

To: ACCC Gas Group
Attention: Kanwaljit Kaur
Fax No: email
Copies:
Subject: Draft greenfields guideline for natural gas transmission pipelines

From: Rohan Zauner
Project No: SHIN128.2
Date: 5 August, 2002
No of Pages: 7

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Dear Kanwaljit

We have received a copy of the Draft greenfields guidelines for natural gas transmission pipelines, June 2002 (the Guidelines), and offer the following comments and observations for your consideration.

Sinclair Knight Merz are not representing anyone in offering these comments.

1. Interpretation

We interpret the Guidelines as suggesting an access regime for new pipelines constructed similar to that utilised for existing pipelines which are covered by the Gas Code, at their initial entry into that regime.

The Code (Clause 8.3, and this is noted in the Guidelines on Page 12) provides the following forms of regulation for a covered pipeline:

- (a) a price path for the relevant access arrangement period
- (b) a cost of service approach for the access arrangement period
- (c) 'variations or combinations' of the above

Whilst this is noted in the Guidelines, much of the Guidelines is spent dealing with matters related to the cost of service approach.

That is that an initial capital base (ICB) would be established (the actual capital cost when Clause 8.12 of the Code is applied), the WACC would be calculated without modification for any non-systematic risk factors, and a tariff profile calculated according to the Post Tax Revenue Model previously released by the Commission.

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There is discussion (eg in Section 6.2 and 6.3 of the Guidelines) concerning recognition of the possibility of ‘benefit sharing’ and ‘preservation of blue sky profits’ for the pipeline developer. These relate to sharing some of the ex-post determined benefits derived from forecast volumes (for example) being better than the forecasts that had been used to justify the development of the pipeline originally.

2. Distinctions between greenfields and existing pipelines

We would note the following key distinction between the circumstances of a greenfields gas pipeline and an existing pipeline entering into the regulatory regime.

With an existing pipeline entering into a regulatory regime, we would note that the process of entering the regime should be neither a wealth-creation/destruction nor a wealth transfer event. That is, it is not intended that the process itself of covering a pipeline with a regulatory regime should result in a windfall profit or loss to either the asset owner or the users of the service, nor, as a corollary to this, should it result in a share-price rise or fall of the asset owner or asset users (except to the extent that expectations of monopoly future profits are removed).

On the other hand, the time at which a developer commits to developing a new pipeline is the very instant of wealth creation. The amount of wealth created is the total net economic benefit of the pipeline (to users, upstream producers, the pipeline owner etc), and the amount of this wealth specifically provided to the pipeline owner is the NPV of the cashflows of the pipeline in the developer’s (mean cashflow) financial model at the time of committing to the project.

Hence, whereas the operation of a Post-Tax-Revenue-Model based on expected (mean) cashflows and using the WACC as the discount rate should indeed be for a zero NPV for an existing pipeline, the operation of such a model for a greenfields development should not be zero¹.

3. The NPV to the developer should not be zero ab initio

That the NPV to the developer for a new pipeline development should not be zero is perhaps best seen by considering the alternative.

The consequences of requiring an NPV of zero for new developments are:

- 1) There is no justification in expending development costs prior to the time of project commitment (call this time ‘financial closure’). That this is the case can be seen by noting that costs expended prior to this time are sunk costs and should not appear on the financial model justifying the project’s acceptance as at financial closure. If the NPV is to be nil at financial closure then there is no justification in spending any such costs.

¹ ... if evaluated at the moment of project commitment by the developer.

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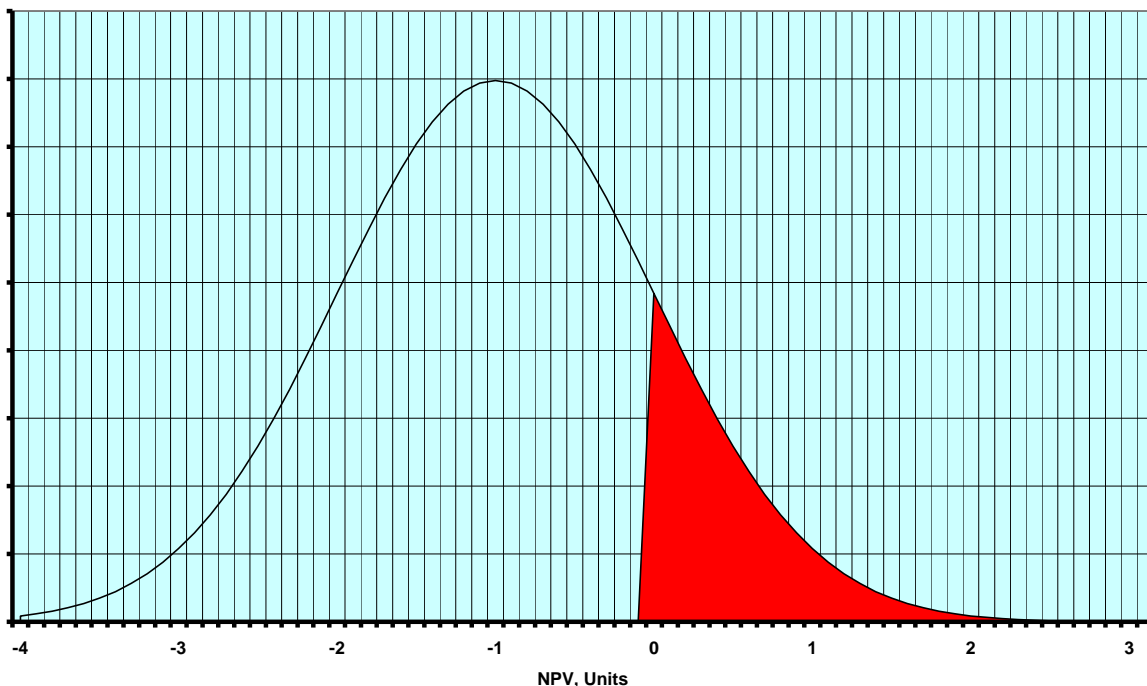
- 2) The share price of the development company can not rise in real terms by virtue of developing the project whereas this is exactly the time at, and process by, which it should rise, approximately by the NPV of the project, per share².
- 3) Pipeline developments will not occur.

While it is the case that, in the absence of capital rationing, all projects should proceed that have an NPV > 0, and that hence in the case of perfect competition etc only marginal projects (ie NPV ≈ 0) should be available, this is not reality.

Whilst marginal projects should exist and should still proceed, it is not the case that the average of all projects that proceed (in an NPV sense) is the return on only marginal projects.

By reference to Figure 1, a developer who is not subject to capital rationing should proceed with all projects available to it with an NPV > 0, ie all projects in the shaded area of Figure 1. It can easily be seen that the average, or typical, project that a developer might undertake would be expected to have an NPV somewhat greater than the marginal project (NPV = 0).

■ **Figure 1 Population of all possible projects a developer may undertake**



² some of the rise should be already built into the share price as expected growth allowance but the point is the same. The share price may change because of interest rate, credit risk changes or because the WACC or project cashflows were mis-estimated but again these would be chance outcomes.

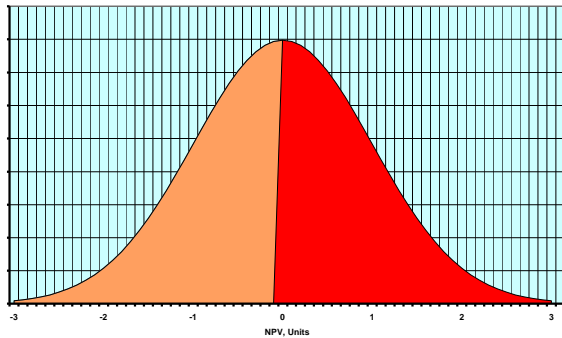
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4. But isn't this the same as preserving 'blue sky' benefits?

No.

The difference between the expectation that the average NPV > zero and of preserving and sharing 'blue sky' benefits can be seen by the following, Figure 2 and Figure 3.

- **Figure 2** Outturn of project that had NPV = 0 at financial closure, sometime after financial closure



- **Figure 3** Outturn of project that had NPV > 0 at financial closure, sometime after financial closure

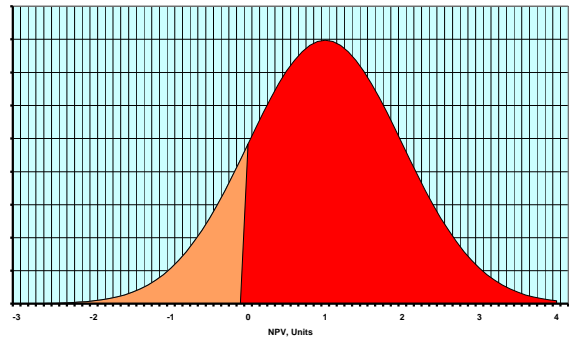


Figure 2 shows the situation where a regulatory assessment at financial closure provided for an NPV = 0 and in the event that actual returns vary from those assessed at financial closure part of the benefits of the 'blue sky' outturn are available to the developer. Figure 3 shows the same case of variability of cashflows after financial closure for a project that had an NPV > zero at financial closure, with the 'blue sky' also partly or wholly available to the developer.

The outcomes for the developer are clearly different in each case.

5. What are the requirements of the Customers?

The position of the users of the greenfields pipeline should also be contrasted with the position of existing users of an existing pipeline.

Pipeline users of an existing pipeline that is entering a regulatory regime have made (sunk cost) investments in their facilities reliant on natural gas, and with assumptions made about the future pricing of natural gas which includes the cost of transmission and distribution.

Possible users of a possible greenfields pipeline have made no such investments. Logically they would invest if they assessed their own project is viable based on their assumptions on, inter alia, gas pricing over the life of the facility they might build.

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If the user's assessment of the delivered gas price from the proposed pipeline is too high to justify their project then either:

- the user will stay using the fuel currently in use,
- the user will locate their facility somewhere else where the combination of factors is better, or
- the user will wait until a competitive pipeline or pipeline pricing is developed³.

The user has lost nothing, other than hope and expectation, by this outcome because they have made no investment in reliance on another outcome.

Hence it can be said that the users' requirement for a greenfields pipeline as opposed to an existing pipeline is for a reliable pricing outlook, not for any particular pricing outcome.

6. Who gets the rent?

In the case where an existing facility is using an alternative fuel, say LPG, then the possibility of natural gas supply if it can be delivered for less than the cost of the LPG means that there is a global amount of wealth, the rent, that can be accessed by building a pipeline. This is represented by the gap between the delivered costs of LPG and natural gas after allowing for amortising the capital expended in the user's new natural gas firing facility.

Several entities may have a call on this rent including:

- upstream suppliers,
- transmission pipeline owner
- distribution pipeline owner,
- fuel retailer and/or
- customer

The fairest way of dividing up the rent is to allocate it in proportion to the investment made (and risks taken) by each party. On this example it should be shared between the pipeline owner who must build the pipeline, the customer, who must convert the facility and possibly some small amount to the upstream producer who must incrementally expand production.

If the expected value of the NPV of the new pipeline is set to zero, then the rent still remains and it will be distributed amongst the other participants.

While this would provide a stronger and more attractive locational signal for customers to locate on the pipeline, it provides an inadequate signal for the development of the pipeline itself and, we would expect, the pipeline would never be developed.

³ There is nothing in the regulatory regime which guarantees a geographic franchise to a pipeline developer

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7. What would be a reasonable NPV?

It may be possible, by research, to estimate a reasonable NPV for a project.

Techniques that might be employed could include:

- an analysis of the Tobin's Q^4 of various companies,
- an analysis of the amount of growth factored into share prices of various companies,
- a survey of industry internal hurdle rates against the WACC⁵
- calculation of indicative economic rents available and allocation between pipeline owners, upstream producers and customers according to their relative investments in new capital equipment and risk. This would need a case-study approach.

8. How would a price-path approach provide benefits

An alternative to the calculation of a reasonable NPV to provide to the developer, and inclusion of this within a cost-of-service approach, is to recognise that the price path approach is simpler and meets the requirements of both users and the pipeline developer.

In this approach the pipeline developer must publish a long-term tariff cap (say a tariff that will be available for the next twenty years in real terms, and to provide tariffs for the subsequent five years to this period every five years), and must commit to ensuring that this tariff service remains available for that period.

The developer may then offer lower prices in any period (to provide for penetration pricing) and the prospective user may invest in gas using equipment, or even build a new factory, knowing that the pricing outcome cannot exceed the published cap for a time comparable with the life of the plant that is about to be invested in.

This should meet the requirements of prospective users, allow flexibility to the developer and be simple and transparent.

The pipeline developer bears the risk of judging appropriate levels of the tariff caps and of the actual tariffs to be offered to balance the need to make the pipeline attractive to potential users and also to earn a reasonable return (and NPV) on its own investment.

⁴ Tobin's Q is the ratio of market capitalisation to shareholders' equity (or net assets). The limitations of this technique in this situation would include that the market capitalisation includes growth expectations as well as the NPV of existing projects, and also that net assets is an accounting construct and may not equal the current cost depreciated value of the assets employed.

⁵ This would not be a reliable measure by itself as it would be influenced by internal project appraisal procedures of companies and capital rationing restrictions

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We would be happy to discuss these matters with you at your convenience. Please do not hesitate to contact me as below.

Yours sincerely

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