



2010 Review of Vector's Transmission Pipeline Interconnection Arrangements

December 2010





About Gas Industry Co.

Gas Industry Co was formed to be the co-regulator under the Gas Act.

Its role is to:

- recommend arrangements, including rules and regulations where appropriate, which improve:
 - the operation of gas markets;
 - access to infrastructure; and
 - consumer outcomes;
- administer, oversee compliance with, and review such arrangements; and
- report regularly to the Minister of Energy and Resources on the performance and present state of the New Zealand gas industry, and the achievement of the Government's policy objectives for the gas sector.

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1

Introduction and background

1.1 Purpose

This paper presents the findings of Gas Industry Company Limited's (Gas Industry Co) 2010 review of Vector Gas Limited's (Vector) interconnection arrangements. The review assesses the extent to which Vector's arrangements meet the objectives of the Gas Act 1992 (Gas Act) and the April 2008 Government Policy Statement on Gas Governance (GPS).

The paper identifies the areas of Vector's arrangements that could better meet the objectives. We recommend actions Vector can take to enhance its arrangements.

1.2 Context for the review

In February 2009, Gas Industry Co published the *Transmission Pipeline Interconnection Guidelines* (the Guidelines). We developed the Guidelines in response to industry participants' concerns about aspects of interconnection with transmission pipelines. The Guidelines set out our view of good interconnection practice and are based on the objectives of the Gas Act and the GPS.

When Gas Industry Co published the Guidelines, we undertook to monitor their effectiveness in influencing the TSO's interconnection services. The purpose was to assess whether transmission system owners' (TSOs') services adequately resolve the industry's concerns with interconnection. If not, Gas Industry Co would consider other options, which might include recommending rules or regulations to the Associate Minister of Energy and Resources (the Associate Minister). That review took place in September 2009. We then undertook to formally assess the extent to which the TSOs' arrangements meet the objectives of the Gas Act and the GPS. The findings of that review are set out in this paper.

The review assesses the interconnection arrangements of both TSOs (Vector and Maui Development Limited (MDL)). The findings of the MDL review have been published in a separate paper.¹

¹ 2010 Review of MDL's Transmission Pipeline interconnection Review, December 2010.

1.3 Transmission Pipeline Interconnection Guidelines

Development of the Guidelines

Industry participants first raised concerns about aspects of interconnection with transmission pipelines during Gas Industry Co's 2006 review of transmission access issues.² Discussions between Gas Industry Co and interconnecting parties at that time suggested:

- interconnection processes were poorly defined, so parties seeking interconnection were exposed to uncertainty over project timing, and when key decisions had to be made;
- technical requirements for interconnection equipment changed during the course of projects causing uncertainty, delay, and additional cost; and
- liability and insurance matters were not discussed until late in the process.

Gas Industry Co published the Guidelines on its website for TSOs to consider.

Objectives of the Guidelines

The Guidelines explain (p1):

As the industry body under the Act, Gas Industry Co may recommend the introduction of rules or regulations to address [the concerns raised in the review of transmission access], and achieve the objectives of the Act and GPS. However, Gas Industry Co considers that it is helpful to first develop guidelines that set out principles, procedures, documentation requirements, and arrangements for addressing disputes. These Guidelines represent Gas Industry Co's view on the features of good interconnection processes. It is hoped that the Guidelines will assist the industry to improve interconnection processes, without the need for further Gas Industry Co review, or possible regulatory intervention.

The Guidelines are non-binding. They are intended to apply to open access pipelines where interconnection arrangements are necessary for offering access on reasonable terms and conditions.

The objectives of the Guidelines are to:

- describe what a TSO's interconnection policy should cover;
- describe the phases of interconnection, what should happen in each phase, and the key decision points;
- establish principles that should apply to the overall provision of an interconnection service, and to each phase of interconnection;

² Papers related to the review are available on our website at <http://www.gasindustry.co.nz/work-programme/transmission-access-framework?tab=723>

- encourage TSOs to adopt consistent interconnection documentation;
- establish clear responsibilities; and
- minimise barriers to entry by promoting transparency and efficiency.

To meet these objectives the Guidelines proposed principles, procedures, documentation requirements, and arrangements for resolving disputes.

1.4 The review process to date

2009 review of interconnection arrangements

We reviewed the Guidelines' effectiveness in September 2009. Section 2 of this paper summarises the outcomes of that review.

Gas Industry Co found the TSOs had made some changes to their arrangements in response to the Guidelines. But both pipeline owners acknowledged they had further work to do on their interconnection arrangements. We concluded additional time should be allowed for that to occur.

Recommendation to the Associate Minister for a further review

In December 2009 we wrote to the Associate Minister recommending a further review in June 2010. We expected the TSOs to have amended their arrangements in response to our recommendations by then. We indicated the review would formally assess whether MDL's and Vector's interconnection services met the Gas Act and GPS objectives. If they did not, we would consider other options for improvement, including recommending rules or regulations and issue an Options Paper in 2010.

In February 2010, the Associate Minister wrote to Gas Industry Co accepting our recommendation. However, she noted her disappointment at the relatively slow progress made by MDL and Vector. She asked that, if the second review concluded other options are required, Gas Industry Co issue a Statement of Proposal by December 2010 (rather than an Options Paper as we had suggested). The Associate Minister stated the timeframe was to recognise the importance of interconnection to a well-functioning gas market. She wished to avoid prolonging a process when the industry had been given ample time to adopt best practice.

1.5 Recent interconnection activity

In the past decade, Vector has added eight new physical interconnection points to its open access transmission system, as described in Table 1.

Table 1 Interconnection activity during the review

Interconnection point	Description
Receipt Points	
Rimu	Receipt point tie-in for the Rimu gas fields (originally Swift Energy)
Kupe	Receipt point tie-in for the Kupe gas field
TAW	Recommissioning of disused Receipt Point, with new ICA.
Delivery Points	
Stratford 3	Preliminary Delivery Point for filling Ahuroa underground gas storage
Stratford 2	Peaker power station
Hunua 3	New Delivery Point within an existing station
Broadlands	Delivery Point near Reparoa
Bi-directional Points	
Stratford 3	Bi-directional Point to/from Ahuroa (underground storage)

Further interconnections could be provided to serve new gas fields, thermal power generation, and isolated industrial loads; or to reinforce existing gas distribution networks.

2

Findings of the 2009 review

2.1 Method

We first reviewed the TSOs' interconnection arrangements in September 2009. The review focussed on documented processes and documentation associated with new interconnections.

The review took the form of structured interviews with representatives from MDL and Vector and an analysis of their documents. The analysis aimed to identify where interconnection arrangements differed from the Guidelines and to assess whether these differences were material from the point of view of policy objectives.

2.2 Summary of findings

Vector's interconnection documents were generally well aligned with the Guidelines. The most significant omission was an interconnection policy. An interconnection policy provides an overall framework for the interconnection process and improves transparency. The policy should cover the areas listed in the Guidelines (Appendix B) and include the following.

- The principles and general terms and conditions for a Delivery Point station to be constructed by the interconnecting party, and then transferred to Vector.
- The process for dealing with new interconnection applications when pipeline capacity is constrained.
- The policy for existing interconnection points where there is currently no interconnection agreement (ICA).
- The principles for determining whether a hot-tap is an unacceptable risk (for example, when another station exists nearby).
- A disputes resolution process.

Vector's documents did not include a pre-contract dispute resolution process. Vector argued a well-constructed interconnection policy would reduce opportunities for disputes to arise before parties entered into an interconnection agreement. Gas Industry Co's view was interconnection arrangements must include a pre-contract dispute resolution process. Such a process is required if the

interconnection arrangements are to meet the objectives of pipeline access on reasonable terms. We suggested a process based on the Gas Governance (Compliance) Regulations 2008 would be the most cost effective.

Vector had no standard Interconnection Establishment Agreement (ICEA). It intended to prepare an equivalent document based on a Letter Agreement (LA), which it has used on two occasions as a precursor to entering into an ICA. Gas Industry Co's review of the standard ICAs and example LA found areas of overlap between these documents. The standard ICA included matters the Guidelines assign to the ICEA. The Guidelines are flexible about which matters are covered by each of these documents; however, we encouraged Vector to review the ICA content when developing a standard ICEA. Vector was also encouraged to align the ICEA as far as practicable with the process described in the Guidelines.

Table 2 Summary of findings of September 2009 review

Guideline item	Gas Industry Co comment and recommendation
Interconnection policy	Vector has no policy document but many aspects are covered in other documents. We recommend Vector develops an interconnection policy.
Dispute resolution	A process for dealing with issues arising before entering into a contract with Vector is not covered. Vector should incorporate a pre-contract dispute resolution process into its interconnection policy.
Interconnection Establishment Agreement (ICEA)	Vector does not have a standard ICEA but has used a LA, which, if standardised, would align with the Guidelines. We recommend Vector develop a standard ICEA.
Interconnection Agreement (ICA)	Vector's standard ICAs (for receipt and delivery) are well aligned with the Guidelines but cover some matters that might be better placed in the ICEA. We recommend Vector align the ICA, where practicable, with the Guidelines.
Technical and metering standards	Vector's Metering Standard and other technical standards (included in their standard ICAs) are well aligned with the Guidelines.
Existing interconnections with no ICA	Vector should develop a policy that retrospectively covers existing interconnection points.
Pipeline capacity	Vector's documented arrangements treat interconnections and capacity independently and are well aligned with the Guidelines. If applicable, the interconnection policy should cover situations where there is insufficient capacity or where Vector may negotiate interconnection and capacity co-dependently.
Equipment ownership	Vector's practice is not fully aligned with the Guidelines, with third parties unable to own delivery stations and equipment. Instead, Vector allows third parties to design and build this equipment, with an agreement for ownership transfer. The interconnection policy should document the principles for this arrangement.
Cost recovery	Vector does not have a documented process for cost recovery before entering into a contract. Cost recovery is covered in the standard ICAs and was covered in the example LA. The interconnection policy should document the principles for cost recovery where the interconnecting party builds the station and transfers the ownership to Vector.
Application process	Vector does not have a documented application process. This should be included in the interconnection policy.
Planning process	Vector does not have a documented process but the process was partially covered in the example LA. This should be formalised in the interconnection policy.
Contract negotiation	Vector does not have a documented contract negotiation process, and some overlap exists between the ICA and the example LA. The interconnection policy The contract negotiation process should be outlined in the interconnection policy, including the circumstances when a LA (or ICEA) would be used.

Guideline item	Gas Industry Co comment and recommendation
Design process	Vector does not have a documented design process but the example LA was reasonably well aligned with the Guidelines. The design process should be outlined in the interconnection policy and details included in the ICEA.
Construction, testing and commissioning	Vector's documented processes (in the ICA and LA) are generally well aligned with the Guidelines. The construction, testing and commissioning process should be outlined in the interconnection policy and details included in the ICEA.

2.3 Conclusions

Gas Industry Co found areas in Vector's arrangements that could be improved to achieve better alignment with the Guidelines. Although compliance with the Guidelines is not mandatory, it is a good indicator that the Gas Act objectives are likely to have been met. Vector acknowledged it had further work to do on its interconnection arrangements. Gas Industry Co concluded additional time should be allowed for that to occur. We proposed a further review in June 2010 because by then we expected Vector to have amended its arrangements to account for Gas Industry Co's recommendations. Unfortunately Vector was unable to supply the documents necessary for the review until October 2010. The rest of this paper reports on this 2010 review.

3

Evaluation criteria

3.1 Gas Act and GPS objectives

The purpose of the current review is to formally assess whether MDL's and Vector's interconnection services meet the Gas Act and GPS objectives. We therefore began by developing evaluation criteria derived from the Gas Act objectives.

When recommending rules or regulations under the Gas Act, Gas Industry Co must consider the objectives specified in section 43ZN of the Gas Act. The principal objective is to:

ensure gas is delivered to existing and new customers in a safe, efficient and reliable manner

Other objectives specified in section 43ZN of the Gas Act are to:

- facilitate and promote the ongoing supply of gas to meet New Zealand's energy needs by providing access to essential infrastructure and competitive market arrangements;
- minimise barriers to competition;
- maintain and advance incentives for investment in gas processing facilities, transmission, and distribution;
- ensure delivered gas costs and prices are subjected to sustained downward pressure;
- ensure risk relating to security of supply, including transport arrangements, are properly and efficiently managed by all parties; and
- maintain consistency with the Government's gas safety regime.

To derive useful criteria for evaluating interconnection arrangements, we must consider what the Gas Act objectives would require in that context. The principal objective suggested a broad classification of the evaluation criteria. Because safety and reliability are closely related, we classified the evaluation criteria under two categories:

- safety and reliability; and

- balance of interests.

Within each of these categories we considered the other objectives listed in section 43ZN of the Gas Act and what they imply for interconnection arrangements. Appendix C sets out the rationale for the development of the evaluation criteria.

The evaluation criteria, that is, what is required of the interconnection arrangements, are set out below.

3.2 Evaluation criteria: safety and reliability

Standards

Interconnection arrangements should specify technical standards for interconnection equipment and methods of construction that comply with good industry practice and the relevant Standards and Codes of Practice. The requirements should cover design, construction, commissioning, testing, and operation of those assets. In particular, interconnection arrangements should:

- specify the standards for construction, operation, and maintenance;
- provide a clear process for agreeing and maintaining the operational parameters (such as minimum and maximum delivery pressure and the operating flow range); and
- provide TSOs the ability to reject arrangements that would adversely affect the safety or the long-term integrity of the pipeline, or the pipeline's certificate of fitness.

Responsibility and liability

Interconnection arrangements should clearly define responsibilities, and associated liabilities, for all activities and approvals throughout the interconnection process. In particular, interconnection arrangements should:

- assign responsibility for design and approval activities;
- identify the personnel within each organisation who are responsible for contract negotiation;
- identify risks and assign liability for losses associated with those risks; and
- place liability with the party able to control the risk.

3.3 Evaluation criteria: balance of interests

Access to essential infrastructure

Interconnection arrangements should allow a party to access the transmission pipeline, subject to reasonable terms and conditions that are consistent with the objectives listed in section 43ZN of the Gas Act. To achieve this, interconnection arrangements should:

- provide open access to gas transmission pipelines;
- identify and publish the terms and conditions for providing access; and
- ensure the terms and conditions are reasonable and consistent with the Gas Act objectives.

Cost

Interconnection arrangements should help to ensure costs and prices are subject to sustained downward pressure. A TSO's arrangements should enable interconnections to take place as quickly as possible and at the least possible cost. To achieve this, interconnection arrangements should:

- identify the principles and standard terms for an interconnection;
- identify the overall process steps, milestones, and criteria for progressing the interconnection process;
- set reasonable timeframes and deadlines for commercial negotiations and technical reviews;
- support the use of existing infrastructure, subject to technical suitability;
- not needlessly duplicate facilities;
- allow disputed matters to be referred to a suitable decision maker (for example, a technical expert);
- allow TSOs to recover reasonable costs; and
- not socialise costs unless there are social benefits.

The interconnection arrangements should promote contestability, independence, innovation, and clarity of process.

Contestability

Interconnection arrangements should promote contestability for the design and construction of equipment to provide downward pressure on cost. To achieve this, interconnection arrangements should:

- identify the principles that apply to contestability; and
- allow ownership, design, and construction to be contestable unless there are compelling technical or legal reasons against contestability.

Independence

Interconnection arrangements should be negotiated independently of transport arrangements unless the parties agree there are compelling technical reasons to negotiate both arrangements together. To achieve this, interconnection arrangements should:

- principally provide for interconnection to be independent of transport arrangements;
- identify the circumstances where co-dependent negotiation may be applicable; and
- allow co-dependent negotiation when *both* parties agree.

Innovation

Interconnection arrangements should:

- promote the use of good industry practices;
- allow TSOs to modify their standard interconnection arrangements to reflect changes in industry practices; and
- allow interconnecting parties to propose alternatives, and allow for TSOs to consider those alternatives.

Clarity of process

Interconnection arrangements should clearly define the technical and commercial processes to enable these activities to be carried out as efficiently as possible, and in a timely manner. In particular, interconnection arrangements should:

- require TSOs to publish an interconnection policy including details of its interconnection process, information requirements, pro-forma contracts, policies and standards, technical review, principles, commercial prerequisites, and a dispute resolution process; and
- require TSOs to provide an interconnecting party with sufficient information to enable it to assess the likely availability of transmission capacity to or from the interconnection point.

Enforcement

Interconnection arrangements should have a means of enforcement at all stages. This should include a suitable dispute resolution process, which is available to both parties throughout the interconnection process.

TSOs might be able to exercise unequal bargaining power. To protect against this, interconnection arrangements must ensure the TSO's terms and conditions are consistent with the objectives listed in section 43ZN of the Gas Act.

To achieve this, interconnection arrangements should:

- set out the provisions for enforcement and dispute resolution; and
- provide dispute resolution processes that:
 - may be applied to a pre-contract dispute relating to the TSO's terms and conditions;
 - take place in a timely and economic manner; and
 - include a fair and effective escalation process.

4

Approach to the 2010 review

4.1 Purpose of the review

The purpose of the 2010 review was to assess the TSOs' interconnection arrangements against the Gas Act and GPS. In response to the issues Gas Industry Co identified in its 2009 review, both TSOs amended their interconnection arrangements. This review assesses Vector's revised interconnection arrangements. As noted in section 1.2, MDL's arrangements are dealt with in a separate document.

4.2 Overview of Vector's proposed interconnection arrangements

Following the 2009 review of Interconnection Processes, Vector prepared a draft Transmission Pipeline Interconnection Policy (Draft Policy).

Several documents accompany Vector's Draft Policy. These include:

- Vector Transmission Code (VTC)
- Application for Interconnection to the Vector Transmission System (Application Form)
- Interconnection Establishment Agreement (ICEA)
- Interconnection Agreement (ICA) for [XXX] Receipt Point
- Interconnection Agreement (ICA) for [XXX] Delivery Point
- Interconnection Agreement (ICA) for [XXX] Bi-directional Point
- Metering Requirements for Receipt and Delivery Points, Nov 2007

The Draft Policy describes its relationship with the Guidelines, the VTC, contracts and forms. Appendix A is an overview of the Draft Policy.

4.3 Method

As with the September 2009 review, we undertook the 2010 review by document analysis and interview. We interviewed representatives from Vector who are responsible for defining and providing

interconnection service. To structure the discussions we devised a series of questions, which we provided to Vector before the interviews. The questions were based on the evaluation criteria. They are attached as Appendix D.

We assessed Vector's interconnection arrangements against the evaluation criteria described in section 3. The criteria are based on the Gas Act and GPS objectives. Section 5 sets out our findings.

5

Assessment of Vector's interconnection arrangements

5.1 Safety and reliability

Standards

Vector's technical standards are well documented in the ICA and cover the key safety legislation and standards that apply when assessing an application for interconnection. Vector's technical review process requires that safety be the primary consideration.

The Application for Interconnection to the Vector Transmission System Pipeline specifies safety and operating parameters. These include the maximum allowable operating pressure, the operating pressure range, and metering requirements.

Gas is potentially hazardous, so the design and construction of gas facilities must be governed by prescriptive standards. These are referenced in the VTC and ICAs. Vector's technical requirements for equipment and construction methods reflect the prescriptive nature of these standards. We consider the requirements to be reasonable and not unduly prescriptive.

Responsibility and liability

Should a hot-tap connection to its pipeline be required, Vector will design and install it. Unless otherwise agreed, Vector will carry the risk and liability of this work (in relation to its own facilities)

In respect of interconnection station design (including metering), the station owner is responsible for the detailed design and construction. The ICA records who owns the interconnection station.

In the ICEA, the IP is responsible for commissioning a front-end engineering design (FEED) study, regardless of which party will own the equipment at the interconnection station. This reflects the fact that at this stage there is no commitment by the IP to proceed with the interconnection. If Vector is the station owner, it will be responsible for the detailed design and the actual project costs. We agree it is appropriate for Vector to recover the cost of the FEED study from the IP in all cases. However it will be necessary for the IP and Vector to determine the accuracy level of the interconnection cost

estimate determined during the FEED, and how the *actual* cost, to the extent it turns out to be different, will be recovered.

Vector's ICEA states that the FEED may include allowance for contingencies. Vector believes that there needs to be agreement on the treatment of the cost of such contingencies, to avoid later dispute. Gas Industry Co understands that Vector will not undertake detailed design or construction work until the treatment of possible contingency costs has been agreed. The IP can reduce the size of any contingencies by requiring the FEED cost estimate to be of a higher level of accuracy, though that will cost more.

However, we note that if the IP is the station owner it may object to the time delay in preparing a FEED study for a station for which it will be responsible. To clarify the responsibilities, we suggest the Policy provides the flexibility for Vector to waive the requirement for a FEED study when the IP is the station owner.

Gas Industry Co notes Vector's position however that, in relation to an asset that could cost from hundreds of thousands to millions of dollars, at least some elements of a FEED are an indispensable part of the design process. The production of key drawings and specifications resulting from that FEED will assure Vector that what it agreed to at the design concept stage will actually be built.

5.2 Balance of interests

Access to essential infrastructure

The ICAs set out the requirements and obligations for an IP to interconnect with Vector's transmission system. Vector reserves sole discretion in respect of various arrangements including ownership of the hot-tap and associated pipe work, Delivery Point stations (including metering), and odorant injection facilities.

We consider it reasonable for Vector to establish a boundary to its transmission system, providing the rationale for that boundary is clearly stated, and is reasonable. We think this rationale is inadequately described in the current policy.

Cost

Vector's interconnection arrangements allow it sole discretion in how it recovers its related costs. Cost recovery can be by a lump-sum reimbursement, ongoing interconnection fees, transmission fees (where costs may not be recovered from the IP at all, except to the extent that it is a shipper), or a combination of these mechanisms³.

³ Section 7.7 of the ICEA.

The FEED study is an independent process that will, amongst other things, determine the cost of the interconnection. The cost estimates in the FEED (commissioned by the IP) will be the basis of Vector's charges. Gas Industry Co considers that Vector should clearly explain its charges during negotiation of the ICA.

Vector reserves the right to require the IP to pay in advance for its costs incurred during the ICEA phase (the FEED study). This phase is relatively short, and could be abandoned by the IP. We therefore consider payment in advance is reasonable, and unlikely to be a significant barrier to access.

The Draft Policy provides a high-level design and review process. The processes appear to be free of steps or hurdles that would introduce unnecessary cost, although the low level of process detail makes this assessment uncertain.

Contestability

Vector's default position is that it will own any connection to its pipeline (whether via a hot-tap or other means) and associated pipe work, and Delivery Point (including metering) and odorant injection facilities. The Draft Policy gives no rationale for this ownership model. However, we consider it logical for the TSO to own the hot-tap and associated pipe work up to the first isolation valve. The hot-tap, being welded to the pipeline, is part of the pipeline for pipeline certification. Therefore, this equipment needs to be under the control of the TSO for the safe operation of the pipeline.

Vector owns all Delivery Points connected to its transmission pipeline, except for facilities to supply minor (and intermittent) quantities of start-up gas to two gas processing plants. Vector maintains that if it (as owner of an open access pipeline) owns the Delivery Point, shippers and end users are more likely to be able to obtain access to it. Vector has several times agreed to the IP building a Delivery Point and then transferring the completed station to Vector prior to commercial operation. Explicitly allowing the option for the IP to build a Delivery Point would introduce contestability to the design and construction of equipment. We think Vector should consider formalising this approach in its Draft Policy.

Independence

Independence ensures interconnection arrangements do not unduly influence TSA negotiations.

The Draft Policy states that an IP (or other party) will require a TSA for transmission services through its interconnection point. It gives design flow rates as a criterion for the Technical Review⁴ but is silent on the relationship between the ICA and TSA. Clearly, Vector, as a prudent operator, should determine whether the gas flow rates requested in the application for the ICA can be shipped to or from the proposed interconnection point. To provide clarity about interdependence, Gas Industry Co suggests

⁴ A Technical Review is Vector's assessment of the technical aspects of an IP's application.

Vector document the approach it would take if transmission capacity were a constraint. This would clarify the circumstances where co-dependent ICA and TSA negotiations would be required.

Gas Industry Co notes Vector's position that it would inform the IP if its proposed interconnection could not be implemented due to an inability to provide the prospective shipper(s) with the necessary transmission capacity. We consider that it is clearly in the interests of all parties for the IP and the shipper(s) to talk to Vector about this early in the interconnection process.

Gas Industry Co also acknowledges that Vector's ICAs establish that the agreements do not provide for the transmission of gas to/or from an interconnection.

Innovation

The Draft Policy does not discuss innovation. The hazardous nature of the industry means design and construction are governed by standards, which are referenced in the VTC and ICA. New technology is most prevalent in the field of metering and telemetry equipment. For this equipment, the applicable standards are documented in the VTC, ICA, and the *Metering Requirements for Receipt and Delivery Points, Nov 2007*⁵. These documents overlap to a degree.

The technical requirements for metering equipment (in Vector's document) are non-prescriptive and allow the use of a range of technologies. Nevertheless, we think Vector should review the requirements from time to time.

Clarity of process

The Draft Policy and the flow chart in Appendix 1 of the policy, provide a brief, high-level overview of process and activities. The ICA and the ICEA duplicate each other in parts.

The ICA provisions cover the process and responsibilities once the ICA comes into operation. However, we think the flow chart in the Draft Policy (see Appendix A) should provide greater clarity.

Enforcement

Vector has well-documented dispute resolution procedures in the ICEA and ICA, including arbitration.

The Draft Policy also provides for limited pre-ICEA dispute resolution, which applies only to rejected applications. Vector may reject an application because, for example, it assesses the risks associated with a hot-tap in the location proposed by the IP are too high. Vector may propose an alternative hot-tap location or insist that an existing interconnection be used. The result would be a longer (and more expensive) pipeline between the production facility or gas consumer and the Vector pipeline. The resulting dispute would be centred on whether Vector was being unduly conservative.

⁵ Available on the Publications page on OATIS. <https://www.oatis.co.nz/Ngc.Oatis.UI.Web.Internet/Common/Publications.aspx>

The pre-ICEA dispute resolution process has no provision for independent arbitration. Clearly this could result in a dispute remaining unresolved. We believe this does not allow for an independent consideration of issues in dispute.

The concern about having no provision for independent arbitration was raised with Vector. Vector does not think there is a robust basis for providing an arbitration process prior to entering into a contract. Vector also considers that, in most cases, it is unlikely that a dispute would occur prior to entering into an ICEA.

6

Conclusions and recommendations

6.1 Conclusions

We found Vector's draft interconnection arrangements met most, but not all of the evaluation criteria. Vector has made efforts to meet Gas Industry Co's concerns and adapt its arrangements to be more consistent with those proposed in the Guidelines. Gas Industry Co commends it for this work.

The Draft Policy lacks detail in some areas. Of particular concern is the lack of a process for ensuring pre-contractual disputes are independently reviewed if the process of escalating a dispute to senior management does not produce a resolution, and contestability for the design and construction of interconnection equipment where Vector will be the owner.

The Draft Policy includes a process for resolving pre-ICEA disputes, but falls short of providing independent review or arbitration. Gas Industry Co acknowledges that a full dispute resolution process, for pre-contract disputes, could require regulation to establish the principles of interconnection.

We note Vector's view that without a contractual relationship between parties, it would be difficult to establish a 'legal' basis for a binding arbitration process. And to help minimise the need for a binding arbitration process, Vector has (in addition to Guideline requirements for Service Description) included RPO obligations that it must comply with. It has also added an expectation that the IP will act consistent with that standard in its policy when assessing the IP's application and has identified the principles that Vector will have regard for during its technical review.

Gas Industry Co considers these are useful additions, but we are not convinced that it will significantly reduce the scope for dispute.

Vector's arrangements enable it to stipulate who will own the interconnection equipment (except in the case of Receipt Point stations), and how costs may be recovered from the IP (lump-sum or on-going fees). These arrangements do not ensure complete contestability but Vector has allowed the process to be contestable on occasion. In particular, it has allowed the design and construction of some interconnection stations to be the responsibility of the interconnecting party, with ownership of the completed station passing to Vector. We believe Vector should consider offering this option in all situations. We note though that Vector may prefer to recover some or all of its costs from shippers.

6.2 Recommendations

To meet the objectives of the Gas Act and GPS in respect of the interconnection process, Gas Industry Co recommends Vector:

- consider expanding its pre-ICEA dispute resolution process to enable binding arbitration by an independent expert;
- amend the flow chart in Appendix 1 of the Draft Policy to provide greater clarity of process and responsibilities during the detailed design, construction, and commissioning phases;
- document the approach it would take if transmission capacity is constrained (noting that Vector believes the IP has responsibility to ensure transmission arrangements are progressed in line with interconnection arrangements);
- take care to discuss with the IP what the FEED is for and how, if Vector is to undertake the design and construction, the cost estimate will be used in the setting fees
- allow flexibility for Vector and the IP to agree who will be responsible for the FEED study, and when the IP is the station owner, allow the requirement for a FEED study to be waived;
- allow contestability for the design and construction of interconnection equipment (excluding the hot-tap connection and associated piping), for example, by providing the IP the option to do this with arrangements for a formal ownership transfer in cases where the IP would otherwise be required to fund the interconnection and where the IP can reasonably demonstrate that its costs are lower; and
- finalise the Draft Policy and associated contractual documents to incorporate the above recommendations.

7

Next steps

Gas Industry Co will advise the Minister of the results of the Interconnection Review.

In our advice we will propose Gas Industry Co review how well the new arrangements perform in practice by evaluating the next interconnections to the Vector and MDL pipelines. We will then make appropriate recommendations.

Appendix A Overview of Vector's interconnection arrangements

Interconnection documentation

Following the 2009 review of Interconnection Processes, Vector prepared a draft Transmission Pipeline Interconnection Policy (Draft Policy).

Several documents accompany Vector's Draft Policy. These include:

- Vector Transmission Code (VTC)
- Application for Interconnection to the Vector Transmission System (Application Form)
- Interconnection Establishment Agreement (ICEA)
- Interconnection Agreement (ICA) for [XXX] Receipt Point
- Interconnection Agreement (ICA) for [XXX] Delivery Point
- Interconnection Agreement (ICA) for [XXX] Bi-directional Point
- Metering Requirements for Receipt and Delivery Points, Nov 2007

Structure of Draft Policy

Vector's Draft Policy is structured as follows and summarised in Table 1. The ICEA and ICAs provisions relevant to this review are summarised in Tables 2 and 3.

- Draft Policy Contents (main body)
 - Gas Industry Co Compliance
 - Purpose
 - Process
 - Service Description
 - Vector's Primary Contract
 - Recovery of Vector's Costs & Prudential Requirements
 - Application

- ICEA
- ICA
- Changes to Policy or Documents
- Appendices
 1. Overview of Vector’s Interconnection Process (Flowchart), included as Figure 1 below.
 2. Application for Interconnection to the Vector Transmission System (Template)

Key provisions

The tables below set out the key provisions of Vector’s Draft Policy.

Table 3 Draft Policy: description of key provisions

Section	Description
Process	<p>The process for the Prospective Interconnecting Party (PIP) is summarised at a high level as:</p> <ul style="list-style-type: none"> • Completion of an Application Form • Execution of an ICEA • Reimbursement of costs • Execution of an ICA <p>The process clarifies that a TSA or Supplementary Agreement is required before gas can be shipped through the interconnection point.</p>
Service description	<p>The principles that Vector will apply in dealing with an application for interconnection are summarised.</p> <p>Vector will:</p> <ul style="list-style-type: none"> • deal with the PIP⁶ in a non-discriminatory manner; • negotiate in good faith; • act in a timely manner; and • provide the PIP with sufficient information to enable it to interconnect with the VTS.
Recovery of Vector’s prudential requirements	<p>The PIP is required to pay all of the costs Vector incurs in processing the PIP application, the ICEA, and the ICA.</p>

⁶ Prospective Interconnecting Party.

Section	Description
Application	<p>The application process is described, with reference to the related documents and forms. Key features of the process are summarised as follows.</p> <p>On receipt of an Application Form, Vector will carry out a Technical Review focusing on the location, feasibility of flow rates, pressure limits, land issues, technical compliance and risk factors.</p> <p>The Draft Policy refers to the safety obligations as set out in the Gas Act 1992 and the Health and Safety in Employment (Pipelines) Regulations 1999.</p> <p>Safety is the primary consideration when assessing new applications and Vector will not permit a hot-tap if it considers the risk is too high.</p> <p>The timeframe for processing the assessment of the Application is in line with the Guidelines.</p> <p>A dispute resolution process for disputes arising as a result of an application not being approved is outlined. If the PIP lodges a Dispute Notice, both parties will attempt to resolve the dispute. If the parties are unable to agree, the matter will be escalated to senior management representatives to negotiate in good faith. No further escalation (such as to an independent expert) is provided.</p> <p>Vector will charge actual and reasonable costs for processing the application, and will provide an estimate of those costs on receipt of an application.</p>
ICEA	<p>Once an application is approved by Vector, the PIP must enter in to an ICEA with Vector.</p> <p>The scope of the ICEA is summarised as covering the investigation of design concepts, preparation of a FEED⁷ study, and the arrangements for cost recovery and dispute resolution.</p>
ICA	<p>The ICA must be signed before detailed design and construction commence. The ICA comprises standard and special terms and conditions.</p> <p>The usual asset ownership arrangements are summarised as:</p> <ul style="list-style-type: none"> • Vector will own assets comprising a Delivery Point or Bi-directional Point • The PIP will own the assets comprising a Receipt Point
Changes to policy or document	<p>Vector reserves the right to modify the Draft Policy and related documents.</p>
Appendix 1: Overview of Vector's Interconnection process (Figure 1 below)	<p>The overall process is shown in a simplified one-page flow chart, which is generally consistent with the Guidelines. The transition from ICEA to ICA occurs after the FEED study, prior to the detailed design.</p>
Appendix 2: Application for Interconnection to Vector Transmission System	<p>The Application Form sets out the information that must accompany a new application, including a general description, location, capacity, gas quality details, pressure control, target gas-on date and the proposed Shipper.</p> <p>The Application Form also stipulates that the PIP, by submitting the application, is agreeing to pay Vector for all costs and expenses incurred in assessing the Application.</p>

⁷ Front End Engineering and Design (effectively the preliminary engineering and design stage).

Table 4 ICEA: Description of key provisions

Section	Description
Special terms and conditions	<p>The agreement addresses the terms and conditions that are described in the Draft Policy. The agreement expires three months after the FEED report is provided, or when an ICA is executed.</p> <p>Cost recovery is detailed being the actual and reasonable costs incurred by Vector for work pursuant to the ICEA. Vector may require the PIP to make payments in advance. A schedule of hourly rates is included.</p> <p>The scope of work is detailed and includes investigating design concepts and selecting one concept for a FEED study. The FEED study will be carried out by a third party (the FE Designer) contracted by the PIP, and approved by both parties. Although not specified, it is presumed that the FE Designer could be Vector.</p> <p>The FEED Report will include drawings, detailed cost estimates and a project time-line. The FE Designer consults with Vector in conducting the FEED study and preparing the FEED Report, and grants Vector limited rights to the IP contained within the FEED Report.</p> <p>On completion of the FEED Report, the parties enter into ICA negotiations. Detailed design, procurement of materials and construction will not commence until an ICA is in place.</p> <p>If Vector undertakes some or all of the Design and Construction, it will recover the associated costs by one of the following means, at its sole discretion:</p> <ul style="list-style-type: none"> • Direct reimbursement • Interconnection fees (paid by the IP) • Transmission fees (paid by Shippers) • A combination of these fees <p>To the extent that the PIP is responsible for the Design and Construction, fees will not be applied.</p>
Standard terms and conditions	<p>A detailed and binding dispute resolution and arbitration process is included, with an independent expert appointed to rule on the dispute.</p> <p>Confidentiality, access rights, term and termination</p> <p>Vector’s liability to the PIP is for direct losses only, limited to the charges paid by the PIP under the ICEA.</p>

Table 5 ICA: Description of key provisions

Section	Description
Special terms and conditions	<p>The special terms and conditions section sets out location of the facilities, commencement and expiry dates, ownership demarcation and the fees and charges. The fees and charges may comprise a combination of one-time, volume based and time based variable charges.</p>

Section	Description
Standard Terms and conditions	<p>The standard terms and conditions address commercial and technical requirements for the interconnection point. Some technical matters covered in the ICEA are duplicated, such as determining the means and location of connection to the pipeline, which are essentially finalised in the FEED study. The technical standards for the station design are set out in Schedule 1 - Technical Requirements, and Section 6 - Metering.</p> <p>Vector has sole discretion to design and construct the connection to the transmission pipeline, and in the case of a receipt point, to design and install an odorant facility. In the cast of a delivery point, Vector has sole discretion to design and construct the delivery point station and will own the metering equipment.</p>

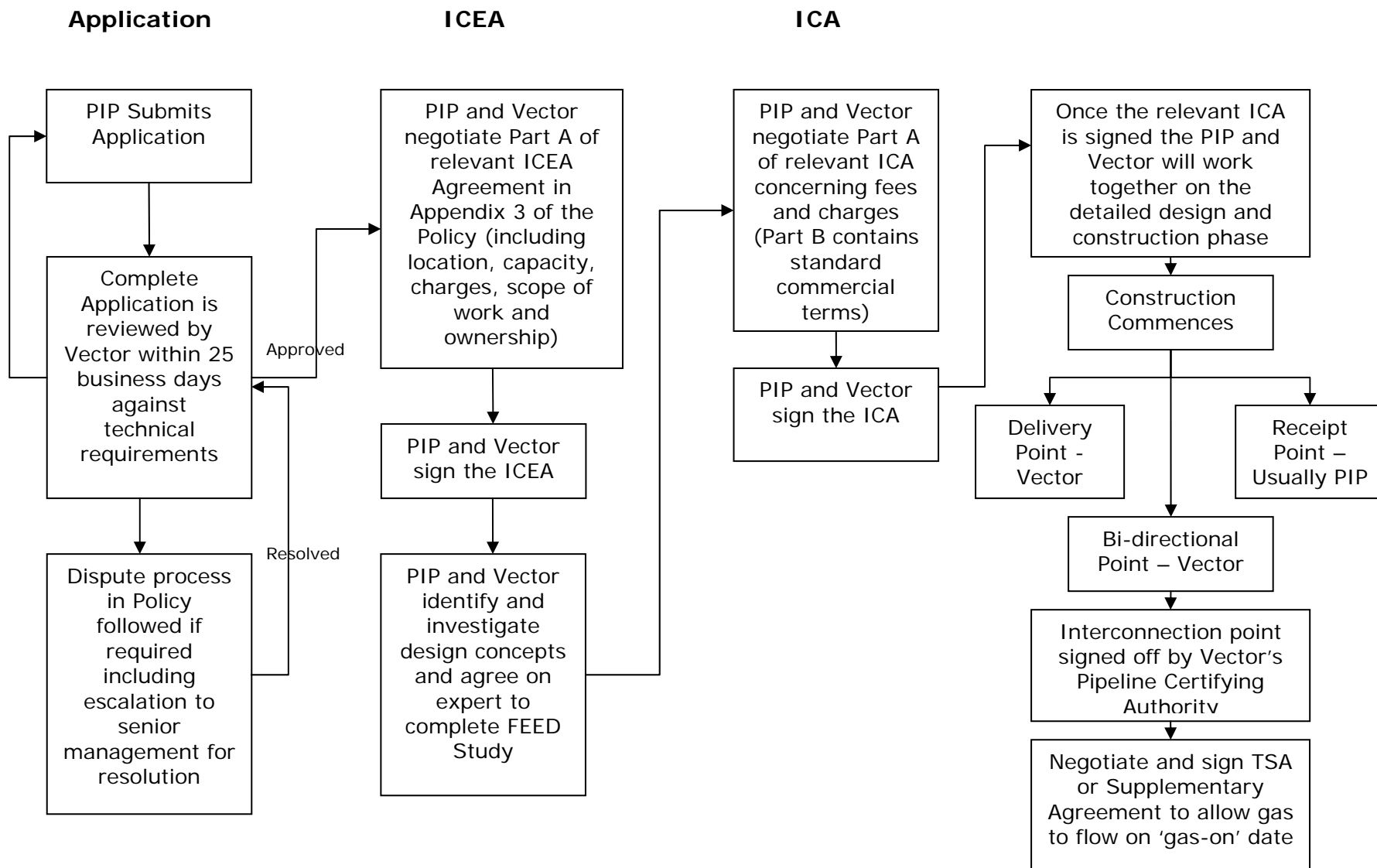


Figure 1 Overview of Vector's interconnection process: draft as at 30 September 2010 (Appendix A of the Draft Policy)

Appendix B The Guidelines

Interconnection policy

Each TSO shall publish an interconnection policy that shall include details of their interconnection process, information requirements, pro-forma contracts, policies and standards, technical review principles, commercial prerequisites for consistency, and a dispute resolution process.

Dispute resolution

The Guidelines recommend that TSOs include a dispute resolution process as part of their interconnection arrangements, and that offering access to the Rulings Panel would be a suitable default option. Dispute processes could then be based on those contained in the Gas Governance (Compliance) Regulations 2008.

Technical and metering standards

The TSO may specify the requirements for the following interconnection equipment:

- metering equipment, including gas analyser and all related instrumentation;
- SCADA equipment and interfaces;
- filtration and liquid removal systems;
- pressure control and protection equipment;
- odourisation equipment;
- interconnection 'T' (for example hot-tap) and isolation valve;
- electrical and cathodic protection isolation equipment; and
- other equipment specified in the interconnection policy.

Pre-existing interconnections

Where the arrangements associated with a pre-existing interconnection are not covered by an ICA, or where the existing ICA does not fully address the requirements of these Guidelines, the interconnecting parties should establish an ICA or amend their existing ICA accordingly.

Pipeline capacity

An ICA does not confer rights to transmission capacity and may be negotiated independently of transportation arrangements. In certain circumstances, as detailed in the TSO's interconnection policy, the TSO may require the ICA and transportation arrangements to be negotiated co-dependently.

Equipment ownership

The TSO will have sole discretion in respect of the ownership of the physical connection 'T', and primary isolation valve, including the pipe work up to the isolation valve from the transmission pipeline.

Ownership of the remaining interconnection equipment will be agreed between the parties. The TSO is not obliged to own or provide this equipment, but the IP can elect to own it. The Guidelines also recognise that the industry norm is for the IP to own receipt stations and for the TSO to own delivery stations.

Cost recovery

Prior to entering into any contract, the TSO may recover the costs it incurs in performing its technical review of an interconnection application, providing such costs are first discussed and agreed by the parties.

The cost allocation methodology detailed in the ICEA should provide for the IP to reimburse reasonable costs incurred by the TSO. This includes the cost to review the detailed design, modify the existing pipeline certificate of fitness, obtain authorisation amendments, and any costs associated with land and easement changes. The parties may agree to include cost recovery for the design and construction phases in an ongoing interconnection fee as part of the ICA.

In establishing an ICEA or ICA, parties shall meet their own contract negotiating costs.

The TSO is not required to accept conditions that would require it to incur operating costs unless it is fully compensated for that cost.

Application process

The TSO should provide a full set of application documents (or have them available for downloading).

The IP should provide a completed application form to the TSO, who should acknowledge the application within five days and confirm whether the application is materially complete within 15 days. Once the application is materially complete, the TSO shall carry out a technical review of the application within 25 days.

The TSO should notify the IP of the outcome of the technical review, and if rejected, the reasons for the rejection. If the IP considers the reasons for rejection to be inadequate, it can initiate the dispute resolution process.

Planning process

Having successfully completed the application phase the parties should meet to agree responsibility for the ownership, design, and construction.

The TSO and IP should develop a project plan assigning responsibilities for design and construction work between the parties.

Contract negotiation

In respect of scope, the ICEA covers the design construction and commissioning of a new interconnection point and the ICA covers the ongoing (post-commissioning) arrangements. For (contractually) simple interconnections, the ICEA may not be warranted and the provisions may be incorporated into the ICA.

In negotiating the ICEA and ICA, the TSO and IP should agree a timetable and sequence for negotiation and advise each other of their contacts for the negotiation. The ICA negotiation may be conducted in parallel with the ICEA negotiation, following agreement of the ICEA, or after completion of the design phase.

In certain circumstances, described in the interconnection policy, the TSO may require the ICA and transportation arrangements to be negotiated together.

ICEA

An ICEA should include the scope of work, standards and specifications, and commercial provisions in respect of design, construction, and commissioning.

The IP should indemnify the TSO for its direct and indirect liability associated with the new interconnection. The TSO may require the IP to provide insurance cover to the value of the indemnity. The scope of the indemnity should include failure of hot-tap operations, off-specification gas and excess pressure.

ICA

An ICA should include commercial terms and conditions and the ongoing operational performance standards and specifications. The ICA should cover:

- Contract period

- Prices
- Interruptions, emergencies, and curtailment
- Confidentiality
- Force majeure
- Liability and indemnity
- Prudential requirements
- Land ownership and access
- Dispute resolution
- Ownership demarcation including any transfer of assets
- Injection rates
- Meter testing and correction details should be included
- Obligations and liabilities of the parties for gas quality
- Odourisation (where required) and testing of odourant levels
- Information transfer including SCADA
- Pressure requirements, limits and protection
- Termination and abandonment

Design process

Unless otherwise agreed, each party is responsible for the detailed design and statutory approval of the assets it owns. The Guidelines recognise that certain assets are critical to the TSO (the 'TSO specified assets') and gives the TSO the right to approve the design of these assets.

Unless the IP has no design responsibility (ie all design and construction is the responsibility of the TSO), the TSO will specify a design review agent.

The IP should issue preliminary design details covering design parameters and high level plant details. Once approved by the TSO's review agent, the IP provides the detailed design for approval including, as applicable, the hot-tap, station, metering, SCADA, and lateral design.

The TSO assesses the effect of the new interconnection, considering factors such as the risk to the existing pipeline from over-pressure and internal corrosion, the operability of the system, and any new threats to above-ground assets.

The TSO also approves the procedures and the qualifications of the party contracted to perform the interconnection.

For a delivery point interconnection point, the TSO and the owner of the downstream equipment agree to the pressure control and protection scheme.

The TSO prepares a report giving either approval, subject to conditions, or rejection including details of design aspects that do not meet the specified standards within 25 business days of receipt of design packages.

Each equipment owner is responsible for obtaining approval from the relevant Certifying Authority for its equipment.

The owner of the station provides the information, as required by the System Operator, to enable the interconnection point to be mapped into OATIS.

Construction, testing, and commissioning

Construction of the TSO specified assets may not begin until the Certifying Authority and the TSO have approved the design.

Where the IP has constructed a new lateral, the TSO has the right to inspect the pipeline cleanliness before the pipeline is put into service.

The TSO will approve the contractor responsible for installing the hot-tap. Notice of any hot-tap work should be given to the System Operator at least one month before the work starts. The party responsible for the hot-tap is responsible for coordinating inspection activities with the Certifying Authority.

Where the IP is responsible for constructing the interconnection station, the TSO may make site construction inspections at agreed hold points for the TSO specified assets.

Where the IP owns 'TSO specified assets', the commissioning procedures are subject to approval by the TSO.

The primary isolation valve will remain closed until the TSO is satisfied that all necessary commissioning tests have been completed and approval has been obtained from the System Operator. Once the primary isolation valve has been opened, the interconnection equipment is deemed to be live.

Any gas injected or withdrawn from the pipeline during commissioning is subject to the requirements of the MPOC or VTC (as applicable) and should be metered.

Appendix C Development of evaluation criteria

To derive useful criteria for evaluating interconnection arrangements, Gas Industry Co must consider what the Gas Act objectives would require in that context. The principal objective (refer to section 3.1 of the main body of the report) suggested a broad classification of the evaluation criteria; because safety and reliability are closely related we classified the evaluation criteria under two categories:

- safety and reliability; and
- balance of interests.

Within each of these categories we considered the other objectives listed in section 43ZN of the Gas Act and what they imply for interconnection arrangements. We set out the rationale for the development of the evaluation criteria.

Safety and reliability

The construction of a new interconnection is a technically complex operation, typically involving a hot-tap connection to a live high-pressure pipeline. This is a hazardous operation with risk of serious harm and supply interruption.

The design and operation of interconnection facilities have a significant role in maintaining a safe and reliable gas supply. Receipt interconnection stations must be designed and operated to appropriate standards to manage the risk of non-specification gas entering the transmission system. Non-specification gas can affect safety and the reliability of the gas supply. Delivery interconnection stations must remove contaminants (oil and dust) from the gas and maintain pressure into the downstream gas network within a safe range. All interconnection stations must have reliable and accurate metering systems.

The objectives relating to safety and reliability will be met where appropriate technical standards are set, responsibilities are defined, and there is a clear link between liability and control.

Balance of interests

Various objective listed in section 43ZN of the Gas Act recognise that there should be a balance between the interests of the access seeker and those of the infrastructure owner. Under the balance of interests category, several criteria for evaluation have been identified, as described below.

Access to essential infrastructure

Providing access to essential infrastructure through an interconnection process is directly applicable to the objective of facilitating and promoting ongoing supply of gas. Arrangements that clearly set out the interconnection process, principles, and reasonable terms and conditions will contribute to this objective.

Cost

The cost of creating new interconnections is directly applicable to the objective of maintaining downwards pressure on delivered gas prices. Cost and prices are subject to sustained downward pressure if aspects of the interconnection arrangements are exposed to competitive pressure, and innovative solutions.

Interconnection arrangements are also relevant to the objective of providing incentives to invest in gas processing facilities, transmission pipelines, and distribution systems. While the interconnection facility is generally only a small part of an upstream gas field development project or downstream gas-fired installation, it nevertheless affects the overall economics of that project. In particular, project economics can be adversely affected where:

- facilities are required to meet unreasonably high technical standards ('gold plating'); or
- where cumbersome processes or unreasonable withholding of approvals delays completion; or
- where interconnection issues are bundled with gas transport issues (see 'independence' below).

Contestability

Providing contestability, where appropriate, is an efficient means of providing competition and therefore supports the objectives of providing downwards pressure on pricing and minimising barriers to competition.

Although interconnection is a process involving an access seeker and a TSO, some aspects of that process do relate to competition in related markets. For example, delayed interconnection can negatively affect competition in upstream gas markets. Competition in the market for constructing interconnection facilities may be reduced if that work is not contestable. These outcomes would mean associated costs are not subject to competitive pressure.

Independence

Independence of interconnection and transport arrangements supports the objective of providing access to essential infrastructure and competitive market arrangements. While there may be technical

reasons to negotiate these arrangements co-dependently, ensuring this co-dependency does not create a barrier to competition is an important consideration (See also 'costs' above).

Innovation

Technical and commercial innovation, such as the specification of metering equipment, supports the objectives of providing downwards pressure on pricing and minimising barriers to competition.

Clarity of process

A clear process, with defined responsibilities and timelines, contribute to the objectives of providing incentives to invest and to achieve the lowest cost and shortest time to completion.

Enforcement

Without a means of enforcement, interconnection arrangements cannot reliably achieve the objectives and it is therefore an important evaluation criterion. Enforcement includes contractual and regulatory means of achieving compliance with the Gas Act objectives, and a process for resolving disputes.

Summary

Table 6 summarises the evaluation categories, and the relevant evaluation criteria within these categories.

Table 6 Interconnection review evaluation criteria

Category	Sub-category	Evaluation criteria
Safety and reliability	Standards	Technical standards for design, construction, operation and maintenance activities should provide for a level of supply security consistent with good industry practice, and should not unreasonably prevent the use of alternative equipment or methods of construction.
	Responsibility and liability	Responsibilities and liabilities should be clear and, to the greatest extent practicable, liability should be linked to the ability to control.
Balance of interests	Access to essential infrastructure	Parties wishing to interconnect to a transmission pipeline should be able to do so, subject to reasonable terms and conditions.
	Cost	Arrangements should promote interconnections that take place as quickly as possible and at the least possible cost.
	Contestability	The right to construct and own facilities should be contestable unless there are compelling technical or legal reasons against contestability.
	Independence	Interconnection and transport arrangements should not be unnecessarily interdependent.

Category	Sub-category	Evaluation criteria
	Innovation	Good industry practice and technology should be applied and innovation should not be stifled.
	Clarity of process	The process for interconnection should be described clearly including responsibility and timeframes.
	Enforcement	There should be effective enforcement of the interconnection arrangements and timely dispute resolution throughout the interconnection process.

Appendix D Review questions

The review of TSOs' interconnection arrangements was conducted partly by interview. The interviews were with MDL and Vector representatives who are responsible for defining and providing interconnection service. We structured the interviews on a series of questions, which we sent to interviewees before the interviews. The questions were based on the evaluation and are set out below.

Do your interconnection arrangements:

1. specify technical standards for interconnection equipment, including by covering the design, construction, commissioning, testing, and operation of those assets?
2. provide a clear process for agreeing and maintaining the operational parameters (such as minimum and maximum delivery pressure and the operating flow range)?
3. provide you the ability to reject arrangements that would adversely affect the safety or the long-term integrity of the pipeline, or the pipeline's certificate of fitness?
4. assign responsibility for design and approval activities?
5. identify risks and assign liability for losses associated with those risks? If so, what are the risks and how is liability assigned?
6. place liability with the party who has the ability to control the risk?
7. provide open access to the gas transmission system for new interconnections?
8. identify the principles and standard terms and conditions for an interconnection? In what ways are these terms and conditions consistent with the objectives of the section 43ZN of the Gas Act?
9. identify the overall process steps, milestones, and criteria for progressing the interconnection process?
10. identify the personnel responsible for contract negotiation?
11. set reasonable timeframes and deadlines for commercial negotiations and technical reviews?
12. support the use of existing infrastructure, subject to technical suitability?
13. not needlessly duplicate facilities?

14. allow matters in dispute to be referred to a suitable decision maker (for example, technical expert)?
15. allow TSOs to recover reasonable costs incurred?
16. not socialise costs unless there are social benefits?
17. promote contestability for the design and construction of equipment to provide downward pressure on cost, unless there are compelling technical or legal reasons against doing so?
18. allow for the independent negotiation of transportation arrangements; unless both parties agree there are compelling technical reasons to negotiate both arrangements together?
19. publish an interconnection policy including details of its interconnection process, information requirements, pro-forma contracts, policies and standards, technical review, principles, commercial prerequisites, and a dispute resolution process?
20. provide an interconnecting party with sufficient information to enable it to assess the likely availability of transmission capacity to or from the interconnection point?
21. provide a suitable dispute resolution process, which is available to both parties throughout the interconnection process?

Glossary

delivery point	An interconnection point to a TSO's pipeline where gas is delivered from the pipeline
GPS	Government Policy Statement on Gas Governance, issued under the Gas Act, published 18 April 2008.
hot-tap	To repair or modify a pipeline or installation without shutting down operations
ICA	Interconnection Agreement, an agreement between a TSO and an IP that addresses the commercial arrangements and operational requirements of the interconnection station
ICEA	Interconnection Establishment Agreement, an agreement between a TSO and an IP providing for the construction and commissioning of an interconnection station
interconnection	Establishing a physical connection between a TSO's transmission pipeline and the assets of another party
interconnection equipment	The physical equipment associated with the interconnection point, including the interconnection T (hot-tap), metering, pressure control, filtration and odourisation equipment (where applicable)
interconnection point	A point agreed between a TSO and IP where custody of gas (and responsibility for gas quality) is transferred
interconnection service	A TSO's offer of terms on which it provides interconnection to its pipelines
interconnection station	A station containing some or all of the necessary pressure control, filtration, metering and odourisation equipment

IP	Interconnecting Party, the party seeking to interconnect with a transmission pipeline or already connected to a transmission pipeline. The IP may be: <ul style="list-style-type: none"> • the owner of an adjoining transmission system; • the owner of a production/treatment station; • the owner of a distribution system; or • the owner of a direct connect end user facility.
MED	Ministry for Economic Development
MPOC	Maui Pipeline Operating Code containing the multilateral terms of transportation and interconnection, which are referenced by relevant transmission service agreements (which are between a shipper and a TSO for the transport of gas) and ICAs
receipt point	An interconnection point to a TSO's pipeline where gas is injected into the pipeline
Specification gas	Gas that complies with NZS 5442 as amended or replaced from time to time
Shipper	A party named in a transmission services agreement under the VTC
transmission services	The services provided by the TSO
TSO	Transmission System Owner
VTC	Vector Transmission Code, containing the multilateral terms of transportation which are referenced by relevant transmission service agreements (which are between a shipper and a TSO for the transport of gas)