ability and incentive to exercise market power would give rise to the hold-up problem. The risk of hold-up in the presence of substantial sunk investments is sufficiently material that it would likely discourage efficient firms from entering the coal tenements market.

In contrast, a future with declaration would constrain PNO's ability and incentive to exercise market power and address the hold-up risk and would likely promote efficient entry (and efficient participation) such that there would be a non-trivial, material improvement in the environment for competition in the Newcastle catchment coal tenements market.

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1 Introduction

Synergies Economic Consulting (Synergies) has been engaged to assist the New South Wales Minerals Council (NSWMC) in its application for a declaration recommendation in relation to certain essential services provided at the Port of Newcastle by the Port of Newcastle Operations Pty Ltd (PNO).

The purpose of this report is to consider the implications of PNO's recent conduct to seek to negotiate bilaterally with coal producers and its actions to refuse to collectively negotiate with coal producers.

We consider this to be a significant departure from the arrangements assumed by the National Competition Council (NCC) of uniform, transparent pricing in its previous consideration of the declaration of the shipping channel service at the Port of Newcastle, particularly in relation to the assessment of the competition test under criterion (a).

The remainder of the report is structured as follows:

- Section 2 – sets out our understanding of criterion (a) assessment;
- Section 3 – sets out our analysis of PNO's ability and incentive to exercise market power, particularly having regard to PNO's revealed conduct to negotiate bilaterally with coal producers; and
- Section 4 – analyses the impact of PNO's exercise of market power on the environment for competition in the Newcastle catchment coal tenements markets.

2 Criterion (a) test

Criterion (a) focuses on the effect of declaration in dependent markets, and specifically whether the requisite access as a result of declaration would promote a material increase in competition in market(s) other than the market for the service.

The NCC describes the relevant test in the following terms:

> The promotion of a material increase in competition involves an improvement in the opportunities and environment for competition such that competitive outcomes are materially more likely to occur.[1]

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.[2] **[emphasis added]**

The Queensland Competition Authority (QCA) was guided by the principles outlined by the NCC and in respect of the declaration review of the service provided by Queensland Rail considered that:

> the concept of promoting a material increase in competition involves an improvement in the opportunities and environment for competition, such that competitive

1 NCC, Declaration of Services, A guide to declaration under Part IIIA of the Competition and Consumer Act 2010 (Cth), April 2018 edn, p. 32, para. 3.23.

2 NCC, Declaration of Services, A guide to declaration under Part IIIA of the Competition and Consumer Act 2010 (Cth), April 2018 edn, pp. 33–34, para. 3.30.

> outcomes are materially more likely to occur in a future with declaration, compared to a future without declaration. Promoting a material increase in competition is not necessarily equivalent to promoting the greatest number of competitors in the market—strong competition may exist between a few firms. Rather, **it involves the possibility that efficient entry and efficient participation by firms would be promoted in a future with declaration, compared to a future without declaration. If efficient entry is likely to be promoted in a future with declaration (compared to a future without declaration), the QCA considers that this would indicate that access as a result of declaration would promote an increase in competition that is material**.[3] **[emphasis added]**

We have approached the assessment of criterion (a) as set out in the above passages, that is, we have focussed on whether efficient entry and efficient participation by firms would likely be promoted in a future with declaration compared to a future without declaration.

In the context of the Newcastle catchment coal tenements market, a decision to enter or develop involves substantial sunk investments. We demonstrate that in a future without declaration, PNO's ability and incentive to exercise market power would give rise to the hold-up problem. The risk of hold-up in the presence of substantial sunk investments is sufficiently material that it would likely discourage efficient firms from entering the coal tenements market as well as developing such tenements. In contrast, a future with declaration would constrain PNO's ability and incentive to exercise market power and address the hold-up risk and would likely promote efficient entry (and efficient participation) such that there would be a non-trivial, material improvement in the environment for competition in the Newcastle catchment coal tenements market.

[3] QCA, final recommendation, Part B: Queensland Rail declaration review, March 2020, p. 67.

3 PNO's ability and incentive to exercise market power

As a commercial entity, PNO has an incentive to maximise profits.

Port of Newcastle is the only facility coal miners in the Newcastle catchment can use to export coal into relevant overseas markets, and PNO has control over that natural bottleneck facility.

As such, PNO would not be constrained from exercising its market power by the availability of substitute facilities, by the countervailing power of users, or by the threat of a new facility being built. In those respects, PNO has the ability and incentive to exercise market power.

3.1 Non-vertically integrated and excess capacity

The issue is whether being a non-vertically integrated service provider with substantial surplus capacity would constrain PNO's ability and incentive to exercise market power.

As a general proposition, the presence of spare capacity does not imply that PNO will not behave in a profit-maximising manner. Put another way, a firm with market power has an incentive to maximise profits, not utilisation of capacity, even with spare capacity. The NCC considered that PNO would prefer that markets related to the Port are effectively competitive as this is likely to maximise demand (and hence profits) from providing the Service at any given prices it charges.

However, the trouble with the NCC's proposition is that at the prices PNO has been charging, there is already substantial surplus capacity at the Port (ie demand is low relative to Port's capacity). In that event, PNO would have an incentive to increase the charges to maximise its profits rather than expect demand to increase when historically demand has been low relative to capacity. PNO's conduct of increasing its charges is consistent with this incentive.

Indeed, maximising capacity utilisation will rarely be consistent with profit maximisation, especially in a situation where a uniform price is charged. To increase capacity utilisation, the service provider will have to decrease its price. However, under a uniform pricing structure, that will result in lower profit from existing users (due to the lower price with cost of providing service remaining unchanged). The service provider will weigh the expected reduction in profit from existing users against the expected gain in profit from new users that respond to the lower price, and will consider decreasing the price so long as the expected gain in profit more than offsets the expected reduction in profit. Put another way, a monopolist who commits to charging a uniform price will always price on the elastic part of the demand curve – if it doesn't, it will not be maximising profit.[4]

A monopolist that is able to price discriminate has a strong incentive to do so to capture as much of the economic surplus as is available. Moreover, in the circumstances where a uniform price is not charged, there is greater likelihood that a monopolist will be able to increase utilisation. However, even here, the objective is not maximising capacity utilisation; rather it is maximising profit. Maximising capacity utilisation will only occur if it also allows profit maximisation.[5]

Nevertheless, the NCC's view has been that PNO would not have the ability and incentive to impose excessive charges on new users (or generally, on users who have not yet made (sunk[6]) investments). The NCC had stated that:

> Charging excessively high prices for the Service is likely to increase the incentive for some potential future miners to invest in other activities (e.g. investing in coal mining activity in other parts of Australia, or overseas) rather than coal mining in the Newcastle catchment.[7]

The argument here is that, in the presence of spare capacity, PNO is not expected to behave as a monopolist when negotiating with users who are yet to make (sunk) investment. The Productivity Commission also noted that the infrastructure service provider would have a strong incentive (through the sharing of its fixed costs) to provide access to any capacity that will be unused for the foreseeable future, provided the access price recovers the full costs of use by the third party.[8]

The QCA did not subscribe to this view in its review of the service provided by Queensland Rail which like PNO is not vertically integrated and has excess capacity on its network. The QCA stated that:

> The QCA considers that a firm with market power would only have incentives to maximise volume in a limited set of circumstances. One such circumstance could be an infrastructure provider that faces previously unanticipated competition from

4 J. Tirole, The Theory of Industrial Organization, p. 66

5 J. Tirole, p. 136.

6 An investment is sunk when its value in alternative uses is lower than its value in the current trading relationship. The more specific the assets are to the current relationship, the more difficult it becomes for the investor to redeploy them to other uses. As a result, exit from the relationship is costly. For example, the underlying value of a coal mine, once established, resides in its potential output. In the case of PNO, the value of coal mine is locked into the Port of Newcastle, which is the only option for coal producers in Newcastle catchment to export coal.

7 NCC, Revocation of the declaration of the shipping channel service at the Port of Newcastle, Recommendation, July 2019, p. 2

8 Productivity Commission, National Access Regime, Inquiry report no. 66, October 2013, p. 10.

> another provider that has recently gained entry into the market. Given the presence of competition for demand, the incumbent provider might have an incentive to decrease its price below the profit-maximising price in order to gain sufficient revenue to cover (at least) its fixed costs. Importantly, this strategy would require some elasticity of demand for the service in order to expand output. [footnote omitted]
>
> However, this does not characterise the general situation of Queensland Rail. It is the dominant service provider in most of its markets and does not face the prospect of competition. For example, in the West Moreton and Mount Isa regions, rail is the most economical option for the haulage of bulk minerals and coal. In those markets, Queensland Rail faces a relatively inelastic demand for its service, as there is no economically viable long-term substitute for rail to transport bulk minerals and coal. Accordingly, the QCA considers that economic circumstances in these regions are more likely to support the standard profit-maximising incentive.[9]

The QCA's conclusion in respect of Queensland Rail also applies to PNO, which is the only port terminal for coal producers in the Newcastle catchment to export coal, and so PNO's conduct will be informed by the standard profit-maximising incentive.

The demand for the service provided at the Port is from users who make long term investment decision (given economic life of a coal mine is on average 30 years), so require access over a long term. Therefore, the important consideration is whether PNO would have an incentive to maintain that conduct (as assumed by the NCC) over the life of a user's investment and whether PNO could credibly commit to behaving in that manner over that investment period.

The problem is that once the investment is made (i.e. costs are sunk), the incentives of the parties change. As the provider of a service for which there is no economically viable long-term substitute, PNO would have an incentive to behave opportunistically in order to appropriate the maximum possible available rents from a coal producer, who is locked in to using the Port.

3.2 Ability and incentive to price discriminate

Arguably, PNO would behave opportunistically, only if it is able to discriminate between users. That is, when PNO is able to bilaterally negotiate with each user and is able to agree and modify (when required) access terms as per the user's circumstances.

In this respect, NCC's view has been that:

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9 QCA, March 2020, pp. 38–39.

- while PNO could enter into individual contracts for different coal miners seeking to use the Service by virtue of section 67 of the PAMA Act, it does not appear to have done so to date.
- whether PNO would seek to engage in future price discrimination between different coal miners seeking to acquire the Service is unclear.
- based on the evidence before it at this point in time, the Council is not persuaded that PNO will engage in extensive price discrimination between different coal miners seeking to acquire the Service.

This is a simplistic and superficial assessment. It fails to address the core economic incentive, which was unchallenged by the NCC, that is PNO will have an incentive to price discriminate between users (or between mines of the same user) to maximise its profits (as noted above).

The Australian Competition and Consumer Commission (ACCC) had also questioned the assertion that PNO would be unable to obtain sufficient information to price discriminate between mines, either now or in the future. ACCC's view was that in addition to overall monopoly pricing and the resulting potential reduction in volumes, PNO could further increase the prices faced by some mines to capture additional profit. In its submission to the NCC, ACCC had raised the threat of hold-up faced by users of the service and considered that:

> the threat of the continued future expropriation of profits of miners by PNO is likely to have a dampening or chilling effect on future investment in the Hunter Valley coal mines, which is in turn damaging to the conditions and environment for competition in dependent markets.[10]

We demonstrate that PNO's position as the natural monopoly provider of an essential service and its recent conduct to seek to negotiate bilaterally with individual coal producers shows that it has the ability and incentive to price discriminate.

3.2.1 The incentive to price discriminate

As argued above, a monopolist will always price on the elastic part of the demand curve – if it doesn't, it will not be maximising profit.

A monopolist that is able to price discriminate has a strong incentive to do so to capture as much of the economic surplus as is available. In the limit, a monopolist will seek to

10 ACCC, NCC preliminary view to recommend to revoke declaration at the Port of Newcastle, 6 February 2019, p. 5.

"perfectly" price discriminate to effectively capture all of the economic surplus available to others in a supply chain.

Moreover, in the circumstances where a uniform price is not charged, there is greater likelihood that a monopolist will increase utilisation. However, even here, the objective is not maximising capacity utilisation; rather it is maximising profit. Maximising capacity utilisation will only occur if it also allows profit maximisation.

3.2.2 The ability to price discriminate

It is clear that PNO has the ability to price discriminate – this simply arises from the lack of alternatives available to Hunter Valley producers – there are simply no substitutes available to use the Port.

The NCC was not convinced that PNO will be able to separately identify different miners in order to charge different amounts to them. The NCC had noted that a key requirement in order for a firm to be able to successfully price discriminate is that it must be able to identify different customers (or customer groups) in order to set different prices for them.

Since then and in contrast to the view held by the NCC, PNO has been seeking to enter into individual contracts with coal miners seeking to use the Service. PNO has also refused to negotiate collectively with coal producers. This conduct shows that PNO has the ability to separately identify coal producers, and so would be able to set different prices for them to extract the maximum possible economic surplus when the opportunity arises. This is exactly as a profit maximising monopolist would be expected to behave where the value from investing in coal mining derived by a coal producer is specific to each user (for instance, due to coal miners not having uniform costs of production, transportation cost would vary depending on the location of their mine, and quality or grade of coal produced could vary between mines (as is the case for the Hunter Valley coal producers).

These events demonstrate that PNO's conduct and commercial incentives are not aligned with what the NCC had assumed in its previous assessment. Through its conduct PNO has demonstrated that it has the ability and incentive to negotiate individually with coal miners.

Individual contracts with coal producers will enable PNO to price discriminate between users and appropriate the maximum possible rents available from each producer which will maximise PNO's profits.

4 Impact on competition in Newcastle catchment coal tenements market

As a business, PNO has an incentive to maximise profits.

In a future without declaration, PNO will not face any effective long-term constraints on its ability and incentive to exercise market power in order to maximise profits.

Negotiating with a profit maximising monopolist that has control over a natural bottleneck facility will create risks for potential coal miners.

It is in this environment that market participants will face decisions to enter or operate in the Newcastle catchment coal tenements market in a future without declaration. In particular, a new entrant to the coal tenements market will have to incur significant sunk costs. Sunk costs include the costs of exploration and preparatory activities prior to developing a mine (e.g. feasibility studies), which are site-specific. Sunk costs also include the costs of developing the mine itself—the underlying value of the mine, once developed, resides in its potential output, and is site-specific. The presence of sunk investments gives rise to the 'hold-up problem'.

NCC's view has been that as PNO charges a uniform price to all users and is transparent about the price terms it will not be in PNO's interest to hold up coal miners. NCC's view was that opportunistic pricing by PNO in that circumstance will send a signal to potential miners in the future that PNO will take advantage of them after they make investments, and that they are at risk of not being able to recover sunk costs if they invest in coal mining activities in the Newcastle catchment. In other words, as per NCC's view, any gains made by PNO from holding up a miner will be outweighed by the loss of future profits from potential miners who would have otherwise invested in the coal tenements.

However, NCC's view assumes PNO will set uniform prices and the access terms agreed with coal producers will be transparent. On the contrary, PNO is seeking to negotiate bilaterally with coal producers which will enable it to set producer-specific charges. This conduct demonstrates that PNO has the ability and incentive to set access terms as per a user's circumstance, and there will be an imbalance of negotiating power between PNO and coal producers in the presence of sunk investments.

An imbalance in bargaining power would inhibit the ability of coal producers to effectively manage risks, in particular the risk of hold-up, which would have a significant effect on the expected profitability of entry into (and operations within) the market. The presence of such risks, and an imbalance in the ability of users to address these risks in a future without declaration, would likely deter efficient entry or efficient investments by market participants. Put simply, PNO's conduct demonstrates that such risks cannot be avoided in a future without declaration.

In comparison, in a future with declaration, PNO's ability and incentive to exercise its market power in order to maximise profits will be constrained by the regulatory regime. A future with declaration will provide market participants the assurance that access will be provided on reasonable terms and conditions, and will mitigate the risk of hold-up for users. As such, the protections offered in a future with declaration would likely promote efficient entry (and efficient participation) such that there would be a non-trivial, material improvement in the environment for competition in the Newcastle catchment coal tenements market.

4.1 Hold-up risk

A potential coal miner seeking to make a long-term investment decision would know PNO's ability and incentive is to behave strategically over the term of its investment. Although PNO has offered a 10-year contract, it is difficult to devise a contract that enables parties to adapt to the uncertainties and at the same reduce the scope for opportunism.

Given economic life of a coal mine is on average 30 years, a coal producer would require an access contract of longer than 10 years. The longer the contract required, as in the case with long-lived sunk investments, the greater the need to allow for adaptation and adjustment in the face of changing market conditions. In particular, it is difficult to entirely eliminate the need for contract renegotiation in the context of a very long-term contract.

In this context, the 10-year contract offered by PNO gives PNO the discretion to change prices in response to changing market conditions. That discretion enjoyed by PNO shows that the coal producer not only faces a risk of expropriation during the contract term but also faces a greater risk when that contract is to be renegotiated after 10-years.

Given PNO has control over the natural bottleneck facility, it will have the superior bargaining position at the time of renegotiation, and the coal producer will be exposed to the risk of expropriation.

While PNO could choose not to exercise this bargaining power ex post, it does not seem possible for PNO to credibly commit ex ante that it will not do so at that later time. For example, by including price openers during the contract term, PNO has demonstrated that it is not able to credibly commit ex ante that a contract will never need to be renegotiated during its term. Additionally, by giving itself the discretion to change prices, PNO has demonstrated that its incentive is to be able to expropriate investment value from the other negotiating party at that future time.

The NCC's view has been that while PNO may have the ability to price in a way that "holds up" those miners that have already sunk costs in coal exploration/mining in the Newcastle catchment, it may not have an incentive to do so due to the signal this would send to those investors that have not yet made any such investments. The NCC considered that it is important for PNO's future coal-derived profits that it develops a reputation for not holding-up its customers.

In other words, as per the NCC, a potential coal producer can be confident that PNO would not engage in "hold up" of their sunk investments, as PNO would be incentivised to avoid a 'bad behaviour' reputation.

The fundamental proposition is that as a business PNO's incentive is to maximise profits and it would engage in behaviour consistent with that incentive.

If PNO were concerned about avoiding a 'bad behaviour' reputation, ie if PNO considered that the NPV of profits over long term by maintaining status quo arrangements outweighed NPV of profits from it seeking to extract users' sunk costs, it would have continued to conduct itself in the manner assumed by the NCC. That is, PNO would have continued to seek to charge a uniform price to all coal producers and make its conduct transparent to all users.

However, PNO has moved away from that assumed conduct and has signalled that the arrangements assumed by the NCC in its previous assessment are not in its best interests.

Even if we assume PNO has an incentive to encourage entry in the tenements market, a well-functioning and effective reputation mechanism depends on sufficient and available information on PNO's performance.

PNO's preference to negotiate bilaterally with coal producers and its actions to refuse to collectively negotiate with coal producers has sent a clear signal that potential coal producers would not have transparency of terms provided by PNO to other users. Indeed, PNO has a strong incentive to keep these deals secret. In circumstances where there is limited availability of information, the threat of reputational damage would not be an effective constraint on PNO's ability and incentive to exercise market power.

Given the long term nature of coal mining investment, the problem is that events could develop over that investment period where the benefits to PNO of expropriating the value of an investment at that later time exceed the benefits of continuing to abide by the status quo arrangements. It is this risk—that significant sunk investments in coal mining will be expropriated—that will lead to a material adverse effect on the environment for competition in the coal tenements market in a future without declaration. For example, existing customers or potential entrants into a market might either delay, or forgo, new investment that would otherwise be economically efficient.

In a future with declaration, the supporting regulatory structure would enable independent regulatory oversight in relation to material price and non-price terms. This oversight would be sufficient to constrain PNO's ability and incentive to exercise market power. The protections offered in a future with declaration would materially improve the environment for competition by encouraging efficient entry and actions (through a stable and predictable environment), which would in turn promote a material increase in the environment for competition in the coal tenements market in the Newcastle catchment.