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Supplementary submission in relation to Criterion (b) – uneconomic for anyone to develop another facility to provide the service

As the Council is aware, the Full Federal Court (the Court) in *Pilbara Infrastructure Pty Ltd v Australian Competition Tribunal* [2011] has found that criterion (b) – uneconomic for anyone to develop another facility to provide the service, should be considered in terms of ‘private profitability’ (or privately economical), rather than in terms of the associated costs and benefits of development for society as a whole. The Court’s decision sets a ‘higher bar’ for deciding whether it is uneconomic for anyone to develop another facility to provide the service subject to the declaration application.

The Council’s current declaration guide and template is based around examining the costs and benefits of duplication to society as a whole. To accommodate the Court’s decision, the Applicant included a summary position, which also addressed the private profitability test.

To support the Applicant’s proposed declarations, further analysis is provided on the private profitability of duplicating Sydney JUHI and the Caltex Pipeline. The additional analysis is entirely consistent with the Applicant’s initial submissions. The additional analysis further explains and justifies the position, given the change to the interpretation of criterion (b) by the Court.

In the case of Sydney JUHI, the Applicant considers that both tests are satisfied by the fact that it is impractical to duplicate the existing infrastructure. As stated in the Applicant’s initial submission, duplicating the Jet Fuel Hydrant Network would involve considerable disruption at Sydney Airport. The Applicant cannot conceive of any situation where Sydney Airport Corporation Limited (SACL) would permit duplication of this infrastructure. The *Sydney Airport Master Plan* also does not provide for a competing JUHI at Sydney Airport.

Given these circumstances, the additional analysis and evidence on the private profitability test focuses on the construction of an additional pipeline from Vopak’s offsite storage facilities to Sydney JUHI (‘second pipeline’), which would compete against the existing Caltex Pipeline. However, the arguments presented are in many cases equally applicable to Sydney JUHI, should duplication of the infrastructure become possible in the first place.

Possible providers

In identifying situations where it might be privately profitable for another party to develop another facility, the Court in *Pilbara Infrastructure Pty Ltd v Australian Competition Tribunal* [2011] stated that:

Where anyone can be identified for whom the development of an alternative facility is economically feasible is a matter of looking at the facts of the market place.

The Applicant has identified the following potential providers of a second pipeline, namely:

1. a provider independent of the current market participants
2. an airline or group of airlines
3. a jet fuel supplier or group of jet fuel suppliers, other than Caltex or Shell
4. Vopak
5. SACL.

The identified providers, therefore, cover the existing market participants, SACL (as an interested party given the importance of jet fuel to the operations of Sydney Airport) and a provider independent of current market participants.

Infrastructure capacity

The Applicant has assumed that the potential provider would construct a second pipeline with a transfer capacity of 10 megalitres (ML) per day from Vopak's offsite storage facility to Sydney JUHI.

It is considered reasonable to assume that the most economical pipeline capacity is about equal to the upgraded capacity of the Caltex Pipeline, given:

- the economies of scale associated with pipeline capacity, and
- the forecast increase in jet fuel demands at Sydney Airport over the next 20 years.

There are considerable economies of scale in pipeline capacity. There are fixed costs associated with planning and environmental approvals. The cost of laying pipes and constructing pumping stations also generally does not increase in the same proportion as the capacity of the infrastructure, further reducing average costs for larger transfer capacities.

As described in the Applicant's initial submission, based on target replenishment rates, the existing Caltex Pipeline has sufficient capacity to meet forecast demand out to about 2020. Jet fuel demand is forecast to continue to grow after 2020, in line with the growth in passenger numbers through the airport.

Given the long economic life of such infrastructure, it is reasonable to assume the second pipeline would be constructed with sufficient capacity to provide for the projected growth in jet fuel demand for many years into the future. The merits of a smaller capacity pipeline are also considered below for a provider independent of the current market participants.

After 2020, it is likely a second pipeline will be required to meet forecast jet fuel demands. A second pipeline delivered before this time would, therefore, mean that:

- a state of substantial excess capacity would exist until about 2020,

- both pipelines would be required at some point after 2020,
- jet fuel demands would gradually grow towards the transfer capacity of both pipelines at some time during 2030-2040, depending on the actual growth in jet fuel demands.

For this declaration, the question of private profitability can, therefore, be limited to whether it would be profitable to bring forward the transfer capacity by about 10 years from when the second pipeline is actually required (in about 2020).

Costs and initial market shares

The estimated cost of the second pipeline is about \$60 million (see SJFIWG Report). The total investment cost to be recovered from the second pipeline is likely to be greater than that of the Caltex Pipeline. This is because of the initial costs incurred in delivering the second pipeline and age of the existing Caltex Pipeline (i.e. some of its value would have been depreciated). As such, the Caltex Pipeline is likely to have a cost advantage over the second pipeline.

Based on the information contained in the SJFIWG Report, the estimated current market shares of the existing suppliers of jet fuel to Sydney Airport via the Caltex Pipeline are:

- Caltex: 76%
- Other two providers: 12% each or 24% total.

Finally, it is assumed that Caltex will transport its jet fuel down the Caltex Pipeline and not seek to use the second pipeline.

A provider independent of the current market participants

Consider when an independent provider (with no other involvement in related upstream or downstream markets) invests in the second pipeline. Under this scenario, the provider would need to be able to earn its cost of capital on its investments from the charges levied on jet fuel suppliers. That is, the investment would need to be profitable on a 'stand-alone' basis. It would not be in a position to subsidise the cost of the investment through profits earned in either upstream or downstream markets.

An investment in the second pipeline involves a high initial fixed cost that is unrecoverable (a sunk cost)¹ and a relatively low marginal cost of providing the jet fuel transport services once the facility is constructed. These characteristics make it difficult for an independent provider to anticipate a sufficient return on its investment. With an investment of this kind, prices need to be above the marginal cost of provision to allow for the cost of the infrastructure to be

¹ Many of the costs associated with developing a new pipeline are unrecoverable, such as resources required for planning and development and obtaining the required approvals for the project. If built, the pipeline could be sold, but only for a price reflecting the anticipated profit stream from the facility. In this sense, there are substantial sunk costs involved in building a second pipeline.

recouped.² A potential independent provider could not be assured of this, with losses on the investment the more likely outcome, as explained below.

From economic theory, there are typically three ways firms can sustain prices above marginal cost (or the incremental cost of provision): product differentiation; capacity constraints; or repeated interaction. Each of these possibilities is considered in turn.

First, a second pipeline would provide transport services of jet fuel to Sydney Airport, an identical service to the one provided by the existing Caltex Pipeline. Consequently, there is little scope for a new provider to differentiate their service from the existing service. Given this, buyers of the service will have little to choose between the two pipelines, besides price. This suggests strong price competition between the two providers, pushing price down towards the marginal cost of provision, making it difficult for the independent provider to recover their fixed capital investment costs.

Second, it is possible when firms face capacity constraints that they are able to raise prices above their marginal costs of provision; essentially, if a firm anticipates that they will sell the same quantity when they raise their prices given they are already at capacity, they can credibly raise prices.

But this situation will not exist for the provider of the second pipeline. Rather, there will be substantial excess capacity over the foreseeable future. As described earlier, the Caltex Pipeline can meet all foreseeable demand out to about 2020.

When firms are not capacity constrained, they will have an incentive to continue to expand the use of their facility (by reducing prices and increasing the quantity sold) provided the price is at least equal to the marginal cost of provision. Given both firms are in the same position, competition between them will reduce prices for the jet fuel transport service towards marginal cost, again making it difficult for the entrant to cover their large fixed cost of the infrastructure.³

What if the entrant invests in a second pipeline with a small capacity? As described earlier, many of the fixed investment cost (e.g. environmental and planning approvals) will be very similar regardless of the capacity of the second pipeline. But with a small capacity, the independent provider would need to anticipate a high enough price margin over marginal costs in order to cover their large fixed costs. This outcome will be difficult to achieve with a small quantity, as the average cost of provision will be quite high. Moreover, it seems unlikely that approval would be given for a second pipeline that does not significantly add to

² An alternative would be to have the investment costs recouped by fixed (access) charges. But as argued below in relation to per-unit prices, with excess capacity it can be difficult to credibly sustain prices above marginal costs of provision, making it difficult to recoup sufficient funds to cover the fixed investment costs.

³ A theoretical example of this can be seen when a firm is considering entering a market with an incumbent monopoly provider. For argument's sake, assume that the entrant has the same constant marginal cost of production as the incumbent and that if they enter they will sell an identical product. In this case, given the products are identical and there are no binding capacity constraints, price competition will drive prices all the way down to marginal cost. Anticipating the post-entry competition, the potential entrant will not come into the market if they have any positive sunk entry costs, as there is no possibility of recovering these costs.

capacity, given the long economic life of such assets and expected growth in jet fuel demand over many decades.

Third, firms can sometimes sustain prices above marginal costs when they compete with each other many times. The rationale is as follows. If a firm competes vigorously in the marketplace today (for example, by setting low prices) it will induce a reaction by the other firms in the future, essentially trying to punish it for acting competitively (for example, the other firms could start a price war). If the cost of this future punishment is sufficiently large, it will not pay for the firm to compete vigorously. As a consequence, competition between the firms will be soft and high prices can be sustained.

But these conditions are unlikely to exist for the second pipeline. Specifically, it is unlikely the independent provider could credibly commit to not strongly compete (in terms of price for example) upon entering. A new entrant would like to increase its market share and an obvious way to do this is to compete on price. Evidence from other industries suggests that entry can trigger a price war as the new firm tries to capture a share of the market⁴. Initially, the new provider could expect to win at most the 24% market share not accounted for by Caltex. This means that to recover costs on a pure average cost basis, the entrant would need to charge prices far higher than the implicit price charged by Caltex to itself. This would occur because of:

- the smaller volume of jet fuel transferred down the second pipeline (around one quarter of current market volumes), and
- the likely cost advantage of the Caltex Pipeline.

This suggests that expanding market share would have to be an important element of the independent provider's strategy.

The current dominant position of Caltex raises further questions as to where this market share would come from. The independent provider would need to be sure that both new suppliers of jet fuel would enter the market and obtain a substantial proportion of Caltex's market share and that they transport their jet fuel down new second pipeline rather than the Caltex Pipeline.

In summary, an independent provider needs to have prices sufficiently high so as to cover both the fixed cost of its capital investment and ongoing operating costs. If the post-entry environment is highly competitive, this is not likely to be the case. Moreover, the independent provider will need a substantial market share over which to spread its large fixed cost, a requirement that could be problematic given that the market is currently dominated by its competitor.

The Applicant, therefore, considers that the most likely outcome for the independent provider is that the investment would not be profitable. As the expected outcome is loss making, it

⁴ See for example de Roos, N (2004), 'A Model of Collusion Timing', International Journal of Industrial Organization, 22(3), 351-87.

is clearly not in a rational investor's interest to undertake such an investment. The Applicant, therefore, considers that this scenario fails the private profitability test.

Given the outcomes for the independent provider, the private profitability considerations for the other identified providers, therefore, relate to the extent they would choose to subsidise the losses sustained on the second pipeline through profits earned in upstream or downstream markets. In each case below, the discussion and analysis assumes the second pipeline would be unprofitable on a stand-alone basis.

An airline or group of airlines

If an airline or group of airlines were to construct the second pipeline, the airlines would be vertically integrated into the downstream international and domestic passenger and freight markets at Sydney Airport. It is, therefore, necessary to consider if the losses incurred on the second pipeline could be offset through the profits obtained in these downstream markets.

International and domestic freight and passenger services to and from Sydney Airport can be considered competitive.⁵ While there are some regulatory barriers to entry (i.e. bilateral Air Service Agreements for international airlines), the normal operating requirements for airlines (aircraft, approvals, etc) are not considered to be meaningful barriers to entry.

The competitive conditions and low barriers to entry mean that there are not large profits available in the markets served by airlines that could be used to subsidise the provision of a second pipeline. It also means that any net benefits derived from greater competition between the jet fuel suppliers would be primarily obtained by end customers, rather than the airlines themselves.

There are few identified high profits in these downstream markets. Rather, the situation of many international airlines has been one of relatively low profitability and difficulty in justifying existing schedules. As noted in the Applicant's initial submission, the exiting of a number of European carriers from routes between Sydney and European destinations since 2000 demonstrates the difficulty for airlines to maintain profitability.

Qantas Airways also recently announced its decision to restructure its international operations in the light of poor profitability, noting that 'a large numbers of our routes, primarily to Asia and Europe, are loss-making, with no improvement in sight.'⁶

This situation contrasts with the mining of iron ore from the Pilbara, where the Court noted that there was a 'high level of international demand for iron ore from the Pilbara and the vast profits to be made from participating in meeting that demand.' (paragraph 43). The profits available to iron ore miners in the Pilbara far exceed those available to airlines operating to and from Sydney Airport.

⁵ For a recent example see ACCC (2011) Applications for Authorisations, Virgin Australia and Singapore Airlines, Draft Determination. In particular, the ACCC found that for overlapping routes between Virgin Australia and Singapore Airlines, there were a number of competitor airlines that are in a position to constrain the price and service offering of the proposed Alliance.

⁶ Qantas Airways (16 August 2011) Building a Stronger Qantas, Press Release.

The fact that airlines change the routes and/or frequency of operations to and from Sydney Airport on an ongoing basis further undermines the ability for an airline, or group of airlines, to enter into an arrangement to subsidise the provision of a second pipeline. Airlines would have limited confidence in their ability to maintain sufficient presence at Sydney Airport through time to earn sufficient profits to justify the loss making investment on such a long lived asset (should such high profits actually exist in the first place, which they do not).

Furthermore, the provision of airline services and constructing and operating a jet fuel pipeline are fundamentally different. It is not clear that an airline or group of airlines would have the requisite skills and know-how to profitably enter the jet-fuel transport market as it is so far removed from their core business.

Finally, it is important to note that the airlines have been aware of the jet fuel supply infrastructure problems to Sydney Airport for many years. However, at no stage has an airline, or group of airlines, sought to initiate a project to construct a second pipeline. If it was profitable for the airlines to do so, then this would have already occurred and declaration of the Caltex Pipeline would not be necessary.

For airlines, the investment in a second pipeline must also be considered a loss making venture. This scenario, therefore, fails the private profitability test.

A fuel supplier or group of fuel suppliers (other than Caltex or Shell)

Jet fuel suppliers would need to earn sufficient profits from the sale of jet fuel to airlines at Sydney Airport that would ultimately cover their investment in a second pipeline.

As noted earlier, the jet fuel suppliers other than Caltex make up a relatively small fraction of the total market share for jet fuel at Sydney Airport. To cover the cost of the second pipeline, the jet fuel suppliers would have to increase their share of the market substantially and this typically would involve competing strongly with the incumbent on price. More vigorous price competition would reduce margins, making it less likely that downstream profits would cover the fixed cost of the second pipeline. Furthermore, a potential entrant would be concerned about the reaction of Caltex to a rival trying to expand their market share.

Another point worth noting is that jet fuel suppliers (often oil companies) compete with each other in many different markets around the world. When considering constructing a second pipeline to Sydney Airport, an oil company will consider the potential ramifications in other markets and not just the market for jet fuel in Sydney. If they anticipate that their entry will increase competition in other markets, the profitability of an investment in a second pipeline to Sydney could be somewhat reduced.

There is, therefore, little incentive for jet fuel suppliers, especially incumbent oil companies, to construct a second pipeline. It is a more profitable strategy for them to participate in the current, highly concentrated market, rather than undertake a loss making investment in a second pipeline to increase the level of competition in the sale of jet fuel to airlines at Sydney Airport. Again, the lack of interest expressed by any existing jet fuel supplier in initiating a

project to construct a second pipeline to date further confirms that it would be a loss making investment.

Vopak

Vopak's incentive to construct a second pipeline prior to 2020 would be based around its ability to obtain additional profits from its offsite storage facilities (upstream market) and offering a vertically integrated service for users (from the Vopak storage facilities to the Sydney JUHI).

However, it is unlikely that Vopak would earn the level of high profits from its storage facilities to cover the losses on the second pipeline. If Vopak made additional storage capacity available for jet fuel, then the prices obtained would need to cover this investment, either as new storage facilities or the opportunity cost of making additional existing storage facilities available, in addition to the losses on the second pipeline. Moreover, there is unlikely to be a significant cost advantage of offering a vertically integrated service product (storage and pipeline transport) so as to give Vopak a substantial scope to undercut its rival on price, as the input of jet fuel into the current Caltex pipeline is already developed and well coordinated.

To do this, Vopak would need a high level of assurance from airlines that they will attract additional jet fuel suppliers and those suppliers would be prepared to pay high prices for offsite storage and jet fuel transport to Sydney Airport. Importantly, Vopak could not be effectively assured that the airlines would not be prepared to seek competing deals with Caltex once the second pipeline was completed.

Moreover, it would not be in the interests of either the airlines or new jet fuel suppliers to make these commitments if they believe they can receive a better deal once there is excess pipeline capacity. Airlines, following a rational profit maximising strategy, would have an incentive encourage strong price competition between Vopak and Caltex given the excess capacity and low marginal cost of both potential jet fuel transport providers. The low profitability and changing market presence of airlines operating to and from Sydney Airport also make assurances by airlines to Vopak largely unrealistic.⁷

For Vopak, a more profitable strategy is to wait until a second pipeline is required before considering whether it is in their long term interest to provide both offsite storage and jet fuel transport services. It is instructive that Vopak did not seek to initiate a project to construct a second pipeline before Caltex committed to its upgrade its existing Pipeline. Vopak's incentives to construct a second pipeline before 2020, therefore, also fail the private profitability test.

⁷ Note that while it might be collectively in the interests of the new jet fuel suppliers (and the airlines) to have a second pipeline constructed, it can still be individually more profitable for each of them not to make any commitments to pay the higher price required to ensure a new pipeline is built. Instead they could all wait for others to bear the cost. If all potential users act in this way, the new facility might not be built.

Sydney Airport Corporation Limited

SACL would need to be able to cover the losses from investing in the second pipeline through profits earned from additional aeronautical and/or non-aeronautical activities at Sydney Airport. This additional activity at the airport would be generated through the improved competitive conditions for the provision of jet fuel at Sydney Airport.

It would not be in the airlines' collective interest to allow SACL to include all, or some, of the cost of the second pipeline in aeronautical prices levied on airlines as a common user aeronautical asset. A number of airlines would likely continue to source a proportion (possible large proportion) of their jet fuel needs from Caltex and/or Shell. Given this, they would be contributing to the cost of providing jet fuel to competitor airlines that primarily sourced their jet fuel needs from suppliers that use the second pipeline.

Given the Australian Government's policy position that SACL does not abuse its market power in setting aeronautical charges, SACL could not earn excessive returns on the additional aeronautical activity to cover the losses on the second pipeline. That is, while the additional activity may bring forward aeronautical investments, SACL would only earn normal commercial return and not excessive returns, which would be required to cover the losses on the second pipeline.

Any additional growth in passenger throughput could also result in higher non-aeronautical revenues for SACL, through activities such as retail and car parking. However, it is unlikely that the marginal non-aeronautical revenues would be sufficient to justify the losses made on the second pipeline. It is important to note that SACL has not announced any intention of investing in a second pipeline. If it was in SACL's commercial interest to undertake such an investment before a second pipeline is required in about 2020, then one could reasonably have expected it to announce its intentions to do so by now.

Furthermore, all major privatised airports, including SACL, remain strongly opposed to any form of pricing where the profits from non-aeronautical activities are used to partly fund the facilities and services required by airlines. It is not in SACL's long term financial interests to set precedents in which it subsidises the facilities and services required by the airlines through the profits earned on non-aeronautical activities. SACL itself would be best placed to comment on its willingness to subsidise the cost of services and infrastructure required by airlines.

As argued above in relation to an airline or group of airlines potentially investing in a second pipeline, this investment would be well outside the core business of SACL providing aeronautical services and other services for users of the airport. It is not clear that the return on capital from a second pipeline is a better investment for SACL than continuing to invest in Sydney Airport and its facilities.

Concluding remarks

The incentives for any market or non-market participant to construct a second pipeline prior to one being necessary in about 2020 are low. The expected outcome from the investment

would be loss making when considered on a stand-alone basis. Neither airlines, jet fuel suppliers, Vopak or SACL have an incentive to subsidise the losses on the investment through additional profits earned in either upstream or downstream markets. The profits either simply don't exist (airlines), would be competed away (jet fuel suppliers), require unrealistic commitments from airlines (Vopak) or require marginal non-aeronautical revenue increases to exceed the losses on the second pipeline (SACL). As such, the Applicant considers that the private profitability test is not met for any identified market and non-market participants.

Finally, it should be emphasised that all market participants identified above have been aware of the jet fuel supply issues at Sydney Airport for many years. Through the SJFIWG Report, each market participant has access to detailed information on all aspects of the jet fuel supply and demand situation at Sydney Airport. The fact that no market participant has sought to initiate a project to construct a second pipeline is perhaps the strongest evidence available to the Council over its profitability. Given the well informed position of long standing market participants, in this case the private profitability test can be readily answered by the lack of interest of those participants in investing in a second pipeline to date.