

Leading Energy

March 2004

New Zealand Electricity Hedge Market

The new year has heralded an interesting development in the New Zealand electricity market. EnergyHedge, a centralised trading platform for electricity derivative contracts, was launched by the four largest electricity generators.

What is it?

Contact Energy, Genesis Power, Meridian Energy and Mighty River Power developed EnergyHedge with the stated intention of enhancing existing electricity hedge markets and providing further price transparency. Standard derivative contracts with durations of up to two years are traded between the four generators, providing a forward curve of electricity prices.

The four generators trade a standardised Contract for Differences (CFD). CFDs obligate the parties to the CFD to settle the difference between the contracted electricity price established in the CFD and the actual electricity price at some future point in time. CFDs have been a feature of the New Zealand electricity sector for some time, both among generators themselves and also between generators and large industrial users. Typically however, these contracts were not standardised for volumes, underlying reference prices, or key contract clauses.

The introduction of a standardised CFD to underpin this market provides enhanced liquidity in these contracts. Haywards has been adopted as the reference price for these contracts. Haywards is a central geographical point in the New Zealand electricity system, and it also has a strong correlation with most pricing nodes throughout the country. The benefits achieved from having a sole reference price are additional liquidity and a lower cost contract. These benefits have been traded off against contract pricing flexibility.



How does the market operate?

EnergyHedge operates on a similar basis to many other derivative markets, offering a centralised price platform where market participants are required to offer reciprocal prices (i.e. an offer and a sell price) to aid liquidity.

The EnergyHedge trading platform does not incorporate a clearing mechanism. Each completed trade results in a bilateral contract between the two generators which is settled between themselves rather than through a centralised clearing mechanism. While this exposes each party to credit risk, a centralised clearing mechanism is not warranted at this stage.

...article continued on page 2

Why was EnergyHedge developed?

EnergyHedge was developed with the intention of providing further transparency to future electricity prices.

Presently, generators are required to provide average volume-weighted prices for fixed price contracts agreed between themselves and other parties on a monthly basis. These are then grouped on a regional and duration basis (one, two or three years), aggregated across all generators, and the results published as the Fixed Price Contract Index (available on the Comit website www.comitfree.co.nz). Anecdotal evidence suggests that these prices are treated with some scepticism given the diversity of contract terms, such as volumes and pricing nodes.

The EnergyHedge marketplace is intended to enhance this process by providing current bid, offer and traded prices on each contract. These prices should assist electricity market participants to establish medium term price trends. Furthermore, it may go some way to appeasing the watchful eyes of the Electricity Commission, who have been empowered to require generators to offer long-term electricity hedge contracts to the market if deemed necessary.

Implications for large users

While EnergyHedge provides current pricing information for these standardised contracts, this market is only accessible to the four generators. A key factor in the success of this market is the requirement for liquidity, which is achieved through the reciprocal pricing mechanism. Industrial users, for example, are unlikely to offer reciprocal prices given the possibility of accumulating unwanted trading positions.

With further development of the market however, it is hoped that EnergyHedge will be extended to other participants. Consistent with other financial derivative markets, it is likely that large users who wish to gain access to the market will have to do so indirectly, through an intermediary (for example one of the generators, or potentially a financial institution). This structure is similar

to that of foreign exchange hedging markets, where those requiring the contracts typically approach several intermediaries (usually large market participants) to action a transaction on their behalf.

The contracts traded on EnergyHedge are 'financial derivative contracts' and as such may require a paradigm change for some electricity users. These contracts are entered into to 'de-risk' cash flows through a swap mechanism. That is, certainty of cash flows is the primary focus rather than securing physical supplies of electricity. Some level of institutional change towards the treatment of electricity contracts may be required. Long-term contracts for electricity supply will be replaced with multiple derivatives contracts with different maturity and price profiles. This will be a risk management challenge requiring skills that may not currently exist within the energy procurement function. There are strong arguments that management of these contracts should rest with the treasury function of an organisation as part of their portfolio of risk management tools, rather than procurement.

Where to from here?

EnergyHedge is in its infancy and is currently available only to the four foundation members.

One would expect that additional liquidity could be achieved through the involvement of additional participants in the market, although the current reciprocal pricing arrangements inhibit large users from doing so. We would expect however that in the future, if EnergyHedge is successful, current market participants would act as intermediaries for electricity users, and specialised financial participants such as banks may also enter the market to provide risk management solutions for their clients.

While this is a positive step in the development of an electricity derivatives market and provides some transparency of forward prices, other participants must be able to access the market in order that the market gains credibility and is effectively utilised. EnergyHedge can be accessed through their website: www.energyhedge.co.nz

2004 New Zealand Petroleum Conference

The biennial petroleum conference was held in early March in Auckland and attracted a record number of delegates.

This reflected the current high level of interest in this sector, particularly given the re-determination of the Maui reserves, and the perceived lack of gas. There was a wide variety of presenters including local and international explorers, researchers, advisors and industry commentators, covering a range of topics including energy markets, exploration and development,

technologies, investment and future energy alternatives such as LNG.

Chris Taylor, an Associate Director in our Energy and Utilities group, presented a paper on Enhanced Investment Appraisal and its applicability to the oil and gas sector.

Chris' paper and the papers of fellow presenters can be accessed from the Crown Minerals website through the following link: <http://crownminerals.med.govt.nz/petroleum/publications/nzpcconf/nzpcconf-2004.html>

The Electricity Commission

On 1 March 2004, the recently established Electricity Commission assumed the responsibility of providing governance oversight of the electricity market.

The Electricity Commission is a crown entity, governed under the Electricity Act 1992 (as amended by the Electricity Amendment Act 2001) and operates in accordance with the Electricity Governance Regulations and Rules 2003.

The Electricity Commission is required to provide oversight in a way that is consistent with the Government's Policy Statement for the electricity sector. In particular, it is responsible for ensuring security of supply and reserve generation (up to a 1-in-60 dry year without the need for emergency conservation campaigns), prioritisation of transmission grid investment and hedge market and demand-side participation.

The Electricity Commission has statutory responsibility for compliance functions related to the Regulations. A rulings panel is being set up to enforce the Regulations and apply penalties or other remedies for contraventions of the Regulations.

Working groups are to be used to develop market arrangements and make recommendations concerning the Regulations. The Electricity Commission has called for nominations, and plans to establish the following advisory and steering groups:

- Hedge Market Development Steering Group
- Retail Market Advisory Group
- Wholesale Market Advisory Group
- Transmission Pricing Advisory Group
- Security Advisory Group
- Common Quality Advisory Group.

A draft work programme has been developed for the period ending 30 June 2005. The work programme covers work streams, specific tasks and functions arising from the Regulations as well as resourcing requirements and timeframes.

The draft work programme can be found on the Electricity Commission's website at the following address:
www.electricitycommission.govt.nz/news/20040205.html

The Regulation of Line and Pipeline Businesses

On 23 December 2003, under subpart 1 of Part 4A of the Commerce Act the Commerce Commission released its final decisions on the regulatory thresholds to be set for electricity line businesses.

The thresholds are intended to be a screening mechanism to identify lines businesses whose performance may warrant further investigation, and if necessary control. The thresholds will apply for one year for Transpower, and five years for the distributors. Transpower's thresholds will be reviewed at the end of the first year, and will take into consideration the work of the Electricity Commission on transmission pricing.

The Commerce Commission has set two thresholds: a price path threshold and a quality threshold. Performance against the thresholds will be assessed annually at 31 March for distributors and 30 June for Transpower. The final form of the thresholds will be gazetted by the end of March 2004. If a lines business breaches either threshold, the Commerce Commission will commence a post breach inquiry process, which may or may not result in the imposition of price control.

A lines business will breach the price path threshold if its average price changes at an annual rate exceeding the change in CPI, less the annual rate of X set by the Commerce Commission for that business. Starting prices will be those in place at 31 March 2004 for the distributors and 30 June 2004 for Transpower. X factors have been determined for each lines business and are made up of three components as follows:

- a B factor, common to all lines businesses, including Transpower, representing expected annual industry-wide efficiency gains;
- a C1 factor, derived for each distributor, reflecting the expected annual productivity gains for each distribution business relative to its peers; and
- a C2 factor, derived for each distributor, reflecting "residual" rates of return for each distribution business relative to its peers.

The X factors that have been assigned to lines businesses are either 2%, 1%, 0% or -1%. The price path threshold allows for the pass through of the following uncontrollable costs: transmission charges; local body rates on system fixed assets; and levies charged by the Electricity Commission. These costs are not subject to the CPI-X formula.

The quality threshold will be breached by a distributor if it reports a deterioration in quality (represented by total annual own network System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI)) when compared with five year historical averages. Transpower's quality performance is measured as system minutes lost and the number of unplanned interruptions. In addition, the quality threshold requires each lines business to demonstrate it has meaningfully engaged with consumers to determine their demand for service quality. This aspect of the quality threshold will be assessed at least every two years. The quality threshold is the same for all distributors, irrespective of their current quality performance.

...article continued on page 4

The Commerce Commission has also released a draft Optimised Deprival Value (ODV) Handbook for valuing system fixed assets for electricity lines businesses. This is to be debated at the Commission's conference scheduled for 14 – 16 April, before being finalised. Every lines business will be required to undertake a valuation of their system fixed assets at 1 April 2004 and 1 July 2004 for Transpower in order to determine opening values for the thresholds and controls regime. The draft handbook is an updated version of the ODV Handbook previously issued by the Ministry of Economic Development. A major change is the table of maximum replacement costs to be applied to standard asset categories for distributors. The costs are now more representative of modern equivalent replacement costs. The previous ODV Handbook had assumed the same costs since 1994.

Lines businesses are also required to continue to disclose, for the year ending 31 March 2004, the same information as previously required under the Electricity (Information Disclosure) Regulations 1999. The Commerce Commission is intending to publish Information Disclosure Requirements, which effectively replicate the Ministry of Economic Development's Disclosure Regulations, by the end of March 2004. These will be subject to a major review during 2004, with revised Disclosure Requirements to be in place by 31 March 2005.

The Commerce Commission is also progressing its inquiry into whether or not the supply of gas (transmission and distribution) services should be controlled. The Commerce Commission issued its Gas Control Inquiry Draft Framework Paper in July 2003. Following submissions on this paper, a conference, and cross submissions, the Commerce Commission plans to release its Draft Report in April. Further consultation will occur including written submissions and a conference, with the Commerce Commission intending to provide its final report to the Minister of Energy by November 2004. More information can be found on the Commerce Commission's website at the following address: www.comcom.govt.nz



Staff profile: Regulatory Specialist

John Calleja has recently joined PricewaterhouseCoopers Energy and Utilities Corporate Finance team in Auckland.

John joins as a Manager from PwC Australia with six years of experience in providing regulatory, commercial and strategic advice to energy and utility companies throughout Australia and Asia.

John's core focus is in energy sector regulation. His experience covers the evaluation of commercial impacts arising from regulatory decisions, the preparation of regulatory submissions and the review of revenue cap applications. John also has extensive experience in constructing and reviewing regulatory models. More broadly his experience includes the provision of detailed financial analysis and financial modelling across the energy, transport and telecommunications industries.

Energy Team

Craig Rice, Partner, Corporate Finance

Craig is National Energy Leader for PricewaterhouseCoopers, and advises a number of energy businesses on valuation, strategy and mergers and acquisitions. In addition, Craig leads the firm's Asia-Pacific Corporate Finance energy practice.
Phone: 09 355 8641
Mobile: 021 624 462
Email: craig.rice@nz.pwc.com

Lynne Taylor, Director, Corporate Finance

Lynne leads PricewaterhouseCoopers regulatory practice, which encompasses regulatory strategy development, valuation and compliance advice.
Phone: 09 355 8573
Mobile: 021 779 088
Email: lynne.taylor@nz.pwc.com

Graeme Pinfold, Partner, Assurance

Graeme is the leader of our Energy Group for Assurance. He has significant experience in the energy sector.
Phone: 09 355 8044
Mobile: 021 358 001
Email: graeme.pinfold@nz.pwc.com

Maurice Noone, Partner, Assurance

Maurice is the Managing Partner of the South Island practice of PricewaterhouseCoopers. He acts for a number of clients in various capacities in the energy sector across the South Island.
Phone: 03 374 3102
Mobile: 021 343 543
Email: maurice.noone@nz.pwc.com

Pip Cameron, Senior Manager, Assurance

Pip is the lead manager in our Energy Group for Assurance. She provides audit and advisory services to a number of energy companies.
Phone: 09 355 8253
Mobile: 021 358 010
Email: pip.cameron@nz.pwc.com

Teresa Farac, Partner, Tax

Teresa has over 20 years experience in tax and specialises in the energy industry. She has extensive first hand experience of the technical tax issues that are particular to the energy sector as well as wider industry issues.
Phone: 09 355 8443
Mobile: 025 600 2253
Email: teresa.farac@nz.pwc.com

Disclaimer: Leading Energy is intended as a guide only. Readers are advised that before acting on any matter referred to in this publication, they should consult a PricewaterhouseCoopers Advisor.

© 2004 PricewaterhouseCoopers. All rights reserved.
PricewaterhouseCoopers refers to the network of member firms of PricewaterhouseCoopers International Limited, each of which is a separate and independent legal entity.