

PROPOSED GAS TRANSMISSION INVESTMENT PROJECT

1. Introduction

There is concern that investment in gas infrastructure, particularly gas transmission pipelines, may not be occurring in a timely and efficient manner. This paper outlines a proposal for Gas Industry Co to undertake a Gas Transmission Investment Project **aimed at establishing the current need for gas transmission investment and developing an effective pathway for gas transmission investment to take place**. This was a concept proposed by industry participants at the Investment and Access workshop on 14 April 2011.

The Project will require a high level of industry buy-in and participation. It will seek commercial means to overcome barriers to efficient investment, but also recognise that regulatory support may be necessary to ensure timely and robust outcomes.

Gas Industry Co now seeks feedback on the proposal, as outlined in this note. In the meantime we will continue to develop the concept by preparing terms of reference to establish a group to assist with the project and project plans. The case for immediate improvements to the pathway to new investment is strong, as investments will have long development and construction periods.

2. Background

The North Pipeline constraint

In 2009 Vector announced that its North Pipeline, supplying gas to Auckland and Northland, was constrained. There were no firm proposals to expand capacity although we understand Vector has been talking to several parties considering projects that would have required such an expansion. This led to growing concern that the constraint will limit the development of the gas market, reduce competition in the wider energy market, and limit the growth of industries in the region. Other transmission pipelines may be approaching similar conditions.

Approximately 60% of gas carried on the North Pipeline is used for power generation at the Otahuhu and Southdown power stations. Another 10% is supplied directly to major end users and 30% is

delivered into distribution systems that supply industrial, commercial and residential users. The annual quantity and value of gas delivered from the pipeline is estimated at 40PJ, and \$400m (\$100m of which is purchased by residential users). Gas therefore makes a substantial contribution to the regional and national economy, and to households. However, there are different views on the nature and extent of the current constraint and how demand will develop over the investment life of new pipeline assets. Information about available capacity and the cost of overcoming constraints, disclosed by Vector in compliance with the requirements of information disclosure regulations, has proved to be inadequate for allowing the market to gauge the extent of the problem. The market, therefore, needs better information to assess these matters.

Vector has advised that it has implemented all low cost options for providing incremental increases of additional North Pipeline capacity. However, to provide capacity to meet all customer demand on the North Pipeline over the longer term, other options must be considered. The indicative options available are to add compression, at a cost of around \$50m, or to build an additional pipeline, at a cost of around \$200-\$300m.



Figure 1 - Vector's North Pipeline

Obstacles to investment

On examination, Gas Industry Co found a number of obstacles to investment, including:

- a lack of public information on gas supply and demand, both actual and forecast,

- inefficient pricing/allocation of capacity (including but not limited to scarcity pricing signals), and
- no recognised test for assessing prudent investments and providing regulatory and market confidence ('investment test').

We are also aware of some industry views that the Commerce Commission's price-quality regime may act as a disincentive to investment. Since investment in transmission is lumpy, subject to high costs and significant uncertainties, and may only be utilised slowly over time, any significant barriers (real or perceived) are of concern to Gas Industry Co. However, we are confident that we can work with the Commerce Commission to resolve these concerns.

Investment and Access Workshop

To explore the need for new investment and possible barriers to the development of investment proposals for additional capacity on Vector's North Pipeline, Gas Industry Co held a workshop in April 2011. The workshop was attended by a wide range of stakeholders, including pipeline companies, gas retailers, major end-users and officials from the Ministry of Economic Development (MED), New Zealand Trade and Enterprise, and the Northland Regional Council. Together with Gas Industry Co, the workshop participants identified a range of possible causes that could account for the absence of an investment proposal. However, while the immediate investment issue is in relation to Vector's North Pipeline, it was recognised that a similar situation could arise on another pipeline in the future.

Reflecting on how these issues should be resolved, and considering the interconnectedness of the issues, participants supported a coordinated project management approach to improving market arrangements with the aim that we can be confident that conditions exist for efficient investment to occur. In particular to improve:

- market information available to participants and investors,
- commercial arrangements, and
- regulatory arrangements.

We agree with workshop participants that arrangements should be improved in a coordinated manner through a Gas Transmission Investment Project that aims to establish an effective pathway for gas transmission investment.

3. Gas Transmission Investment Project

Project scoping

It is prudent project management practice to undertake a project scoping exercise before framing the project plan. This exercise will establish a clear problem definition, scope, timetable, and project governance arrangements.

Project Scoping
<p>Project scoping will develop:</p> <ul style="list-style-type: none">- clear problem definition- scope- time table- project governance
<p>Possible associated work:</p> <ul style="list-style-type: none">- Reviewing market conditions to assess the urgency of the problem.- Developing investment options and 'stress testing' them against the current contractual and regulatory environment to identify impediments to efficient investment.- Clarifying responsibilities and outcomes.

Figure 2 – Project scoping

Project plan

From our previous work on access issues we can anticipate the main areas that the Project will need to address. The final size and shape of the Project will be determined through the project scoping exercise. However, we consider the Project would comprise three parts. In the table below we describe these project parts, their purpose, and possible outputs. Non-regulated commercial industry solutions are possible but difficult to achieve in a multilateral setting. Accordingly, it is also important to acknowledge that achieving some of the outputs are likely to require regulation, particularly if timely outcomes are to be achieved.

Table 1 Gas Transmission Investment Project

Part	Purpose and possible output
Improving the quality and availability of information	Providing all market participants and potential investors with better information, including: <ul style="list-style-type: none"> • transmission system security criteria • physical capacity of pipelines • current information on capacity reservations, demand and capacity queues, and • forecast information on possible future supply/demand scenarios and resulting capacity needs.
Improving commercial arrangements	Enabling commercial arrangements that support efficient investment in transmission infrastructure. It is expected that alterations to Vector’s access and pricing arrangements may be required.
Improving regulatory arrangements	Enabling regulatory arrangements that support, rather than hinder, efficient investment in transmission infrastructure. It may, for example, be necessary to develop investment objectives and a pipeline investment test, and to give these regulatory standing.

Each of these parts is considered in more detail below.

4. Improving the quality and availability of information

The purpose of this part of the Project is to provide the market with better information. Good information is required to assist new and existing industry participants and potential investors to make informed commercial decisions.

It is necessary to know the security of supply standard to which Vector is operating since this will determine the circumstances in which interruption is likely, and any further investment required.

In order to establish the size and extent of any physical constraint, it is important to identify what the physical capacity is along transmission pipelines.

Information about how much capacity is reserved and delivered should assist market participants to identify where capacity is not being used, and allow it to be traded and utilised more efficiently.

Also, credible, independent information about possible future scenarios for gas supply/demand by pipeline will improve the quality of decisions involving:

- investment in pipelines and other infrastructure,

- fuel choices, and
- the location of gas intensive industries.

The New Zealand electricity market and the Australian gas market provide examples as to how information may be collected, analysed and shared in a meaningful way.

Electricity as an example

The electricity industry uses demand forecasting and scenarios to model assumptions about future growth and the need for additional grid investment. The information is published in an annual Statement of Opportunities (SOO). The SOO provides interested parties with independent information to consider in assessing the potential for grid management efficiencies and, in particular, investment in upgrades and transmission alternatives. The SOO is also useful to generators and end-users.

Recently, responsibility for the SOO has been transferred to the MED. In addition to the scenarios produced in the SOO, Transpower develops additional scenarios. Through this process Transpower identifies the need for grid investment and develops project options.

Australian gas industry as an example

The Australian Energy Market Operator (AEMO) produces SOOs for the electricity and gas sectors. The purpose of the gas SOO is to provide information to assist energy stakeholders and potential gas industry investors in making informed decisions about investment in pipeline capacity and other aspects of the natural gas industry.

5. Improving commercial arrangements

The purpose of this part is to enable commercial arrangements that support efficient investment in transmission infrastructure.

Vector's transmission access and pricing arrangements will require further consideration. Transmission access arrangements have already been the subject to some consideration. Gas Industry Co issued a paper entitled *Options for Vector Transmission Capacity* in May 2010 to consider possible alternatives to Vector's contract carriage arrangement.

Transmission pricing needs to work in tandem with the other terms of access and is key to investment decisions. Efficient investment requires that the demand for new capacity is appropriately signalled and that these signals are acted upon. Individual price levels and pricing structures are important as consumers respond to the prices they face. If prices are inefficient, demand for capacity may be distorted, which in turn will affect investment.

Pricing is also important for considering how the costs of a new investment will be recovered. The investor needs certainty that it will be able to generate sufficient revenues to recover the full cost of any investment. The Commerce Commission is responsible for regulating what return on investment a

pipeline owner would receive. However, it is not concerned with pricing structures, so these will require separate consideration.

6. Improving regulatory arrangements

The purpose of this part is to enable regulatory arrangements in the gas industry to support efficient investment in transmission infrastructure.

It is likely that some regulation will be required to implement or supplement commercial arrangements. One way of testing where new regulation may be needed, or existing regulation may need adjustment, is to role-play investment scenarios. This could be done in a workshop setting by considering how credible investment options might progress through the various stages of development.

It is not possible to fully imagine the outcome of this process. However, we can speculate that one initiative could be the development of an investment test to assess proposed transmission pipeline investments. Such tests are common in many jurisdictions before a large infrastructure investment takes place. Because such tests are founded on investment objectives, they help establish the frame of reference for the proposed investment. For example, the objective may be to benefit gas consumers, or have a wider purpose such as maximising the net public benefit for all New Zealanders.

For example, in New Zealand, a Grid Investment Test applies to electricity grid investments. In Australia, the National Gas Rules provide an ex-post check that capex is 'conforming' before the new assets are allowed to be rolled into the regulatory asset base.

We recognise that the Commerce Commission has a critical role in relation to gas and other infrastructure investments, including the protection of consumer interests. We therefore consider that the Commerce Commission will have a key role to play both in relation to improving regulatory and commercial arrangements to allow for an effective pathway for gas transmission investment to take place.

7. Project management

While much of the shape, size, and timing of the project will be determined through the project scoping exercise, an indicative project management arrangement is provided below. Although the industry's proposal is that the Project will be managed by Gas Industry Co, it is also proposed that it will be guided by input from a Panel of Strategic Advisers, as illustrated in the diagram below. Timelines provided are intended to be indicative as the timing of the work will depend largely on whether new investment is required and, if so, how urgent it is. Once established, Gas Industry Co will work to ensure a timely delivery of the conditions to allow that investment to occur.

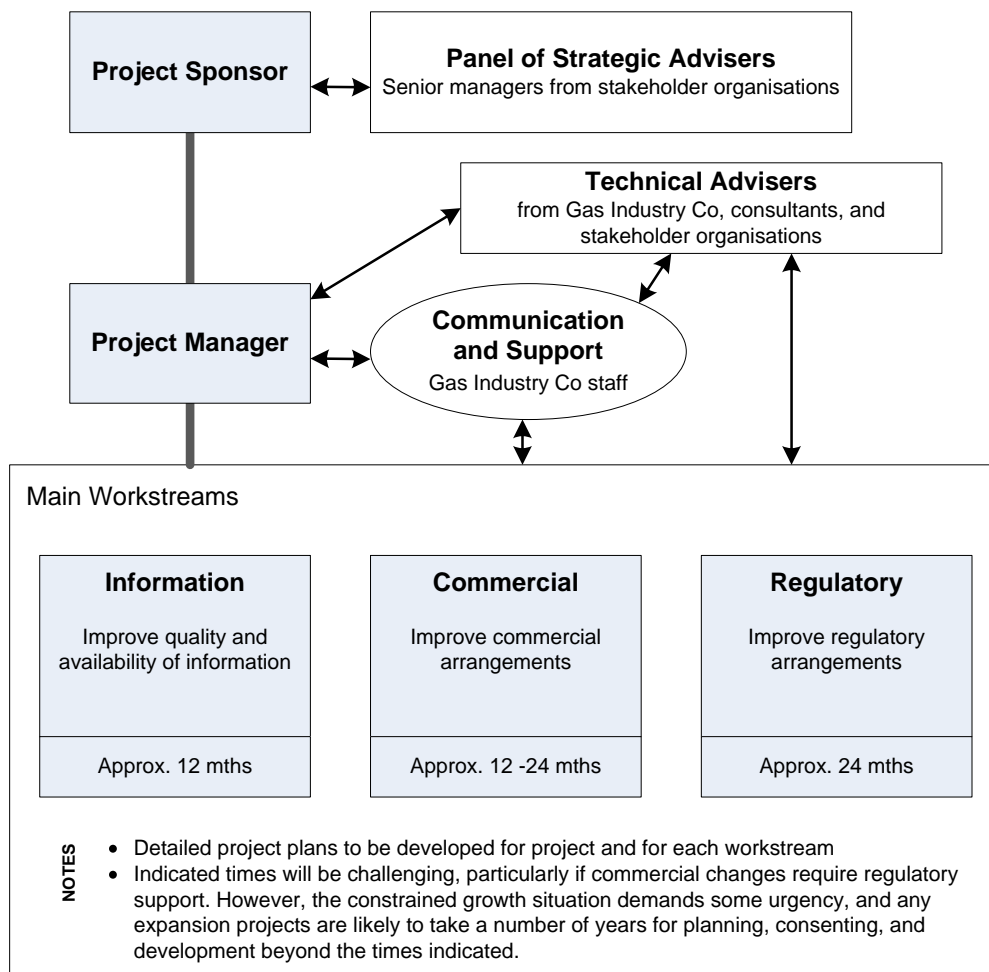


Figure 2 – Proposed project management

Although the Commercial and Regulatory workstreams have a degree of interdependence, we anticipate that good, early progress can be made to independently advance the Information workstream.

8. Feedback

Gas Industry Co invites feedback on the proposal that we undertake a Gas Transmission Investment Project as outlined in this paper. We are particularly seeking views on whether your organisation:

- agrees that the project should be aimed at establishing the current need for gas transmission investment and developing an effective pathway for gas transmission investment to take place;
- considers the project management outline provided in section 7 is suitable or, if not, what alternative you would suggest; and
- would be likely to nominate a senior manager to participate in the Panel of Strategic Advisers (panel numbers will be limited, but will be representative of the industry end-to-end).

Feedback is required by Tuesday 7 June 2011 at 5pm. Please note that feedback received after this date may not be able to be considered.

Please send your feedback to Melanie Leonard at Melanie.Leonard@gasindustry.co.nz