Review of Victorian Natural Gas Transmission Access Arrangements

Response to ACCC Issues Paper

May 2002

Origin Energy

Contents

1. Introduction

Origin Energy Ltd. (Origin) welcomes the opportunity to comment on the Australian Competition and Consumer Commission's (the Commission's) issues paper reviewing access arrangements put forward by VENCorp and GasNet.

Origin is a national energy company with significant interests in the Victorian retail market for natural gas, with 550,000 Victorian customers. Further, Origin has invested heavily in bringing new sources of gas to the Victorian and South Australian market through the future commercialisation of the Yolla, Thylacine and Geographe exploration projects.

The issues raised by the Commission regarding the VENCorp and GasNet access arrangements are dealt with in this submission. Our initial views of the access arrangements lodged with the Commission are summarised here:

- There are a number of serious concerns surrounding the structure and impact of the GasNet proposal on Origin's retail market in Victoria.
- Whilst Origin does not object to increases to the asset base (such as the rolling-in of the South-Western pipeline [SWP]), we take issue with the fundamental change to the approach of collecting the return on the capital asset. This includes the 38% increase in reference tariff services in the first year of the access arrangement's application (2003).
- Inconsistent approaches to demand forecasting applied between the operator (VENCorp) and the asset owner (GasNet).
- The GasNet proposal does not recognise the risks of retailers in regard to:
    1. Managing contractual risk and contract design in a competitive market; and
    2. The ability for retailers to pass through the efficient costs of transmission to contestable customers, including the (currently regulated) mass market.
- The GasNet access arrangement is not able to sufficiently recognise alternative sources of supply, with a continued focus on the Longford processing facility.
- GasNet's insufficient justification for the shortening of the useful life of assets, in particular the Longford to Dandenong transmission pipeline.
- The difficulty in assessing numerical information in GasNet's access arrangement as presented.
- The absence of any attempt to appropriately model the impact of transmission tariffs on end-use customers.
- Concerns surrounding the treatment and operation of the K factor.

It is Origin's view that GasNet and VENCorp have invested a significant amount of effort into the development of the access arrangements for the Principal Transmission System (PTS) for the period 2003-2007. However, there remain a number of concerns regarding the application of both access arrangements and the impact they will have in defining the provision of regulated monopoly gas transmission services in the fully contestable market in Victoria should they be introduced in their current form.

For the purposes of this submission, Origin has adopted the Commission's convention of treating the terms GasNet System (including the South West Pipeline) and PTS as interchangeable.

2. Specific questions raised by the Commission

In this section of the submission, Origin addresses relevant questions raised by the Commission in the issues paper.

2.1 Broad Issues

2.1.1 Heat Island effects on demand forecasts

Origin does not agree with the warming trend presented by GasNet, which implies a reduction in the forecast gas loads. Origin notes that this forecast is also different to the VENCorp forecast, which does not apply a warming trend. Origin suggests that the forecast gas loads should be similar and that the VENCorp forecast be used.

2.2 GasNet Access Arrangement

2.2.1 Inclusion of the South-West Pipeline

Origin accepts the broad principle of the inclusion of the South West Pipeline (SWP), particularly in the context of the relevant injection tariffs, which are designed to recover the costs of the pipeline from its users.

Origin's support for the roll in of the SWP is contingent on its provision of system wide benefits for the Victorian market and that to the extent possible under the Code, this should be reflected in establishing the appropriate reference tariff for the pipeline.

The basis for the provision of system wide benefits (following the roll-in of the SWP) is discussed here. One in twenty winter demand in Victoria[1] cannot be currently met from all existing firm supply sources without the contribution from the Iona storage plant. This demand can just be met with the completion of the EGP/GNS connection at Longford (the Duke Energy Longford Hub) by end 2002 if all available capacity is contracted from reliable supply sources. It is believed that the Esso/BHP-Billiton Longford plant is effectively fully contracted, the Cooper Basin fields are in decline and thus incremental gas supply from Moomba via the NSW interconnector (other than Timor Sea or PNG gas) at a market price is unlikely. Yolla and Patricia/Baleen will contribute to peak day supply (but not coincidently for any significant period due to the limited reserves of Patricia/Baleen) and their contribution to firm supply for supply security purposes will be constrained by their level of plant redundancy.

From the above, and without the SWP, the Victorian market would remain critically dependant on a single pipeline with some doubt over capability to reliably meet one in twenty peak winter demand. With the SWP, up to 250 TJ/d of additional firm peak capacity is added to the market from the Iona storage plant, providing a significant contribution to system security. In the longer term, this pipeline also facilitates upstream gas competition by allowing the delivery of the recent offshore Otway Basin discoveries (Thylacine & Geographe) into the Victorian market.

[1] 1131 TJ/d in 2002 increasing at approximately 2% per year- VENCorp Annual Planning Review (2002-06)

2.2.2 Reference tariff methodology

How would these proposals affect the relative risks of GasNet and users of the PTS?

The proposed tariff approval process

The GasNet reference tariff proposals raise a number of concerns for Origin. Origin does not support GasNet's stipulation that the Commission approve an application to increase reference tariffs via the 'pass through' mechanism within 20 business days of notification, as it is an extremely restrictive review period.[2] Further, Origin does not consider a failure to respond within this time frame by the Commission as tacit approval of such a proposal.

Origin accepts the principle of a pass-through mechanism, but not in the form proposed by GasNet.

We note:

- The pass through mechanism should be two-way, and cover a decrease in costs as well as increases (For example, the removal of GST from energy supply, as mooted by the Federal Opposition prior to the election last year).
- The concept of 'deeming' and approval should be rejected in its current form. We suggest it be replaced with the requirement for the Commission to respond (rather than approve/reject) within 20 business days. The Commission should be entitled to call for submissions as warranted.

Operation of the K factor

Origin understands that the effect of the K factor during the first access arrangement period (1997-2002) was to allow GasNet to recover revenue to the extent that the average revenue per gigajoule (GJ) in any year is less than the target average revenue. The current K factor adjustment also requires GasNet to refund to users in the event that the average revenue per GJ in any year is greater than target average revenue.

The K factor adjustment does not itself cover GasNet's exposure to variations in volume (with the exception of volume impacts on average revenue per GJ). In addition, GasNet's ability to recover revenue under the K factor adjustment is limited by the price cap.

However, it is our understanding that the proposed $14M adjustment in the second access period for the K factor in the first access period, would effectively allow GasNet to recover in the second period the revenue lost by the operation of the price-cap constraint.

GasNet is also proposing significant changes to the current operation of the K factor:

[2] ACCC (2002), Issues Paper- Application for revision lodged by GasNet Australia (Operations) Pty Ltd and Victorian Energy Networks Corporation, page 10

- K factor adjustment is not constrained by the price cap;
- The price cap itself is increased to 2% (from 1%) and operates in addition to, rather than in conjunction with, the K factor;
- Origin is concerned that the K factor does not recognise the changes to retailer's aggregate load characteristics as customer switching takes place under FRC.

While Origin understands the concerns of GasNet with the approach applied in the first access period, it is our view that the proposed approach for the second access period transfers a substantial degree of risk to the users of the system. Such changes mean that GasNet's revenue is relatively more exposed to the behaviour of suppliers and less to the more stable behaviour of end-users than under the current system.

Origin notes with some concern that an outcome of the K factor proposal (which always existed, but was mitigated by the constraints), is that GasNet may achieve higher than forecast total volumes/revenues but still apply for an increase in tariffs in the subsequent year(s) based on K factors. For instance, if the summer gas fired generation load increased above forecast, then overall revenue might increase, but average revenue decrease. Users would be asked to pay more in the following year to "compensate" GasNet.

As noted, this is a consequence of the operation of the K factor based on average revenue and Origin is not seeking a change from that approach. However, we believe it is quite inappropriate to allow the K factor adjustment to occur without constraints as the constraints mitigate the anomalies identified above.

Prudent discounts

Origin supports the principle of prudent discounts, with roll-in to all users when the discount provides for positive system-wide net benefits available to all parties utilising the pipeline.

Origin considers however, that the GasNet access arrangement should consider:

- <u>The SEA Gas connection point to the PTS</u>

  This connection will be in the vicinity of the Iona storage plant but downstream of the system MIRN. Therefore, injections from the storage plant into SEA Gas and from SEA Gas into the storage plant will use the PTS, albeit over a very short length. The alternative to using the PTS is to build a metered bypass.

  Origin Energy therefore believes that matched transfers between SEA Gas and the Iona storage plant qualify for a prudent discount as proposed by GasNet for Pakenham and the Western Zone MIRNS. GasNet needs to include a Port Campbell withdrawal zone to compliment the Port Campbell Injection Zone with an appropriate tariff.

- <u>The "Longford Hub"</u>

  The Duke Energy "Longford Hub" connection point to the GNS will be in the vicinity of the Longford plant but downstream of the system MIRN. Therefore, injections from the Longford plant into the EGP (via the Hub) will use the PTS, albeit over a very short length. The alternative to using the PTS is to build a metered bypass. Origin Energy therefore believes that matched transfers between the Hub and the Longford plant qualify for a prudent discount as proposed by GasNet for Pakenham and the Western Zone MIRNS. GasNet needs to include Longford withdrawal zone to compliment the Longford Injection Zone with an appropriate tariff

In regard to the Pakenham connection point for Yolla, Origin offers the following comment:

- GasNet states that, while it has provided for development of the Yolla field with the Pakenham injection tariff, it does not believe that the development of Yolla is likely to occur.

- The Yolla Joint Venture has approved the project for development and the engineering contract has been awarded. Apart from any unforeseen outcome from statutory approvals, the project is scheduled for commissioning in approximately the fourth quarter 2004.

Origin would ask the Commission in assessing GasNet's proposed access arrangement, to ensure that sufficient flexibility is built into the tariff structure to allow prudent discounts if new projects that provide system-wide benefits are implemented during the forthcoming access period (2003-2007).

Estimated life of the Longford pipeline

GasNet has proposed to reduce the estimated life of the Longford pipeline from 2030 to 2023. We understand that this is based on GasNet's view of the economic life of the pipeline given the remaining gas reserves in Bass Strait and the emergence of alternative sources of gas.

Origin is of the view that there appears to be insufficient information available to support that such a change is warranted and that the basic assumptions that underpinned the original assessment have not fundamentally changed.

<u>What impact will recent discoveries of new gas sources have upon the economic life of the GNS?</u>

Origin does not agree that new sources and discoveries of gas will have a substantial impact on the economic life of the PTS to the extent indicated by GasNet in their submission to the Commission. New sources of supply such as the Yolla field[3] are very likely to bring new supply sources into Victoria. However, such new sources (Patricia Balleen, SEA Gas etc) will represent an addition rather than a displacement of existing gas basin production and processing capabilities currently overseen by Esso/BHP-Billiton.

Further, whilst GasNet considers peak system demand to be declining because of impacts such as the "heat island" effect, Origin contends that load will continue to grow due to normal increases in demand driven by economic development and future gas-fired power generation projects.

[3] Yolla is to be developed as part of the joint venture BassGas project (in which Origin is a key participant)

2.2.3 *Capital base re-opening*

Is GasNet's proposed roll forward of the capital base consistent with the requirements of the Code? In particular, does the Code allow for the capital base to be reopened?

Origin is aware of the proposal to include $36M of adjustments for excluded assets[4], largely reflecting inclusion of a value for easements. We believe this constitutes a re-opening of the capital base. GasNet claims the easements were in the original capital base but were valued at zero dollars.

The issue raises important questions of principle and practice. Origin notes for instance that the proposal represents a 9% increase in the value of the capital base (as a proportion of the 1998 capital base of $399.5M), representing annualised additional revenue of some $2.8M (@7.75%).

It is our understanding (in line with the Commission's comment), that the capital base cannot be re-opened under the Code. The matter is therefore dependent on a number of points:

- Can GasNet demonstrate to the satisfaction of the Commission, the argument put to Origin that the easements were in the original asset base, albeit valued at $0?

- If so, is the Commission satisfied with the assessment of the value of the easements and other additional assets included in the draft access arrangement?

Origin would ask the Commission to consider what fundamental change in conditions for GasNet has triggered the different approach taken by GasNet in the first access period relative to the proposed access arrangement before the Commission now. That is, Origin considers the proposed re-opening of capital base, the change in the way revenue is to be collected across the access period and other deviations from the approach followed in the first access period have not be sufficiently justified.

Is forecast capital expenditure prudent and consistent with assumptions in the access arrangement?

Origin accepts that the proposed forecast capital expenditure is consistent with reasonable and prudent practice.

2.2.4 *Rate of return*

Does GasNet face unique circumstances that justify a high asset beta? Is an asset beta of 0.6 compatible with industry benchmarks used by the Commission when selecting parameter values?

GasNet has proposed an increase in the Asset beta from 0.55 to 0.60. We understand this is largely to reflect the volatility of revenue because of their exposure to volume variances (price variance being addressed via the K Factor).

[4] GasNet (2003), GasNet Australia Access Arrangement Information, page 4.

While GasNet has experienced reductions in forecast volumes (see Sections 2.1.1 and 2.2.6 of this submission) over the initial forecast, Origin notes (see above), that the revised demand forecast is based on assumptions about weather that are considerably more conservative than the forecasts in the first access period.[5]

Origin is of the view that this alone reduces GasNet's exposure to the volume shortfalls it experienced in the first access period. The proposed amendments to the operation of the K factor (if accepted) would also reduce the requirement for a higher asset beta by allowing greater adjustment of average revenue.

Overall therefore, Origin sees no unique circumstances applying in the forthcoming period that are consistent with GasNet claiming a higher asset beta (and therefore a higher pre-tax real WACC) than the previous access arrangement. Indeed, as noted, we believe some of the initial risks have been mitigated by the current demand forecasts and K factor approach.

2.2.5 Revenue elements

Origin has dealt with aspects of the revenue elements elsewhere in this submission.

2.2.6 Demand forecasts

GasNet has used the VENCorp demand forecast for year one of the second access period, and Origin supports this approach.

However, GasNet has included a warming trend in the forecast, such that in year five demands are 1.2PJ less than VENCorp's five-year forecast.

GasNet has produced a paper prepared on their behalf by the CSIRO. However, the paper places a great deal of reliance on the theoretical "heat island" effect as identified at one central Melbourne site (compared to a rural site).

Notwithstanding the report, Origin's view is that there is still considerable uncertainty surrounding local and regional warming/cooling trends and of the impact of many other factors such as urban pollution and wind patterns on local climate. We therefore do not accept that it is appropriate to include a warming trend in the demand forecast for the second access period.

In particular, we consider it to be asset over-recovery on the part of GasNet to include both a warming trend in the demand forecast, and a higher asset beta based on exposure to volume risk (see discussion on asset beta, (see section 2.2.4 of this submission).

Origin concedes that the impacts of gas-fired power generation projects are difficult to forecast, though considers that such effects should be given attention, given the growing intermediate-peak generation market for gas-fired plant in Victoria.

---

[5] We understand the forecasts in the first access period were based on an annual EDD of 1537 (long term average) at the time. The current forecast is based on annual EDD of 1445 with a warming trend over the 5 years. The difference amounts to around 4PJ per year, or 5.2PJ (4PJ+1.2PJ) in the final year.

Furthermore, Origin believes that the VENCorp and GasNet demand forecasting methodologies should be segmented into power plant demand and non-power demand. This would add a significant degree of clarity to the understanding of system utilisation and the likely impact upon tariffs (on a $/GJ basis).

2.2.7 *Reference tariffs*

In this section, Origin provides some general commentary on the GasNet access arrangement tariff structure, in addition to addressing some of the Commission's specific questions.

GasNet's proposed real tariff increase of over 10% for the second access period

The real increase reflects a number of factors, as set out below, and we have noted these separately in other parts of this submission.

- Increase in the value of the initial asset base, which flows through to the second access period **(Section 2.2.3)**
- Recovery of the K factor carry-over of $14M **(Section 2.2.2)**
- Higher WACC (8.22% vs. 7.75%), largely because of the increase in asset beta **(Section 2.2.4)**
- Lower volume forecasts than in first access arrangement (and lower than VENCorp forecasts for second access period). **(Section 2.2.6)**
- Roll in of the SWP **(Section 2.2.1)**
- Reduction in the life of the Longford Pipeline. **(Section 2.2.2)**

Further, Origin has significant concerns about the revenue recovery profile over the five-year period.

<u>Is a 38 per cent increase in 2003 and then a real decrease of 4.5 per cent in each subsequent year of the access arrangement period an appropriate average revenue path?</u>

GasNet's proposal sets out:

- Average increase of 38% in tariffs in year one of the second access period (2003-2007).
- Average decrease in tariffs in year two to year five of CPI-4.5%

Origin understands that this proposal reflects a view that tariffs in the third access period will be much lower and are designed to avoid a "price shock" in the transitional year between the end of the second access period and the start of the third access period.

Origin would ask the Commission to substantiate GasNet's claims that the average revenue path is appropriate, given:

1. The magnitude of the price shock in year one of the access arrangement.
2. The ability for retailers to pass through such a cost to the fully contestable retail market.
3. The inconsistency in the view that the revenue path will mitigate a price shock in the third access period, whilst ignoring the substantial impact that the 38% increase in the first year of the second access period will have upon the market.

Origin does not consider this proposal an appropriate revenue path for a regulated monopoly service provider.

GasNet's proposed Tariff Structure

GasNet has put forward a significant change in tariff structure, and Origin has not had the opportunity to fully review the impact of this change on customer's costs, particularly at the locational level.

Our comments therefore are directed by principle:

- Origin supports the removal of peak day withdrawal charges from system supply points of Culcairn, Barnawatha etc. The peak day withdrawal charges at these nodes, particularly Culcairn, has created a significant barrier to interstate gas sales and the development of an active interstate "spot" or trading market, to the detriment of the development of interstate gas trading.
- As a general principle, Origin supports the concept of capacity charges being levied on a withdrawal basis (i.e. on customer demand), as this approach is more likely to furnish signals to customers regarding their energy use and allows them to respond accordingly. Notwithstanding that the current approach to withdrawal charges (with retrospective definition of peak days), limits the effectiveness of the demand management signals, due to the retrospective definition of peak days for larger customers, Origin believes that it is important to retain a demand-based signal of peak capacity costs.
- The reliance in the proposed access arrangement to signal peak capacity costs on the basis of the ten peak-injection days <u>only</u>, is in our view an inappropriate step away from true economic signalling.

  Moreover:

  1. It is very difficult for retailers to assess the risks and pass through the relevant costs to the customers in a transparent fashion.
  2. When combined with the concepts of discounts for matched injections and cross-regional charges, it adds to the complexities of transmission pricing
  3. Under current arrangements, the five peak-injection charges compromise only a small component of the peak period (capacity) charges, and the impact of these uncertainties are quite small on the overall costs to customers. Now they represent the totality of capacity related charges and a significant component of total charges (approx 55%). It is not clear to Origin the impact of removing all peak withdrawal charges and replacing these in total with peak injection charges will have on other aspects of the wholesale market in Victoria. Origin has not been able to sufficiently assess this change in the time allowed by the Commission through detailed modelling, but recommends that some attention be given to its impact.

2.3 VENCorp Access Arrangement

The bulk of this submission has concerned GasNet's access arrangement rather than the particulars of VENCorp's access arrangement.

Origin would make the following general points regarding the VENCorp access arrangement:

- The application of the Ramsay Pricing Model is an acceptable model for Origin in regard to VENCorp's cost allocation under the requirements of the Code.

- The variation in demand forecasts applied by GasNet and VENCorp needs to be addressed. Origin would encourage the Commission to establish a requirement for both parties to arrive at consistent demand forecasts, noting that GasNet has modified the original VENCorp data.

- In regard to prudent discounts, Origin requests that the Commission recognise the benefits of avoided bypass to all users of the system by addressing the $/GJ rate put forward by VENCorp. The operating tariffs should be adequately discounted to reflect the system wide benefits to users.

  As argued in our discussion of the GasNet access arrangement, Origin would ask that the Commission ensure that VENCorp has the capacity to offer alternative tariffs during the access period if new projects benefiting all users are implemented and bypass threat furnishes incentives for a reduction in tariffs.

3. Conclusions

Origin considers the impact of the proposed GasNet access arrangement to be detrimental to the operation of the retail market for natural gas, particularly in the context of a fully deregulated market. These can be summarised as:

- The approach to capital recovery, manifested through the significant price shock in the first year of the second access period. The decision to approach cost-recovery in this manner has not been justified.
- The inclusion in the asset base of easements. Origin is concerned that the asset base is being overvalued with the inclusion of pipeline easements, given these assets were valued at $0 and included in the sale of the PTS. More generally, the insufficient justification offered by GasNet for re-opening the capital base.
- The pass-through mechanism generates risk to retailers by failing to allow adequate consultation and assessment by participants and the Commission (as necessary).
- The operation of the K factor and the potential its application has for generating counter-intuitive results.
- The need for access arrangement tariffs to recognise (on a zonal basis) the impact of legitimate bypass issues and reflect bypass avoidance through appropriate tariffs. This requires sufficient flexibility in GasNet's (and VENCorp's) tariff structure to allow the provision of prudent discounts as benefits arise rather than at the commencement of the next access period (post 2007).

However, Origin commends some of the approaches put forward by GasNet, including:

- The inclusion of the SWP into the PTS asset base (provided it generates system-wide benefits and increases the utilisation of the SWP through the proposed tariffs).

- The removal of peak-day withdrawal charges on PTS supply points that have previously negatively impacted upon interstate gas trade (Culcairn).
- Recognition of legitimate bypass threat through prudential discounts.

On balance, Origin is not satisfied that the GasNet access arrangement has been fully substantiated, and in its present form, is considered likely to impact negatively on both the retail market for natural gas and the possibility of maximising gas utilisation and flow across the PTS if attention is not given to flexibility in assigning prudent discounts to projects that may result in legitimate bypass threats.

Origin is not in a position to fully assess the economic and financial impacts of the proposed access arrangement due to a lack of clarity in the GasNet access arrangement and the time constraints involved in responding to the Commission. However, the arguments presented here are based on some initial modelling of the effect the GasNet and VENCorp access arrangement will have upon Origin's Victorian gas business for the second access period.