

29 October 2003

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Dear Mr McCormack

Final Decision on the Access Arrangement for the Moomba to Sydney Gas Pipeline System – discussion on section 8.10 (k): HNET

The purpose of this note is to comment on the Commission's findings in respect of s8.10 (k) of the Gas Code.

I have read the Commission's Final Decision, and in particular pages 63-65, where the Hypothetical New Entrant Test (HNET) is discussed in the context of s8.10(k). The Commission concluded:

- The HNET tariff calculated by NERA is a relevant factor in considering tariffs that replicate outcomes of a competitive market;
- Tariffs calculated by NERA are broadly consistent with an ICB of \$559.3 million; and
- HNET analysis can be used to test the appropriateness of tariffs.

I believe that the conclusions reached in that section are unreasonable, given the information available to the Commission at the time.

Information available to the ACCC at the time of the Final Decision

In September 2002, the ACCC submitted to the NCC a report by NERA on the application of the Hypothetical New Entrant Test to estimate contestable market MSP tariffs. Later that month, EAPL submitted to the NCC an NECG report¹ critiquing that NERA report. EAPL later submitted that NECG report to the ACCC, who commissioned NERA to critique it in October 2002.

¹ *"Revocation of Coverage for the Moomba – Sydney Pipeline: attachment in support of EAPL response to NERA/ACCC submissions"* (September 2002).

That NECG report identified many areas of approximate agreement between NERA and ourselves, notably on the appropriateness of using the HNET concept, the revenue requirements for return on assets, the level of non-capital charges, the replacement cost of the pipeline, and – broadly speaking – the overall revenue requirement for the MSP.

The NECG report took issue with NERA’s assumptions on HNE pipeline volumes and with NERA’s depreciation estimates for the HNE pipeline.

Since that time, the Commission has revised its own estimates for non-capital charges and volume forecasts for the pipeline. In the Final Decision, the Commission has accepted non-capital charges of approximately \$18.5m per annum – a figure which is more than \$6m per annum higher than the figure used by NERA in its HNET calculation. The Commission has also accepted a volume forecast for the MSP of 95.8 PJ per annum average over the Access Arrangement period – a figure which is 21 PJ lower than the figure used by NERA in its HNE calculation.

Underpinnings of NERA’s HNET calculation

As already noted, NERA’s HNET calculation differs only in certain respects from NECG’s own calculation. As far as factors leading to the HNE revenue requirement are concerned, the differences are relatively small with the exception of depreciation, as the table below² indicates.

Revenue requirement	NECG analysis	NERA analysis	Reference to NERA figures
ORC value	\$1,058.3	\$976.1m	p. 28
Return on assets	\$60.63m	\$61.3m	p. 28
Depreciation	\$16.4m	\$5.2m	p. 32
Non-capital charges	\$12.2m	\$12.2m	p. 32
Tax		\$1.4m	p. 34
Total HNE cost	\$89.2m	\$80.1m	p. 34

² This table is reproduced from page 7 of NECG’s September 2002 report, “Revocation of Coverage for the Moomba – Sydney Pipeline: attachment in support of EAPL response to NERA/ACCC submissions”.

It is the conversion of this revenue requirement to a reference tariff for the HNE on which NERA and NECG disagree most strongly. As the Commission itself noted in the Final Decision (p. 64), the essence of the disagreement is that NERA divided the revenue requirement by the total NSW market demand (the volume transported on the MSP plus the volume transported on the EGP), whereas we divided the revenue only by the actual MSP volume forecast. The table below³ illustrates the importance of this volume effect on the absolute level of tariffs. The table also examines the effect on the NERA calculation of alternative depreciation assumptions.

Comparison of MSP tariffs with range of HNE tariffs
For the year 2002

Pmsp (\$/GJ)	0.66					
Vmsp (PJ/yr)	89.8					
Vmkt (PJ/yr)	114.8					
MSP revenues (\$m/yr)	81.2					
		Scenario				
		NERA	NECG	mixed		
		per NERA	per NECG	per NERA	NERA with plausible depreciation rate -- 30 yr contractual certainty	
revenue assumption						
HNE cost est (\$m/yr)		80.1	89.2	80.1	90.79	90.79
volume assumption		whole mkt	MSP vol	MSP vol	MSP vol + 10%	MSP vol
Vhne (PJ/yr)		114.8	89.8	89.8	98.78	89.8
Phne (\$/GJ)		0.51	0.73	0.65	0.67	0.74
Pmsp (\$/GJ)	0.66					

Note: These calculations use the formula employed by NERA, equation 5.2 on page 35, except that Vmkt has been replaced with Vhne. As discussed in this NECG submission, Vmkt is not likely to be equal to Vhne.

Why a hypothetical entrant would not capture 100% of the NSW gas market

The foregoing discussion has shown that NERA and NECG derive quite different estimates of the HNET tariff, largely because of different views on the correct volume assumption to apply. Several compelling facts make it clear that NERA’s assumption that a HNE would capture 100% of the NSW gas market cannot be correct:

- An actual new entrant to the NSW gas market, the EGP, constructed a pipeline without securing contracts for 100% of the NSW market volume. In fact the capacity

³ This table is reproduced from page 17 of NECG’s September 2002 report, “Revocation of Coverage for the Moomba – Sydney Pipeline: attachment in support of EAPL response to NERA/ACCC submissions”.

of the EGP is estimated to be approximately 55 PJ/annum—less than half the market volume. Even with maximum compression, the EGP capacity is less than the market volume assumed by NERA in its HNET calculation. Thus an actual entrant did not capture 100% of the market, and clearly never intended to.

- As NERA has modelled it, the hypothetical entrant would serve only one gas basin. Recent developments (such as the new AGL gas supply contracting arrangements) demonstrate that single basin supply would be unattractive to many major customers who value redundancy and the ability to comparison shop for gas. For this reason alone, it is unrealistic to contend that a single basin pipeline could capture the entire market.
- If the NERA approach were applied to interconnections between regional nodes in the National Electricity Market, then each such interconnection would only be viable if it was the only interconnection supplying the downstream node. Entrant interconnectors do not expect to capture 100% of the inflows to the downstream node they supply, and their viability should not depend on such an extreme outcome. Clearly it would be absurd to say that such a 'network' would be optimal.

Further arguments of a more technical nature against NERA's volume assumptions were previously provided to the ACCC in NECG's September 2002 report (pp.11-12).

Commission has never accepted NERA's volume assumptions

As I have just shown, the weight of evidence demonstrates the unreasonableness of NERA's volume assumption. Importantly, the Commission also rejected it consistently over several years. NERA's volume assumption is not accepted by the Commission in its Final Decision, but the Commission's disagreement with NERA's volume approach goes back three years. NERA first advocated the use of 'defined capacity'—a gas volume equivalent to the whole market volume⁴ for tariff setting on the MSP in October 2000⁵. The ACCC rejected the use of defined capacity in its December 2000 Draft Decision on the MSP Access Arrangements,

⁴ In its October 2000 report, NERA advocated use of defined capacity. The actual capacity of the MSP is close to the total NSW market demand, which is the sum of MSP and EGP volumes. In its September 2002 report on HNET, NERA advocated use of the sum of MSP and EGP volumes. The resulting volumes are approximately equal to those which would have arisen from the 'defined capacity' approach.

⁵ "Regulation of tariffs for gas transportation in a case of 'competing' pipelines: Evaluation of five scenarios", NERA October 2000.

preferring instead to use firm-specific volumes. The Commission has again used firm-specific volumes in its Final Decision. In short, NERA has consistently proposed a whole market volume for tariff setting, and the Commission has consistently adopted pipeline-specific forecast volumes over the past three years.

Given the Commission's consistent use of MSP-only volumes for tariff determination, it is not reasonable for the Commission to reject the NECG MSP-only volume assumptions in the HNET calculation and adopt the current NERA (MSP + EGP) volume assumptions (which is numerically equivalent in its effect to NERA's earlier '*defined capacity*' assumption) instead.

The HNET result if assumptions were consistent with ACCC pricing parameters

On page 18 of its 23 October 2003 submission to the ACCC, EAPL sets out a revised calculation of the HNET price if the ACCC's own tariff assumptions were used to update NERA's HNET calculation. This revised calculation takes account of the increased non-capital cost levels accepted now by the Commission, and of the Commission's own volume forecasts for the MSP. I agree with the method used in this calculation and with its conclusion, that if the HNET calculation performed by NERA was updated to reflect the Commission's current views—particularly on volume—then the resulting tariff would be no less than \$0.66/GJ.

This HNET comparison price is not consistent with the \$559.3m ICB posited by the Commission—it is consistent with a much higher ICB. This HNET price is, however, nearly equal to the present MSP tariff, which was arrived at without regulatory intervention through a process of commercial negotiations.

Having said that, care must be taken in seeking to draw conclusions about the value of assets based on a single year snapshot of tariffs. The long lifetime of pipelines and the variation over that span of prices and demand conditions mean that rates of cost recovery can, and probably should, vary markedly over time. In the case in point, systematic differences are likely to exist between a regulated price path and one derived on NERA's HNET basis. Any differences in backloading or assumed lifetimes would render the comparison of one-year price snapshots meaningless for assessing relative capital valuations.

Conclusion on reasonability of ACCC findings on HNET

With some justification, the Commission expresses doubts about the use of the HNET calculation method to estimate or confirm ICB valuations. Nevertheless, the Commission relies heavily on the specific HNET tariff value generated by NERA in September 2002. Without the NERA calculation to support it, the Commission's ICB value appears untenable,

as it is inconsistent with the Commission's adoption of DORC as the value of ICB in its past decisions, and it has been calculated under a misapplication of s8.10 (f) of the Gas Code.⁶

Since September 2002, the Commission's own views have changed on two of the critical inputs to the NERA HNET calculation. If the NERA calculation were updated to reflect the Commission's own current thinking on these inputs, then it would no longer support the Commission's ICB valuation.

It might be argued that it is open to the Commission to choose whichever gas volume assumption it prefers, as this critical assumption is subject to disagreement between expert economists. However it is clear from objective facts that the NERA volume assumptions cannot be correct.⁷ Additionally, the Commission itself has steadfastly rejected the NERA view on gas volumes over the past three years: first when 'defined capacity' was proposed for the Draft Decision, and now when whole market volumes are proposed for the Final Decision. The Commission's preferred position on gas volumes mirrors the position advocated by NECG—only the MSP's firm-specific volumes should be used to derive tariffs. It follows that the Commission's reliance on the NERA HNET tariff value is not reasonable, when this reliance goes against the Commission's longstanding views on gas volumes.

Yours sincerely

Mike Smart
Director

⁶ EAPL's 23 October 2003 submission makes the case that the ACCC has misapplied s8.10 (f) of the Gas Code in arriving at its ICB value of \$559.3m. One of the factors cited by EAPL is the Commission's use of accounting depreciation despite the fact that s8.10 (f) requires the use of economic depreciation. In my opinion, the use of accounting depreciation will yield very different results from economic depreciation in the context of s8.10 (f) and the MSP.

⁷ These facts include the circumstances of an actual new entrant, the EGP, the fact that a major NSW gas customer, AGL, has signalled publicly its strategic intent to source gas from more than one basin, and the pricing precedents for interconnectors in the national electricity grid.