

Gas Transmission Investment Programme, Status and Development - July 2013

Date issued: 19 July 2013
Submissions close: 30 August 2013





About Gas Industry Co.

Gas Industry Co is the gas industry body and co-regulator under the Gas Act. Its role is to:

- develop arrangements, including regulations where appropriate, which improve:
 - the operation of gas markets;
 - access to infrastructure; and
 - consumer outcomes;
- develop these arrangements with the principal objective to ensure that gas is delivered to existing and new customers in a safe, efficient, reliable, fair and environmentally sustainable manner; and
- oversee compliance with, and review such arrangements.

Gas Industry Co is required to have regard to the Government's policy objectives for the gas sector, and to report on the achievement of those objectives and on the state of the New Zealand gas industry.

Gas Industry Co's corporate strategy is to 'optimise the contribution of gas to New Zealand'.

Submissions close: 30 August 2013

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Foreword

This report from Gas Industry Co on the Status of the Gas Transmission Investment Programme (GTIP) is being released in conjunction with the second substantive advice report from the Panel of Expert Advisers (PEA) in relation to improving transmission access arrangements, entitled *Advice from Panel of Expert Advisers, Report to Gas Industry Company, July 2013*.

Both reports have been informed by an industry workshop held on 11 April, at which stakeholders provided feedback on GTIP work and on the path forward. In particular, a workshop presentation from the PEA focussed on options for improved transmission access and pricing arrangements, including on a potential 'convergence' of the two existing multilateral access codes: the Maui Pipeline Operating Code (MPOC) and the Vector Transmission Code (VTC). The workshop discussed a path forward towards defining and implementing a preferred option for improved arrangements in 2014.

Underlying that discussion was market information showing that market demand for firm capacity had reduced and the consequential risks of constraint had eased. This supports the PEA's view that an on-going 'evolutionary' approach to development of transmission arrangements is the most appropriate, but with an associated commitment that the industry needs to press on with a set of improvements before any future constraint bites.

In our view the GTIP remains the best framework for this work, and for orienting related industry initiatives and Gas Industry Co's obligation to fulfil the requirements and goals of Part 4A of the Gas Act 1992 and the Government Policy Statement on Gas Governance 2008. This Gas Industry Co paper is intended to confirm how the work to date, including the PEA's second advice report, fits within that framework and point to the path forward.

The ideas presented at the workshop and the feedback from workshop participants are reflected in the PEA's advice and this Gas Industry Co's GTIP review. We seek submissions on both papers.

Steve Bielby

GTIP Project Sponsor/

CEO Gas Industry Co

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1 Introduction

1.1 Purpose

The Gas Transmission Investment Programme (GTIP) is an industry initiative to:

- ensure that existing and future gas transmission assets are used efficiently;
- establish the need for gas transmission investment; and
- develop an effective pathway for efficient gas transmission investment to take place.

The GTIP comprises a set of projects administered by Gas Industry Co with the assistance and oversight of industry participants.

Further details on the GTIP, including the PEA's makeup, terms of reference and work to date, can be found at <http://gasindustry.co.nz/work-programme/gas-transmission-investment-programme>.

This report describes progress of the GTIP projects, their current status, what work remains to be done, and proposed next steps. Particular attention is given to the GTIP's central project – Transmission Access and Capacity Pricing. That project aims to ensure that transmission pipeline access arrangements are dynamically efficient, and a Panel of Expert Advisers (PEA) has given Gas Industry Co advice on how to achieve this. This project has reached a significant milestone with the release of the PEA's second advice paper. That paper is being released together with this paper and Gas Industry Co invites submissions on both papers.

1.2 Next steps

The next steps for the GTIP are discussed in Chapter 5 of this paper. We strongly encourage industry participants to give feedback on these proposals. The GTIP is an industry initiative and requires the continued support of the industry to succeed.

1.3 How to make a submission

Submissions are invited from stakeholders on both this paper and the PEA's advice paper. Submissions should be provided no later than 5pm on **Friday 30 August 2013**. Please note that submissions received after this date are unlikely to be considered. Submissions can be made by logging-on to the

Gas Industry Co website (www.gasindustry.co.nz). All submissions will be published on the website after the closing date.

The recommended format for submissions on both papers is attached as Appendix B of this paper and may be downloaded in MS Word format from the Gas Industry Co website.

Because submissions will automatically be made public on Gas Industry Co's website following the closing date, submitters should discuss any intended provision of confidential information with Gas Industry Co prior to uploading their submissions.

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Overview of GTIP projects

The GTIP comprises three sets or projects: Information Projects, Market Projects, and Regulatory Projects, as shown in Table 1.

Table 1 - GTIP Projects

Project Area	Purpose	Component Projects	Project Rationale
Information Projects	To minimise information asymmetries	Vector's Capacity Determination	For Vector to transparently review the North Pipeline capacity
		Supply and Demand Outlook	To improve the quality of information so people make better decisions about transmission investment and alternatives
		Transmission Market Disclosures	To ensure that information necessary for efficient operation of the market is available. (Note that the information that would be disclosed is non-financial and sits alongside the work of the Commerce Commission)
		Backstop Information Gathering and Analysis	To ensure access to data for analysis to underpin any conclusions and recommendations in relation to all areas of Gas Industry Co's work
Market Projects	To provide efficient transport arrangements	Transmission Access and Pricing	To ensure efficient arrangements for optimal allocation, utilisation, and pricing of capacity
		Gas Trading Arrangements	To ensure efficient arrangements for the gas market
Regulatory Projects	To define appropriate regulatory arrangements	Testing regulatory options	To identify whether there are appropriate incentives in place for investment

In order to advance these projects with the benefit of industry wisdom and oversight, Gas Industry Co established two advisory panels. The PEA comprises industry experts and provides advice on a range of market design issues. Also, a Panel of Strategic Advisers (PSA) comprises senior industry executives and provides oversight or intervention in the case that significant issues considered by the PEA cannot be readily resolved. A good indicator of GTIP progress to date has been that there have been no such issues to refer to the PSA.

For further background on the GTIP, please refer to Gas Industry Co's website
<http://gasindustry.co.nz/work-programme/gas-transmission-investment-programme>.

The next section of this paper describes the current status of the component GTIP projects.

3

Status of GTIP projects

3.1 Overview of GTIP progress

Figure 1 summarises progress on each of the GTIP projects. Progress is discussed in more detail in the subsequent sections of this chapter.

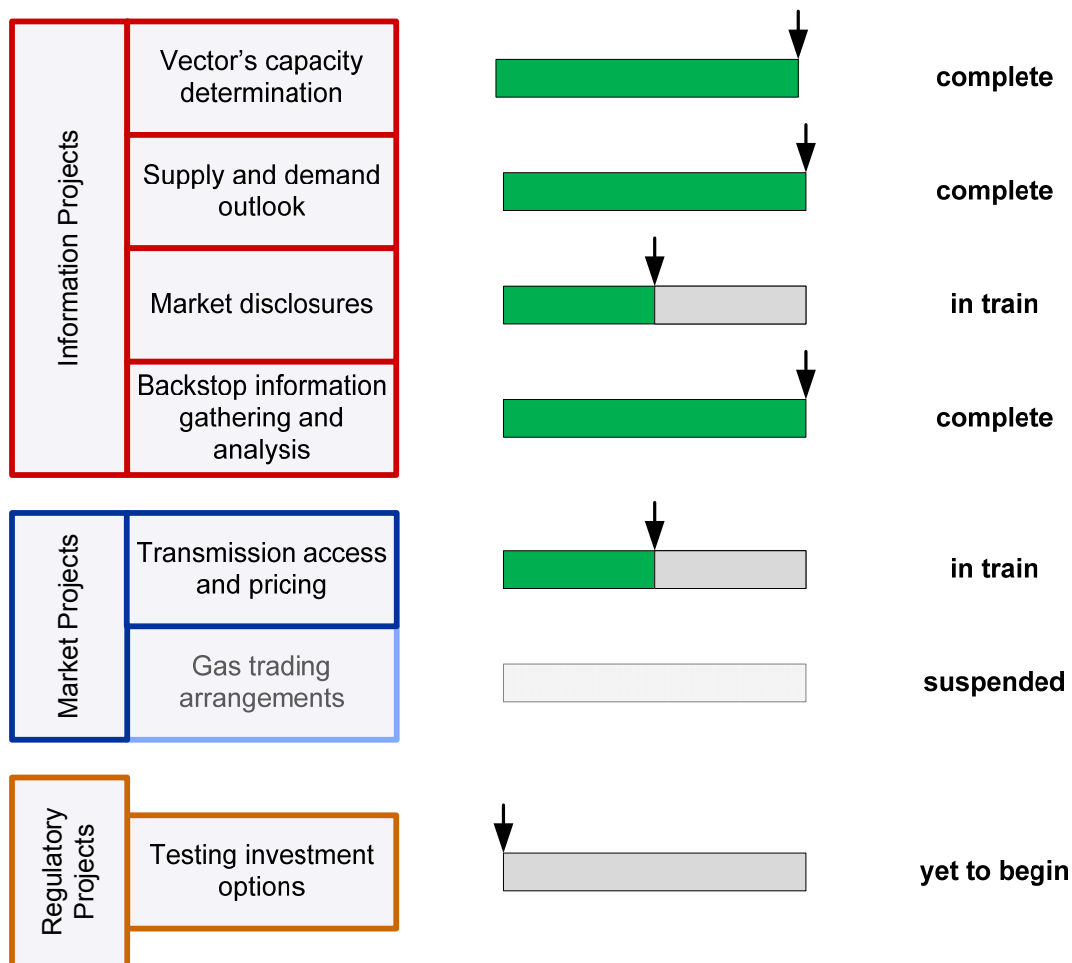






Figure 1 - Progress on GTIP Projects

3.2 Information Projects

The Information Projects are designed to improve the quality of information so that market participants are able to make informed decisions about transmission investment and alternatives. Table 2 summarises the status of each Information Project, and Figure 2 describes the key milestones of each project.

Table 2 - Status of Information Projects

Purpose	Component Projects	Project Rationale	Status	Notes
To minimise information asymmetries	Vector's Capacity Determination	For Vector to transparently review the North Pipeline capacity		Complete <i>Capacity Determination for the Vector Gas Transmission System, March 2013 published</i>
	Supply and Demand Outlook	To improve the quality of information so people make better decisions about transmission investment and alternatives		Complete <i>Gas Supply and Demand Scenarios 2012 – 2027, February 2013 published</i>
	Transmission Market Disclosures	To ensure that information necessary for efficient operation of the market is available. (Note that the information that would be disclosed is non-financial and sits alongside the work of the Commerce Commission)		In train
	Backstop Information Gathering and Analysis	To ensure access to data for analysis to underpin any conclusions and recommendations in relation to all areas of GIC's work		Complete <i>Protocol for Information Gathering and Policy Development, May 2013 published</i>

5. 28/29 November 2012 – Vector issues a *Rotowaro North Capacity Determination* paper and a *Gas Transmission System Security Standard* paper for consultation

6. 21 February 2012 – Vector issues a Capacity Determination for all of its transmission system

We consider that Vector has achieved the objective of this project by transparently reviewing the capacity of the North Pipeline, and has gone beyond this to apply its methodology to all of its open access system. In doing this, Vector has:

- systematised its approach to determining the physical capacity of its pipeline;
- established its security of supply standard;
- clarified how it views its RPO obligations;
- received stakeholder input at workshops and through written feedback; and
- for the North Pipeline, and its other pipelines, established how much firm capacity is on issue and how much remains available for sale.

We therefore consider this project is complete. However, we note that the PEA's advice (both in July 2012 and July 2013) strongly emphasises the need for improved transparency overall (see further below), and the need for information to be presented in an easily understood format. We expect that the Transmission System Owners (TSOs) will bear this in mind in their on-going disclosures, capacity reviews and other communications.

Supply and Demand Outlook Project

Gas Industry Co engaged Concept Consulting to produce the country's first comprehensive gas supply/demand study, *Gas Supply and Demand Scenarios 2012-2027*. During the project, end users were consulted, a spreadsheet model developed, and industry views canvassed to ensure the final report was comprehensive and robust.

Significant project milestones (as illustrated in Figure 2) were:

1. November 2011 – Gas Industry Co issues RFP for developing the Supply and Demand Outlook
2. December 2011 – Terms of Reference set and Concept Consulting appointed as consultant
3. 18 May 2012 – Industry workshop to exchange ideas on the design of the supply/demand model
4. August 2012 – draft *Gas Supply and Demand Scenarios 2012 – 2027* published
5. December 2012 – Maui addendum commissioned following requests from stakeholders to broaden the scope to include consideration of the Maui Pipeline

6. February 2013 – *Gas Supply and Demand Scenarios 2012 - 2027* report, including Maui addendum, published

The key findings from the completed report were:

- New Zealand's gas supply position is strong relative to recent decades, mostly due to increased exploration activity encouraged by high oil prices. Increased availability has been reflected in softer gas prices;
- although demand is projected to be steady for commercial, residential, and most industrial users, petrochemical and power generation demand is volatile. Aggregate long-term gas demand is likely to vary significantly between 75-250 PJ/year depending on price scenarios; and
- existing pipelines are expected to have sufficient capacity to accommodate the projected scenarios except Vector's North Pipeline on which available capacity is low or zero. However, large users such as power stations have alternatives to gas which are likely to be available at a lower cost than new pipeline investment.

We consider that the objective of this project - to improve the quality of information that would allow stakeholders to make better decisions about transmission investment and alternatives - has been achieved. The report has also provided valuable information for other GTIP projects. In particular, the PEA found the report very helpful in 'clearing the fog'. The report and associated data model will be a valuable resource that can be refreshed from time to time as conditions change.

The underlying model is available on Gas Industry Co's website for interested parties to download and use as they wish. The model may be updated periodically and Gas Industry Co is also considering the appropriate period for a substantive update to the report itself.

Transmission Market Disclosures Project

Transparency of commercial and operational data became a significant concern of the PEA during its consideration of transmission access issues. It was a substantive theme in the PEA's First Advice paper, and an aspect that submitters were generally very supportive of. It remained a concern in the PEA's subsequent deliberations and has now been taken up in discussions between Gas Industry Co and the TSOs.

While these are clearly relevant to the Transmission Market Disclosures Project, the project was originally conceived as a 'wash up' project, to be completed after improvements arising from other projects were achieved. It will then assess whether all the information necessary for efficient operation of the market is available. So, the project is in train, but not yet complete.

Significant project milestones (as illustrated in Figure 2) were:

1. 2012 – PEA develops its views on the importance of transparency

2. 11 March 2013 – in line with PEA discussions, Gas Industry Co requests Vector for more transparency of specific information
3. 8 April 2013 – Vector responds to Gas Industry Co’s request, confirming its commitment to transparency
4. 28 May 2013 – the dialog between Vector and Gas Industry Co continues, with Gas Industry Co requesting clarification from Vector on a number of matters

We consider that useful advances have been made in relation to information transparency, most notably through work related to the Vector Capacity Determination Project and the Supply and Demand Outlook Project. However there is a continuing dialogue on transparency, and there will still be a need, once other projects are complete, to check that all the information necessary for efficient operation of the market is available.

Backstop Information Gathering Project

Gas Industry Co consulted on a Statement of Proposal in late 2011 which set out options for improving processes for Gas Industry Co to gather information required to assist in its policy development process. From that consultation, Gas Industry Co’s preferred option was to develop a formalised and transparent protocol for requesting information from industry participants, and holding that information confidential where necessary. The successful operation of this protocol will either limit, or remove, the need for a regulated approach to information gathering.

Significant project milestones (as illustrated in Figure 2) were:

1. 2011 - Gas Industry Co develops proposals to address the difficulty it has in gathering information to support its policy recommendations
2. December 2011 – Gas Industry Co issues an *Information Gathering Statement of Proposal* for consultation
3. February 2012 – Stakeholder workshop to discuss Statement of Proposal
4. 2012/13 – Gas Industry Co develops and trials an Information Protocol
5. May 2013 – Gas Industry Co publishes a final *Protocol for Information Gathering and Policy Development*

We consider that this project has achieved its objective. The protocol is available here:

http://gasindustry.co.nz/sites/default/files/u254/final_paper_on_information_gathering_for_policy_development_183832.1.pdf

3.3 Market Projects

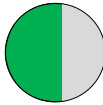
The Market Projects are designed to provide efficient transport arrangements. Table 3 summarises the status, and describes the key milestones of each project.

At the outset of the GTIP two Market Projects were allowed for. The Transmission Access and Capacity Pricing Project was to focus on whether current arrangements allow for the optimal allocation, utilisation, and pricing of capacity. Originally this project related only to Vector pipeline arrangements, but on the recommendation of the PEA, it was later extended to include Maui pipeline arrangements.

The Gas Trading Arrangements Project was allowed for in the event that it was considered necessary to also reform gas trading arrangements in order to ensure efficient transport arrangements.

The projects are listed in the table and explained in more detail below.

Table 3 - Status of Market Projects

Purpose	Component Projects	Project Rationale	Status	Notes
To provide efficient transport arrangements	Transmission Access and Capacity Pricing	To ensure efficient arrangements for optimal allocation, utilisation, and pricing of capacity		Ongoing Most recently, PEA submitted its second report to Gas Industry Co; <i>Advice from Panel of Expert Advisers, July 2013</i>
	Gas Trading Arrangements	To ensure efficient arrangements for the gas market		Suspended. Proposals for gas trading markets are being negotiated among market participants and service providers, outside of the GTIP

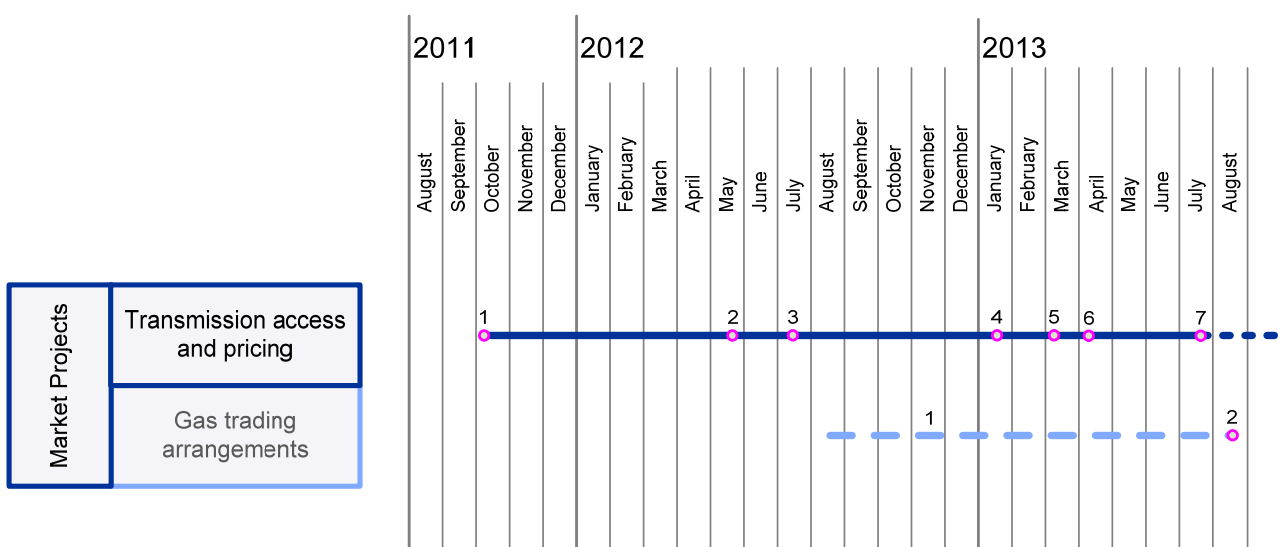


Figure 3 - Milestones for Market Projects

Transmission Access and Capacity Pricing Project

To date this Project has involved the PEA providing Gas Industry Co with advice.

Significant project milestones (as illustrated in Figure 3) were:

1. 13 October 2011 – PEA holds its first meeting
2. 18 May 2012 – Problem Definition workshop held
3. 16 July 2012 – PEA's first advice to Gas Industry Co - *Review of Transmission Access and Capacity Pricing, Advice from the Panel of Expert Advisers, July 2012* (PEA's First Advice) - is released for consultation
4. 15 January 2013 – Transparency and Demand Management workshop held
5. 5 March 2013 – Gas Industry Co issues *Submissions Analysis on Preliminary Advice from PEA*
6. 11 April 2013 – An industry workshop is held to allow Gas Industry Co to update participants on progress with the GTIP, and for the PEA to present its latest thinking
7. July 2013 – PEA submits second report to Gas Industry Co; *Advice from Panel of Expert Advisers, July 2013* (PEA's Second Advice)

The first deliverable for the PEA was to provide advice to Gas Industry Co on a review of Transmission Access and Capacity Pricing. That report considered the economics of pipeline access, discussed some lessons from overseas jurisdictions, identified problems with current arrangements in New Zealand, and proposed a straw-man for improving current arrangements. Gas Industry Co issued an analysis of submissions received on the PEA's report. The next significant deliverable of the Project is the PEA's further advice paper, which is being released concurrently with this paper. More detail on the content of the PEA's advice and the process followed by the PEA is provided in Appendix A.

Gas Trading Arrangements Project

This was identified as a possible project in the event that the PEA's considerations extended to the gas trading market, perhaps leading to an in-depth consideration of a 'market carriage' type arrangement that integrates gas transportation with gas trading (the 'Full Integration' option).

Significant project milestones (as illustrated in Figure 3) were:

1. August 2012 - Following consideration of submissions on the PEA's First Advice paper, the PEA considered whether a 'Market Carriage' style market, that fully integrates transmission gas trading into a single market, was justified in New Zealand. It concluded that it could not be justified at present

2. August 2012 – Gas Industry Co sets out in the *GTIP Update* paper why the Full Integration option is not supported at present

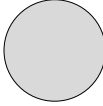
We consider that reform of the gas trading market is not currently justified. This Project is therefore suspended.

3.4 Regulatory Projects

This purpose of this Project is to identify whether there are appropriate incentives in place for investment in gas transmission pipelines.

There was only one project identified as discussed below.

Table 4 - Status of Regulatory Projects

Purpose	Component Projects	Project Rationale	Status	Notes
To define appropriate regulatory arrangements	Testing Investment Options	To identify whether there are appropriate incentives in place for investment		Yet to begin

This Project has been on hold until a better understanding is gained of:

- the Commerce Commission’s recently implemented economic regulation regime affecting gas transmission pipelines; and
- the likely changes to gas transport arrangements as a result of the Transmission Access and Capacity Pricing Project.

However, Gas Industry Co still believes that consideration of the merits of a Regulatory Investment Test is warranted.

3.5 Overall assessment

Our view is that the GTIP to date has been a valuable process, but that further work is required before the original objectives of the GTIP are fully realised. Each Project has brought benefits to the industry. These benefits include:

- increased availability of information (largely through the Supply and Demand Outlook Project and Vector’s Capacity Determination Project);
- improved knowledge (mostly through the PEA’s advice reports and Vector’s Capacity Determination Project) of physical and commercial arrangements in the industry such as how the physical capabilities of pipelines are assessed, security of supply standards, and how constraints are managed;

- facilitating systematic discussion of issues between market participants (at workshops, at PEA meetings, and through consultation processes);
- influencing the renegotiation of transmission contracts for delivering gas to power stations, resulting in some North Pipeline firm capacity being freed up; and
- allowing the industry to engage constructively on market design issues.

Although the GTIP is taking longer than expected, we consider that this reflects the complexity of the issues, robust engagement on these issues with the industry, and some consequential re-scoping (in particular as a result of the PEA's recommendation to also consider Maui pipeline arrangements). Also, the GTIP continues to deliver high quality results, through a constructive and participative process. We therefore think it is worthwhile for the GTIP to be completed. This was also the sentiment of participants at the April 2013 Workshop, and a belief supported by the PEA.

Chapter 5 describes how we propose to advance the outstanding GTIP Projects.

Q1: Do you agree with our assessment of the GTIP? If not, where does your assessment differ from ours?

Q2: Are there any Projects you think should be given greater or lesser attention by Gas Industry Co? Are there any other projects you think should be considered as part of GTIP?

4

Gas Industry Co preliminary views on the PEA's Second Advice paper

The Transmission Access and Capacity Pricing Project is central to the GTIP and has been advanced by the work of the PEA, the outputs of the other GTIP projects and engagement with industry stakeholders.

As Secretariat for the PEA, Gas Industry Co has been present throughout the PEA's work on transmission access and witnessed the PEA's process of thinking and re-thinking the various issues. So we are well positioned to offer some preliminary views on the PEA's Second Advice paper.

The PEA has followed a rigorous process and benefitted from disciplined chairmanship, excellent economic advice, and members with a wealth of industry experience. Above all, we have been impressed by the PEA's tenacity in teasing out the issues and seeking solutions that make sense from an economic perspective and in the business context.

The PEA's Second Advice paper proposes a set of 'guiding principles', makes a number of recommendations to Gas Industry Co, and suggests some 'indicators of success' for gauging progress. These are summarised in Appendix A of this paper under the heading PEA's Second Advice paper (July 2013).

4.1 Guiding principles

Subject to consideration of submitter views, Gas Industry Co's preliminary view is that it endorses the guiding principles set out in Chapter 6 of the PEA's Second Advice paper.

4.2 Implementation plan

The PEA recommends that Gas Industry Co invite MPOC and VTC signatories to:

- develop an implementation plan;
- establish governance arrangements to support delivery of the plan;
- report regularly to GIC on progress against the plan; and
- consult with wider industry as appropriate.

Gas Industry Co agrees with the PEA that an on-going design and implementation plan is necessary. However, there may be good reason for the TSOs to take the first steps.

We also agree that stakeholders other than the MPOC and VTC signatories need to be involved in the design of new access arrangements.

4.3 Regulatory options

The PEA's final recommendation to the Gas Industry Co is that it 'considers regulatory options should they be required'. We agree that regulation could be required, and should be prepared for. The PEA's work should provide a firm foundation for the development of a regulatory solution. Below, we briefly canvass how Gas Industry Co will approach this work, and invite submitters to comment.

Regular Gas Act objectives

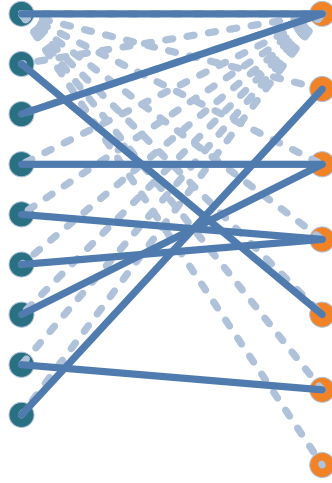
As in our normal policy development process, we would identify all reasonably practicable options for addressing the defined problems, and assess these against the objectives listed in the Gas Act. We would also assess the costs and benefits of the options and whether the objective would be achievable without having to make regulations.

Assessment criteria

Appendix A explains how the PEA developed a set of characteristics of a well-functioning gas transmission market. We consider that, in the context of transmission access, these are likely to be a good guide for policy development. We have cross-referenced the Gas Act objectives and the PEA's characteristics in Figure 4 and find that there is a strong match.

Well-functioning market characteristics

1. Dynamic efficiency
2. Minimum governing and operating cost
3. Efficient use of physical assets
4. Related market competition not distorted
5. Related market investment facilitated
6. Pipeline investment facilitated
7. Independence of pipeline business
8. Operational/commercial transparency
9. Able to evolve in timely fashion



Gas Act 1992 s43ZN Objectives

ensure that gas is delivered to existing and new customers in a safe, efficient, and reliable manner (s43ZN(a))
the facilitation and promotion of the ongoing supply of gas to meet New Zealand's energy needs, by providing access to essential infrastructure and competitive market arrangements: (s43ZN(b)(i))
barriers to competition in the gas industry are minimised (s43ZN(b)(ii))
incentives for investment in gas processing facilities, transmission, and distribution are maintained or enhanced (s43ZN(b)(iii))
delivered gas costs and prices are subject to sustained downward pressure (s43ZN(b)(iv))
risks relating to security of supply, including transport arrangements, are properly and efficiently managed by all parties (s43ZN(b)(v))
consistency with the Government's gas safety regime is maintained (s43ZN(b)(vi))

Figure 4 - Cross referencing well-functioning market characteristics with Gas Act Objectives

Q3: Do you agree that the characteristics of a well-functioning transmission market, as described by the PEA, could be used as criteria for evaluating regulatory options?

5

Next Steps

5.1 The GTIP mandate

A co-regulatory model is operated in the New Zealand gas industry in recognition of the industry's small scale, and the success participants have achieved in pro-actively developing pro-competitive market arrangements - most notably the development of the open access arrangements on the Mau and Vector pipelines. The GTIP is an example of the co-regulatory model in action.

The industry conceived the GTIP with specific objectives in mind, closely aligned to the objectives of the Gas Act¹, but achieved through a project structure and project management disciplines using industry expertise and industry contributions wherever possible. In its roles as Project Manager and Project Sponsor for the GTIP Projects, Gas Industry Co aims to deliver real benefits by fostering constructive industry engagement. Our assessment is that this process has been successful to date, thanks largely to the participation of stakeholders and their on-going commitment to the GTIP objectives. This is the essential spirit of co-regulation, and we hope to maintain it until the full benefits of the GTIP are realised.

In Chapter 3 we described the status of the GTIP Projects, noting that a number of them are now complete. In the following sections we describe how the outstanding Projects can be managed to a successful conclusion.

5.2 Information Projects

As noted in Section 3.2, all Information Projects are complete except for the Market Disclosures Project. Both TSOs are committed to efficient disclosure and Gas Industry Co is working with them to improve the scope and quality of current disclosure. While this work will continue, the Markets Disclosures Project is intended to be a 'catch-all' used after all other Projects are complete to check that all the information necessary for efficient operation of the market is available. It will therefore be the final GTIP Project to be completed.

Q4: Do you agree with the proposed way forward for the Information Projects?

¹ Section 43ZN sets out the objectives of Gas Industry Co, as 'industry body', in recommending gas governance arrangements.

5.3 Market Projects

Since the PEA and Gas Industry Co consider that a full integration of the transmission and gas trading markets is not justified at present, the Gas Trading Arrangements Project is currently suspended. The remaining Market Project is the Transmission Access and Capacity Pricing Project, which is the central focus of the GTIP. The Project has already benefitted from outputs of the other GTIP Projects, and lengthy deliberations of PEA, culminating in the PEA's July 2013 advice to Gas Industry Co.

We are optimistic that the industry can meet the challenge of improving transmission access and pricing arrangements along the lines proposed by the PEA. The current MPOC and VTC arrangements were developed through industry negotiation (albeit with the occasional encouragement of Government), and we believe that the industry is showing willingness to enter another stage of development, along the lines proposed by the PEA. In particular, we are aware that the TSOs have already begun discussions on how they can enable the PEA's recommendations, and Gas Industry Co will do what it can to support such efforts, including through its code change roles.

However, we recognise that the task is complex and difficult, and we believe that Gas Industry Co must also continue to develop its own views on how industry arrangements should evolve, and on what timeframe. Now that the problems have been so thoroughly analysed, and remedies identified, we should press on with improvement and be sure that we are not caught short if another constraint does arise. As the PEA has observed, Gas Industry Co has regulatory powers that can be used if industry progress stalls.

We see the continued industry initiatives and Gas Industry Co's own efforts as being complementary rather than competitive. Hopefully each will inform the other and ensure a successful conclusion of the Transmission Access and Pricing Project

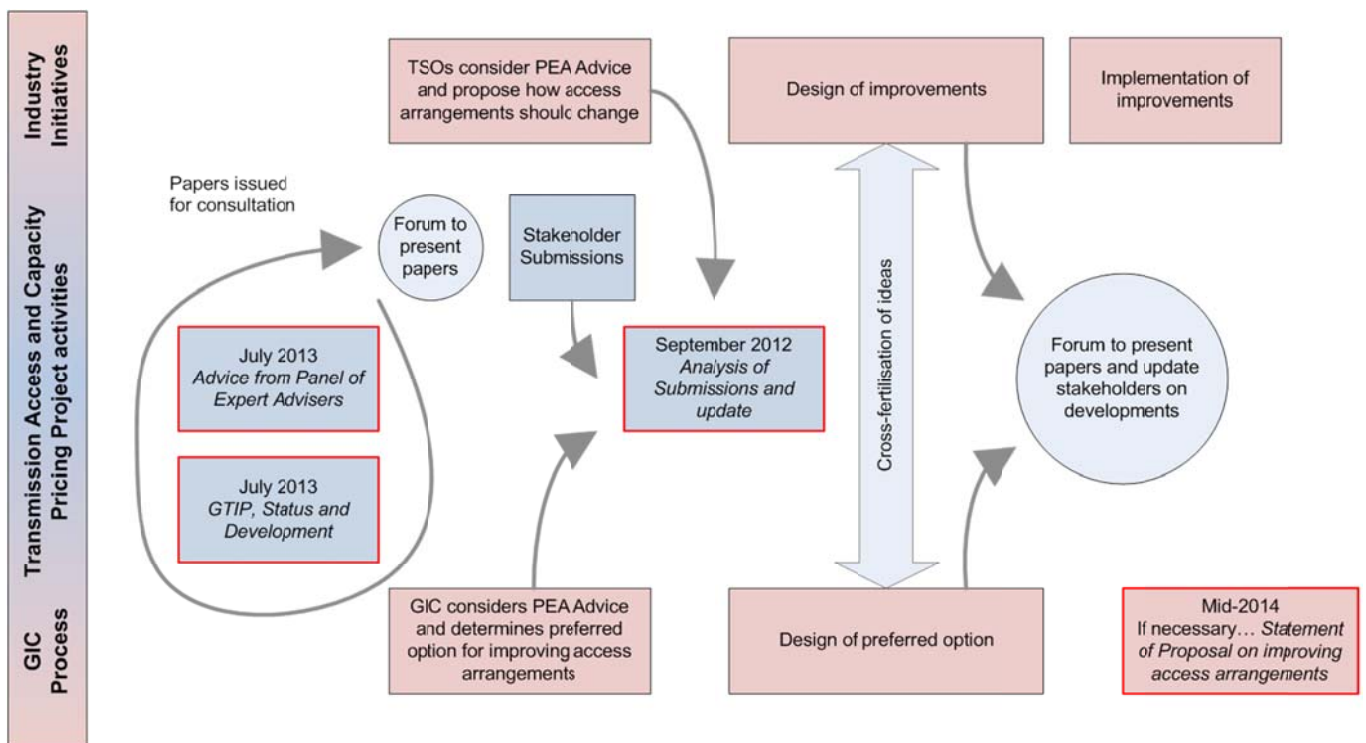


Figure 5 - Next steps in the Transmission Access and Capacity Pricing Project

The process illustrated in Figure 5 - Next steps in the Transmission Access and Capacity Pricing Project involves:

1. This paper and the accompanying PEA's Second Advice paper are issued for consultation
2. Both papers will be presented at a forum to allow submitters to become familiar with them and to ask question before preparing their submissions
3. As suggested by the PEA, we expect that TSOs will be considering how to respond to the PEA's Second Advice paper. Also, as discussed in Chapter 4, Gas Industry Co will be giving further consideration to the PEA's advice
4. With feedback from submitters and with the benefit of the TSOs and Gas Industry Co's further considerations, Gas Industry Co will prepare a Submission's Analysis and Update paper
5. At this stage we anticipate that the TSOs will be designing improvements, and Gas Industry Co will also be considering what the 'preferred option' for improvement should look like, in the event that a regulatory solution is necessary. We hope that there can be a significant degree of cross-fertilisation between these design processes
6. Once these processes are sufficiently advanced to present a coherent picture to stakeholders, Gas Industry Co will hold a forum to update stakeholders on developments

7. Once Improvements have been designed the implementation process can begin. We are optimistic that this can be achieved by industry agreement and code change processes. However, Gas Industry Co can make regulatory recommendations if that is necessary to assist.

Some key milestones in this process are provided in Table 6.

Table 5 - Indicative timetable for Transmission Access and Capacity Pricing Project

Milestone	Date
Submissions due on PEA's advice paper	30 August 2013
Analysis of submissions published (including Gas Industry Co's full response to the PEA's Second Advice paper)	27 September 2013
Improvements design forum	Mid-2014

Q5: *Do you agree with the proposed way forward for the Market Projects?*

5.4 Regulatory Projects

As noted in Section 3.4, there is only one Regulatory Project; the Testing Investment Options Project. Although it has not yet begun, Gas Industry Co still believes that there is value in considering whether a regulatory investment test has a place. This is best done once there is some experience of how significant investments will take place under the new Commerce Act Part 4 economic regulation arrangements, and some understanding of how pipeline access arrangements will signal the need for new investment.

Q6: *Do you agree with the proposed way forward for the Regulatory Projects?*

Appendix A PEA's advice in relation to the Transmission Access and Capacity Pricing Project

PEA's First Advice paper (July 2012)

In its first report - *Review of Transmission Access and Capacity Pricing, Advice from the Panel of Expert Advisers, July 2012* (PEA's First Advice) - the PEA examined current access arrangements for Vector's transmission system from the perspective of economic efficiency. It considered the main problems to be that:

- grandfathering inhibits efficient allocation of capacity;
- there is no price signal for scarce capacity;
- there is low uptake of interruptible capacity arrangements;
- the effectiveness of the secondary market is unclear: it is thinly traded and non-transparent;
- there is a lack of transparency regarding the determination of the amount of commercial capacity; and
- there is uncertainty about whether the regulatory incentives are adequate to encourage new pipeline capacity to be built when it is efficient to do so.

The PEA presented a straw-man proposal which it characterised as evolutionary rather than revolutionary, and therefore suitable for the small New Zealand market, and low cost. The straw-man proposal was to:

- water down grandfathering rights when capacity is scarce by, say, grandfathering only 80% of capacity (s5.3 of PEA's First Advice);
- auctioning any un-grandfathered capacity (s5.3 of PEA's First Advice);
- make interruptible arrangements more transparent (s5.3 of PEA's First Advice);
- reflect variable costs by variable charges - implying an increase in fixed charges and a reduction in variable charges (s5.4 of PEA's First Advice);
- confirm bulletin board and tradability of power station capacity (s5.5 of PEA's First Advice); and
- introduce a nominations regime (s5.6 of PEA's First Advice).

Submissions received on PEA's First Advice

A wide range of submissions were received, but some common themes emerged:

- there were some concerns that a vision for the future had not been presented;
- some were dissatisfied with the problem definition;
- the straw-man was the only option given considerable attention. Submitters suggested that other options should have been considered, including a common carriage regime;
- concerns that Vector's point-to-point contract carriage regime may not allow for full utilisation of physical pipeline capacity and that a shift to common carriage or the introduction of use-it-or-lose-it rules may need to be considered; and
- support for greater transparency.

PEA deliberations since PEA's First Advice

Submissions on the PEA's First Advice caused the PEA to undertake a very thorough re-examination of its problem definition and prescription for improving access arrangements. A full description of this work can be found in the Gas Industry Co's March 2013 *Analysis of Submissions on Preliminary Advice from PEA to GIC*, and the minutes of the PEA meetings, which can all be found on Gas Industry Co's website. Below, we summarise the main results of the PEA's work.

Characteristics of a well-functioning gas transmission market

The PEA acknowledged the concern of a number of submitters that its strawman proposal was difficult to assess in the absence of a 'vision', and without alternative options. In the PEA's First Advice, the PEA recognised that more efficient outcomes may be achieved by establishing a common set of access arrangements that apply seamlessly across the Vector and Maui transmission pipelines. However, it did not go beyond this to set out a broader vision for the market. Rather it focused on the purpose of the Transmission Access and Capacity Pricing project as specified in the PEA Work Plan, ie '... to ensure Vector's arrangements for transmission access and capacity pricing allocate capacity efficiently and effectively signal the need for investment in additional capacity.' The narrow focus of this purpose reflected the industry concerns that gave rise to the GTIP. However, the PEA agreed with submitters that some more tangible description of 'what success looks like' would be useful. It approached this by first considering what would be the characteristics of an 'ideal' transmission market.

The PEA concluded that the overarching characteristic should be a goal of dynamic efficiency, which is to maximise efficiency in the present and in the future. Beneath this overarching goal, there are a number of secondary characteristics:

- minimisation of costs (including transaction costs) of governing and operating efficient transport arrangements;
- maximum efficient use of physical capacity, particularly at times of capacity scarcity;
- competition in related markets not distorted;
- efficient investment in related markets is facilitated;
- investment in pipelines is facilitated;
- independence of functions in governance and operation;
- appropriate operational and commercial transparency; and
- arrangements evolve in a timely fashion to meet changing needs.

Best access regime for the future

Having set out the characteristics of a well-functioning transmission market, the PEA next considered which particular style of access regime was best suited to the future New Zealand gas market. It concluded that there are too many uncertainties about the future gas market to reach a confident view. Rather, it considered that incremental changes would be preferred to radical changes given the high cost of significant regime changes.

Revised problem definition

Given submitters' views on the problem definition, the PEA carried out a gap analysis of current arrangements versus the ideal characteristics. This exercise led to a revised problem definition as follows:

Current access arrangements do not provide for:

- efficient allocation of scarce capacity, both physical and commercial (ie as defined by contracts/codes);
- price signals to facilitate efficient investment; or
- transparency on physical state of the pipelines and contractual arrangements for the use of pipelines.

Also:

- grandfathering of capacity may reduce competition to supply downstream users;
- unnecessary costs may arise from different Maui and Vector access arrangements;

- end users do not need to secure long term capacity rights on the Maui pipeline; and
- vertical integration demands special care that arrangements cannot favour affiliate businesses.

Transmission Access and Capacity Pricing project: Revised purpose statement

With all of the re-framing discussed above, the PEA considered that it was necessary to re-examine the purpose statement for the transmission access and capacity pricing project. This was agreed as:

The purpose of the Transmission Access and Capacity Pricing project is to ensure that transmission pipeline access arrangements are dynamically efficient. In particular, the arrangements should:

- *transparently provide for the efficient utilisation of physical transmission pipeline capacity;*
- *enable and facilitate efficient investment;*
- *be harmonised across both transmission systems, to the extent that it is efficient; and*
- *offer transport services that, to the extent that is efficient, meets the needs of users.*

April 2013 Workshop

Gas Industry Co hosted a workshop in April 2013. The workshop was an opportunity for the PEA to update the industry on the work described above and its findings. Detailed presentations for the workshop are available on Gas Industry Co's [website](#).

The workshop included three sections. First, Gas Industry Co provided an introduction to the GTIP project including a recap on what was initially intended to be accomplished. We noted that the scene had changed since the initial concerns about the capacity shortage emerged, particularly that all requests for firm capacity were met in the current gas year. Second, Graham Scott and Lewis Evans (the PEA Chair and PEA's Economics Advisor respectively) provided their and the PEA's assessments of the current status of the Transmission Access and Capacity project. Third, was an opportunity for the industry to discuss the topics presented and options for improvement. In general, participants valued the GTIP work and supported it being carried through to completion. The review of options did not uncover any that had not already been discussed.

PEA's Second Advice paper (July 2013)

Guiding principles

In its second report - *Advice from Panel of Expert Advisers, Report to Gas Industry Company, July 2013* (PEA's Second Advice) - the PEA proposes a set of 'guiding principles':

Offer mix of transmission services across both pipeline systems

- TSOs should offer firm services for a range of terms and allocate these according to willingness to pay;
- once allocated, firm service rights should be tradable;
- TSOs should also offer non-firm services; and
- services should be harmonised to facilitate shipping across both pipelines.

Determination of physical transmission capacity

- TSOs should publish the physical capacity determinations of their systems (by location or zone, as appropriate) and the underlying methodology applied, including the security of supply standard; and
- capacity determination methodologies should be stable over time.

Proportion of physical capacity available as firm

- a process allowing input from shippers, users and TSOs should be used to determine what proportion of physical capacity will be offered as firm.

Term structure and release profile for services

- desirable for transport services to be offered for a range of terms;
- a progressive release of capacity for a particular future year is preferred; and
- arrangements should evolve over time in response to the needs of contracting parties.

Nominations regime to allow for scaling when capacity scarcity arises

- nominations should apply for all contracts (at least where congestion is possible); and
- there should be incentives for parties to give accurate nominations (such as nominations forming the basis of transmission charges).

Transition away from grandfathering and supplementary agreements

- arrangements giving preferential renewal rights to incumbent users should be phased out;
- arrangements should be generic and subject to codes; and
- transparent discounting or capital recovery arrangements should not be precluded.

'Bolt on' arrangements for capacity pricing when scarcity occurs

- at the time capacity rights are initially allocated: allocate capacity on a willingness to pay basis (at least where congestion is possible during the term of the offered contracts). A simple auction should be adequate; and
- at the time of a constraint: consider how price signals might be generated. This could involve capacity trading, with more sophistication being introduced over time.

Treatment of congestion rents

- any congestion rents should be allocated in a way that minimises distortions to long-term bidding for firm capacity and short-term incentives.

Transparency of information

- all information relevant to the formation of prices for capacity rights should be made widely available;
- the costs of making information transparent should be recovered from a broad base; and
- the information provision functions could be externalised in the longer term.

Governance for pipeline capacity access and pricing

- the establishment of common code development processes for capacity access and pricing issues should be a priority; and
- the establishment of common code dispute resolution procedures should be considered.

Recommendations

The PEA recommends that Gas Industry Co:

- a. Adopts the guiding principles set out in Chapter 6 of the PEA's Second Advice paper and considers industry feedback where appropriate;
- b. Invites signatories to MPOC and VTC to adopt and operationalise the guiding principles by:
 - i. Developing an implementation plan that:
 - I. Includes milestones that take account of shorter and longer term needs;
 - II. Provides for identified changes to be made in a timely manner, subject to a public cost-benefit analysis justification;
 - ii. Establishing governance arrangements to support delivery of the plan;

- iii. Reporting regularly to Gas Industry Co on progress against the plan;
- iv. Consulting with wider industry as appropriate;
- c. Provides feedback to MPOC and VTC participants on the proposed implementation plan and milestones; and
- d. Considers regulatory options should they be required.

Indicators of success

The PEA suggests that progress should be assessed using the following 'indicators of success':

1. A memorandum of understanding has been agreed between Maui and Vector to develop and implement governance change processes and provide for the development of an implementation plan
2. Change requests to implement governance have been formulated and proposed by November 2013
3. Governance arrangements are in place to facilitate implementation of operational changes in a timely way
4. There is sufficient information transparency for industry and wider stakeholders to be confident that they can assess the likelihood of congestion on pipeline systems (Maui and Vector)
5. There is confidence in the industry that any short-term excess demand for capacity can be managed in a way that ensures that scarce capacity is allocated to the highest value uses
6. Planning for a mechanism to enable price signals for scarcity on a longer term timeframe is in place, and will be implemented in accordance with cost benefit criteria.
7. Gas Industry Co is able to provide assurance to the government that any future shortage of capacity will be able to be handled in an efficient way.

Appendix B Recommended format for submissions

Submission prepared by: (company name and contact)

GTIP, Status and Development - July 2013

QUESTION		COMMENT
Q1	Do you agree with our assessment of the GTIP thus far? If not, where does your assessment differ from ours?	
Q2	Are there any Projects you think should be given greater or lesser attention by Gas Industry Co? Are there any other projects you think should be considered as part of GTIP?	
Q3	Do you agree that the characteristics of a well-functioning transmission market, as described by the PEA, could be used as criteria for evaluating regulatory options?	
Q4	Do you agree with the proposed way forward for the Information Projects?	

QUESTION		COMMENT
Q5	Do you agree with the proposed way forward for the Market Projects?	
Q6	Do you agree with the proposed way forward for the Regulatory Projects?	

Advice from Panel of Expert Advisers – July 2013

(note that these questions are not embedded in the PEA’s report, but the questions reference the relevant sections)

QUESTION		COMMENT
Q7	Do you agree with the Problem Definition? If not, please explain your reasons. (see PEA’s Second Advice paper, Section 1.2)	
Q8	Do you agree with the assessment of the current state of the market for transmission capacity? If not, please explain your reasons. (see PEA’s Second Advice paper, Section 2.2)	

QUESTION		COMMENT
Q9	<p>Do you consider that the PEA has considered all the reasonable options for improvement? If not, what other options would you wish to have considered?</p> <p>(see PEA's Second Advice paper, Chapter 5, Broad approaches to moving forward)</p>	
Q10	<p>Do you agree that Evolutionary Convergence is the best approach to improving access arrangements? If not, what other option do you prefer?</p> <p>(see PEA's Second Advice paper, Chapter 5, Broad approaches to moving forward)</p>	
Q11	<p>The PEA proposes a set of 'guiding principles'. Do you agree with these principles? If not, what alternatives would you propose?</p> <p>(see PEA's Second Advice paper, Chapter 6, Guiding principles for moving forward. Also summarised in bullet point format in Appendix A of Gas Industry Co's Status and Development paper)</p>	
Q12	<p>Do you agree with the PEA's overall conclusion, including its 'indicators of success'?</p> <p>(see PEA's Second Advice paper, Chapter 7, Conclusion)</p>	
Q13	<p>Do you agree with the PEA's recommendation to Gas Industry Co?</p> <p>(see PEA's Second Advice paper, Chapter 8, Recommendations)</p>	

QUESTION	COMMENT
<p>Q14</p> <p>Several boxes with dashed borders appear throughout the PEA's Second Advice paper. These boxes contain material that has been discussed by the PEA but not sufficiently closely examined to draw firm conclusions. Do you have any comments on this material?</p> <p>(see PEA's Second Advice paper: Section 6.1.6 box titled 'Possible initial components of a development path'; Section 6.2.2 box titled 'Rotowaro model'; Section 6.2.3 box titled 'Possible initial components of a development path'; Section 6.3.4 box titled 'Possible initial components of a development path'; Section 6.4.2 box title 'Possible initial components of a development path')</p>	

Glossary

GTIP	Gas Transmission Investment Programme
MPOC	Maui Pipeline Operating Code
PEA	Panel of Expert Advisers
TSO	Transmission System Owner
VTC	Vector Transmission Code