



**Recommendation to
the Minister of Energy
on Wholesale Market Development**

August 2007

1 Introduction

Gas Industry Co previously provided a report on the Wholesale Market work stream dated 20 December 2006. That report noted:

- the specific regulatory objective for the work stream is to facilitate transactional efficiency in gas trading;
- an intention to develop a standard, short-term gas sales agreement for use on a voluntary basis;
- a simple, electronic platform has the potential to facilitate gas trading; and
- further work needed to be done in the areas of market design and IT costs.

The purpose of this paper is to report on progress to date, describe the approach to completion of this work stream, and recommend early implementation of electronic trading in the form of a market trial.

2 Background

2.1 Gas Act and GPS objectives

The Gas Act sets out the objectives of Gas Industry Co in recommending gas governance regulations for the wholesale market, as follows:

- *The principal objective is to ensure that gas is delivered to existing and new customers in a safe, efficient and reliable manner;*
- *The other objectives are:*
 - *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;*
 - *Barriers to competition in the gas industry are minimised;*
 - *Incentives for investment in gas processing facilities, transmission, and distribution are maintained or enhanced;*
 - *Delivered gas costs and prices are subject to sustained downward pressure;*
 - *Risks relating to security of supply, including transport arrangements, are properly and efficiently managed by all parties; and*
 - *Consistency with the Government's gas safety regime is maintained.*

The current Government Policy Statement (GPS) repeats and expands these objectives, and then sets out the areas where the Minister of Energy is expecting recommendations on proposed arrangements from the Gas Industry Co. In the wholesale market context, it states these will include recommendations on:

- *The development of protocols and standards applying to wholesale gas trading, including quality standards, balancing and reconciliation.*

- *The development of a secondary market for the trading of excess and shortfall quantities of gas.*

Gas Industry Co has considered these factors in its deliberations on the development of wholesale gas market arrangements. It has also used these factors as the basis for deriving the regulatory objective for this work stream which is:

to facilitate transactional efficiency in gas trading.

2.2 Reasonably practicable options

Given the existence of long-term contracts for the vast majority of gas produced and sold within New Zealand, there are only limited opportunities for increasing transactional efficiency. Although no centralised data exists on the volumes of gas traded, these are generally agreed to be small relative to total gas production. This suggests that any actions taken to promote market efficiency need to be modest in cost so as to ensure the net effect is an increase in overall benefits.

The practicable options Gas Industry Co has identified which contribute to meeting this regulatory objective are:

- development of a standard gas sale agreement as a way of lowering transaction costs for ad hoc trading of gas; and
- a voluntary, formal market implemented by way of a simple, low-cost electronic platform as a way to increase transparency, trading volumes, and thereby build liquidity.

These are discussed in the remainder of this paper.

3 Standard Gas Sale Agreement

The December 2006 report explained the work that had been undertaken in preparing a draft gas sale agreement (GSA). The draft GSA was the subject of further refinement with members of the industry during the first quarter of calendar 2007. The Gas Industry Co Board reviewed the standard GSA at its monthly meeting in April 2007 and approved its release.

The primary purpose of the standard GSA is to improve transactional efficiency in the gas market by:

- providing a base agreement that can be used “off the shelf” for plain trades;
- avoiding unnecessary expenditure of time and resources in developing bespoke contracts for simple deals; and
- reducing transaction costs involved in negotiating more complex arrangements by providing an industry standard core set of terms and conditions.

The GSA was posted on the Gas Industry Co website on 30 April 2007 and continues to be available, free of charge, to any party who wishes to use it to trade gas.

Gas Industry Co intends to review the standard GSA periodically and, based on feedback from those using it, to revise and update it as necessary.

4 Feedback on December Discussion Paper

At the end of 2006 Gas Industry Co issued a third discussion paper to seek feedback on a defined set of issues in respect of the wholesale market design. The paper sought to clarify issues that had been raised as a result of the September paper or which had arisen in the course of discussions with potential traders and the Wholesale Markets Working Group. The issues were:

- platform funding;
- platform processes;
- prudential arrangements;
- trading processes;
- choice of trading location; and
- information processes.

4.1 Platform funding

The discussion paper provided two broad mechanisms for funding an electronic platform for trading gas:

- “User pays” - where costs would be recovered from direct users, i.e. traders; and
- “levy funding” – where costs would be recovered from gas users more generally.

The discussion paper expressed a preference for the platform to be funded by fees charged to users. However, the paper acknowledged that beneficiaries and users are not necessarily the same, as the former will include parties who gain from increased transparency, even if they do not trade directly. The difficulty of avoiding “free-riding” was also noted, where parties might hold back from initial platform usage in the hope they can sidestep some of the set-up costs.

Responses from submitters covered a range of options as summarised in the table below.

Submitter	Initial Development	Ongoing costs
Contact	Levy	Levy – initial fixed operating costs User pays – costs that vary with usage
Genesis	Levy	Levy
MRP	User pays	User pays
OMV	User pays	User pays
Vector	Levy	User pays

This is an area where there is no perfect answer, with the key judgement required around the balance between allocating costs to parties who have the best incentives to manage them (“fee type” arrangements) and minimising barriers to participation (“levy-type” arrangements).

Given Gas Industry Co’s broad objective of facilitating competition, it appears reasonable to place slightly more relative emphasis on the latter consideration. In light of these factors, it is proposed that Gas Industry Co proceed on the following basis:

- development costs – be recovered via a levy-type arrangement to reflect the fact that gas users in general benefit;
- fixed operating costs – be recovered via levy-type arrangement – at least until volumes become significant; and
- variable operating costs – be allocated to direct users (e.g. set up fees, special reporting etc).

4.2 Platform processes

Platform processes encompass the basic issues of how parties join the platform, leave the platform, the different levels of access that may be required for different roles (trading, settlement, etc), the requirement to abide by platform rules, and processes to support prudential arrangements.

All parties agree that the application process for platform users should be kept as simple as possible, in order that the platform is available to a wide group of participants.

Similarly, all parties agree with Gas Industry Co's proposed approach to suspension, and that there should be basic controls outside of prudential requirements. These include access rules, timely payment of fees, supplying erroneous data, and failure to abide by any of the obligations under the platform's rules. All parties broadly agreed with the proposed user controls and, in response to feedback received, those controls will be enhanced in some areas.

Questions on prudential requirements elicited a range of views. In the broad, respondents support the use of individual white lists for managing credit exposures through the platform. One point of difference was whether the platform itself should be required to track counterparty limits. Gas Industry Co has concluded that, because the platform cannot know counterparty exposures for arrangements outside of the platform, there is little to be gained from the additional expenditure of tracking those exposures for platform trading. Instead, trading entities will be able to add to or delete from their individual white lists in order to avoid breaching credit limits.

A related question was whether the platform should have any additional role in relation to credit information on individual parties. Gas Industry Co considers the role of the platform is one of facilitation and, therefore, any role in relation to credit information must go no further than providing a means for participants to disseminate their own information. Thus neither the platform nor the related market would have any role in researching, generating or otherwise reporting on creditworthiness.

The responses varied on the merits of blind trading (i.e. masking trader identities until after a deal is formed). Certain parties considered the additional complexity, and therefore cost, did not justify the advantages of blind trading. Other parties considered that blind trading added to the credibility of the market and would be likely to increase liquidity (one party going as far as saying if the market is not blind it will be bypassed).

From a strategic perspective, the key issue is the relative benefits and costs from blind trading, given that it necessitates a degree of cost/complexity associated with some form of prudential arrangement.

Rather than make a final decision on blind trading/white list as a result of consultation, Gas Industry Co prepared the RFP on the basis that blind trading (with individual white lists) is the preferred approach. This is the conservative approach as it is unlikely that,

with individual white lists, blind trading would cause any organisation not to use the platform.

4.3 Trading process

Parties agreed with the underlying philosophy in relation to the rights and obligations associated with a trade, subject to the appropriate governance arrangements being in place to ensure platform trades resulted in binding obligations.

As a result of the feedback, Gas Industry Co prepared the functional specification in the RFP on the basis that the platform would have provision for:

- both buy and sell offers;
- the transmission day to be the unit of time measurement;
- the basic quantity increment to be 0.1 TJ/day (although there was a wide range of views asking for both larger and smaller units);¹ and
- partial acceptances of bids/offers (subject to the facility for the party who posted the bid/offer to have the option to specify the parcel as indivisible).

One of the most debated issues in the trading process has been the location(s) at which the platform would allow trading of gas. This is discussed later in 5.2.

4.4 Information processes

Parties generally agreed with the provision of information on current and historical bid and offer ranges, current and historical final prices, and traded volumes and periodic volume-weighted prices. The point was also made that issues around the provision of these types of information would be better decided in a future process concerning the details of the trading platform. In particular, one respondent cautions against certain situations involving the release of data, particularly to the public, noting that *“If the number of trades within a particular period is small then a release of details could give a false view of the market (particularly in terms of price) and could lead to the identification of traders”*.

5 Development of Platform Trading

The December report signalled the intention to:

- prepare a functional specification for a simple trading platform;
- use that functional specification to seek proposals from platform developers; and
- assess whether the costs and benefits supported proceeding with developing a short-term, wholesale gas market based on electronic trading.

¹ The basic trade increment should not be confused with the minimum deal size – it is simply the minimum **incremental** size for any parcel.

This section discusses the work that has been undertaken in the interim and the approach to resolving certain matters that remain outstanding.

5.1 Release of Request for Proposals

A functional specification was developed, taking into account the feedback received on the December discussion paper. In April 2007, the Board approved release of a Request for Proposals (RFP). Recipients were given approximately six weeks to respond to the RFP and, on 18 June 2007, Gas Industry Co received Proposals from four vendors.

The Proposals have been evaluated with assistance from a group of industry representatives. Early indications are that prices are broadly in line with the indicative costs used to evaluate the simple IT platform option in the September 2006 discussion paper.

The evaluation of proposals from the IT vendors is aimed at establishing:

- which proposals are “fit for purpose” or can be made so; and
- whether the cost of a “fit for purpose” platform is affordable.

The evaluation has identified an IT vendor to work with to further refine the design parameters, finalise pricing and, in turn, to implement the trading platform.

5.2 Trading location

The scoping work has previously identified the attractiveness of concentrating trading at one location – a “hub” in industry parlance. The primary advantage of a hub is to increase liquidity in the market by maximising the number of comparable contracts to be traded. Two well-known examples of hubs are:

- Henry Hub in the US which is not only a trading location but the series of spot prices that emerge from trading at that hub also provides a price index for adjusting longer term contracts; and
- the National Balancing Point, or NBP, in the UK which is the basis of the UK spot gas market. The standard contract used to trade gas at the NBP is known as NBP97.

Naturally, the choice of location for a trading hub is a matter of compromise. In the New Zealand context it appears that the most advantageous location is on the Maui pipeline at, or around, the Frankley Rd interchange. This location would seem to accommodate shippers, whether they were having their gas delivered north or south, with relatively small costs involved in transporting gas from producing fields to the proposed hub location.

Whilst the advantages of concentrating trading at a hub are clear from a market design perspective, the concept is not universally accepted by potential traders.

Reservations primarily stem from parties who have long-dated purchase contracts for delivered gas which specify a delivery point some distance north of the proposed hub location. In such a case a portion of the purchase price for the gas will include the cost of shipping the gas to the delivery point. The concern centres around the cost of shipping the gas back to the hub (known as backhaul) and the loss of value to the seller.

Whilst the majority of potential traders favour the hub concept, there are proponents of:

- two or more hubs (e.g. one at Frankley Road and a second at Rotowaro); or

- a market which has the ability to freely trade gas at all welded points.

Further work needs to be done to increase the support for a single hub which will both increase the potential liquidity in the market and minimise complexity and, therefore, cost.

5.3 Pipeline interface

A related matter to be addressed is how best to facilitate the interface between the market and the transmission system. Both traders and network operators have stressed the importance of ensuring any wholesale market has appropriate interfaces covering title-tracking and nominations.

Gas Industry Co has sought external advice on these matters and further work needs to be done to finalise a solution. At this stage the most promising option is to utilise the existing features of the OATIS system and create a “virtual” welded point. Creating such a welded point would provide a number of advantages, chief among them being:

- the functionality already exists within the OATIS system;
- traders can use an interface they are familiar with to make nominations matching their trades;
- the combination of an independent hub operator and a data interface with the trading platform would allow for accurate confirmation of nominations (and the ability to recognise mistakes); and
- trading on nominations would solve many of the difficulties associated with title-tracking.

Work on the virtual welded point concept continues and will be brought to a conclusion prior to finalising the detailed design for the IT platform.

5.4 Governance arrangements

One of the hallmarks of the market design for platform-based trading is that participation in the market will be voluntary. Much of the reform in the energy sector has been market-based and the short-term wholesale market is another area that lends itself to market-based design rather than a regulated solution.

Because participation in the market will be voluntary, it may be feasible to implement the market by way of an industry arrangement. Market governance may be strengthened in specific areas with the support of a regulatory compliance regime, most likely an extension of the arrangements being put in place to support the Switching Rules.

Keeping in mind that the market is designed to form bilateral trades (i.e., this is not a cleared market) the governance architecture will comprise:

- a standard set of terms and conditions (Platform Trading Contract Terms) which, together with the details of the trade executed on the platform, will form a binding contract between buyer and seller. These standard terms and conditions will be similar to the terms contained in the Standard GSA previously released by Gas Industry Co;
- a Deed of Participation between each party intending to use the trading platform and the market operator (this may be Gas Industry Co or another entity). The Deed will need to cover items such as:

- how parties join and leave the market;
- entering into the Deed of Participation binds a party to the platform rules (these are not rules created under the Gas Act);
- termination or suspension of a party's rights to participate in the market (e.g. for non-compliance with rules or failure to consummate trades, etc);
- how disputes will be dealt with; and
- how rule changes may be made;
- a set of rules governing the operation of the trading platform and the parties using it. These rules will cover such things as:
 - general market conduct principles; and
 - market trading arrangements such as: submission, content, amendment and withdrawal of bids and offers; trading hours; prudential arrangements such as white list creation, amendment, and application; market information dissemination; rule change processes; and fees.

As noted above, because the market is a voluntary one it lends itself to a governance structure based on agreements rather than rules created under the Gas Act. This is an important point of difference from an industry arrangement that would require universal agreement. Multilateral industry agreements can be forestalled simply by (at least) one participant holding out. By contrast, the voluntary nature of the formal wholesale market means that negotiation of terms and conditions need only proceed for as long as it takes to secure an acceptable number of participants.

The very fact that agreement of all potential participants is not required has the potential to alter the approach of parties who might otherwise be incentivised to hold out for more favourable terms and conditions. Such parties will recognise they lack the leverage inherent in a multilateral arrangement and will need to prioritise their "wish lists" so as to focus on the most important aspects of the market arrangements.

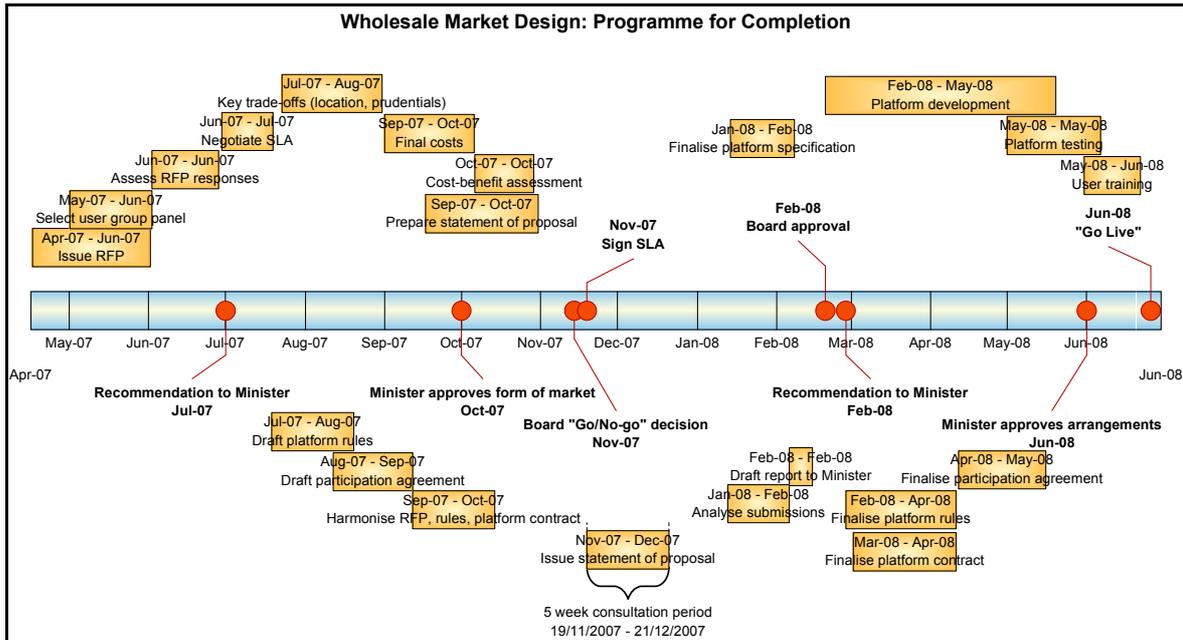
As a consequence of the above, the approach to implementation can be somewhat different than for a work stream pursuing an industry agreement (multilateral) with a fall-back to rules under the Gas Act if required. In particular, the greater relative certainty of achieving the governance structure described above means that it is feasible to consider putting in place a trial of the wholesale market and, thereby, shorten the lead-time for platform-based trading. This is discussed in the next section.

6 Potential for Market Trial

In the course of reviewing this work stream, and as part of the process of approving release of the RFP, the Board of Gas Industry Co requested an assessment of the feasibility of running a trial of an electronic platform for gas trading. The purpose of holding such a trial would be twofold:

- first, to bring forward the time at which platform trading could begin; and
- secondly, to provide a "hands-on" consultation process.

The diagram overleaf shows the original work stream timetable with a view to the market going live in June 2008.



That timetable presupposed:

- governance arrangements for the trading platform would be based primarily on contracts supplemented by a compliance arrangement designed to minimise dispute costs;
- as the market would be a voluntary arrangement, it would not be necessary to achieve unanimous agreement on the contracts, thereby increasing the likelihood that an industry arrangement could not be blocked by one party "holding out";
- platform trades would be bilateral in nature and the instrument creating the binding trade would be a modified version of the standard contract that has already been released; and
- any further governance, in the form of Rules or Regulations under the Gas Act, would be modest in scale.

This last point, in particular, is what makes it possible to contemplate holding a trial. The lead time required for creating Rules or Regulations is considerable, requiring:

- drafting of the Rules/Regulations and the preparation of the associated Statement of Proposal (SOP);
- consultation on the SOP and subsequent consideration of the submissions received;
- revision of the SOP where necessary (and a possible requirement to consult again depending on the extent and nature of the revision(s));
- preparing a decision paper and a formal recommendation to the Minister of Energy;
- a period of up to ninety days for approval of the recommendation; and
- a further period for the Rules or Regulations to be recommended by the Minister and go through the process leading up to them being gazetted.

The existing programme for completion, assuming Rules are put in place in time for the "go live" date, would see the trading platform go live in June 2008.

6.1 Deferral of compliance arrangements

If Gas Industry Co were to proceed with a trial, and regulation under the Gas Act were not regarded as a prerequisite for that trial, then it is possible the “go live” date can be brought within calendar 2007. So, what are the consequences of proceeding to a trial without first putting in place Rules for compliance and enforcement?

Given the trades formed by way of an electronic trading platform will be bilateral contracts between buyer and seller, Gas Industry Co considers the key risk is a party defaulting on a sale or purchase obligation. This risk was raised in the course of developing the stand-alone standard GSA. Parties to a trade under the standard GSA have the option to resort to an arbitrator to settle a dispute. It is envisaged that at the time a Rulings Panel is set up it may be more efficient for the Rulings Panel to handle such disputes. The same would go for disputed trades on the platform.

In the longer term, assuming the trading platform exhibited sufficient volumes that it was regarded as a credible price discovery mechanism, conduct within the market may require a degree of control. For example, where prices in the short-term market were used as an index to set price escalation in longer term contracts there could be incentives for parties to influence short-term prices. Disincentivising such behaviour would almost certainly require some form of compliance and enforcement arrangement in the future. However, that issue is not expected to arise until the market has been in place for some time. It is reasonable to conclude that the market can run for an interim period without needing such compliance and enforcement arrangements.

These matters were considered at a recent Board meeting and Gas Industry Co believes it is feasible to revise the work programme to bring forward the onset of platform-based trading and that it appears reasonably safe to proceed without installing compliance and enforcement arrangements immediately.

7 Next Steps

At a high level, the steps required to put a trial market in place are listed in the following table.

Major task	Description
Evaluation of Proposals in response to the RFP	<p>Gas Industry Co requested assistance from a project team of industry participants who are broadly representative of parties who may be expected to trade in the wholesale market.</p> <p>In conjunction with the project team, Gas Industry Co evaluated the Proposals and considered the trade-offs between costs and features.</p> <p>A key issue in the evaluation process was to ensure, as far as possible, that certainty of implementation cost can be obtained.</p>
Settle on trading location(s)	<p>Complete work on feasibility of “virtual welded point” leading to a decision on trading location. To some extent this work is interactive with finalising aspects of the design of the chosen Proposal as the decision on trading location will have repercussions for platform design and features. However, it is considered this issue will have only a second-order effect on platform price.</p>

Major task	Description
Develop market governance arrangements	The skeleton of the market governance arrangements has been developed now but certain aspects will need to await final design details. It is proposed to develop governance arrangements and engage with potential traders in parallel with the design work.
Negotiate with platform provider	Following selection there will be a period of time required for negotiation with the chosen party to agree price based on the detailed design specification. Completion of this step will lead to a service provider contract.
Contracts with market participants	With a final platform specification it will be possible to finalise the proposed market governance arrangements which, in turn, will allow for negotiation of the terms and conditions with market participants. As noted previously in this paper, universal agreement is not required, the negotiation process need only proceed until there is an acceptable number of participants willing to sign up.
Platform testing and acceptance	Whether the platform provider is undertaking a new build or is refining an existing platform, they will require a period of time to provide the finished product. Gas Industry Co, in conjunction with a user panel, will undertake acceptance testing prior to the market going live.

There are too many variables at this stage to provide a timetable for the above steps, particularly given the close inter-relationships between a number of the tasks. However, as noted earlier in this paper, Gas Industry Co is of the opinion that it may be feasible to bring a trial market into operation in calendar 2007.

8 Interim Recommendation

Gas Industry Co has already consulted extensively with respect to design and development of a secondary market for gas trading in New Zealand. Subject to a fit-for-purpose platform being feasible (in terms of price and features), the only remaining question is the extent of demand for that service.

Having sought proposals from potential platform providers, Gas Industry Co is satisfied that a platform can be put in place with the features required to support a low-cost secondary market. However, in considering the implementation path, there are two options for commissioning such a platform.

The first option is to use a conventional approach of consulting on a final design, which would involve the following steps:

- work with a preferred provider and potential traders to finalise the platform specification;
- obtain a firm price and ask the platform provider to hold that price pending a final decision to proceed;
- prepare the documentation for the governance arrangements (for example, platform rules and trading contract);
- prepare a paper which details the solution and issue that paper for consultation;

- make a final recommendation to the Minister of Energy, including any refinements as a result of consultation;
- develop/commission the platform and open the market for trading; and
- invite users to join the market.

The second option would substitute a trial of the market for the consultation process, keeping in mind the extensive consultation that has already been undertaken. The steps involved would be:

- work with a preferred provider and potential traders to finalise the platform specification;
- obtain a final price and contract with the platform provider for a specific time period which would allow trading for six to twelve months, subject to some minimum number of participants signing-up to trade;
- prepare the documentation for the governance arrangements (for example, platform rules and trading contract);
- develop/commission the platform and open the market for trading;
- after a suitable trial period, review the performance of the market (including taking soundings from users) and make a decision whether to continue or to terminate; and
- make a final recommendation to the Minister of Energy.

The first option is the one used by Gas Industry Co for governance arrangements where all parties are required to be bound by a set of mandatory rules or regulations—for example, the proposed Switching Rules. However, given that participation in this secondary wholesale market is intended to be voluntary, there are risks in committing the expenditure for a formal consultation document, consultation and commissioning a platform ahead of obtaining a commitment from the voluntary users.

The second option is a way to reduce these risks. In essence the trial period becomes a form of consultation. Moreover, the expense of putting a platform in place on a trial basis is of a similar order to the expenditure involved in preparing and consulting on a Statement of Proposal.

8.1 Gas Industry Co recommendation

Gas Industry Co therefore recommends that the Minister of Energy endorses the plan to work towards commissioning a platform, subject to commitment from a minimum number of users, and run that for a trial period. At the conclusion of the trial period Gas Industry Co will prepare a final recommendation based on a review of market performance over the duration of the trial.