



**APT Petroleum Pipelines Limited**  
**ACN 009 737 393**

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**RESPONSE TO THE DRAFT DECISION ON PROPOSED ACCESS  
ARRANGEMENT  
FOR ROMA BRISBANE PIPELINE**

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**10 OCTOBER 2006**

## **APTPPL Response to the ACCC's Draft Decision on the Roma to Brisbane Pipeline Access Arrangement**

### **1. Introduction**

APT Petroleum Pipelines Limited ACN 09 737 393 (APTPPL) is a wholly owned subsidiary of the Australian Pipeline Trust ARSN 091 678 778 and is the owner of the Roma to Brisbane Pipeline (RBP).

On 31 January 2006 APTPPL lodged a proposed revised RBP Access Arrangement and Access Arrangement Information with the ACCC (the Commission).

This document is a consolidated response to Draft Decision on the proposed Access Arrangement, released on 31 August 2006.

The response consolidates APTPPL's previous responses to the Commission on non-revenue amendments and revenue amendments..

### **2. Confidentiality**

This response is public.

### **3. Initial Capital Base**

This section of the response outlines APTPPL's position on the Initial Capital Base (ICB) and broadly follows the structure of the Commission's considerations in the Draft Decision.

The amendment required by the Commission is:

#### **ACCC Amendment 01**

Before APTPPL's revised access arrangement for the RBP can be approved, the value of the ICB must be set at \$250.63 m.

This amount is determined by calculating the straight line DORC for the pipeline, and then reducing the value of \$295.8 million by \$46.5 million (or 16%) to reflect assumed past capital contributions. The amount is in \$ July 2006.

This contrasts with the value of \$342.6 m (October 2005) proposed by APTPPL, and which was calculated using the NPV DORC methodology accepted by the Australian Competition Tribunal in the *Moomba Sydney Pipeline Case*.

APTPPL does not accept this amendment as it considers it unreasonable in all the circumstances.

### 3.1 Calculation of DAC

#### 3.1.1 ACCC Position

The Draft Decision has determined a DAC for the RBP based on APTPPL 2005 statutory accounts, which show the pipeline has a book value of \$133.7m. The Draft Decision has reduced this value to take into account revaluations of \$25.4m (Draft Decision p16). This results in a “DAC” of \$108.3m. The Draft Decision (Draft Decision p17) states that in other regulatory decisions, where there is insufficient information, it has been acceptable to adopt accounting depreciation in the absence of information on the economic depreciation.

#### 3.1.2 APTPPL Response

The Draft Decision’s determination of DAC is in error. DAC must be calculated using economic depreciation and it is not sufficient to use accounting depreciation as a proxy for economic depreciation.

There is insufficient information to make an accurate determination of DAC for the RBP<sup>1</sup>, mainly as a result of the age and various changes in ownership and structure of the RBP. For example:

- The actual capital costs of the RBP are unknown. Reliable, accurate and complete information is not available on:
  - the initial capital cost of the pipeline;
  - additional capital expenditure on the pipeline since construction in 1969, in particular additional capital expenditure in the earlier years of the pipeline’s operation.

APTPPL has provided the Commission with information on the historical capital cost as held in its accounting system, and has also advised the Commission<sup>2</sup> (as noted in the Commission’s regulatory model) that historical capital expenditure information contained discrepancies and may not be comprehensive.

- The reasons for previous revaluations or write-downs are unknown. The Draft Decision has deducted an amount from the current DAC to reflect revaluations

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<sup>1</sup> The reasons for this have been explained in earlier submissions and documents provided to the Commission. For example the Access Arrangement Information (pp7-8) notes that capital cost information is not accurate or complete and “Further Information Provided to ACCC 21 February 2006”(Attachment 3) notes that “Due to the age of the RBP and changes of ownership and ownership structure, accurate information on the actual capital cost of the Covered Pipeline is not available”.

<sup>2</sup> Noted in the Commission’s regulatory model on capex\_schedule worksheet.

known to APTPPL. However information relating to these revaluations is not complete.

- Comprehensive information which would enable the accurate calculation of economic depreciation over the life of the pipeline is not available, such as detailed information as to costs, revenues and return expectations over the life of the pipeline, including the period when the pipeline was owned and operated as part of a “bundled” business.

The Draft Decision (Draft Decision p17) argues that in the absence of information on economic depreciation, it has been acceptable to adopt accounting depreciation as a proxy to determine the depreciation to be deducted from the actual capital cost. APTPPL does not agree with this position as the term depreciation in “DAC” is economic depreciation and considers that the use of accounting depreciation for economic depreciation is a flawed proxy.

The actual capital cost of the RBP is not available, so the accurate calculation of any form of depreciation (economic depreciation or accounting depreciation) is problematic. Additionally, it is not possible to identify the economic depreciation recovered over the life of the pipeline. Accordingly, any calculation of DAC will be inaccurate.

APTPPL’s position is that the DAC cannot be accurately determined, but that it could be up to \$253.3 million<sup>3</sup>. There is nothing in the Draft Decision to demonstrate that the Commission is able to be confident that its calculated DAC value is, in fact, the DAC within the meaning of the Code. Accordingly, the ICB proposed by the Draft Decision may be less than the DAC. In these circumstances the Draft Decision may have proposed, without proper reason, a value for the ICB that is outside the normal range of DAC and DORC (Code 8.11).

### 3.2 ORC

ORC is an input to the DORC calculation. Two ORCs have been calculated. One ORC is for a replacement pipeline designed to accommodate forecast growth (“forecast capacity ORC”) and the other is for a replacement pipeline designed to provide the current service capability of the pipeline (“existing capacity ORC”).

This reflects a difference of view as to what “ORC” is meant to measure – the efficient costs of replacing current and forecast service requirements, or of replacing the existing service capability.

The Draft Decision proposes using the existing capacity ORC for the calculation of straight line DORC, but the forecast capacity ORC for the calculation of NPV DORC.

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<sup>3</sup> As outlined in section 3.2.2.1 of the proposed RBP AAI and calculated using the approach explained in “Further Information Provided to ACCC 21 February 2006” (Attachment 3).

No clear reason is given for the proposed use of different ORC values for what is intended to be a calculation of the same value.

APTPPL proposed using the forecast capacity ORC for NPV DORC, and, if straight line DORC were to be calculated, for that calculation.

### 3.2.1 ACCC Position

The ORC valuations put forward by APTPPL were broadly accepted by the Draft Decision. The Draft Decision (Draft Decision p19, p24) described the difference between its ORC estimates and APTPPL's ORC estimates as immaterial for both the forecast growth ORC pipeline and the existing capacity ORC.

The Draft Decision then modifies APTPPL's proposed ORC value by adjusting for construction financing (Draft Decision p 19, p24), where the cost of financing is to be aligned with the cost of capital used elsewhere in the Draft Decision, and to reduce equity raising costs (Draft Decision p29). This has the effect of reducing the value of APTPPL's proposed existing capacity ORC by approximately \$5m, from \$446 million (\$ July 2006) to \$441 million (\$ July 2006).

### 3.2.2 APTPPL Response

In relation to the forecast capacity ORC, the Commission's consultant estimated an ORC of \$502m (\$May 2006). Adjusting this to \$October 2005 gives a valuation in the range \$495m - \$490m (depending on the interpolation of the CPI quarters selected). APTPPL's forecast capacity ORC valuation was \$456m (\$ October 2005) with further capital expenditure of \$38m in 2008 to provide the same service capability as that assumed by the Commission's consultant (Draft Decision pp 18-19). This results in a discounted ORC value of approximately \$ 485m - \$490m (\$ October 2005), depending on the discount rate used. Thus the two values for the forecast capacity ORC are very close.

In discussing these ORC values the Draft Decision (Draft Decision p19) states that

*in view of the sizeable contingency factors surrounding such estimates, the ACCC considers the difference in the costs of the two estimates to be immaterial*

Similarly in relation to the existing capacity ORC, the Commission's consultant estimated an ORC of approximately \$423 million (\$ July 2006) compared to APTPPL's estimate of approximately \$427 million (\$ October 2005). Again the Draft Decision (Draft Decision p24) notes that

*in view of the sizeable contingency factors surrounding such estimates, the ACCC considers the difference in the costs of the two estimates to be immaterial*

Thus the Draft Decision establishes that the Commission considers a variation of \$5 million to \$10 million to be immaterial in relation to ORC for the RBP.

However, the Draft Decision then seeks to reduce APTPPL's proposed existing capacity ORC by approximately \$5.1m to take account of a different view of the cost of financing during construction and approximately \$110,000 to take account of a different view of equity raising costs.

The fact that two separate studies arrive at approximately the same value for ORC should be seen as evidence that the values are reasonable. In light of this, and the recognition that a difference of approximately \$5 million to \$10 million is immaterial, it is then unreasonable for the Draft Decision to adjust APTPPL's proposed ORC downwards by approximately \$5.1m for financing and \$110,000 for equity raising costs. Additionally, this proposed reduction seems to:

- ignore the nature of the ORC valuations which are recognised by the Draft Decision. The Draft Decision's adjustment to one element of an overall valuation package seems to imply a very high level of finesse in cost estimation that does not exist, and ignores the Draft Decision's implied materiality threshold;
- incorrectly assume that the methodology and assumptions for the determination of the ICB are required by the Code to align with other assumptions and methodologies that may be used in applying the "building-blocks" approach.

APTPPL does not accept these changes to ORC. They imply a level of precision in determining ORC that does not exist and are inconsistent with the recognition in the Draft Decision that a difference of \$5 million to \$10 million is immaterial.

APTPPL does not object to the Draft Decision's method of adjusting the ORC for linepack and inflation.

### 3.3 DORC

#### 3.3.1 ACCC Position

The Draft Decision (Draft Decision p18) states that the Code gives no guidance on the determination of DORC and that, except for the Moomba Sydney Pipeline (MSP), DORC has been calculated using the straight line DORC method.

The Draft Decision does not address in any detail the fact that any uncertainty as to the proper meaning of DORC has been removed by the decision of the Tribunal in the *Moomba Sydney Pipeline Case*. The Tribunal concluded that DORC should be calculated by the cost-based NPV method and that, given the significance of DORC under the Code, a serious effort was required to arrive at the correct result.

### *3.3.1.1 ACCC Position on NPV DORC*

In relation to NPV DORC the Draft Decision asserts:

- NPV DORC should be calculated from the perspective of the incumbent and not that of the Hypothetical New Entrant (HNE);
- the appropriate discount rate for costs is the real risk free rate (Draft Decision p20). This is based on a view that “there is little, if any, systemic risk in the forecast cost streams” and consequently “the discount rate for costs should not include a risk premium”. The Draft Decision supports this position with reference to various papers, including a paper prepared by Professor Bruce Grundy for the Commission in the *Moomba Sydney Pipeline Case* and by providing an intuitive example.
- The manner in which APTPPL treated tax in its NPV DORC calculation is incorrect and requires changes to the model.
- The asset expansion and replacement schedule used by APTPPL is incorrect and requires changes to the model. In particular APTPPL did not take account of the actual time parts of the pipeline would have to be replaced. The Draft Decision’s position (Draft Decision pp22-23) is that this approach “only approximates the appropriate value as it is assumed that the two pipelines (the existing and the optimal replacement) have the same service potential. If the service potential of the new pipeline is greater than the existing pipeline, the APTPPL approach will over estimate the true DORC value.”

In addition, the Commission’s consultant, NERA<sup>4</sup>, now argues that the rigorous NPV methodology used in the calculation of DORC for the MSP should be abandoned in favour of a proxy method (i.e. the straight line adjustment of ORC, which historically has been applied by regulators).

The Draft Decision generally rejects the NPV DORC approach and uses straight line DORC as a proxy.

### *3.3.1.2 ACCC Position on Straight Line DORC*

The Draft Decision’s preferred approach to calculating DORC is to adopt the straight line method. This preference appears to be based on a view that the method is simpler and is an established methodology.

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<sup>4</sup> This is argued passim in NERA 2006, *Comparison of DORC Estimation Procedures*, A report for the ACCC, Melbourne, July.

In particular the Draft Decision (Draft Decision p23) notes that

*Before the Tribunal's decision on MSP, the ACCC's approach to calculating DORC was to discount the value of the optimised replacement cost (ORC) on the basis of the ratio of the expected remaining life of the actual pipeline over the economic life the optimal pipeline.*

The Draft Decision has maintained this calculation method. In calculating the straight line adjustment to ORC the Draft Decision assigns the ORC to various asset categories and then depreciates each on the basis of the ratio of the expected remaining life of the existing asset to the economic life of the replacement pipeline. No explicit rationale for this formulation is provided beyond the fact that the formulation has been used previously.

### 3.3.2 APTPPL Response

#### 3.3.2.1 *Overview of APTPPL's view on DORC*

There is a fundamental difference between APTPPL and the Commission in relation to the calculation of DORC, being whether the calculation should be undertaken rigorously (through the NPV DORC approach) or by way of an approximate method (eg "straight line DORC").

The Draft Decision (Draft Decision p18) asserts that the Code gives no guidance on the determination of DORC and historically DORC has been calculated using the straight line DORC method. APT considers that this fails to recognise the decision of the Tribunal in the *Moomba Sydney Pipeline Case* which clarified the determination of DORC and held that, given the significance of DORC in the regulatory process, a serious effort should be made to arrive at the correct result. As confirmed in the attached letter dated 4 October 2006 from Middletons, the Federal Court's decision did not affect the conclusion of the Tribunal that straight line DORC is "too crude" a methodology and that a serious effort must be made to calculate NPV DORC.

DORC can and should be calculated according to a fixed definition and methodology that produces a value that accords with the position of DORC in the Code as the normal upper bound of the range of the ICB. The construct of DORC as proposed by APTPPL provides a rational and logical basis for such a value.

The straight line adjustment of ORC is an invalid proxy for DORC, as discussed in Attachment 1. Even if the straight line adjustment of ORC were a valid proxy, the way in which the Draft Decision has accounted for the difference between the original life of the mainline and its ORC replacement is flawed and understates the value of "straight line DORC". This point is developed in more detail in Attachment 2.



DORC for the RBP can and should be calculated by the NPV DORC methodology based on:

- Costs;
- a HNE's perspective; and
- discounting at post-tax WACC with tax effects modelled explicitly.

While APTPPL considers that its proposed use of weighted average lives for major assets is reasonable, APTPPL recognises that the approach adopted in the Draft Decision, of using individual asset lives, is also valid. APTPPL does not object to the use of this approach.

Similarly APTPPL considers that while use of forecast capacity ORC is a reasonable basis for the calculation of DORC, APTPPL recognises that the use of an existing capacity ORC as proposed by the Commission for its preferred DORC methodology is also reasonable. Accordingly APTPPL has adopted the existing capacity ORC in the calculation of DORC.

When the approach above is used, and other minor adjustments are made, the NPV DORC for the RBP is \$345.7m. Further information on this calculation is in Attachment 1.

APTPPL submits that this is the appropriate value for the ICB for the pipeline.

If it is decided that the ICB should be some value other than properly calculated NPV DORC, then the reasons for that decision should be given separately from the calculation of DORC and implemented transparently. Section 8.10 of the Code provides for this to occur. It is unnecessary and inappropriate to have an uncertain and moveable definition of DORC that can be adjusted according to the circumstances of the particular case for the purpose of producing a value that might be adopted as the ICB.

#### *3.3.2.2 APTPPL Response on NPV DORC*

There is no valid reason for abandoning a rigorous NPV DORC approach in favour of a proxy. The calculation of a cost-based NPV DORC for the MSP, which reflected modelling agreed between EAPL and the Commission<sup>5</sup>, demonstrates that the calculation can be done. The fact that a range of forecasts or assumptions need to be made is no different to the situation applicable to the general exercise of the regulator's discretion under the Code (where forecasts and/or assumptions need to be made as to volumes, non-capital costs, capital expenditure etc).

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<sup>5</sup> APTPPL notes that while EAPL and the Commission did not agree on the values of all inputs, including on the issues of HNE of incumbent and WACC of risk free rate, the approach to the modelling of NPV DORC was substantially agreed.

If the Draft Decision considers it necessary to use an alternative to the cost based NPV approach then an NPV DORC calculation based directly on the Hypothetical New Entrant Test (HNET) revenue path is practicable and avoids a number of the concerns raised by NERA with the cost-based approach.

There are two principal points of difference between APTPPL and the Commission in relation to the calculation of NPV DORC, namely:

- the perspective from which the DORC calculation should be performed: HNE or Incumbent<sup>6</sup>; and
- the discount rate to be used in the calculation: risk free rate or WACC<sup>7</sup>.

These points of difference are matters of principle. Once they are decided, the feasible range of NPV DORC will be very much narrower than that suggested by the Draft Decision.

Arguments supporting both of these points are developed in more detail in Attachment 1 and CRA paper “Roma Brisbane Pipeline: NPV DORC Key Inputs”.

As outlined in more detail in Attachment 1, NERA and the Tribunal accept there is a nexus between the HNET and DORC as a valuation methodology. The HNET involves an assessment of the revenue that the HNE would require to support an investment in the hypothetical new pipeline costing ORC. The corollary to this is that it must be the HNE who has the alternative of purchasing the existing pipeline in the HNE construct of DORC. That is, if DORC is to be consistent with the HNET, then DORC must be determined from the HNE’s perspective. The HNE’s perspective is also the only perspective that is supportable given the competitive market underpinnings of DORC.

The NPV DORC should be based on the HNE approach rather than the incumbent approach. The choice of approach (new entrant or incumbent) affects tax treatment and it seems that a contributing factor to the Draft Decision’s choice of the incumbent approach is that to do otherwise may compromise the “Post Tax Revenue Model”. APTPPL believes that the calculation of DORC and setting of the ICB (whether or not equal to DORC) are distinct steps required by the Code. Modelling of cash flows once the ICB has been set, whether or not with the PTRM, is a separate process in which the ICB is one input. Any perceived need for consistency with the current revenue modelling approach is not relevant.

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<sup>6</sup> APTPPL has previously outlined its support for the HNE construct of DORC in “Further Information Provided to ACCC 21 February 2006” pp3-4.

<sup>7</sup> APTPPL has previously outlined its support for the WACC discounting of NPV DORC in “Further Information Provided to ACCC 21 February 2006” p5.

NERA and the Commission have also asserted that discounting in the cost based DORC calculation should be at the risk free rate. The reasons in the Draft Decision and the NERA report are not conclusive. There are a number of reasons why discounting at the risk free rate is inappropriate:

- In the calculation of NPV DORC it is not sufficient that the present values of the build-ORC and buy-DORC cost streams are equal. There is an additional and necessary condition that the net present values of the build-ORC and buy-DORC “project” cash flows, discounted at WACC, must be equal and equal to zero. The regulatory framework is based on the assumption that costs will equal revenues over the longer (if not the shorter) term. This condition requires that costs be discounted at the regulatory WACC in the DORC calculation. If any other discount rate is used, the regulated revenue that results when the DORC is adopted as the ICB will be inconsistent with the difference (if any) in revenues that was assumed in the DORC calculation, thus infringing the criterion that the investor should be indifferent between the build-ORC and buy-DORC scenarios, which is at the heart of the DORC definition.
- The use of the risk free rate assumes that, over the life of the existing and new pipelines, *all* costs are certain. It is self-evident that this assumption is incorrect in the context of an assessment of costs for the economic life of the pipeline – for example, the Draft Decision itself recognises uncertainty as to the timing (and therefore the cost) of capital expansions, and of non-capital costs, such as increased security costs. Additionally, a service provider is not able to obtain a fixed price contract for the management, operation and maintenance of the pipeline for its economic life, which would be required before the Commission could begin to be confident that the costs of the alternatives are without risk.

APTPPL believes the Draft Decision’s approach to discounting is incorrect. More detail on the appropriate discount rate to be used in NPV DORC is included in Attachment 1 and the attached paper by Charles River Associates (CRA) “Roma Brisbane Pipeline: NPV DORC Key Inputs”.

The Draft Decision also criticises APTPPL’s NPV DORC calculation on a number of other grounds that are of secondary significance:

- APTPPL has used a grossed-up pre-tax discount rate instead of modelling tax effects explicitly;
- APTPPL has grouped assets and used weighted average lives instead of treating major assets separately with individual lives; and
- The Commission’s consultant and APTPPL have different views of the timing and costs of the asset replacements and expansions required for the existing pipeline to match the delivery capability of the “forecast capacity ORC pipeline”.

APTPPL has re-calculated NPV DORC addressing these issues as follows:

- a post-tax WACC has been used, and tax effects have been modelled explicitly;
- individual rather than weighted average lives have been used for major assets; and
- the calculation has been performed using the existing capacity ORC (\$446.4 m), being the ORC value adopted in the Draft Decision for the calculation of DORC using the straight-line proxy method, as adjusted for inflation, finance in construction and equity raising costs. As to the criticism in the Draft Decision that APTPPL's proposed expansions costs understated the costs of expansion and thus overstated the NPV DORC value, APTPPL considers that the assumptions made in its NPV DORC modelling to reflect future capital costs for asset replacement and expansion were reasonable. The fact that the Commission's consultant identified a number of other, more expensive, alternatives does not mean that APTPPL's assumptions were incorrect or unreasonable<sup>8</sup>.

The reasons for the last of these changes are discussed below and in Attachment 1.

#### *3.3.2.3 APTPPL Response on Expansion*

APTPPL recognises that DORC is concerned with valuing a pipeline which exists, not a pipeline which may exist in the future. However, this creates tension with the definition and concept of ORC, which is the optimum replacement cost for the service capability of the existing asset. As previously described to the Commission by APTPPL<sup>9</sup> various papers have suggested that, at least, short term growth expectations should be reflected in the ORC valuation. However, the question does not seem to have been extensively tested or debated.

In the case of the RBP, this presents a particular issue as the forecast load growth of the pipeline results in a differently designed pipeline to that which would be optimum for current requirements. As far as APTPPL is aware, this is the first time there has been a significant difference between the existing and forecast capacity requirements and possible ORC designs (and hence costs).

Both the Commission and APTPPL examined the issue of expanding the current pipeline to meet the forecast future loads, with the cost of the expansion to be reflected in a reduction to the NPV DORC calculation.

Based on APTPPL's experience in operation and expansion of the RBP, APTPPL assumed a three stage expansion from 2007 to 2011 costing \$115m. The Commission's

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<sup>8</sup> This is also supported by the fact that expansion capital identified by the Commission's consultant as necessary in 2005-2006 and 2006-2007 has not and will not be incurred.

<sup>9</sup> See "Further Information Provided to ACCC 21 February 2006" pp2-3

consultant undertook its own analysis of expansion options, and identified alternative proposals with a higher capital cost. This alternative expansion program includes expenditure of \$27m in 2005-6 and \$130m in 2006-7. This expenditure did not occur in actuality and will not occur in the remainder of the identified period.

While it is possible to reasonably estimate the timing and quantum of such expansion costs, the alternative approach is to adopt the existing capacity ORC as it removes the need to identify these costs and then deduct them from the calculation of NPV DORC.

Given the difficulties apparently faced in reaching a common position on future capital costs when the forecast capacity ORC is adopted, APTPPL will accept the use of the existing capacity ORC as the basis of the calculation of NPV DORC. This also has the benefit of alignment with the approach adopted in the Draft Decision to the calculation of straight line DORC.

#### *3.3.2.4 APTPPL Response on Straight Line DORC*

In APTPPL's view simplicity and precedent are inadequate bases for adopting straight line DORC when determining the DORC value for the pipeline under section 8.10 of the Code. This view is also consistent with the findings of the Tribunal in the *Moomba Sydney Pipeline Case*, as discussed above.

The calculation of straight line DORC in the Draft Decision is erroneous in its treatment of the original RBP mainline, where the existing asset has a shorter economic life than the optimised replacement pipeline. This is discussed further in Attachments 1 and 2. When this is corrected the "straight line DORC" value for the RBP of \$312.6m.

Table 1 below summarises APTPPL's position on DORC.

**Table 1: Summary of DORC Positions**

	<b>ACCC Draft Decision</b>	<b>APTPPL Response</b>
<b>ORC for NPV DORC calculation</b>	\$462.21m (forecast capacity ORC) as proposed by APTPPL (ACCC spreadsheet <sup>10</sup> )	Existing capacity ORC, adjusted as set out below (\$446.4 million)
<b>NPV DORC</b>	\$171.6m <sup>11</sup> (p32) <ul style="list-style-type: none"> <li>• Cost-based calculation</li> <li>• Incumbent perspective</li> <li>• Discounting at risk free rate</li> <li>• Individual rather than weighted average lives for major assets</li> <li>• Commission view of expansion timing and costs</li> <li>• Tax effects modelled explicitly</li> </ul>	\$345.7m <ul style="list-style-type: none"> <li>• Cost-based calculation</li> <li>• HNE perspective</li> <li>• Discounting at post-tax WACC</li> <li>• Individual rather than weighted average lives for major assets</li> <li>• Expansion not a consideration with existing capacity ORC</li> <li>• Tax effects modelled explicitly</li> </ul>
<b>ORC for straight line DORC calculation</b>	\$441.0m (Table 2.2.5.1) APTPPL proposed existing capacity ORC (\$427m) adjusted for: <ul style="list-style-type: none"> <li>• Draft Decision view of equity raising costs</li> <li>• Draft Decision view of financing in construction</li> <li>• value of linepack</li> <li>• inflation</li> </ul>	\$446.4m Existing capacity ORC (\$427m) adjusted for: <ul style="list-style-type: none"> <li>• APTPPL view of equity raising costs at 3.83%</li> <li>• APTPPL view of financing in construction</li> <li>• value of linepack</li> <li>• inflation</li> </ul>
<b>Straight line DORC</b>	\$295.8m (Table 2.2.5.1) based on existing capacity ORC of \$441.0 million	Straight line DORC is not valid. If used it requires: <ul style="list-style-type: none"> <li>• correction of the method of dealing with the differences in economic life for the RBP mainline. When corrected, straight line DORC is \$312.6m<sup>12</sup>.</li> </ul>
<b>DORC value</b>	Straight line proxy – \$295.8m	NPV DORC – \$345.7m

### 3.4 Other Valuation Methodologies and factors to be considered

#### 3.4.1 Other well recognised valuation methodologies

The Draft Decision uses APTPPL's 2001 purchase of 15% of the RBP as a potential valuation benchmark. The Draft Decision estimates that the purchase implies a value for the RBP of \$163.1 million.

<sup>10</sup> It appears that the value of ORC used by the Commission does not include the adjustments to construction financing and equity raising costs discussed in the Draft Decision.

<sup>11</sup> APTPPL has examined the Commission's calculation and detected at least one error: the formulae that calculate the present values of tax concessions for both the new and old pipeline discount to 2005 instead of 2006 which is the discounting base for all other present value amounts.

<sup>12</sup> Based on existing capacity ORC of \$446.4m.

APTPPL does not agree that the value calculated in this manner is correct or informative for the reasons outlined in section 3.2.8 of the Access Arrangement Information.

### 3.4.2 Reasonable expectations under the prior regulatory regime

The Draft Decision (Draft Decision p27) states that

*there is nothing in the previous regulatory regime that could lead to the expectation that a service provider would be entitled to charge tariffs determined under that regime once the transitional phase concluded.*

APTPPL submits that this may demonstrate a failure to understand the prior regime, and the expectations which existed under that regime. The previous regime for purposes of clause 8.10(g) is the regime that preceded the Code – that is the regime established in 1995 under Part 8 of the *Petroleum Act 1923*.

That regime did not contemplate a transitional phase. There was nothing in that regime to create any expectation other than the continuation of the Act, and therefore the continuation of the approach to approving tariffs that applied between 1995 and the commencement of the Code in 1998.

There is no basis for the suggestion in the Draft Decision (Draft Decision, p27) that the expectations to be considered under section 8.10(g) are expectations as to what would happen once the Petroleum Act regime ceased. The section is directed at recognising the expectations which interested parties had under the regime– it does not direct an inquiry as to what interested parties may have expected would apply once a different regime came into effect. This construction is artificial and suggests an attempt to avoid recognition of the nature of the expectations under the regime established by the *Petroleum Act*.

The tariffs established under the prior regime were agreed between the customer and APTPPL, and/or approved by the Minister. As APTPPL has previously submitted, the expectations of parties under the prior regime were that tariffs generally consistent with those in place would continue. This is strongly supported by the fact that there was relatively little comment made in submissions by interested parties, particularly users who were users under the prior regime, on the level of tariffs proposed by APTPPL.

Recognition of this in establishing the ICB can be broadly achieved by establishing tariffs similar to current tariffs. As previously noted by APTPPL<sup>13</sup> the tariffs in the proposed Access Arrangement broadly align with the current tariffs and as such, an ICB consistent with the continued recovery of those tariffs is warranted.

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<sup>13</sup> APTPPL 2006 “Further Information Provided to ACCC 21 February 2006” p10.

### 3.4.3 The price paid for any asset recently bought by the service provider

The Draft Decision (Draft Decision p28) states

*setting the reference tariff on the basis of current replacement cost of the asset may therefore require tariffs that are uneconomic for users and this would imply that the pipeline would not be replaced*

There is no basis for the Draft Decision's conclusion that tariffs based on a replacement cost valuation of the pipeline will be uneconomic for users.

The reference tariffs proposed by APTPPL are not based on current replacement costs (although they are based on NPV DORC which takes as its starting point the current replacement cost of the assets) and are broadly consistent with current tariffs. These current tariffs are demonstrably affordable.

## 3.5 Capital Contributions

### 3.5.1 ACCC Position

The Draft Decision proposes reducing the straight line DORC value (and thus the ICB) by \$46.541 million to take account of an estimate of past capital contributions.

This reduction is based on the Commission's review of agreements, and a range of assumptions which were then made on the historical returns and the basis on which tariffs had been set in the past. The Draft Decision (p 33 Draft Decision) concludes that users paid above "standard charges", that these payments were linked to capacity expansions, and thus APTPPL "more than fully recovered through past tariffs the capital associated with these capacity expansions".

Specifically the Draft Decision states (p 33 Draft Decision)

*...it is **reasonable to expect** and there is **some evidence** to support the view that past tariffs have been set on the basis of fully recovering the costs of expansions through the contracts associated with those expansions. [emphasis added]*

Thus the proposed reduction is based on expectations and "some evidence".

The confidential attachment to the Draft Decision also seeks to demonstrate that the payments identified by the Draft Decision are capital contributions. This is based on expansion timing and changes to charging schedules, timing of charging schedules and the interpretation of several contracts.



The analysis is also said to demonstrate that APTPPL has more than fully recovered capital associated with all compressors, looping 1 and 2 and some of looping 3 (but no other looping stages).

### *3.5.2 APTPPL Response*

APTPPL believes the Draft Decision's analysis and conclusion as to the existence, quantum and treatment of past "capital contributions" is flawed.

It is not possible for the Commission to conclude with any certainty that APTPPL has recovered or "more than fully recovered" the capital the Draft Decision has assumed, or the capital which was in fact incurred. The uncertainty as to this is reflected in the language of the Draft Decision – it is "reasonable to expect" and there is "some evidence". This makes clear that the matter is not without significant doubt, and is clearly insufficient to warrant reducing the ICB by 16%.

APTPPL also submits that it is incorrect or unreasonable for the Commission to assume that because a tariff is identified by reference to a particular aspect of the pipeline (such as a compressor) that the tariff represents a "capital contribution" and/or that recovery of those tariffs justifies a reduction in the ICB. It is also incorrect or unreasonable to conclude, that the whole of the tariff was referable to the capital costs involved in providing services.

On one view, all users of an asset "finance" the asset's construction, expansion and operation. The capital cost of every asset is ultimately recovered by way of depreciation included (explicitly or implicitly) in tariffs. On this view, if the ICB is to be reduced to reflect the actual or possible "capital contributions" paid by users, the ICB should be reduced to reflect all tariffs paid by all users over the life of the regulated asset. Clearly, this is not the intention of the Code or the practice of regulators over the past eight years.

APTPPL submits that there is no reason to do so here, other than the fact that some contracts appear to refer to what could be described as a "capital" tariff. However, the fact that a particular tariff specifically references a tranche of capacity, or similar, is not a proper basis for assuming that those tariffs have some special feature that warrants depriving the service provider of value which the Commission would otherwise attribute to the ICB.

APTPPL also submits that the reduction of the ICB which would otherwise apply, to reflect assumed capital contributions, is inconsistent with the Code and may be an incorrect exercise of discretion or power by the Commission. This is discussed further below.

#### *3.5.2.1 Information Concerns*

Due to the age of the pipeline, and the various changes of ownership and ownership structure that have occurred over the years, there is a lack of comprehensive financial information related to the cost of the original construction and early expansion of the RBP, the rate of return expected on the original and subsequent capital, and the period over which the original and subsequent capital was expected to be recovered. This raises concerns relating to the reliability of conclusions drawn from the available information. Examples of some of the uncertainties are:

- The Commission has allocated all identified charges to capital recovery. There is insufficient information on whether these charges relate to just the capital recovery of identified components or whether they relate to more general costs (such as increased operating costs) or other costs (such as previous under-recoveries). Without such certainty, it would be an error to reduce the capital base on the basis of an assumption that capital has been recovered such as to warrant a reduction in ICB value.
- Several of the agreements<sup>14</sup> on which the analysis was based also contain clauses raising the possibility of renegotiation of tariffs. It is not known if this occurred, or what was intended by these provisions.
- The risks inherent in the capital expenditure and the rate of return required by the service provider to recover the costs of the capital expenditure at the time of investment are not known. However, it is reasonable to assume that the required rate of return would have been in excess of that currently permitted by regulators under the application of the Code.
- APTPPL has not conducted an audit, and may not have the information available, to identify whether all amounts expressed as payable in such tariffs were, in fact, paid by shippers; whether the agreements were varied or terminated earlier than anticipated; whether charges were waived or not chargeable as a result of force majeure or for some other reason; or whether there were various amounts “set-off” in favour of the shippers. It simply cannot be assumed that all amounts apparently payable on the face of a contract were, in fact, received by the service provider.

The uncertainty surrounding the analysis is underlined by the fact that the Draft Decision has used two sources of capital cost information which do not align and selected a mid point.

#### *3.5.2.2 Definitional Concerns*

APTPPL believes that to be a capital contribution a payment must be an “up front” payment for a specific piece of capital (eg a payment for a pipeline extension) which directly reduces the up front capital cost of the service provider.

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<sup>14</sup> - Confidential -

A payment of an amount over time in return for service apparently provided by an identified item of capital is indistinguishable from a “normal” tariff, which likewise is payment for a stream of services from an item of capital over time. The Draft Decision gives no compelling reason for different treatment of past tariffs paid on the RBP to regulators’ treatment of historical charges paid on other regulated assets

The Commission<sup>15</sup> confirmed the following contracts as the contracts examined.

**- Confidential -**

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<sup>15</sup> Email from Commission to APTPPL 19 September 2006.

*- Confidential -*

- *Confidential* -

### *3.5.2.3 Analysis Methodology Concerns*

The Commission's analysis assumes that the revenue stream resulting from certain identified tariffs can be fully allocated to a capital expansion, and that this can then be compared to an assumed capital cost of the relevant capital expansion. The Commission then attempts to calculate whether APTPPL has recovered the assumed capital costs of these expansions using an IRR analysis with current discount rates, assumed capital costs for the expansion and the full allocation of revenues to the expansion.

The difficulties with the analysis are as follows:

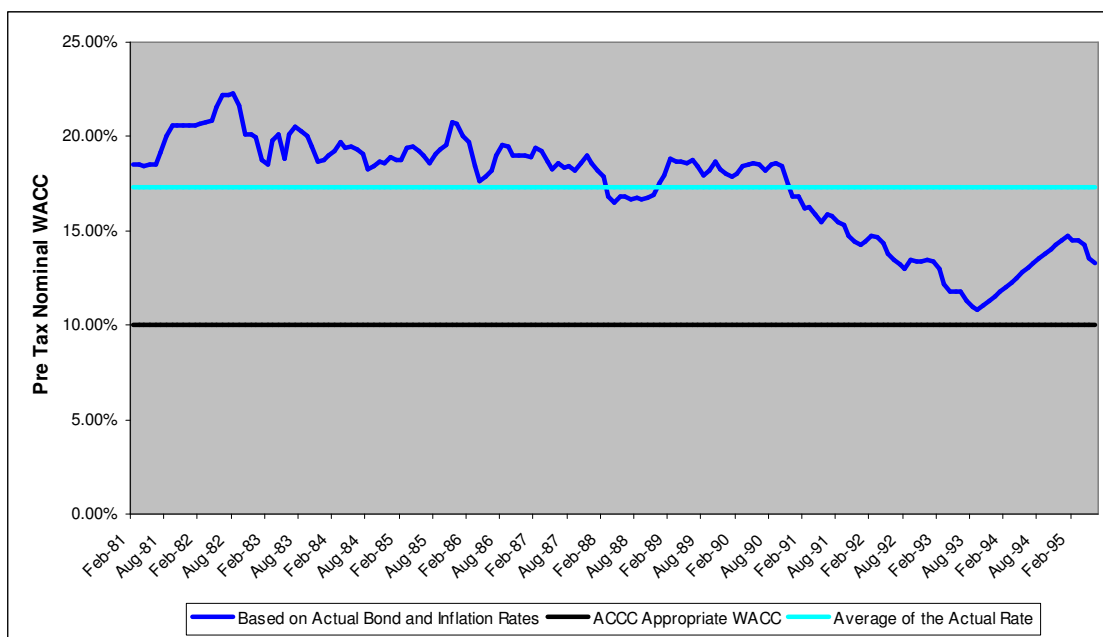
- The underlying information on the actual capital costs of each expansion is not fully known.
- There is no recognition of the fact that capital expansion of the pipeline is necessarily accompanied by an increase in the non-capital costs of the pipeline. No attempt seems to have been made to quantify these increases, or to reflect the existence of these additional costs in the analysis.
- The likelihood is that, like much energy infrastructure, in its earlier years the RBP under-recovered. It could therefore be reasonably assumed that any apparent "excess" in tariff setting was simply a mechanism to take previous under-recovery into account. To review the expansions individually does not take into account the role of the expansions in the context of the development of the pipeline over time.
- The Draft Decision states (Draft Decision Confidential Appendix footnote 235) that the appropriate post-tax nominal WACC to be used for the analysis is 10%, equivalent to the 6.9% pre-tax real WACC as proposed in the proposed Access Arrangement. This parameter appears to be based on current (ie 2006) financing parameters. The analysis has not considered significant factors driving the discount rate at the time the investments were made – these factors include prevailing risk free rates, inflation rates and the tax regime.
  - APTPPL has calculated an estimated cost of capital for the various movements in the 10 year bond rate, which demonstrates the discount rate used in the Draft Decision is significantly below applicable rates over the 15 year period from 1980 to 1995<sup>16</sup>. Table 2 below shows a chart of the pre tax nominal WACC for the period in question. The WACCs shown in

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<sup>16</sup>All of the payment schedules identified by the Draft Decision, except one, commenced in this time frame. Thus capital costs in this time frame are relevant to the capital financing decision.

- this Table were derived using inputs consistent with the discount rate of 10% (Draft Decision Confidential Appendix footnote 235) adjusted only for observable variables such as bond rates and inflation. Even if the conservative values used in the derivation of WACC in the Draft Decision were applicable at the time, which APTPPL disputes, the average WACC over the period based on the actual bond rates and inflation rates is 17.3% in comparison to the return of 10% used in the analysis.
- It is not clear the analysis in the Draft Decision recognise the significantly different tax rates that applied during much of the life of the pipeline.
- This higher required discount rate would reduce the level of any over-recovery calculated using the approach in the Draft Decision.

**Table 2: Pre Tax Nominal WACC**



Note: (1) The data series used did not include data for the period 1994/1995. It has been assumed that the movement between the points is a straight line.

### 3.5.2.4 Other Concerns

The instances of capital contributions being examined by the Commission all occurred in a significantly different environment. Of the agreements relied on in the Draft Decision all were negotiated prior to the commencement of the current regulatory regime and it is inappropriate to now review those agreements in light of the current regulatory framework, including different treatment of tariff-setting..

### 3.5.2.5 Gas Code Treatment

The incorporation of customer contributions into the derivation of the ICB raises several issues in relation to the proper interpretation of the Code. These relate to whether such an approach is inconsistent with the express treatment of capital contributions under section 6, and whether it is permitted or appropriate under section 8.10 to reduce the ICB to reflect contributions which may or may not have occurred.

Under the Gas Code prior Capital Contributions are expressly identified in s6.20 as an issue that can be addressed under arbitration. The Code allows the arbitrator to allow a user which has made a capital contribution to have this recognised through payment of a tariff lower than the reference tariff. Thus the Code remedy for users who may have paid capital contributions is via arbitration not an adjustment to the ICB. Presumably, although it is not clear, the intention of this provision is to allow a particular user to have its contribution reflected in its tariffs, rather than allowing all current and future users to benefit (through a reduction in the ICB and thus reference tariffs) from the prior capital contribution of the single user, who may not benefit at all. More importantly, the existence of this express treatment of past capital contributions – and the absence of such a provision in section 8.10 - implies that the intended response to capital contributions is under section 6.20, not through the regulator reducing the ICB.

Additionally, the Code (including section 8.10) is concerned with determining the value of the pipeline to be recovered from users in the future. This value may be DORC or some other forward looking value. To adjust DORC, a forward-looking replacement value, by an assumed historical capital contribution amount mixes forward looking and backward looking concepts.

In relation to assets regulated under the Gas Code there has been little discussion on the treatment of past capital contributions in the context of establishing the ICB. The most extensive discussion occurred in the 1997 IPART decision on the AGL Gas Distribution Network in NSW. IPART concluded it was not appropriate to reduce the capital base to reflect any past capital contributions. IPART's rationale includes the statements below<sup>17</sup>:

*In the tariff setting regime in which the customer contributions were made, prices were negotiated directly by AGL and each customer. It is not clear whether or how these contributions were reflected in the price charged by the network operator for service. Since tariffs were previously set in an environment of negotiation, any reflection of these contributions in tariffs cannot be identified.*

And

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<sup>17</sup> Independent Pricing and Regulatory Tribunal, 1997, AGL Gas Networks, Access Undertaking (as varied): Determination p71.

*The Tribunal considers that an unregulated monopoly Service Provider would be likely to package the revenue stream in the way most palatable to the customer, with the caveat of maintaining the same total revenues. The Tribunal considers that a customer contribution, either through a minimum bill arrangement or lump sum payment, is, in essence, an alternative form of revenue collection. The Tribunal is not seeking to compensate customers for higher prices paid per unit in the past. Nor is it seeking to compensate customers for making additional payments that may have been labelled capital contributions.*

APTPPL submits that similar conclusions are appropriate in this case.

Additionally, APTPPL notes that the approach in the Draft Decision potentially exposes a service provider to “double jeopardy” – where the ICB which would otherwise apply is reduced to reflect past capital contributions, and reference tariffs are set on the basis of that reduced ICB. However, the service provider is then exposed to the risk that a user is then able on an arbitration to have the reference tariff reduced to reflect capital contributions made by that user. There is no mechanism in the Code, or proposed in the Draft Decision, to enable recovery of that loss which will result in a windfall gain to the relevant user (in that already reduced reference tariffs are further reduced on arbitration) and a windfall loss to the service provider (in that there is no means of recovering the lost revenue).

#### *3.5.2.6 Summary of Capital Contributions*

Both APTPPL and the Commission acknowledge there is imperfect information in relation to the pipeline, including as to previous tariffs paid by users. To assume that capital contributions have been made, when they may not have been made, and to use this as a basis to reduce the ICB is unreasonable. It may also prevent the service provider from earning a stream of revenue that recovers the costs of the pipeline over its life (Code 8.1 (a)).

There is too much uncertainty in the available information to enable the Draft Decision to make an accurate conclusion that the previous capital expenditure for expansions in capacity has been recovered and an amount should be deducted from the capital base. Further, the analysis reflected in the Draft Decision is flawed, with the result that the assumed “value” of \$46.5 million may be significantly overstated.

### *3.6 Conclusions on ICB*

The ICB as calculated in the Draft Decision is unreasonable and should be adjusted as follows

1. ORC values should be re-adjusted for align with APTPPL’s proposal in relation to construction financing costs and equity raising costs.



2. NPV DORC should be adopted.
3. If the Commission believes step 2 above cannot be done, and wishes to adopt a simpler solution then the straight line adjustment approach used should be consistent with the approach outlined in Attachment 2. This approach yields a value of \$312.6 million.
4. Adjustments for capital contributions should not be made as information regarding these contributions is incomplete and uncertain, such an adjustment may well be outside the scope of section 8.10, and is inconsistent with the arbitration regime established under section 6 of the Code.

APTPPL submits that the ICB for the RBP should be NPV DORC, correctly calculated. That is:

- from the HNE's perspective;
- on the basis of costs;
- using a value of ORC reflecting the replacement of the existing pipeline's service capability ("existing capacity ORC");
- discounting at a post-tax WACC with tax effects modelled explicitly; and
- on the basis of individual rather than weighted average lives for major assets.

When this is done, the ICB for the RBP is \$345.7m.

#### **4. Tax Asset Assumption**

The Commission has stated that they the tax life of assets adopted for calculating tax depreciation are based on the tax law<sup>18</sup>. The tax depreciation rate adopted by the Commission is a 20 year straight line approach. The Commission has derived a tax asset base of \$93.822m for the RBP<sup>19</sup> and an effective tax rate of 16.26%.

Under tax law asset owners can elect to either a 20 year straight line or an accelerated depreciation approach, such as a 7.5% diminishing value approach for assets such as pipelines.

While APTPPL does not object to the general approach in the Draft Decision in this instance it should be noted that one of the challenges of the Commission's approach in

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<sup>18</sup> Email Commission to APTPPL 19 September 2006.

<sup>19</sup> APTPPL notes that a slightly different value of \$95.3 million was used in the DORC calculation. APTPPL understands that this is due to a timing difference between the two calculations.

general, and the PTRM in particular, is that in deriving the cost of capital the Commission has to make decisions on tax approaches and structuring, whereas in reality these are matters for the service provider.

## **5. Depreciation**

The Draft Decision does not require an amendment to depreciation.

### *5.1 ACCC Position*

APTPPL notes that there are no amendments required in relation to depreciation but the Draft Decision does not accept APTPPL's back-ended depreciation methodology (Draft Decision pxiii). The Draft Decision's position is that back-ended depreciation may be appropriate when the market growth is forecast and the pipeline has capacity to meet the forecast growth, however in the case of the RBP there is no potential for volume growth in Reference Services, and consequently back-ended depreciation is not accepted.

The Draft Decision appears to generally accept the asset lives of the existing pipeline and replacement pipelines.

### *5.2 APTPPL Position*

APTPPL agrees that the back ended approach may be appropriate when market growth is forecast and the pipeline has capacity to meet the forecast growth. However, APTPPL does not agree with the Draft Decision's position that the back-ended approach is inappropriate in the case of the RBP.

APTPPL does not agree with the Draft Decision's ICB and operating expenditure parameters and as such, to the extent that the pipeline does not achieve the required return, it is reasonable that this under-recovery is added into subsequent year's asset base. The adoption of APTPPL's parameters for the ICB and operating expenditure and the use of back-ended depreciation approach is a suitable approach for the determination of the reference tariff.

Accordingly APTPPL acting within its discretion under clause 8.4 of the Code considers it reasonable to use the NPV approach to the derivation of Total Revenue.

The Code (sections 8.33 and 8.34) outlines a series of factors that should be considered in establishing depreciation under the NPV methodology. APTPPL has applied depreciation to meet these requirements, in particular each asset is depreciated over its economic life (Code, Section 8.33 (b)); and each asset is depreciated only once (Code, Section 8.33 (d)).

## 6. Capital Investment and Redundancy

APTPPL notes that the Draft Decision has accepted “stay in business capital costs” as proposed. There are no amendments required to the Access Arrangement in relation to capital investment, capital redundancy or the proposed economic life of the pipeline.

APTPPL acknowledges that capital spent in the regulatory period will be subject to review under section 8.16 of the Code.

## 7. Cost of Capital

The amendment required by the Draft Decision is:

### **ACCC Amendment 02**

APTPPL must amend the rate of return estimates and associated parameters forming part of the access arrangement and access arrangement information to reflect the ACCC’s estimates as set out in table 2.5.5.5 of this Draft Decision. The calculation of reference tariffs must reflect these parameters.

APTPPL does not believe this amendment is reasonable.

### 7.1 *ACCC position*

The Draft Decision bases its proposed cost of capital on point estimates rather than ranges, and thus, in effect, does not accept the ranges approach.

APTPPL notes that the major difference in the Draft Decision’s approach is using an effective tax rate, as calculated in the PTRM, in the cost of capital formulation.

All non-market WACC variables used by the Draft Decision (with the possible exception of the cost of raising debt) fell within the ranges proposed by APTPPL.

### 7.2 *APTPPL position*

APTPPL does believe this amendment is reasonable or correct for the reasons outlined below.

#### 7.2.1 *Ranges approach*

There exists statistical uncertainty over many of the parameters of the WACC and the Draft Decision acknowledges this, noting the exercise of identifying any single point as subjective (Draft Decision p44). However for the value of each component of the WACC, and for the WACC itself, the Draft Decision has adopted a point estimates approach rather than a ranges approach. This is based on the view (Draft Decision p43)

that it is necessary to identify a “best estimate” of the cost of capital as required by the Code, notably sections 8.2(e) and 8.4.

In particular the Draft Decision (Draft Decision p46) states

*APTPPL has proposed upper and lower boundaries for some parameters used in the calculation of the WACC. However, in some cases it has not stated the points within the ranges that it has used for these parameters. This makes it difficult, if not impossible, for the regulator to assess these proposals in accordance with the code.*

The Code requires the regulator to decide whether a rate of rate of return used in determining a reference tariff is commensurate with prevailing conditions in the market for funds and the risk involved. It does not require the provision of point parameters but an assessment of the rate of return proposed by the Service Provider. It is incorrect to assume that it is necessary to demonstrate that the point estimates selected the “best” estimate for a parameter or are “most consistent” with Code section 8.1.

The proper interpretation of the Code was determined by the Australian Competition Tribunal in the GasNet case. It has also been recognised as correct by the Economic Regulation Authority, which described its task as being<sup>20</sup>:

*to consider whether the Rate of Return used for the derivation of reference tariffs... falls within the range of rates commensurate with the prevailing market conditions and the relevant risk' and that the proposed Rate of Return 'will comply with the Code if the value used is within the range of values that different minds acting reasonably might attribute to the Rate of Return...'*

The reliance by the Draft Decision on a point estimate approach in preference the ranges approach is incorrect as it fails to properly apply the law as articulated by the Australian Competition Tribunal in the GasNet case<sup>21</sup>:

*The task of the ACCC is to determine whether the proposed AA in its treatment of Rate of Return is consistent with the provisions of s 8.30 and s 8.31 and that the rate determined falls within the range of rates commensurate with the prevailing market conditions and the relevant risk.*

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<sup>20</sup> Economic Regulation Authority, 2005, Final Decision on the Proposed Access Arrangement for the Goldfields Gas Pipeline p63.

<sup>21</sup> *Application by GasNet Australia (Operations) Pty Ltd* [2003] ACompT 6.

### 7.2.2 Values of Point Estimate Variables

To the extent that the WACC variables used by the Draft Decision fell within the ranges proposed by APTPPL then APTPPL has no major issue with the value of these variables. All major point estimate variables were within the ranges put forward by APTPPL.

### 7.2.3 Effective Tax Rate

As the Draft Decision notes (Draft Decision p46) APTPPL uses pre tax modelling at 30%.

APTPPL does not believe that the formulation of a WACC using an individually calculated effective tax rate necessarily better meets all Code requirements.

As outlined in section 4 above the Draft Decision has derived an effective tax rate of 16.26%.

### 7.2.4 Value of Cost of Capital

Given the general alignment of the APTPPL cost of capital range with the point estimate variables selected by the Draft Decision APTPPL does not accept that APTPPL's proposed cost of capital was not reasonable.

APTPPL notes that it proposed a range of 7.37% to 5.20%, with a pre tax real WACC of 6.90% being selected. If this range is adjusted for current bond rates, inflation, and the effective tax rate (as calculated by the Draft Decision), then the range would be 6.65% to 4.92%. Placing the pre tax real WACC at approximately the same point in the range as in the proposed Access Arrangement would produce a pre tax real WACC of 6.25%.

If effective tax rates are to be used then a pre tax real cost of capital of 6.25% should be used in preference to 5.85%.

## 7.3 Other APTPPL Comments on the Cost of Capital

Other factors relating to the cost of capital discussion are outlined below.

### 7.3.1 Benchmark Variables

In relation to WACC parameters the two most relevant sources of information are regulator determined outcomes and market information.

### 7.3.2 Regulator determined outcomes

APTPPL notes that the Draft Decision (Draft Decision p43) makes reference to the AEMC's Draft Rule prescribing WACC parameters. APTPPL believes that as gas

transmission is generally viewed as having greater risk than electricity transmission these parameters should act as effective floor to the determination of any future gas transmission WACC parameters.

To do otherwise may result in a distortion of investment decisions for pipelines and upstream and downstream industries.

### 7.3.3 Market information

The Draft Decision has examined market data for a number of company specific variables such as gearing and beta. APTPPL believes that the Code requires regulation of the asset, not the asset owner. Thus observable company variables may be due to factors irrelevant to the asset and in relation to the asset are unlikely to be “best estimates”

Market data inherent in asset purchase prices may be subject to complicating factors such as specific project financing conditions, depreciation treatments, tax profiles, synergies, growth assumptions, strategic concerns and valuation approaches – these may all impact on the value paid for an asset.

### 7.4 Conclusions on Cost of Capital

Overall the Cost of Capital as calculated in the Draft Decision should be adjusted as follows:

- The effective tax rate should not be used; and
- The ranges approach, as adjusted for movements in bond rate and inflation, should be re instated, thus the pre tax real cost of capital should remain at 6.9 % if tax rates of 30% are used, or be 6.25% if an effective tax rate of 16.26% is used.

## 8. **Non Capital Costs**

The amendments required by the Draft Decision are:

### **ACCC Amendment 03**

Before APTPPL’s proposed revised access arrangement for the RBP can be approved, APTPPL must amend its access arrangement to amend its benchmark expenditure on wages and salaries as set out in table 2.6.5.1.

### **ACCC Amendment 04**

Before APTPPL’s proposed revised access arrangement for the RBP can be approved, APTPPL must amend its access arrangement to amend its benchmark expenditure on non-labour costs to exclude the amounts proposed for the Agility management fee.

**ACCC Amendment 05**

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend its access arrangement to remove the component for external legal costs from its proposed expenditure.

**ACCC Amendment 06**

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend its access arrangement by reducing the costs for additional security measures from \$100 000 to \$50 000.

**ACCC Amendment 07**

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must implement appropriate administrative arrangements as described above in this section (2.6.5)<sup>22</sup>.

*8.1 Amend Benchmark Expenditure on Wages and Salaries – Amendment 03*

APTPPL does not accept this amendment.

*8.1.1 ACCC Position*

The Draft Decision proposes a 4.6% increase per annum in wages and salaries. The Draft Decision appears to have based this figure on numerous wage and salary benchmarks. In particular the Draft Decision (Draft Decision p72) discusses seven benchmarks; the average of these benchmarks is 4.6%.

*8.1.2 APTPPL Position*

APTPPL proposed a rate that was consistent with ABS data and with the actual wage and salary increases experienced by APT Group.

APTPPL maintains that the rate proposed of 6% is consistent with the requirements of section 8.37 of the Code as any prudent Service Provider will act to retain existing, experienced staff. Reducing expenditure on wages and salaries raises the increased likelihood that recruitment costs will be incurred and is not necessarily consistent with the sustainability criterion of Code 8.37.

Of the benchmarks discussed by the Draft Decision (Draft Decision p72), four benchmarks were industry specific or state specific, and three benchmarks were more general estimates of wages growth or forecasts of long term wages growth, namely;

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<sup>22</sup> Note that in responding to this amendment APTPPL assumes that the "administrative arrangements as described above in this section" refer to the arrangements relating to the documentation of self-insured risk.

- “wages for all industries”; and
- Treasury estimates and Association of Superannuation Funds of Australia forecasts of long– term wages growth in submissions to a Senate Committee.

If these three more general benchmarks are not used then the average of the remaining four benchmarks used by the Draft Decision is 5.1%. In light of this APTPPL believes the increase per annum in wages and salaries should be at least 5.1%.

## 8.2 Removal of the Agility Management Fee – Amendment 04

APTPPL does not accept this amendment.

### 8.2.1 ACCC Position

The Draft Decision takes the view that the cost of the Agility management fee cost is not consistent with section 8.37 of the Code, and consequently the cost is disallowed. Other fees and charges paid to Agility are accepted as being consistent with the Code.

In discussing the role of Agility more generally the Draft Decision makes reference to the “corporate memory” of Agility and the continuity of personnel involved in RBP operation. In particular the Draft Decision (Draft Decision p75) notes

*The existence of corporate memory has significant efficiency benefits in maintaining assets such as pipelines. The ability to draw upon experience of the past can save considerable effort in understanding problems and their causes and can provide insight into possible solutions. Corporate memory is complementary to effort in staying abreast of new developments in order to achieve efficiency in operations*

However the Draft Decision then makes no allowance for this.

### 8.2.2 APTPPL Position

The PMA outlines how APT pays Agility for the provision of services. The payment to Agility is by way of a three part charge including agreed costs, additional services and the management fee.

- The agreed costs cover the cost of provision of the services in the PMA scope;
- The additional services costs cover the cost of those items not in scope. The cost must be competitive; and



- The management fee which covers all remaining cost components or charges that are not specified in the scope and includes intangible benefits such as knowledge of the asset obtained through long term operation.

The Draft Decision acknowledges that Agility provides benefits beyond the scope of the agreed and additional services, such as the benefits of “corporate memory”. The management fee reflects the benefit obtained by APTPPL from Agility undertaking the PMA asset management activities relative to the alternative of these activities being undertaken by APTPPL itself.

The benefit to APTPPL is reflected in the IRS benchmarking report, as provided by APTPPL to the Commission. This report (IRS 2006 p19) states that it uses RBP 2006 operating costs of \$9.36m. This number is generally consistent with non-capital costs provided by APTPPL to the Commission which included the management fee<sup>23</sup>. In relation to this RBP benchmarking report the Draft Decision (Draft Decision p150) states:

*Consideration of both distance based measures indicates that the RBP performs within an acceptable range in the distance-based benchmarks presented by APTPPL*

And

*APTPPL performs relatively well on non-capital costs as a percentage of ORC (2.05 per cent). This figure is near the bottom of the range of results in table 4.1 being above only the MSP*

Thus, even with the management fee included in operating cost benchmarks, the RBP’s operating costs are identified as being acceptable to good. This supports the fact that the current RBP operating costs including the management fee are consistent with fees which would be incurred by a prudent service provider, acting efficiently, in accordance with accepted industry practice, as required by Code 8.37.

Despite the benefits identified by the Draft Decision and supported by benchmarking evidence the Draft Decision does not allow APTPPL to recover the costs incurred in obtaining this benefit (which the Draft Decision acknowledges exists).

The Draft Decision rejected this cost component on the basis that it is not consistent with section 8.37 of the Code.

Regulatory treatment of these fees is varied. In the past the Commission has disallowed these costs, however, in recent times several regulators has allowed these costs, for example the Essential Services Commission and the Queensland Competition Authority

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<sup>23</sup> See for example Confidential Attachment 3 provided by APTPPL to the Commission as part of an information package on 7 April 2006.

have allowed a third party management fees in decisions relating to Envestra gas distribution networks<sup>2425</sup>.

APTPPL believes these outsourcing structures should be compared relative to each other to assess accepted and good industry practice, and total fees paid to third parties allowed when these d=fees are within benchmarks.

### 8.3 Removal of External Legal Costs – Amendment 05

APTPPL does not accept this amendment.

#### 8.3.1 ACCC Position

The Draft Decision takes a view that this cost is not consistent with section 8.37 of the Code, and consequently the cost is disallowed. In particular the Draft Decision states (Draft Decision p74)

*The proposed expenditure on external legal costs is inconsistent with section 8.37 of the code. Recovery of legal costs associated with negotiated services through the reference tariff would be inconsistent with a prudent service provider acting efficiently in accordance with accepted and good industry practice and to achieve the lowest sustainable costs of delivering the reference service.*

However in another section of the Draft Decision it is recognised that all costs of operating the pipeline are properly attributable to the reference service:

*The ACCC notes that all the costs incurred in providing services using the existing capacity are assumed to be attributable to the reference service, as only one reference service is proposed.*

The Draft Decision does not suggest that the legal fees are considered unreasonable.

#### 8.3.2 APTPPL Position

The basis for the proposed amendment appears to be that no reference service is expected to be used by any User during the access arrangement period, thus all legal costs by definition apply to negotiated services and are thus disallowed. This approach is in contradiction of the Draft Decision's position outlined above and the fact that the Code requires that the Service Provider be able to recover all costs of providing services, not just reference services (Code 8.4).

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<sup>24</sup> Essential Services Commission (2002) Review of Gas Access Arrangement Final Decision p85.

<sup>25</sup> Queensland Competition Authority (2006) Final Decision: Revised Access Arrangement for Gas Distribution Networks Envestra p119. The Authority indicated some concerns over the transparency of the fee but it was allowed.

Other costs proposed to be allowed by the Commission (eg Agility operations costs) do not apply specifically to any Reference Services but they are accepted in the Draft Decision as recoverable. APTPL believes legal costs should be treated in the same manner.

In the context of this Access Arrangement where the Reference service is applicable to the whole capacity APTPL submits that all the costs incurred in providing services using the existing capacity are to be recovered. The legal cost component reflects numerous costs that would be incurred including:

- agreements relating to transportation of gas under the reference service provided in the Access Arrangement;
- amendment and variation of existing contracts;
- agreements relating to the construction or commissioning of new facilities such as receipt points, delivery points etc, which would ultimately benefit all users; and
- general external legal costs relating to the operation of the business.

Attachment 3, which is confidential, contains a breakdown of recent legal costs relating to the RBP, excluding expansion and other business development projects.

APTPL believes that engaging in appropriate legal activity is acting efficiently and in accordance with good industry practice and these costs should be included in the forecast expenditure.

#### 8.4 Reduction in costs for External Security Measures – Amendment 06

APTPL does not accept this amendment.

##### 8.4.1 ACCC Position

The Draft Decision seeks to reduce the costs for additional security measures from \$100,000 to \$50 000.

##### 8.4.2 APTPL Position

APTPL proposed the inclusion of additional costs relating to security to cover expected increased security spending. APTPL identified seven areas of spending to the Commission<sup>26</sup> but indicated that it was not possible to accurately identify at this time the costs of responding to additional requirements.

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<sup>26</sup> See for example APTPL information package provided to the Commission 7 April 2006 p35.

Since the provision of this information APTPPL has obtained cost estimates for one of these areas of spending. This is shown in Attachment 4, which is confidential.

APTPPL believes that an estimate of \$100,000 per annum is still a reasonable estimate.

#### 8.5 Implementation of Appropriate Administrative Arrangements relating to Self-Insured Risk – Amendment 07

APTPPL does not accept the amendment.

##### 8.5.1 ACCC Position

The Draft Decision accepts that self-insurance costs exist and that an amount should be recoverable.

The Draft Decision then requires that in order to recover costs of self insured risk specific administrative arrangements must be implemented. In particular the Draft Decision (Draft Decision p78) asserts that the Commission’s approach to self-insurance management is the only efficient approach, and therefore all other approaches to self insurance are inefficient (ie only by following the seven point Commission approach will self insurance costs be efficient).

In addition the Commission has stated in correspondence on this matter to APTPPL<sup>27</sup>:

*We draw your attention to the information the ACCC requires when considering self insurance estimates in the context of electricity transmission regulation. These can be found on page 69-70 of Statement of Principles for the regulation of electricity transmission revenues – background paper (8 December 2004). Similar requirements are appropriate in the context of gas transmission regulation.*

This has the appearance of the regulator imposing additional regulatory burdens on APTPPL beyond the provisions of the Gas Code. The Commission does not describe by what authority these provisions are “appropriate” for gas transmission pipelines.

##### 8.5.2 APTPPL Position

APTPPL agrees with the Draft Decision’s position that self-insurance costs exist and they can be incorporated into the non-capital costs.

Previous regulatory decisions under the Gas Code allowed costs relating to self-insured risk of \$172,000 to \$200,000.

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<sup>27</sup> Letter 24 March 2006 Commission to APTPPL.

APTPPL sought costs of \$80,000. In supporting this APTPPL provided the Commission with information on current insurances<sup>28</sup> – APTPPL self insures for all other risks, sums less than deductible claims and sums greater than the sum insured.

The Draft Decision has rejected these costs with no evidence that the amount is not efficient, other than the fact that APTPPL has not put in place a series of processes required by electricity transmission revenue regulatory instruments. These electricity transmission regulatory processes and instruments are quite different to the Gas Code processes<sup>29</sup>. The selective application of a single extract of a regulatory process designed to apply to a different class of assets implies an element of “cherry picking”.

APTPPL does not believe that the Draft Decision’s requirement for the RBP to conform to electricity transmission regulation is consistent with the Gas Code or previous decisions under the Gas Code.

APTPPL believes that the effect of the seven steps is that the Commission is seeking to micro-manage business operations, including dictating board behaviour and determining accounting practices. This effect is clearly inappropriate.

The cost of self - insured risk of \$80,000 proposed by APTPPL for the RBP is reasonable.

## 8.6 Calculation Error

APTPPL does not accept the statement that APTPPL has made a calculation error.

### 8.6.1 ACCC Position

The Draft Decision (Draft Decision p72) states that APTPPL has made an error in its calculation of the labour costs.

An email from the Commission on 1 September provided further information, noting that:

*It appears that APT has double-counted inflation. Their staff costs in 2005/06 were \$783.51k ... This figure was increased by a nominal 6 per cent to arrive at their 2006/07 figure of \$830k, which APT states is in July 2006 dollars. However, the figure should have been adjusted downwards by the inflation rate to arrive at a figure in July 2006 dollars.*

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<sup>28</sup> Letter from APTPPL to the Commission 11 May 2006 attachment 3.

<sup>29</sup> Australian Pipeline Industry Association submissions to various government processes, particularly MCE processes contain detailed discussion on the differences between gas transmission and electricity transmission and gas and electricity transmission regulation. For example the Gas Code is a “propose respond model” not a “consider determine” model, the Gas Code determines tariffs not revenues (ie the pipeliner takes volume risk); the Gas Code assumes contractual carriage rather than pool arrangements etc.

### 8.6.2 APTPPL Position

The Commission states that the APTPPL numbers should be adjusted downwards for the inflation rate. The Commission states in its email that the APTPPL value for the 2006/07 year is in \$July 2006, thus there is no need to adjust for inflation in this first year to arrive at \$July 2006 and the number in that first year must be the same.

APT has taken the nominal 2005/06 value of \$784,000 (being \$July 2005) and escalated it at 6% to be a nominal 2006/07 value of \$831,000 (being \$July 2006). Thus real \$July 2006 (for the 2006/07 year) would be the same \$831k as the nominal as the dollars are in the same time period.

### 8.7 Other Costs

APTPPL notes that the RBP Access Arrangement costs are likely to be more than the \$500,000 forecast, similarly the IT system costs are likely to be more than forecast (as flagged to the Commission in previous correspondence<sup>30</sup>).

In relation to access arrangement costs APTPPL advised the Commission<sup>31</sup> that these costs were initially forecast to be lower than previous access arrangement costs as:

- the capital base determination was expected to be less contentious for RBP due to the Tribunal decision in the Moomba Sydney Pipeline case; and
- the cost of capital determination would be less contentious due to regulatory precedent relating to the acceptance of the ranges approach to WACC.

and that based on these assumptions a cost of \$500,000 has been used for the RBP Access Arrangement.

Given these assumptions no longer hold APTPPL may have to revise the costs for the Access Arrangement.

## 9. **Volumes**

APTPPL notes that there are no amendments required to the Access Arrangement and Access Arrangement Information in relation to forecast volumes.

## 10. **Incentive Mechanisms**

APTPPL notes that there are no amendments required to the Access Arrangement and Access Arrangement Information in relation to incentive mechanisms.

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<sup>30</sup> APTPPL information package to the Commission on 7 April 2006 p30.

<sup>31</sup> Letter APTPPL to the Commission 9 May 2008 Attachment 3.

## 11. Cost Allocation and Tariff Setting

APTPPL notes that there are no amendments required to the Access Arrangement and Access Arrangement Information in relation to cost allocation and tariff setting and structures.

## 12. Revenues and Tariffs

The amendment required by the Draft Decision is:

### **ACCC Amendment 08**

Before APTPPL's revised access arrangement can be approved, the reference tariff must be amended to the starting tariff of

- Capacity Reference Tariff = 0.3819 (\$/GJ of MDQ / day)
- Throughput Reference Tariff = 0.0255 (\$/GJ)

and thereafter increased annually by CPI-X where X = 0.87

APTPPL does not accept this amendment, to the extent that it is driven by other amendments not accepted.

APTPPL notes that there are no amendments required to the Access Arrangement and Access Arrangement Information in relation to reference tariff methodology.

### *12.1 ACCC Position*

The Draft Decision proposes the above tariff path based on the other elements of the Draft Decision as part of the assessment of the pipelines total revenue requirement.

### *12.2 APTPPL Position*

APTPPL does not accept the values contained in this amendment as these values rely on other amendments above being accepted. APTPPL does not object to the form of the tariff.

#### *12.2.1 Modelling Issue*

APTPPL notes that the Draft Decision modelling does not include any return on capital in the year the capital expenditure is incurred (that is it assumes that all capital expenditure is incurred at 30 June).. It is reasonable for the Commission to assume a return on 50% of the capital expenditure (ie the expenditure occurs mid-year).

### **13. Non Revenue Items**

This remainder of this APTPPL response addresses non-revenue related amendments. A marked up version of the Access Arrangement reflecting this section of the response is provided separately to this response.

### **14. Reference Tariff Variation Methodology**

The Draft Decision required the amendment below and also discussed in the Draft Decision text several other potential changes.

#### **ACCC Amendment 09**

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend clause 4.4 (b) by removing the words in brackets ('except for the purposes of the review on 1 July 2007 when  $CPI_{n-1}$  means the CPI published for the September quarter 2005').

APTPPL proposed an ICB calculated in September 2005 and proposed the above escalation to maintain correct calculation. The Commission proposes an ICB calculated as at 1 July 2006. As a result, APTPPL does not object to the amendment. This is reflected in the attached marked-up Access Arrangement.

An amendment has also been made to address the (unlikely) possibility of the cessation of publication of the CPI, and to clarify that the time limit in clause 4.4 is a minimum period. .

### **15. Services Policy**

APTPPL notes that there are no amendments required to the Access Arrangement and Access Arrangement Information in relation to services policy.

The Draft Decision contains discussion of backhaul, interruptible and storage services. All of these are currently offered and used as negotiable services. APTPPL intends to continue to offer these services as a negotiated service.

APTPPL agrees with the conclusion in the Draft Decision that it is not necessary or appropriate to require additional services to be offered as Reference Services. While the Draft Decision refers to assertions by a number of Users and Prospective Users that other services (such as backhaul) are required by a significant part of the market, APTPPL notes that there is little objective evidence of this. Further, the fact that such services may be able to be provided at this time does not mean that there is demand for those services. APTPPL also notes that the queue for capacity, and the Requests for Service which have been submitted, demonstrate that there is not an unsatisfied, or significant, demand for alternative services.



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In offering negotiated services APTPPL considers issues such as:

- existing industry pricing benchmarks that relate backhaul to forward haul prices;
- existing industry pricing benchmarks that relate interruptible to firm prices; and.
- capital costs of expansion or bypass, if they are relevant (for example bypass may be relevant for backhaul or expansion may be relevant for storage).

For example, APTPPL would typically expect to price backhaul services at 50% of the firm forward haul tariff, consistent with industry practice.

## 16. Terms and Conditions

### **ACCC Amendment 10**

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend its access arrangement to state that while daily total receipt MDQ has to match daily total delivery MDQ there is flexibility in varying individual receipt point MDQ and individual delivery point MDQ.

### **ACCC Amendment 11**

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend s. 68(b) to read the 'User agreeing to pay a reasonable charge (determined by APTPPL and the User) for the cost of transfer of the capacity. If the transfer does not proceed to completion, the User will only be liable for the legal and other costs associated with consideration of the request to transfer up until the time the user notifies APTPPL that it has decided not to proceed.'

### **ACCC Amendment 12**

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend clauses 55 and 56 so that it states a users' allocation must include the following information:

- nominations
- meter readings
- identity of shippers using the receipt or delivery points
- a clear description of the tranche or pro rata methodology used.

In relation to Amendment 10, APTPPL notes that some submissions incorrectly described the service on offer as "pipeline capacity". This is incorrect and misconceives the nature of the service offered as a Reference Service – which is the receipt, transportation and delivery of gas within MDQ, MHQ and pressure limitations. APTPPL does not object to the principle underlying the amendment and has reflected the principle in the attached marked-up Access Arrangement.

In relation to Amendment 12, the Draft Decision repeats an assertion by Queensland Gas Company that APTPPL's right to adopt an allocation methodology "has been an historical problem as APTPPL has been unwilling to accept the user's requirements". APTPPL considers this assertion to be unreliable and untrue – QGC is not a shipper on the pipeline, so at most is repeating second-hand information, and APTPPL has not at any time exercised its right under existing GTAs and the 2002 Access Arrangement to adopt its own allocation methodology.

While APTPPL considers amendments 11 and 12 unnecessary, APTPPL does not object to these amendments. This is reflected in the attached marked-up Access Arrangement.

**ACCC Amendment 13**

For APTPPL's proposed revised access arrangement for the RBP to be approved, APTPPL must amend the formulae specified in clause 2.3.3 to:

(a) APTPPL's obligation =  $MDQ * (AHV2/AHV1) * \sqrt{(RD1/RD2)}$

(b) Adjusted throughput charge = throughput charge \*  $(AHV1/AHV2) * \sqrt{(RD2/RD1)}$

where

AV1 = heating value of the reference gas e.g. average for the year 2005

AV2 = average heating value of gas received on the day

RD1 = relative density of the reference gas e.g. average for the year 2005

RD2 = average relative density of gas received on the day.

APTPPL does not consider this amendment is reasonable or necessary for the reasons outlined below.

The Commission, Users and APTPPL accept the principle of adjusting for heating value. The underlying rationale of the adjustment is to recognise that pipeline capacity, and tariffs, have been calculated on the assumption that the gas delivered into the pipeline by shippers will have a heating value of 40MJ/m<sup>3</sup>. If gas of a lesser heating value is delivered into the pipeline, APTPPL may not be able to comply with its contractual obligation to deliver a thermal (as opposed to volumetric) quantity of gas. Similarly, as shippers are charged for the energy (cf volume) delivered, APTPPL would not recover the expected revenue.

The rationale (Draft Decision page 121) for seeking this amendment appears to be to accommodate the concerns of QGC who assert (Draft Decision page 116) that the existing mechanism may result in a higher tariff for some shippers. Thus the Draft Decision proposes revising the formulae to make heating value adjustments directly proportional to the average heating value and also proportional to the inverse of the square root of the relative density.

In relation to the existing mechanism, the clause reflects the approved Access Principles (ie the regulatory system prior to the current system), the 2002 Access Arrangement and GTAs with all existing shippers.

QGC are not a shipper on the RBP, and as far as APTPPL is aware, the formula has not been seen as particularly contentious by current shippers.

APTPPL believes there is no reason to alter the existing formula that has been in use for many years. Additionally, the revisions to the existing practices and operations implicit in the proposed revision may adversely or unfairly affect users under existing GTAs who have entered into those agreements on the reasonable expectation that the mechanism would be reflected in future GTAs.

To understand the impact of the proposed amendment, APTPPL sought advice from Venton and Associates on the differences between the two approaches. Venton concludes that neither approach is accurate and:

*unless there is a real need for an accurate prediction of the capacity impact, it seems that the APT equation should continue to be used, particularly since it is more favourable to producers who supply lower heating value gases.<sup>32</sup>*

Venton's full report is attached to this submission.

APTPPL is not aware of any other pipeline owners who use the proposed formulae. If there is a general significant technical issue in relation to the preferable treatment of variations in the heating value of gas supplied by shippers, APTPPL believes that the issue is best addressed by pipeline technical regulators and pipeline industry operating groups. These fora are more likely to result in a consistent approach across the industry that addresses the concerns of all participants.

The Draft Decision contains some discussion in relation to gas specification issues. APTPPL has included some minor amendments to address inconsistencies and omission (see section 21 below).

The Draft Decision contains some discussion (page 121) of the fact that the specification in Queensland differs from that under AS4564. APTPPL submits that it is not the proper role of the regulator in assessing an Access Arrangement to be critical of the technical standards which APTPPL is required by law to apply, and by implication to criticise APTPPL for reflecting those standards in its Access Arrangement.

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<sup>32</sup> Cf the assertion by QGC that the APTPPL formulation disadvantaged them as a producer of lower heating value gas.

**ACCC Amendment 14**

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must add an additional clause at the end of the provision to include the words, 'The order of priority will be determined in a non-discriminatory manner with firm services (whether negotiated or reference services) having the highest priority.'

APTPPL does not object to the intent of this amendment. To ensure clarity APTPPL has amended Clause 52 and Clause 53 as shown in the attached marked-up Access Arrangement.

**ACCC Amendment 15**

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend clause 24 of the terms and conditions to 'Where volumetric metering is used, the quantity of gas delivered at a delivery point on any day will be the product of the volume of gas delivered and the average heating value per unit volume of gas delivered as declared or measured for the pipeline on that day. Where mass flow metering is used, the quantity of gas delivered at a delivery point on any day will be the product of the mass of gas delivered and the average heating value per unit mass of gas delivered as declared or measured for the pipeline on that day.'

APTPPL does not object to the intent of this amendment. To ensure clarity APTPPL has amended Clause 24 using a slightly different form of words. The proposed wording to address the amendment is contained in the attached marked-up Access Arrangement.

**ACCC Amendment 16**

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend the words under the heading 'Delivery station' in schedule 3 of the access arrangement as follows:  
Add the word 'reasonable' before 'technical, operational or safety considerations'.

APTPPL does not object to this amendment. This is reflected in the attached marked-up Access Arrangement.

**17. Trading Policy**

It seems from the Draft Decision that there is some confusion as to the role and requirements of a Trading Policy in an Access Arrangement under the Code. A Trading Policy is required to set out the "policy that explains the rights of a User to trade its rights to obtain a Service to another person" (Code, section 3.9). Section 3.10 then contains certain principles which must be reflected in the Trading Policy, all of which relate to the circumstances in which a User can deal with its Contracted Capacity.

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It is clear from sections 3.9 and 3.10 that a Trading Policy is to address the circumstances in which persons with contracts for pipeline services can trade those rights with other parties. Contrary to what is suggested in the Draft Decision (pages 128 and 129), a Trading Policy is not required “to facilitate capacity trading” or to inform users of “their options in accessing unused capacity”. APTPPL therefore disagrees with the conclusion in the Draft Decision that it is “questionable” whether APTPPL’s proposed Trading Policy complies with the minimum requirements of the Code (Draft Decision, page 130). APTPPL also notes that its proposed trading policy is either the same as, or very similar to, the trading policies in numerous Access Arrangements approved under the Code.

**ACCC Amendment 17**

Before APTPPL’s proposed revised access arrangement for the RBP can be approved, APTPPL must explain in its proposed trading policy what constitute ‘reasonable commercial grounds’ and ‘reasonable commercial conditions’. These must be consistent with code principles.

APTPPL considers this amendment is unnecessary, and a response to ill-founded User concerns that a lack of prescription as to what are “reasonable commercial conditions” means that the Trading Policy will operate to their disadvantage. APTPPL also notes that the language of the Trading Policy reflects the Code, and is consistent with a number of other approved Access Arrangements which do not describe what these terms mean. However, APTPPL is prepared to amend the proposed Trading Policy as shown in the attached marked-up Access Arrangement.

**ACCC Amendment 18**

Before APTPPL’s proposed revised access arrangement for the RBP can be approved, APTPPL must amend its proposed trading policy to specify the conditions under which the trading of linepack will or will not be permitted. Such conditions must be reasonable and subject to approval by the ACCC.

APTPPL does not consider this amendment is reasonable or necessary for the reasons outlined below.

As noted in the Draft Decision (p131) APTPPL does not believe that either the current or proposed revised Access Arrangement restrict line pack trading and has offered to consider the issue further if precise concerns are identified. However, no specific concerns have been identified.

APTPPL assumes that the intent of the request for the ability to “trade” linepack is for shippers to be able to manage their linepack. There is nothing in the Access Arrangement to prevent Users “trading” linepack or imbalances and Users are currently able to manage their linepack through the nominations provisions. APTPPL believes these provisions are sufficient and are consistent with the current operation of the pipeline and existing contracts.

Any separate system of linepack trading will add a further layer of unnecessary complication.

## 18. Queuing Policy

### **ACCC Amendment 19**

Before APTPPL's proposed revised access arrangement can be approved, APTPPL must add a clause to the end of s. 6.1(e) of the proposed queuing policy to state that it will specify an indicative tariff before the start of an investigation into new capacity. This may be an indicative tariff specified in the information package if that indicative tariff is appropriate for the service sought by the prospective user.

APTPPL does not agree with the interpretation of section 5.1. An information package is intended to provide information in relation to the Covered (ie. existing) pipeline, not information as to what the applicable tariff might be if the pipeline is expanded or extended in a particular way in the future. The Code does not require a service provider, in preparing and maintaining its information package, to create volume or capital forecasts for the purposes of identifying possible future tariffs.

APTPPL is prepared to address the intent behind the amendment, which is to provide some indication to prospective users of a range of possible tariffs, to assist them in considering whether to contribute to the costs of an Investigation. This is on the basis that the indicative tariff is non-binding, can be expressed as a reasonable range and is for the sole purpose of assisting Prospective Users consider whether they share the costs of an Investigation under clause 6.3. This is reflected in the attached marked-up Access Arrangement.

### **ACCC Amendment 20**

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must add a clause to the proposed queuing policy to state that a user who pays for a capacity investigation will be provided with a written report which:

- details the options considered to provide the developable capacity
- provides an itemised cost estimate for at least the recommended option
- provides a firm tariff for the capacity sought and the basis for deriving the tariff
- provides details on the allocation of costs of providing new capacity when more than one user would be using the new capacity.

APTPPL considers that the amendment as proposed is unnecessary and unreasonable, and seeks to impose significant obligations on a service provider to those applicable under the Code, and has some reservations about its operation in practice. Particular issues relate to

- it is not possible to provide a "firm tariff" until all Prospective Users who contributed to the Investigation have identified their final load requirements;

- the disclosure of itemised costs is not required under a Code and would allow a third party to determine APTPPL's target rate of return for new investment, which is commercially sensitive;
- the disclosure of cost allocations with a third party is likely to result in the release of confidential information relating to that third party.

APTPPL notes that the Code does not require a service provider to undertake any expansion or extension. The service provider's extensions/expansions policy, if reasonable, is fundamentally a matter for the discretion of the service provider. The queuing and extensions/expansions policy contained in the proposed Access Arrangement are reasonable and consistent with numerous other approved Access Arrangements. The intrusion into APTPPL's commercial and business decisions inherent in the proposed amendment is unreasonable and unnecessary.

APTPPL is prepared to include in the Access Arrangement wording as shown in the attached marked-up document.

**ACCC Amendment 21**

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend the proposed queuing policy to permit a prospective user to transfer its rights in a queue to another prospective user.

APTPPL does not object to the intent of this amendment although has some reservations about its operation in practice. In particular the Commission (Draft Decision p 137) and APTPPL have both recognised the potential for gaming and hoarding that this will create.

APTPPL has attempted to address this in the proposed wording contained in Schedule A. APTPPL is willing to consider drafting suggestions made by the Commission, users or third parties, which may prevent such gaming.

It seems from the Draft Decision (page 137) that the intention is that this amendment is to apply in circumstances where a Prospective User has contributed to Investigations, so the amendment has been drafted in this way.

**ACCC Amendment 22**

Before APTPPL's proposed revised access arrangement for the RBP can be approved, APTPPL must amend the proposed queuing policy to provide for separate queues for existing and new capacity.

APTPPL considers that this proposal may be unworkable or ineffective in practice, but is willing to consider specific proposals made by the Commission, users or third parties. APTPPL is largely indifferent to the approach taken as long as it can be managed efficiently and effectively, and does not leave APTPPL in breach of other requirements (eg requirements to act in a non-discriminatory manner). Pending all interested parties

agreeing on the detail of how a 2-queue Queuing Policy would operate, APTPPL submits that the Queuing Policy in the proposed Access Arrangement is reasonable.

A possible approach to such a queuing policy could be:

- a queue is maintained for Requests for Service that can be met from the existing uncontracted capacity of the pipeline (Existing Capacity Queue); and
- a queue is maintained for Requests for Service that can be met by an increase in the capacity of the pipeline (Developable Capacity Queue).

The decision as to which queue a Request for Service is allocated to shall be at APTPPL's discretion<sup>33</sup>. Typically if a Request is for a level of capacity greater than existing uncontracted capacity the Request will be placed on the Developable Capacity Queue and not on the Existing Capacity Queue (or the Prospective User invited to decide whether to "split" the Request between the Existing and Developable Capacity Queues.

In regards to the current queue APTPPL will take the current queue and allocate it to either the Existing Capacity Queue or the Developable Capacity Queue.

It should be noted that current users of the contracted capacity that will be made available in 2012-13 are not automatically entitled to the capacity unless they are in the queue in the appropriate position.

Practical concerns about how a two queue approach will operate include:

1. incentives for gaming if there is a price differential between the current capacity queue and a new capacity queue. For example if new capacity has a higher price and prospective users compete in the same end market (eg retailers, power stations) then there is the potential for the prospective users to purchase all available low priced capacity to force their competitors to use the higher priced capacity
2. impact that the incentives outlined in point one may have on expanding the pipeline in a timely manner

APTPPL is willing to further discuss and refine the two queue process to address Commission and user concerns. APTPPL is of the view the queuing policy exists for the benefit of users.

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<sup>33</sup> A particular concern relates to the inadvertent disclosure of information by APTPPL in explaining any queuing decisions. To this end APTPPL should not be required to provide any information explaining the basis for allocating a Request for Service to specific queue.



## **19. Extensions and expansions policy**

APTPPL notes that there are no amendments required to the Access Arrangement and Access Arrangement Information in relation to extensions and expansions policy.

Several of the amendments above (for example Amendment 20) will address some of the issues raised by users and the Commission.

## **20. Review of the Access Arrangement**

APTPPL notes that there are no amendments required to the Access Arrangement and Access Arrangement Information in relation to review of the Access Arrangement. An amendment has been made to the proposed Revisions Submissions Date to reflect the six month period applicable under the Code – that is, that the latest date on which APTPPL is to lodge proposed revisions to the Access Arrangement is 4 years and six months after commencement of the Access Arrangement (such that the Revisions Commencement Date is 5 years from commencement).

## **21. Other Matters**

### *21.1 Electronic Capacity Register*

Potential changes to the Access Arrangement relating to electronic capacity registers and bulletin boards were discussed in the text of the Draft Decision. APTPPL does not object to the following:

- the establishment of electronic access to its register of spare and developable capacity if the prudent costs of this activity will be recoverable as a new facilities investment via the Access Arrangement process.
- the investigation of the introduction of an electronic bulletin board. Any investigation will depend on related policy developments and will require the good faith participation of users. For any bulletin board to be successful users will need to engage in posting of buy and sell offers for capacity.

APTPPL expects that any prudent costs of investigating, implementing and operating a bulletin board, which are not recovered from bulletin board users, will be recoverable via the Access Arrangement process

Proposed changes to reflect this are shown in the attached marked-up Access Arrangement.

### *21.2 Gas Specification*

The Commission has indicated separately to APTPPL that in the Access Arrangement subparagraph (q) of schedule 4B is inconsistent with subparagraph (f).

(f) it must not contain more than 65 milligrams per cubic metre of water vapour;

(q) not contain more than 112 mg/m<sup>3</sup> of water vapour;

The reason for this difference is that:

- (f) above relates to gas received at Receipt Points; and
- (q) above relates to gas delivered. Only one minor contract contains this 112 mg/m<sup>3</sup> condition.

Given both references relate to prior contracts still on foot APTPPL does not consider it appropriate to modify the provisions at this time.

In addition APTPPL notes that in schedule 4A the Wobbe Index has a minimum limit but no maximum limit is specified. This limit is 52.0 MJ/m<sup>3</sup> and is shown in the attached marked-up Access Arrangement.

### *21.3 General Matters*

Various other Access Arrangement amendments and drafting issues have been raised by the Commission, either in the text of the Draft Decision or in separate discussions with APTPPL. These are reflected in the attached marked-up Access Arrangement.

## **Attachment 1**

### **Detailed Response in Relation to Concepts of DORC - including the Calculation of NPV DORC**

#### **SUMMARY:**

DORC for the RBP can and should be calculated by the NPV DORC methodology:

- from the Hypothetical New Entrant's perspective;
- on the basis of costs;
- using a value of ORC determined on the basis of ORC reflecting the replacement of the existing pipeline's service capability;
- discounting at a post-tax WACC with tax effects modelled explicitly; and
- on the basis of individual rather than weighted average lives for major assets.

When this is done, the cost-based NPV DORC for the RBP is \$345.7m.

#### **Introduction**

DORC can and should be calculated according to a fixed definition and methodology that produces a value that is consistent with the position of DORC in the Code as the normal upper bound of the range of the ICB. The Hypothetical New Entrant (HNE) construct of DORC provides a rational and logical basis for such a value.

There are three principal points of difference between APTPPL and the Commission in relation to the calculation of DORC:

- whether the NPV calculation required by the definition of DORC should be undertaken rigorously or by an approximate method, such as "straight line DORC".
- the perspective from which the NPV DORC calculation should be performed; either HNE or Incumbent; and
- the discount rate to be used in the NPV DORC calculation; either risk free rate or WACC.

The Commission has also identified a number of other, less fundamental, points of difference including whether the NPV DORC should be calculated on a pre-tax or a post-

tax basis; and whether assets should be aggregated and given a weighted average life or treated separately with individual lives.

In relation to the first principal point of difference NERA now argue that the rigorous NPV methodology used in the calculation of DORC for the Moomba Sydney Pipeline System (MSP) should be abandoned in favour of a proxy method (i.e. the straight line adjustment of ORC, which has been applied historically by regulators). APTPPL does not accept this position.

Straight line adjustment of ORC is an invalid proxy for NPV DORC on a number of grounds, including the likelihood that it is a biased estimate when NPV DORC is calculated correctly in accordance with the HNE construct and with discounting at WACC. Even if straight line adjustment of ORC was a valid proxy, the way in which the Commission has accounted for the difference between the original life of the RBP mainline and its ORC replacement in applying the straight line proxy method to the mainline is incorrect and understates the value of “straight line DORC”.

There is no valid reason for abandoning the rigorous NPV approach in favour of a proxy approach. The fact that a cost-based NPV DORC has been established for the MSP demonstrates clearly that the calculation can be done.

### **Development of NPV DORC**

It is incorrect to imply, as the Draft Decision does (see for example Draft Decision p21 and p23) that the NPV DORC methodology appeared suddenly on the scene with the Tribunal’s decision in the *Moomba Sydney Pipeline Case*. The debate concerning NPV DORC began at least as early as 1998 when the HNE construct of DORC was first enunciated by the Commission and the Office of the Regulator General (ORG) in the Victorian Gas pipeline final decisions (ACCC 1998 and ORG 1998). The concept of HNE based NPV DORC was developed further by the Commission (ACCC 1999, p39) in the Draft Statement of Principles for the Regulation of Transmission Revenues (DRP) published in 1999:

*The main economic principle for assessing the economic value of any assets is that their value to investors is equal to the net present value of the expected future cash flows generated by those assets. The practical difficulty in making this assessment for regulated monopoly businesses is that the future revenue derived from the assets is itself determined by the regulator – hence the issue of circularity associated with the use of ODV as a methodology to value sunk assets.*

*This potential circularity is eliminated by the use of DORC. The DORC of a network is the sum of the depreciated replacement cost of the assets that would be used if the system were notionally reconfigured so as to minimise the forward looking costs of service delivery. There are two definitions of what DORC attempts to measure:*

- *One interpretation of DORC is that it is the valuation methodology that would be consistent with the price charged by an efficient new entrant into an industry, and so it is consistent with the price that would prevail in the industry in long run equilibrium.*
- *The second interpretation is that it is the price that a firm with a certain service requirement would pay for existing assets in preference to replicating the assets.*

And (ACCC 1999, p40):

*Finally, another justification for DORC setting the upper limit to valuations comes from what a DORC valuation actually is attempting to measure. This is the maximum price that a firm would be prepared to pay for 'second-hand' assets with their remaining service potential, higher operating costs, and (old) technology - given the alternative of installing new assets which embody the latest technology, and which generally have lower operating costs, and which will have a greater remaining service potential. Therefore, if prices reflect a value that is in excess of DORC, then users would be better off if the existing system were scrapped and replaced by new assets. Similarly, if assets are sold for prices above the DORC valuation, then this implies that scarce investment funds are being inefficiently applied: in this case, it would have been a more efficient use of investment funds for the existing assets to be scrapped and a duplicate system installed.*

However the Commission did not complete the task it foreshadowed in the DRP, to establish a DORC guideline (ACCC 1999, pp xi and 25). Neither did it respond adequately to a number of submissions made between 2000 and late 2003, supporting the HNE definition and including specific calls for the Commission to establish a definitive DORC methodology that is economically sound and consistent with that definition and the Code (See for example, Connery 2001a, 2001b, and 2002, and McDonald 2003a and 2003b).

Agility proposed an NPV calculation method that is consistent with the HNE construct in August 2000 (Agility 2000a) and then applied it to the MSP (Agility 2000b). In the MSP Final Decision the Commission acknowledged that the HNE construct of DORC was the correct interpretation of DORC under the Code and that it required an NPV calculation, but then proceeded to apply the traditional straight line adjustment of ORC "as a proxy for the true economic value of DORC" (ACCC 2003, p46). Since then the Tribunal has considered the question in the context of the *Moomba Sydney Pipeline Case*, concluding that DORC should be calculated by the cost-based NPV method (ACT 2004, paragraph 38), and a value of DORC has been established on that basis for the MSP. The Tribunal's conclusion on this point is unaffected by the subsequent appeal to the Full Court of the Federal Court.

### **The DORC Calculation – application of the NPV methodology**

It is accepted that the DORC calculation involves three steps:

- Establishing an optimised design for a replacement pipeline that would be built by a new entrant;
- Costing the optimised design on a modern engineering basis to establish the optimised replacement cost (ORC) of the pipeline; and
- Depreciating the ORC to reflect the fact that the existing pipeline is not new.

The point at issue for the RBP is the manner in which the depreciation step should be performed. The Tribunal’s finding in relation to the MSP addressed this matter, but left open two questions of principle:

- the perspective from which the calculation should be performed (Hypothetical New Entrant or Incumbent); and
- the basis of the discount rate to be applied to the two cost streams (WACC or the risk free rate).

#### *Incumbent vs hypothetical new entrant*

The Commission argues that DORC should be implemented from the Incumbent perspective because of the potentially different tax positions of the Incumbent and the HNE. The consequence of the Commission’s argument is that the value of DORC is ownership-dependent.

This raises the question - “under what circumstances could the Incumbent be placed in the position of having to decide between buying the existing pipeline (which it already owns) and building a new/replacement pipeline?” No credible scenario has been advanced.

The HNE construct, on the other hand, is straight forward and plausible.

Despite the lack of a feasible “Incumbent replacement” scenario, the Draft Decision clearly regards the distinction between the Incumbent and HNE perspectives as important. That being the case, it is inconsistent that the Draft Decision should then propose to adopt a proxy (i.e. straight line DORC) that is independent of ownership.

#### *The nexus between the HNET and DORC*

In the Code (clause 8.11), DORC is cast as the normal maximum value for the ICB. The HNE construct is a logical and rational basis upon which to establish a maximum value

and is a sound basis for calculating DORC. It can also be applied in practice. The same hypothesis is also applied in the HNET. As the Tribunal (ACT 2004, paragraph 31) concluded: “the principles underlying the use of HNET and DORC are effectively the same.”

NERA (NERA 2003, p8) also acknowledged the relationship in a paper prepared for Natural Gas Corporation (NGC) (in New Zealand) in 2003, stating “As discussed further in section 3, the asset valuation methodology consistent with the hypothetical new entrant test is ODRC.”

Under the HNET, the hypothetical new pipeline is being built by the HNE. Given the accepted nexus between the HNET and DORC, it follows that it must be the HNE that has the alternative of purchasing the existing pipeline and that DORC must be evaluated from the HNE’s perspective. This view is supported by the NCC (NCC 2004, p31):

*It is widely recognised – including by both the Council and by the ACCC - that optimised depreciated replacement cost represents the best estimate of the value that would attach to assets in a competitive market environment. ODRC represents the capital cost that (sic) faced by a hypothetical new entrant into the market choosing to buy second hand assets (and incurring the cost of earlier replacement when those assets reach the end of their useful life) as compared with the cost of rebuilding a system from scratch.*

*The hypothetical new entrant test (HNET) is the correct standard by which to test prices (and the associated question of asset value), because it defines the point at which entry into a market can be profitable. Under the HNET, achieved returns (on assets valued at ODRC) above a company's weighted average cost of capital are a prima facie indicator of monopoly profits, while returns below the HNET level are, by definition, less than those required for entry into a market to be viable. The Council has previously endorsed the use of HNET to value assets in its assessment of applications under the coverage provisions of the Natural Gas Pipelines Access Code, which applies essentially the same criteria as Part IIIA of the TPA. (emphasis added)*

It would be inconsistent to calculate DORC from any other perspective. The HNE’s perspective is also the only perspective that is supportable given the competitive market underpinnings of DORC.

*HNET as a Basis for the DORC Calculation and the Equivalence of the Revenue-Based and Cost-based Approaches to the NPV DORC Calculation.*

The HNET involves calculation of the HNE’s revenue requirement in the first year of a revenue path that will recover the cost of a new pipeline costing ORC over its life. It follows that, if the HNET value is accepted as valid (which NERA and the Commission, as well as the NCC, did in the case of the MSP revocation) then so must the assumed path that produced that value be accepted as valid.

The HNET, which takes the HNE's revenue requirement in one year as a benchmark against which to assess the existing pipeline's performance in that year, says nothing about the value of the existing pipeline – value is determined by the flows of revenue and costs over time. However, the HNET involves postulating a revenue path for the HNE's ORC pipeline. Once that revenue path is known then the assumption of identical revenues (which underpins the cost-based NPV approach) or knowledge of the differences in service potentials of the existing and ORC pipelines (if those differences exist and are considered relevant) means that the revenue path available to the existing pipeline is known.

The corollary is that, if the HNET defines the maximum revenue that the existing pipeline can take in year 1, then the NPV of the first "n" years of the HNET revenue path (where "n" is the remaining life of the existing pipeline) defines the maximum NPV of revenue ( $NPV_n$ ) that is available to support the value of the existing pipeline to the HNE over the remainder of its life.

Thus DORC – the value of the pipeline that is consistent with the HNE construct – is  $NPV_n$  less the present value of costs that will be incurred by the HNE in operating and maintaining the existing pipeline over the remainder of its life<sup>34</sup> and service potential differences over the same period if relevant. The revenue-based DORC and the cost-based DORC are connected by the facts that:

- the present values of costs and revenues for the HNE's ORC pipeline and for the existing asset must be matched (and will be matched in practice), whether over the remaining life of the existing asset, one replacement cycle or multiple replacement cycles;
- the HNE's ORC pipeline revenue path is modelled by NERA and the Commission as a continuous geometric function over the life of the initial ORC asset at least – so that at any point in the asset's life, revenue is equal to the revenue that would be required by a HNE installing a new asset at that time; and
- the cost-based DORC calculation initially proposed by NERA and adopted with some modification by the Commission is formulated as the sum of geometric series.

In the NPV DORC paper (NERA 2002b) NERA argued that Agility's proposed revenue-based approach to DORC was infeasible because of the circularity associated with setting a regulated asset value by reference to regulated revenue (pp1 and 11) and uncertainty about the revenue path of the HNE (pp2 and 11).

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<sup>34</sup> Note that Agility recognised that allowance should be made for the different O&M costs of the ORC pipeline and the existing pipeline in its initial NPV DORC submission (Agility, 2000a, footnote 1) and in applying the method to the MSP (Agility, 2000b).



However, it should be noted that, contemporaneously with the NPV DORC paper, NERA (in NERA 2002a) applied the HNET to the MSP and, in that calculation, assumed a revenue path for the HNE. The HNE revenue path is the starting point for the revenue-based DORC calculation and, once established, breaks the circularity claimed by NERA.

Revenue-based DORC is consistent with HNET and both NERA and the Commission have accepted that the HNET is a feasible calculation. The revenue- and cost-based approaches are conceptually the same and will produce very similar results. NERA apparently accept this view (NERA 2002b, p14):

*It will always be possible to make assumptions about revenues that are founded in the costs the company faces and which will therefore result in the mathematical representation of the two models coinciding. In other words, if the revenues are assumed to reflect cost differences, then, yes, the two models will provide the same answer.*<sup>35</sup>

Under both the HNET and the Code, revenues do reflect costs.

The Commission (Draft Decision, p21) seeks to particularise the cost-based approach and distinguish it from the revenue-based approach to support the suggestion that application of the cost-based approach to the MSP was in some way novel and had not been considered prior the MSP appeal. The fact is that the revenue- and cost-based approaches (and the HNET) are conceptually equivalent and, while the details of the MSP calculation were refined during the course of the appeal, the general form of the calculation follows directly from the HNE definition of DORC adopted by the Commission in 1998 (see King 2001). The Commission itself first described the DORC calculation by reference to the general formulae for summation of geometric series in the DRP (ACCC 1999, Box A5.1). Although the calculation of NPV DORC for the MSP involved considerable detail, the principles of the calculation are the same as those set out in the DRP.

A DORC calculation based directly on the HNET revenue path is a practicable alternative to the cost-based DORC calculation and avoids a number of the concerns raised by NERA with the cost-based approach. In particular it does not require the consideration of major asset replacements in either scenario.

APTPPL does not propose that a revenue-based approach be adopted for the RBP, although that does remain an option. The purpose of the foregoing discussion is to reinforce the connection between the HNET (which considers the HNE's revenue in one year as a benchmark for the existing pipeline in that year) and DORC.

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<sup>35</sup> Note that EAPL accepted the cost-based approach to DORC in the MSP case principally because of this essential equivalence.

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DORC calculation perspective -- conclusion

The correct view is to adopt a definition of DORC that provides a logical and rational basis for a maximum value that is consistent with the position of DORC in the Code as the normal upper limit of the range of ICB. The HNE construct (with evaluation from the HNE's perspective) provides such a definition, whereas the incumbent construct does not. If DORC is calculated in a manner that is inconsistent with that definition then the definition cannot be sustained.

This view is consistent with previous statements by NERA (NERA, 2002b, p1):

*The third key message is that the DORC should be determined exclusively by reference to the economic principles that underpin it. Section 8.10 of the gas code sets out a number of issues that should be considered when establishing the ICB, which include the DORC and a number of other valuation approaches and related issues. A "DORC" that is intended to reflect these other, sometimes conflicting, valuation approaches is difficult to interpret and may reduce the transparency of the ICB setting process. We therefore believe there is a strong case for divorcing the link between the DORC and ICB.*

and (at pages 20 and 21):

*If the DORC is intended to reflect the value a new entrant with a certain service requirement would be willing to pay for second-hand assets in preference to replicating these assets. It should reflect the difference in costs associated with existing versus new assets. Any valuation that moves away from this definition to incorporate other issues can no longer be said to be a DORC estimate. Our view is that, in this (or any other) context, DORC should be established exclusively on the basis of the economic principles underlying the concept and not by reference to factors that are addressed separately and specifically elsewhere in section 8.10 of the gas code.*

The discounting rate: WACC vs risk free rate

NERA include with their paper entitled Assessment of APT's DORC Calculations for RBP (NERA 2006b, Appendix A) a paper prepared by Professor Bruce Grundy that was originally submitted by the Commission to the Tribunal in the *Moomba Sydney Pipeline Case*. Professor Grundy relies on finance theory to support the view that costs should be discounted at the risk free rate in the cost-based NPV DORC calculation. That view is accepted by NERA (NERA 2006b, p8). There is no recognition that EAPL submitted a strong rebuttal of Professor Grundy's position in the course of the MSP appeal and that the Tribunal held that NPV DORC should be calculated using WACC<sup>36</sup>.

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<sup>36</sup> Although it was recognised that this particular aspect of the Decision was not to be taken as establishing a general point of principle.

### **The complexities advanced by NERA and the Commission**

NERA and the Commission argue that the calculation of the cost-based NPV DORC is subject to a number of complicating factors. APTPPL does not accept those factors as valid or as a reason for abandoning a rigorous approach. The fact that a cost-based NPV DORC has been established for the MSP demonstrates clearly that the calculation can be done.

Given the significance of DORC and the ICB in the regulatory schema, a quest for the “correct” DORC value involving commensurate levels of effort and complexity is justified. As the Tribunal (ACT 2004, paragraph 38) said:

*Where the value attributed to the ICB will have a continuing effect for the balance of the life of the pipeline, it is appropriate that there be a serious effort made to arrive at the correct result*

The obstacles raised by NERA here can also be contrasted with the way in which they approached the HNET calculation in the matter of the EAPL revocation (NERA 2002a), and with the conclusions reached by NERA (NERA 2003, p18) in the NGC paper that:

*... the difficulties associated with determining an appropriate level of [tilted annuity]depreciation for the purposes of determining an ODRC valuation ... are likely to be much more manageable than the difficulties associated with undertaking an historic cost valuation.*

This statement is made in the context of a discussion of “tilted annuity depreciation” which is precisely the approach adopted by NERA in the MSP HNET calculation, and referred to as “competition depreciation” in the DRP (ACCC 1999).

The principal issues raised by NERA are:

1. The straight line adjustment of ORC as a proxy for “Economic DORC”
2. Differences in service potential
3. Complexity, cost and transparency
4. Commercial practice
5. Information asymmetry
6. Pre tax and post tax discounting
7. Weighted average life vs separate treatment of assets

Taking them in order:

### **1. The straight line adjustment of ORC as a proxy for “Economic DORC”**

Straight line adjustment of ORC has no theoretical economic rationale as a benchmark value. Its only rationale is precedent and ease of calculation. These two considerations should not be the basis for the choice of a calculation methodology.

The straight line approach is inconsistent with the accepted position that DORC is a forward looking concept (see re Michael, paragraph 164 and ACCC 2003). The straight line approach is backward looking inasmuch as the implicit proposition is that the ORC pipeline was constructed instead of, and at the same time as, the existing pipeline. The calculation amounts to a determination of remaining value taking into account actions that could have been, but were not, taken in the past.

For example, as formulated by the Commission, there is an implicit assumption that the hypothetical ORC pipeline is constructed instead of the existing pipeline, and that this pipeline would have recovered its capital cost on a real straight line basis up to the date of the DORC calculation. A new pipeline will typically incur economic losses in its early years. Given the lack of historic information relating to the RBP in its earlier years, the existence and size of any economic losses is unknown, but based on the experience of other pipelines it is reasonable to assume such losses occurred.

The Commission’s approach also implies acceptance of the price shocks that the straight line depreciation schedule creates when asset replacement occurs. This is inconsistent with the competitive market underpinnings of the definition of DORC. For any given asset value, real straight line depreciation will generally result in higher prices initially and lower prices later in the asset’s life than would be required by a HNE.

Finally, the Draft Decision’s application of the straight line proxy DORC to the RBP highlights a practical flaw, where the lives of the ORC asset and existing asset are different. The result of the Commission’s approach is that the straight line proxy DORC for the RBP is understated (See Attachment 2 for further discussion of this.) Details are presented in the following modified version of Table 2.2.5.1. from the Draft Decision:

**Attachment1 Table 1:**

	<b>Life</b>	<b>Remaining Life</b>	<b>ORC</b>	<b>Corrected Straight line DORC</b>
<b>Summary</b>				
Pipeline			378.7	277.3
Compressors			49.2	18.9
Easements			14.0	13.4
Communications			5.0	3.4
<b>Sub-total</b>			446.9	313.1
Less Linepack			0.5	0.5
<b>Total</b>			446.4	312.6
<b>Pipes</b>				
Original	60	23	136.9	52.5 <sup>37</sup>
Looping 1	80	62	11.9	9.3
Looping 2	80	64	13.9	11.1
Looping 3	80	72	23.2	20.9
Looping 4	80	75	31.7	29.7
Looping 5	80	77	98.1	94.5
Looping 6	80	77	17.4	16.7
Lateral	80	75	45.5	42.7
<b>Sub Total</b>			378.7	277.3
<b>Compressors</b>				
Dalby	35	11	8.0	2.5
Kogan	35	11	4.7	1.5
Oakey	35	12	6.1	2.1
Condamine	35	13	8.5	3.1
Yuleba	35	15	10.6	4.6
Gatton	35	16	11.3	5.1
<b>Sub Total</b>			49.2	18.9
Pipe + Compressors			427.9	296.3
Easements	1000	963.0	14.0	13.4
Communications	15	10	5.0	3.4
Less Linepack			0.5	0.5
<b>TOTAL</b>			446.4	312.6

<sup>37</sup> Value corrected for the flaw in the Commission's treatment of cases, such as the original RBP mainline, where the lives of the existing asset and the ORC replacement asset are different.

## 2. Differences in service potential

The DORC hypothetical involves the choice between buying the existing pipeline and building an optimally designed new pipeline to replace the service potential of the existing pipeline i.e. a like-for-like replacement.

There are practical reasons why a strict like-for-like replacement of the RBP is impracticable today. For example markets and pipeline codes have changed significantly over the years since the RBP was constructed and, because of urban encroachment, it is unlikely that a new pipeline would be built along the same route as the existing pipeline. A hypothetical replacement pipeline could obtain direct access to additional markets that are only accessible indirectly by the existing pipeline (via the connected gas network). Relatively minor changes in pipeline route are unlikely to result in material changes to the level of gas transportation service sought and delivered.

These realities are reflected in the Venton initial ORC design (Venton, 2006a, pp16-21). This design was for a pipeline that has a higher capacity than, and followed a different route to, the current RBP. In this report Venton also determined an ORC value for a pipeline with higher capacity based on the current pipeline route (Venton, 2006a, Appendix 3). The ORC value for the current route was substantially greater than the value for the alternate route, indicating that the alternate route was optimal.

Venton (Venton 2006b) also determined an ORC for a pipeline with effectively identical service capability to the current RBP. This pipeline followed the optimal route identified in the initial Venton report. Venton stated (Venton 2006b p1):

*The pipeline is assumed to be constructed along the route proposed for the optimised design in Venton & Associates report 167-R-01 [ie Venton 2006a], for the reason identified in that report that the existing route through metropolitan Brisbane is so congested that the alternative route that uses existing road and power easements will be lower cost, and will provide increased safety through the residential area*

The Commission's consultant similarly designed a pipeline with effectively identical service capability to the current RBP and adopted an alternate route (Sleeman 2006 p8, p24) similar to Venton's route for similar reasons to Venton.

The Commission used this "existing capacity ORC" (with minor adjustment) as the basis for its straight line proxy calculation.

Referring to the Venton report, NERA (NERA 2006b, p11) discuss the higher costs of maintaining the existing pipeline and the relative risk characteristics of the existing and replacement pipelines in the context of a discussion of service potential. As formulated by The Allen Consulting Group (ACG 2003, p22) and understood by APTPPL, differences in service potential will generally be reflected in differences in revenues.

Differences in maintenance costs and risk profiles (to the extent they are reflected in different insurance costs) are provided for in the NPV DORC calculation through the assumption that the existing pipeline has higher O&M costs than the replacement pipeline.

NERA's discussion of differences in service quality (which are ultimately expressed as revenue differences) also invites the question: "what discount rate should be applied in the economic DORC calculation when the calculation includes those differences?" Presumably it would not be appropriate to use the risk free rate.

In any event, the NPV DORC calculation presented by APTPPL in its Access Arrangement Information (AAI) includes provision for costs, including capital expenditure of \$115m (\$2005/06 real) on the existing pipeline in the years up to 2011 (CRA 2006, Table 3), to expand its capacity to that of the "optimal" (ie higher capacity) (\$462m) ORC design so that the APTPPL DORC calculation is based on a like-for-like comparison<sup>38</sup>. That being the case, and given that the principal service will always be receipt of gas at one point and delivery at another, and end-use markets are identical, any remaining differences in the service potentials of the two pipelines compared in the APTPPL DORC calculation are unlikely to be great.

At the end of the day, the objective of the DORC calculation is to value the existing pipeline with its current service capability. APTPPL has recalculated the value of NPV DORC on that basis.

### **3. Complexity, cost and transparency**

The calculation of DORC is just one element of an inherently complex undertaking – establishing the ICB for a pre-existing pipeline which has had a varied economic, ownership and operational history and then, from the ICB and other inputs, determining a price path for the regulatory period.

As the Commission acknowledges, "the ICB is the most crucial input parameter in determining the level of reference tariff" (Draft Decision, p11). Once determined, it is not re-evaluated. There is no question of re-setting the DORC at future reviews, and so the situation is not comparable to that considered by The Allen Consulting Group and referred to by NERA (see NERA 2006a, p7). A quest for the "correct" DORC value involving commensurate levels of effort and complexity is justified. As the Tribunal (ACT 2004, paragraph 38) said:

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<sup>38</sup> APTPPL does not accept the capital expenditure profile assumed for the existing pipeline by the Commission in its NPV DORC calculation. For example, the Commission's calculation assumes expenditure of \$129.4m in 2007 and \$291.7m in total through 2021, compared with \$34.8m in 2007 and \$121.9m in total through 2021 in APTPPL's calculation (all amounts real with "Tech" taken into account).

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*Where the value attributed to the ICB will have a continuing effect for the balance of the life of the pipeline, it is appropriate that there be a serious effort made to arrive at the correct result*

NERA (in NERA 2002b) considered a cost-based calculation over two ORC asset cycles. The Commission subsequently introduced the perpetuity approach in the MSP calculation and APTPPL has continued with that approach for the RBP. It is therefore surprising that the Draft Decision raises the perpetuity assumption as a criticism of APTPPL's modelling (Draft Decision, p19). However, the difference in terms of the value of DORC is immaterial and, given that the calculation is formula-driven, the practical difference between the two approaches, in terms of complexity and costs, is also immaterial.

#### **4. Commercial Practice**

NERA criticise economic NPV DORC on a number of grounds namely, that it is not a well understood and practiced economic valuation method; that the cost-based embodiment of DORC is not reflective of commercial practice because it takes no account of revenues; and that it ignores differential service quality between new and existing assets (NERA 2006a, p21.)

To APTPPL's knowledge, the Commission and the ORG were the first to define DORC explicitly by reference to the HNE construct in the Victorian gas pipeline decisions referred to by NERA (NERA 2006a, p11)<sup>39</sup>. The definition was developed in more detail by the Commission in the 1999 DRP (ACCC 1999).

Regardless of whether DORC is a common valuation method in commercial practice, the Code, as clarified by the Tribunal, requires that the regulator have regard to the DORC value in establishing the ICB of a pipeline.

NERA cite the fact that the cost-based NPV DORC calculation is based on costs alone as a point of difference between that calculation and commercial practice where valuations involve consideration of revenues (NERA 2006a, p21). As NERA suggest, they may well have been the first to introduce the cost-based NPV approach (NERA 2006a, p20) but NERA's rejection of the revenue-based approach in favour of the cost-based approach is, at the very least, questionable given their contemporaneous application of the HNET to the MSP, which in turn relied on assumptions as to the revenue path the HNE will adopt (NERA 2002a). Moreover, the cost-based NPV DORC calculation avoids reference to revenues only because of the assumption of identical service potentials – an assumption which NERA now question.

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<sup>39</sup> The Commission and the ORG applied the straight line method in the 1998 Victorian gas decisions without discussion, despite the definition which it is now accepted requires a NPV calculation if it is to be applied rigorously. This highlights the very point raised by Agility – that the calculation must be performed in a manner that is consistent with the definition or the definition cannot be sustained (see, for example, Connery 2002). The Tribunal essentially upheld this position in the MSP appeal.



DORC is necessarily a hypothetical concept. Its value can be calculated by reference to costs alone or by reference to the revenue path that the HNE would require to recover the costs of a new pipeline costing ORC – the two approaches are equivalent by virtue of the matching of revenues and costs. While the concept may be hypothetical, DORC becomes a real value, for regulatory purposes at least, when it is adopted as the ICB.

## **5. Information Asymmetry**

NERA makes much of information asymmetry as a justification for adopting the straight line proxy (NERA 2006a, pp6, 21, 22). In APTPPL's view, NERA's concern is misplaced. ORC is the source of most uncertainty in the DORC calculation and ORC is common to all DORC methodologies. Most of the other material data requirements are also common to both the NPV and straight line methods including the remaining lives of the existing assets and the economic life of the ORC asset.

In the case of the RBP, APTPPL's and the Commission's consultants have produced very similar values for ORC.

Apart from the inputs that are common to both methods, the cost-based NPV DORC calculation as formulated by NERA and the Commission applies standard series summation formulae driven by four external parameters. (The APTPPL NPV DORC calculation as submitted in its AAI also includes the costs of expanding the capacity of the existing pipeline to meet the throughput schedule of the "optimal" ORC pipeline.)

APTPPL and service providers in general do not have asymmetric access to any of the information necessary to assess ORC, asset lives, or the values of the four parameters used in the NPV calculation.

NERA now qualify the applicability of the formulae that they adopted in their 2002 paper on DORC (NERA 2002b) noting that "they were only ever intended as being for illustrative purposes" (NERA 2006a, p17). While that may be the case, those formulae, extended to model on a perpetuity basis and with inclusion of taxation effects, were submitted by the Commission in the course of the MSP appeal and were ultimately adopted as the basis for calculating the MSP DORC. Just as significantly, NERA adopted the same sum of geometric series approach in their 2002 MSP HNET calculation (NERA 2002a). That calculation involved consideration, at least qualitatively if not quantitatively, of the same four parameters that were canvassed in the DORC paper, and was not qualified as an example.

The Draft Decision (Draft Decision p32) refers to the choice of discount rate and treatment of taxation as issues in the context of its synopsis of NERA's work. These two issues (which account for a significant part of the difference between APTPPL's and the Commission's NPV DORC values), are matters of principle and it is misleading to characterise them as contributing to variance or uncertainty. Once these matters are

decided they will cease to be an issue and the practical range of NPV DORC will be very much narrower.

## 6. Pre tax and post tax discounting

In recalculating the value of NPV DORC, APTPPL has adopted a post-tax WACC, and modelled the value of tax concessions separately.

## 7. Weighted average life vs separate treatment of assets

In relation to the issue of asset lives and asset replacement, in the AAI, APTPPL used a single weighted average life of the pipeline to reflect the fact that the RBP is a single pipeline in terms of service offerings, contracts, operations and regulation.

APTPPL appreciates that treating assets separately, as done by the Commission, is also valid. In recalculating the value of NPV DORC, APTPPL has treated assets separately, assigning each asset its appropriate remaining life.

### **SUMMARY:**

APTPPL's position on DORC can be summarised as follows:

	<b>ACCC Draft Decision</b>	<b>APTPPL Response</b>
<b>ORC for NPV DORC calculation</b>	\$462.21m as proposed by APTPPL (ACCC spreadsheet <sup>40</sup> )	Existing capacity ORC, (\$427m) adjusted as set out below (\$446.4m).
<b>NPV DORC</b>	\$171.6m <sup>41</sup> (p32) <ul style="list-style-type: none"> <li>- Cost-based calculation</li> <li>- Incumbent perspective</li> <li>- Discounting at risk free rate</li> <li>- Individual rather than weighted average lives for major assets</li> <li>- Commission view of expansion timing and costs</li> <li>- Tax effects modelled explicitly</li> </ul>	\$345.7m <ul style="list-style-type: none"> <li>- Cost-based calculation</li> <li>- Hypothetical New Entrant perspective</li> <li>- Discounting at post-tax WACC</li> <li>- Individual rather than weighted average lives for major assets</li> <li>- Expansion is not an issue with existing capacity ORC</li> <li>- Tax effects modelled explicitly</li> </ul>

<sup>40</sup> It appears that the value of ORC used by the Commission does not include the adjustments to construction financing and equity raising costs discussed in the Draft Decision.

<sup>41</sup> APTPPL has examined the Commission's calculation and detected at least one error: the formulae that calculate the present values of tax concessions for both the new and old pipeline discount to 2005 instead of 2006 which is the discounting base for all other present value amounts.

	<b>ACCC Draft Decision</b>	<b>APTPPL Response</b>
<b>ORC for straight line DORC calculation</b>	<p>\$441.0m (Table 2.2.5.1)</p> <p>Existing capacity ORC (\$427m) adjusted for:</p> <ul style="list-style-type: none"> <li>- the Commission's view of equity raising and financing costs</li> <li>- value of linepack</li> <li>- inflation</li> </ul>	<p>\$446.4m</p> <p>Existing capacity ORC (\$427m) adjusted for:</p> <ul style="list-style-type: none"> <li>- APTPPL view of equity raising costs at 3.83%</li> <li>- APTPPL view of financing in construction</li> <li>- value of linepack</li> <li>- inflation</li> </ul>
<b>Straight line DORC</b>	<p>\$295.8m (Table 2.2.5.1), based on an existing capacity ORC of \$441.0m.</p>	<p>Straight line DORC is not accepted by APTPPL in principle, but if it is to be used, it requires at least</p> <ul style="list-style-type: none"> <li>• correction of the method of dealing with the differences in economic life for the RBP mainline. When corrected, straight line DORC is \$312.6m<sup>42</sup>.</li> </ul>
<b>DORC value</b>	<p>Straight line proxy – \$295.8m</p>	<p>NPV DORC – \$345.7m</p>

<sup>42</sup> Based on the APTPPL's existing capacity ORC of \$446.4m.

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## Attachment 2

### Deficiencies in the Draft Decision's calculation of Straight Line DORC

The straight line adjustment of ORC as applied in the Draft Decision is incorrect.

#### Application of Straight Line DORC to the RBP Main Line

The straight line method as implemented in the Draft Decision fails where the initial life of the ORC asset is longer than that of the existing asset. This flaw is highlighted in the case of the original RBP main line, where the original life of the existing asset is shorter than the forecast life of the ORC asset. The formula applied in the Draft Decision is as per NERA's Comparison of DORC Estimation Procedures (NERA 2006a, p7):

$$DORC = ORC \times \frac{\text{Remaining Life of Existing Pipeline}}{\text{Economic Life of Replacement Pipeline}}$$

In the case of the original RBP mainline the approach produces a straight line DORC of \$38.9m:

$$DORC = 135.3 \times \frac{23}{80} = 38.9m \text{ (Draft Decision Table 2.2.5.1 p36)}$$

This approach uses actual remaining life in the numerator but hypothetical economic life in the denominator. This mixing of characteristics of two different pipelines in the one calculation is at the core of the problem which becomes evident when the two pipelines have different lives. This is demonstrated below from two points of view.

#### Calculation mixes quantities from different pipelines

First, consider the following steps:

1. DORC is ORC discounted by depreciation to date:

$$DORC = ORC \times (1 - \text{fraction of value depreciated to date})$$

2. The Draft Decision's straight line DORC calculation is not equivalent to the formula above; the Draft decision uses the formula below:

$$DORC = ORC \times \frac{\text{Remaining Life of Existing Pipeline}}{\text{Economic Life of Replacement Pipeline}}$$

3. To see the flaw, consider the following possible DORC formulae, both based on the straight line definition of DORC:

$$\begin{aligned} \text{DORC1} &= \text{ORC} * (1 - (\text{age of actual pipeline} / \text{full life of actual pipeline})) \\ &= \text{ORC} * (\text{remaining life of actual pipeline} / \text{full life of actual pipeline}) \end{aligned}$$

Or

$$\begin{aligned} \text{DORC2} &= \text{ORC} * (1 - (\text{age of optimal pipeline if constructed when RBP was built} / \text{full} \\ &\quad \text{life of optimal pipeline})) \\ &= \text{ORC} * (\text{remaining life of optimal pipeline constructed when RBP was} \\ &\quad \text{built} / \text{full life of optimal pipeline}) \end{aligned}$$

To demonstrate that the Draft Decision's formula systematically understates the valuation under either of the formulae immediately above, posit the following:

$$\begin{aligned} 60 \text{ years} &= \text{service life (SL)} + \text{remaining life (RL)} \text{ for the actual pipeline} \\ 80 \text{ years} &= \text{SL} + \text{RL} + 20 \end{aligned}$$

$$\text{Draft Decision DORC} = \text{ORC} \times \text{RL} / (\text{SL} + \text{RL} + 20)$$

$$\text{DORC1} = \text{ORC} \times \text{RL} / (\text{SL} + \text{RL})$$

$$\text{DORC2} = \text{ORC} \times (80 - \text{SL}) / 80 = \text{ORC} \times (\text{RL} + 20) / (\text{SL} + \text{RL} + 20)$$

For positive values of RL and SL, the following inequalities must apply:

$$\text{DORC2} > \text{DORC1} > \text{Draft Decision DORC}$$

In conclusion, by mixing pipelines in its formula, the Draft Decision has generated a number that is not reconcilable to the definition of straight line DORC, and which systematically understates the valuation that would be obtained under either formula in point 3 above.

*Ignores time value of money*

Second, when taken to the limit, the Draft Decision approach may imply that the value of a brand-new pipeline with a 60 year life is 75% of the cost of a new pipeline with an 80 year life (assuming the same capital costs for the pipeline). Such an outcome is clearly unsupportable. The reason for this result is that the formula fails to recognise the time value of money. In particular, it fails to take account of the fact that the "benefit" of the extra 20 years' life of the 80 year asset occurs in years 60 to 80 and, at normal discount rates, has very little present value when the existing pipeline is relatively new. At normal discount rates, the value of a new pipeline with a 60 year life will be similar to the cost of a new pipeline with an 80 year life. Given the framework of a simplified straight line calculation, this shortcoming in the Commission's approach is best addressed by

adopting the DORC1 formulation above for all assets, irrespective of their economic lives i.e.:

$$DORC = ORC \times \frac{\text{Remaining life of existing pipeline}}{\text{Economic life of existing pipeline}}$$

The corrected DORC for the RBP mainline is:

$$DORC = 136.9 \times \frac{23}{60} = 52.5m \text{ (based on APTPPL's corrected existing capacity ORC of } \$446.4m)$$

These results are summarised in the table below

**Attachment 2: Table 1**

	ORC	Main Line ORC	Main Line straight line DORC		Difference	Total Straight Line DORC	
			ACCC	Corrected Main Line		ACCC	Corrected Main Line
<b>ACCC ORC</b>	441.0	135.3	38.9	51.9	13.0	295.9	308.8
<b>APTPPL Corrected ORC</b>	446.4	136.9	39.4	52.5	13.1	299.4	312.6

- APTPPL Corrected ORC is the Draft Decision's ORC with finance cost during construction at 10.6% and equity raising costs at 3.83%.



**Attachment 3 – *CONFIDENTIAL***

**Attachment 4 – *CONFIDENTIAL***