

Gas reform – an evaluation and comparison with electricity

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Abstract

It is almost impossible to discuss the current gas reforms in New Zealand without also mentioning electricity reform. Electricity is like an older brother to gas – it has suffered the brunt of parental (read “Government”) attempts to enforce improved behaviour through reform, while its younger brother gas has, until recently, escaped such close scrutiny. However, focus has now turned on to the gas industry. While gas may escape some of the excesses of the reform zeal, it appears Government is in that common parental trap of over-eagerness to assume that one size fits all. The gas industry has adopted the cry of younger siblings everywhere: “We may be related, but we’re different!” Is anyone listening?

All the indicators are that Government is using a similar format for the reform process for gas as that adopted for electricity. What is not so clear is whether Government has an overall energy strategy in which gas and electricity reform play a co-ordinated part.

While the gas industry may be able to avoid some of the difficulties the electricity reform process encountered, it may also find that the path of reform has been chiselled by electricity and that it is therefore difficult for gas to carve out an alternative solution.

This paper will provide an overview of the recent gas reforms and implications for the industry, and discuss how this process has been influenced by electricity reform and where it needs to depart from those reforms. It will also examine whether the issues currently facing the gas industry are likely to be addressed by the reform process.

Electricity and gas – the history of reform

Electricity and gas reform have both followed a parabolic pattern over the last two decades, with increasing privatisation and liberalisation followed by a move back to greater regulation.

Electricity

Electricity reform began with the 1987 restructuring of the old Electricity Department into the Electricity Corporation of New Zealand as an SOE, continued with the separation of Transpower from ECNZ and establishment as an SOE in 1994, the split of Government-owned monopoly generation first into ECNZ and Contact Energy in 1996 and further separation of ECNZ into three state-owned generators in 1999. At the same time, Contact Energy was privatised.

The 1992 removal of the statutory retail monopolies held by local electricity supply authorities enabled the development of

retail competition. This initially only benefited industrial users and some large businesses. The mandatory separation of lines and supply businesses was intended to further encourage competition, particularly for smaller domestic consumers, by removing the opportunity for cross-subsidisation.

Alongside these structural changes, a key feature of industry reform was the emergence of voluntary multi-lateral industry-wide agreements – MARIA (providing minimum standards for measurement, recording and reconciliation of electricity and subsequently expanded to include customer switching protocols), the establishment of NZEM as a multilateral trading contract for spot market electricity trades and the development of MACQS, an agreement on common quality standards.¹

¹ MACQS was established as a governance framework but never implemented at an operational decision-making level. The common quality rules being developed under MACQS were transferred to the industry rulebook and have subsequently been incorporated into regulatory framework of Electricity Governance Regulations and Rules

Gas

Gas reform started around the same time as electricity, although proceeded at a different pace. Much of the structural reform was completed by the mid-1990s. Overall, the scope of gas reform has been narrower than electricity. By the early 1990s, the Crown had exited a large part of its involvement in the upstream gas industry. This started in 1987 with the sale of Crown-owned Petrocorp (including NGC and the Crown's 50% interest in the Maui field held through Offshore Mining Limited) to Fletcher Challenge. By the end of 1990 the Crown's commercial interests in the gas industry were limited to its role as buyer of gas under the Maui gas contract (with back-to-back on-sale contracts which effectively removed it from any real commercial risks) and an 11% interest in the undeveloped Kupe field.²

Competition was introduced into the retail market through termination of local gas board franchises and the removal of price controls via the Gas Act 1992. Since that time, light handed regulation using information disclosure to complement general competition law has been the primary regulatory regime for the gas industry.

Unlike the electricity industry, the development of comprehensive market arrangements has not been a feature of gas reform. In part, this reflects the different nature of the industry. The dominance of the Maui field, the long term nature of the Maui gas contract and the production flexibility which the Maui field was able to deliver meant that governance and market structure were not a priority for Government. Gas was not seen to be a political issue in the way electricity (particularly domestic electricity prices and supply) was. This was not necessarily logical, as gas is the basis of a quarter of New Zealand's electricity reticulation.³

Nor was there any major impetus from within the industry for wholesale reform of gas governance structures or market arrangements. Nonetheless, a number of reforms were implemented, albeit in a relatively ad hoc manner. The Gas Pipeline Access Code (the "Gas House" Code), a voluntary code of conduct negotiated by industry has operated since 1998, and the Reconciliation Code, also a voluntary code, was established in 2000.

Electricity reform as a catalyst for gas reform

What triggered the latest round of electricity reform?

By the late 1990s there was increasing dissatisfaction with the governance of the industry, exacerbated by tension between lines and energy companies, concerns at under-investment and disagreement over the reasons for this, public perception that electricity companies were charging consumers

too much, and concerns that the 1998 split of lines and energy supply had failed to deliver on the promise of lower prices.

Labour saw an opportunity and went into the 1999 election with a pledge to hold a Ministerial Inquiry if it were elected, which it duly was. An inquiry to examine regulatory arrangements in the electricity industry proceeded throughout much of 2000. Its recommendations included that governance of the wholesale physical market should be strengthened, compliance with certain rules relating to the physical market should be mandatory, the three voluntary arrangements should be brought within a single governance structure and transmission service levels also encompassed within this structure.

Government largely adopted these recommendations and issued a Government Policy Statement (GPS) in December 2000⁴. A preference for industry self-regulation was expressed, but in order to give credibility to its intentions (and probably also to be seen to be doing something more than simply repeating previous attempts at a "light-handed" approach), Government passed preliminary legislation providing for back-stop regulation if the industry failed to make sufficient progress in regulating itself.

For the next two years, the industry worked towards developing a self-regulatory arrangement, known as the "Rulebook", but failed to gain sufficient industry-wide support for its adoption when it went to a vote in early 2003. This was due to a variety of reasons, including lack of support from consumers, Transpower, some of the distribution companies, and concern with the impact on some existing long-term contracts, particularly the Comalco arrangements. Perhaps two of the more significant factors were the difficulty of making self-regulation (which by definition is voluntary) effectively mandatory and the challenges of bringing all aspects of the industry within a common governance framework. As regards the latter, the challenge was maintaining the confidence of all sectors that an appropriate balance of interests had been achieved, particularly within the context of almost total vertical integration on the energy side of the industry.

Attempts to achieve self-regulation might have continued, but Government was facing increased pressure to act from an accumulation of events, starting with the 2001 winter crisis of power shortages and nationwide power savings which triggered a further review.⁵ Rapidly escalating power prices for businesses exposed to the spot market were repeated in 2002/2003 with another dry year. The re-determination shortfall of Maui gas further raised the political temperature. Not unsurprisingly, Government responded to the industry vote of no confidence in the Rulebook by implementing regulatory arrangements in the form of the Electricity Commission.

² This interest has recently been sold to Genesis Power

³ Source: July 2003 Energy Data File (MED)

⁴ Reissued in an updated form in February 2002

⁵ "The Electricity Post Winter Review", Ministry of Economic Development, September-December 2001. Refer to www.winterreview.govt.nz/decisions/cabinet/index.html

The gas review and reform process

Although the depletion of Maui and lack of sufficient alternative sources of supply was already on the horizon, these do not appear to have driven gas reform. Instead, the electricity review and reform programme appears to have been the catalyst, as evidenced by the following comment from the Minister of Energy in announcing the gas review:⁶

“Having reviewed the electricity industry and introduced the Power Package reforms, it is now time to put the gas industry under scrutiny ... The Government’s energy policy objective is to ensure that energy is delivered in an efficient, fair, reliable and sustainable manner to existing and potential users. This must include gas as well as electricity.”

Government’s first step was to commission ACIL Consulting to provide a report on the gas sector (the “ACIL Report”). The terms of reference⁷ were (as with the electricity review) very wide-ranging but with a strong focus on efficiency. Specific issues to be addressed included:

- (a) economic efficiency of the supply chain;
- (b) inter-fuel competition;
- (c) efficiency and environmental externalities;
- (d) regulation, asset valuation and multi-utilities; and
- (e) take-or-pay contracts, their possible renegotiation and hydro-spill.

The key conclusions drawn by Government from the ACIL Report⁸ were:

- (a) existing gas wholesaling and transmission arrangements will not be adequate in the post-Maui market and new arrangements need to be developed;
- (b) negotiation to provide access to the Maui pipeline and re-negotiation, in stages, of the Maui contract, should begin;
- (c) gas prices to domestic and smaller commercial and industrial users are influenced by a range of upstream charges and are unlikely to be efficient;
- (d) by-pass indicates the existence of monopoly pricing, possibly disguised by excessive asset valuations;
- (e) enhancements to the regulatory regime could include:
 - (i) encouragement of voluntary corporate separation of the transmission arm of NGC from the rest of the business;

- (ii) disclosure of retail switching rates;
 - (iii) formation of an industry body to address technical issues;
 - (iv) mandating an asset valuation methodology (ACIL suggests Optimised Deprival Value (ODV)), undertaking a one-off exercise to assess the accuracy of existing asset valuations, and independent analysis of financial statements provided under information disclosure regulations to assess profit levels;
- (f) a further review in three-four years should be undertaken to decide if further regulation is warranted; and
 - (g) there are technical reasons for hydro spill and spill does not appear to have occurred for other than technical reasons.

While the production sector was assessed and reported on in the ACIL Report, the underlying assumption seems to have been that supply would respond to meet demand. The report defines efficiency as encompassing fostering productivity and new supply sources, with a strong focus on competition and barriers to entry. The conclusions on efficiency in the production sector were that arrangements at this level were not a source of inefficiency and the anticipated transition from low Maui prices to higher prices from new fields was consistent with efficiency.

Future investment in the upstream sector was very briefly canvassed⁹ and acknowledged to be dependent on a wide range of factors, including:

- number and size of new discoveries;
- location of new discoveries;
- extent of markets for new discoveries;
- technological change; and
- trends in environmental regulation

Exploration and the incentives and issues affecting exploration investment were not canvassed.

The ACIL Report was released for public submission. One of the main themes coming out of the public submissions was the critical importance of development of new gas fields to ensure security of supply. Another was a general view favouring the continuation of a light-handed regulatory regime.¹⁰

⁶ Media Statement from Hon Pete Hodgson, Minister of Energy, Thursday 15 March 2001, www.med.govt.nz/ers/gas/review/media/minister20010315.html

⁷ www.med.govt.nz/ers/gas/review/tor.html

⁸ Cabinet paper “Gas Sector Review – Paper 1: Background”, 6 November, www.med.govt.nz/ers/gas/review/decisions/paper01.html#P88_13883

⁹ ACIL Report, Section 4.8.2

¹⁰ Cabinet paper “Gas Sector Review – Paper 1: Background”, 6 November, www.med.govt.nz/ers/gas/review/decisions/paper01.html#P88_13883

Government's response was very similar to its response to the electricity Ministerial Inquiry – it issued a policy package of Government decisions and a draft GPS in November 2002¹¹. The GPS invited the industry to provide solutions, with a deadline of December 2004. Quarterly reporting was required and if progress towards measurable milestones was considered unsatisfactory, then Government would consider regulatory solutions.

The final version of the Gas GPS (released in March 2003) invited the gas industry to set up a governing entity that represents all stakeholders, has an independent chair, and a majority of independent members appointed after consultation with the Minister of Energy. The required initiatives include:

- (a) improving arrangements for the wholesale trading of gas;
- (b) developing an open access regime for all transmission pipelines;
- (c) developing standard terms and conditions for accessing distribution pipelines; and
- (d) establishing an independent system for handling consumer complaints.

Industry response to the Gas GPS

Governance

The invitation to the gas industry to set up a governing entity to develop appropriate market arrangements is similar to what Government did in respect of electricity – however the indications are that Government will have little tolerance for extensions if the industry fails to meet the expected timeframe.

The Gas Governance Establishment Group (“GGEG”) was formed by the industry in October 2002 as an interim body in response to the draft GPS. The GGEG has since been replaced with the Gas Industry Steering Group (“GISG”). The GISG, chaired by Jim Bolger, is comprised of consumer and industry representatives. Some of the issues the GISG is currently looking at include what a rule-making entity should look like and what its scope and relationship with Government would be. It is also considering issues likely to impact directly on consumers such as retail customer switching and customer complaints.

Co-regulation

The gas industry seems more realistic than the electricity industry in recognising the limitations of self-governance (or perhaps it is just benefiting from the electricity experience). GISG has already acknowledged that a

voluntary arrangement is unlikely to work. Whereas the electricity industry attempted to impose a “voluntary but comprehensive” arrangement without Government intervention, GISG has indicated that it will be asking Government to provide an overarching framework that will allow the industry governance body to enforce whatever arrangements it decides upon.

While recognising the need for mandatory enforcement by Government, and thus inevitably a government role, the GISG does not want to cede all regulatory power to Government – it favours a co-regulatory approach. As the name suggests, this model splits regulatory power between industry and government. One potential solution being discussed is based on the New South Wales gas market structure, which adopts a public company structure owned by industry participants and limited by guarantee. The constitution would set out the aims, objectives and guiding principles and creates obligations on members to make rules which meet those aims, objectives and guiding principles.

Open access

Open access is a significant issue for the gas industry and Government has indicated that it wishes the industry to resolve this issue and implement open access to the Maui pipeline. This was not an issue for the electricity industry as a national transmission system already exists. Open access is currently being worked through by MDL (the owner of the Maui pipeline) in consultation with pipeline users.

Price control inquiry

As part of the 2003 gas reform package, the Minister of Energy requested that the Commerce Commission inquire into the gas industry in order to make recommendations on whether or not the supply of gas (transmission and distribution) services should be price controlled. The inquiry timetable anticipates that the Commission's process will be completed by 30 November 2004.

This differs from the process introduced for electricity price control where Government specifically transferred responsibility for price control of electricity lines businesses to the Commerce Commission via part 4A of the Commerce Act (introduced in 2001). Part 4A introduced a specific statutory scheme for price control of electricity lines businesses, based on the concept of targeted price control. If a lines business breaches the pricing thresholds set by the Commission, the Commission will investigate and determine if price control should be imposed.

In contrast, Government has not introduced a specific statutory scheme for gas distribution but simply required an investigation by the Commission.

¹¹ “Draft Government Policy Statement: Development of New Zealand's Gas Industry”, replaced by a final “Government Policy Statement: Development of New Zealand's Gas Industry” in March 2003

The Electricity and Gas Industries Bill

Backstop regulation

Backstop regulation, foreshadowed at the time of the final Gas GPS, was put forward in the Electricity and Gas Industries Bill (the “Bill”), introduced to Parliament on 28 October 2003. These regulatory powers only come into effect if the gas industry fails to deliver Government’s objectives via self-regulation. The core of the backstop regulation is the power to establish a Crown-led regulator. Essentially this would amount to the expansion of the newly-formed Electricity Commission into an Energy Commission to deal with both electricity and gas. Regulatory powers which would be given to the Energy Commission include operation of a wholesale gas market, access to gas processing facilities and transmission and distribution matters.

Immediate regulatory effects of the Bill

In addition to providing for backstop regulation of the gas industry, the Bill introduces regulation of the downstream gas sector in an number of areas as soon as the Bill comes into force. These include the power to regulate customer switching from one gas retailer to another, prepayment meters, disclosure of information by gas transmitters, dispute procedures between industry participants and also with consumers and a wide range of domestic consumer issues.

Interestingly, while at first glance these regulatory powers all seem focussed on the retail market rather than the producer/wholesale market, the very wide definition of gas retailer brings most gas producer supply arrangements within the scope of these regulation making powers.

Regulation is also proposed via amendments to the Crown Minerals Act 1991 which provide the Crown with powers to require further information disclosure, including petroleum reserves, new discoveries and field deliverability data.

Does the solution fit the problem?

Securing sources of gas supply

There is growing recognition across a broad spectrum of the energy sector that securing economically viable sources of gas supply is the fundamental building block for all other industry issues – there is little point in reforming market arrangements if there is no gas to supply that market. The end of Maui signals the need, first and foremost, for new sources of gas. Changes in gas market and governance arrangements are unlikely to be the determinative factor in securing new sources of supply. That is not to say that governance and market structures (in one form or another) are not desirable, but unless sufficient exploration investment is occurring to meet the post-Maui shortfall, the question of governance may well become obsolete.

The Gas GPS and the Bill both appear to assume that the answer to gas supply lies with the market structure. The second paragraph of the Gas GPS introduction states:

“The expected end of the life of the Maui gas field signals the need for significant changes in gas supply arrangements. Production from an increased number of smaller fields will require more sophisticated pro-competitive market arrangements, including improved arrangements for gas balancing and reconciliation.”

Similarly, the Regulatory Impact Statement accompanying the Bill states:

“The Bill provides the Government with a mechanism that enables it to act expeditiously should industry self-governance not effectively implement Government policy. This provides Government with the ability to ensure that security of supply and national energy interests are met, particularly in the post-Maui environment.”

The connection between industry governance and Government’s ability to ensure security of supply is not explained. The genesis for some of this thinking can perhaps be traced back to the ACIL Report. However, to be fair, the ACIL Report is very much an outcome of its terms of reference which in turn seem to reflect the underlying assumption that an internationally competitive permitting and royalty regime is sufficient to attract exploration capital. Investment will be stimulated merely by depletion of the Maui field and increase in energy demand.

The Gas GPS goes on to state that “the Government welcomes investment in exploration and development of new gas fields” and references the Crown Minerals Act and Minerals Programme as providing “an attractive royalty regime”. This suggests Government is somewhat complacent that it has all the necessary policies in place to attract an appropriate level of investment. Many would argue that this approach is too one-dimensional and does not match the reality of exploration activity over the last three-five years. The well-known and anticipated depletion of Maui should have stimulated increased and active drilling programmes by a variety of new entrants. But this has not occurred, and the levels of under-investment highlight the inadequacy of the assumption that the market will adjust to meet demand.

A possible reason for the limited approach by Government stems from the attempt to put gas into the same box as electricity. The issue of security for supply for electricity arises in a different context to gas and is more amendable to being dealt with through governance and market arrangements. Security of supply was not an immediate focus of the current round of reform. Supply only became an issue following the “winter crisis” of 2001 and the ensuing Post Winter Review. Even then, arguably the importance of the issue was over-stimulated due to public concern and focussed on hydro shortages.

Gas supply on the other hand requires more investment and exploration incentives. In electricity the Government is (through its ownership of the SOE generators and Transpower) the major investor. Government does not have any equivalent role in the gas industry.

Evaluating the impact of the gas reforms

Upstream investment

Much of the upstream industry would argue that the proposed gas reforms do not simply fail to address the issue of supply, but actively inhibit further exploration and development. The scope of the backstop regulatory powers in the Bill, combined with the immediate regulatory powers, send a signal to potential investors that there is a very real risk of regulatory intervention of a potentially intrusive nature. Combine that with the size of the New Zealand market, geographical distance and the upside of increasing gas prices is immediately counterbalanced. The result is that we are unlikely to see the immediate and significant increase in petroleum exploration required if demand is to be met from New Zealand's indigenous gas resource.

While one would expect industry participants to be wary of increased regulation, it does appear that Government may have underestimated the impact of its regulatory approach in the context of the need for immediate and substantial increases in petroleum exploration. Although there is unlikely to be a single piece of regulation that effectively shuts down investment, the cumulative effect of the threat of regulation, the uncertainty posed by the current position and the specific regulatory powers being introduced, is likely to be a deterrent, delaying investment decisions with companies adopting a wait-and-see approach.

The new unconditional regulatory powers in the Bill are the most puzzling. It is difficult to see how they fit with Government policy to attract exploration investment in New Zealand and ensuring New Zealand's regulatory environment does not add to cost pressure faces by exploration companies and the industry generally. It is also unclear why Government has chosen to regulate these areas while at the same time giving the industry a chance to develop its own regulatory model – it seems to be giving with one hand and taking away with the other. Again, it seems that gas has suffered from the timing being imposed on electricity with Government adopting a “let's address it all together” approach.

The backstop regulatory approach

In terms of the downstream industry, provision for backstop regulation for industry governance in the Bill could be seen as sensible planning to avoid the situation encountered in the electricity industry where the collapse of the Rulebook created somewhat of a vacuum. It also sends a very strong message about Government's intentions, in an environment where previously the threat of regulation has been perceived as being somewhat remote.

On the other hand, the shadow presence of an “Energy Commission” may limit the scope for industry to develop in a different way to electricity. It remains to be seen whether the existence of the backstop regulation places more pressure on the gas industry than was the case for electricity.

If the functions of the Electricity Commission are widened to form an Energy Commission, there is a risk that similar (but not necessarily appropriate) arrangements will be applied to both industries. While one would hope that the Energy Commission would have the sophistication to differentiate between the industries, it seems inevitable that operational rules developed for electricity will provide at least a starting point when gas arrangements come under consideration.

Not surprisingly, there has been some scepticism within the industry on how these initiatives by Government sit with the policy of favouring industry solutions and regulating only when necessary.

Issues with co-regulation

There has been strong support within GISG for a co-regulatory approach. The detail, including the level of regulatory intervention/approval by Government, has yet to be fleshed out.

Co-regulation is clearly a middle-ground between industry self-regulation and Government regulation, and it is perhaps easy to claim that it avoids the disadvantages of either while capturing most of the advantages. The extent to which this is true will depend in part on which features of regulation are carried over, and in particular how much scope is provided for Government/Minister/Energy Commission to intervene in the running of the market.

The level and scope of Government intervention is a critical issue and this should be the key focus of any evaluation of the co-regulatory model.

Delineating responsibility for industry decisions – a lesson from electricity

The industry is naturally keen to retain some control of its own arrangements, and the co-regulatory model may give Government sufficient comfort that such industry control will not be “out of control”. Including industry in the regulation-making process is more likely to result in efficient solutions that balance all interests of relevant participants. However, if industry is to have regulatory power, a key issue in achieving this balance (whether under a self-regulatory or co-regulatory model) is the division of authority and influence among the various industry sectors.

Decision-making by any one sector of industry should be limited to areas where that sector is affected, and should be proportional to its interest. This may seem self-evident, but in large part the electricity Rulebook failed because of concerns that one sector (generator-retailers) would be dominate other sectors in an inappropriate way. The

likelihood of this is increased with vertical integration, which is a feature of the gas industry as well as the electricity industry.

Gas and electricity: an integrated approach?

Government's GPS for electricity has this fundamental objective:

"The Government's overall objective is to ensure that electricity is delivered in an efficient, fair, reliable and environmentally sustainable manner to all classes of consumer."

The Gas GPS is almost identical:

"to ensure that gas is delivered to existing and new customers in a safe, efficient, fair, reliable and environmentally sustainable manner."

These reflect Government's energy policy objective, which is to ensure the delivery of energy services to all classes of consumer in an efficient, fair, reliable, and sustainable manner.

Interestingly, the energy policy objective is contained within a document entitled "Energy Policy Framework" dated 3 October 2000, one of a suite of documents released as part of the October 2000 "Power Package: Government Decisions on Electricity Reform". Apart from this one paper, there appear to be no recent Government documents discussing overall energy policy as distinct from industry specific policies.

The adoption of an overall policy statement and similar wording for each specific GPS does not make an integrated policy. The wording is so wide that it could equally be applied to housing, education, health services or almost any other service which Government provides or is perceived as having some responsibility for. Apart from this statement, and its inclusion (substituting the words "electricity" and "gas" for "energy" in the respective GPSs), it is difficult to see any integrated approach to electricity and gas reforms. The shadowing of gas reform processes into the blueprint created by electricity is not the same as an integrated approach.

There are differences to electricity regulation – particularly in terms of price control – but it is not clear what the rationale for those differences is. In addition the specific problems of the gas industry do not appear to be being addressed – in particular how to make the investment environment more attractive for international investment.

An integrated approach to reform would:

- (a) recognise that the gas industry has both a "vertical" and a "horizontal" relationship to the electricity industry, ie it is both a raw material and a competing fuel source;

- (b) acknowledge the importance of indigenous gas exploration for the whole energy sector;
- (c) take the approach that a single integrated framework should not preclude but facilitate industry-appropriate solutions;
- (d) recognise and plan for the reality that decisions in related industries have an impact on each other (for example, decisions to import LNG are likely to be a disincentive for gas exploration).

Within an integrated approach, reform policies should reflect the different features and requirements of each industry. On this basis, gas reform would look quite different to electricity reform, if for no other reason than the electricity market has a number of market structure requirements which the gas market does not. These include the need for instantaneous reserves, complex dispatch mechanisms, economies of scale and a single national transmission system. Electricity also requires a far greater degree of physical co-ordination both in relation to dispatch and common quality than gas does. As a result, electricity market arrangements need to be both more comprehensive and more complex than those required for gas.

Gas is different to electricity. It can be stored, day-to-day supply is more predictable and common quality is not a transmission issue and therefore not a market issue to anywhere the same extent.

The gas industry is also significantly smaller than the electricity industry. While this in itself does not preclude issues requiring regulatory intervention, it does suggest that compliance costs will be relatively more significant for gas than electricity. Any regulatory responses provided need to accommodate this.

These factors all suggest that there is greater scope for gas market arrangements (including open access and trading arrangements) to develop on a smaller, more localised scale than is possible for electricity and the "one size fits all" duplication of many of the regulatory structural features developed for regulation of the electricity industry will be inappropriate for gas.

Conclusion

We await the outcome of the gas reform process with interest. We are optimistic that the participants will learn from the electricity experience, and be able to balance the interests of different participants and Government to achieve a regulatory structure that facilitates the development of efficient market arrangements. However, GISG and open access alone are unlikely to provide the necessary solution to the supply issue. It is imperative for upstream industry and Government to work together to address the supply challenge.

This may involve thinking outside the square. Without advocating any particular approach, examples might include:

- The adoption of royalty holidays or even a no-royalty regime for gas. Royalties would still be payable on liquids.
- A long-term commitment by Government to purchase (or at least underwrite the purchase of) gas supplies. This may simply be through a commitment to develop a new gas fired power station in proximity to any new field discovered outside of Taranaki. While this may seem an odd suggestion given that demand currently exceeds supply, demand profiles can change relatively quickly (if, for example, Methanex were to withdraw from the market as was signalled at one stage). The possibility of such drops in demand increases market risk for exploration and production.

These may seem like radical answers. However, Government has recently committed to providing (by requiring the Electricity Commission to contract for) reserve generation, including the purchase of the Whirinaki power plant. A consistent Government policy would at least require Government to consider the effect of an equivalent commitment on the upstream gas industry.

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