

NEW ZEALAND'S POWER SECTOR REGULATORY ENVIRONMENT – AN UPDATE

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ABSTRACT

The purpose of this paper is to provide an update on the electricity sector structure and regulatory environment within which New Zealand's electricity generation, transmission and distribution network businesses operate. Recent events that have had an impact on the sector are reported and relevant factors and issues are discussed.

The paper updates the author's presentation on this subject to the 2005 CIRED conference.

PUBLIC SECTOR REFORM IN THE 1980S

Starting in the mid 1980s, the New Zealand Government, faced with the need to re-vitalise the economy and reduce debt, introduced a comprehensive programme of public sector reform. The programme was designed to support the Government's economic restructuring programme for the country as a whole by establishing a free market economy, abolishing many controls and regulations, re-establishing state trading enterprises as commercial organisations, selling many of them and promoting efficiency in all remaining public sector operations.

These principles were embodied in the State-Owned Enterprises Act 1986¹ and were extended to the electricity sector through the introduction in 1991 of the Energy Sector Reform Bill and subsequent enactment of the Electricity Act 1992 and Energy Companies Act 1992. The new legislation was intended to introduce competition to generation and energy sales activities whilst recognising the natural monopoly characteristics of the transmission grid and distribution networks. Details of the reforms and the status of the industry prior to and after their introduction have been presented earlier by the author – see [1], [2] and [3].

Regulatory Framework

The Government had decided upon a light-handed regulatory framework for the electricity distribution sector. Transparent pricing and information disclosure by energy companies, in accordance with regulations published pursuant to the Electricity Act 1992, were the central feature of the regime – see [4].

Customers or other parties who alleged anti-competitive practice had recourse to the Commerce Commission. The Commission was established under the Commerce Act

1986. Its stated objective was "to promote competition in markets within New Zealand". The Act was and is a major feature of the regulatory environment in which businesses in New Zealand operate. The Commission has various powers as described by the author in 2005.

Limited Competition

The original concept of the Government's reforms included, amongst other things, the belief that competition could be introduced into the generation sector. However, it was not until 1995 that the Government split the then Electricity Corporation (ECNZ) into two SOEs, ECNZ and Contact Energy Limited, to help bring this about. The generation sector then comprised two SOEs controlling around 95% of the generation capacity in the country and some smaller private operators. Of concern to major energy users and others, however, the market remained voluntary and was characterised by the fact that approximately 75% of transactions by-passed the market or were backed by hedge contracts set up in earlier years with the then ECNZ.

FURTHER REFORMS IN 1998

In response to a public perception that the electricity sector reforms had failed to deliver benefits to customers, and perceiving that the benefits of efficiency gains to date had been captured by shareholders (ironically the Government in the case of most generation companies), the Government enacted the Electricity Industry Reform Act 1998. The main features of this act were to: further split ECNZ into three SOEs giving four competing SOEs in the generation sector plus smaller private sector operators, mostly distribution lines companies with small, embedded hydropower plants; and to require the distribution lines companies to split their ownership, divesting themselves either of their natural monopoly lines businesses or their retail/generation activities. Other measures were included – see [2].

The aims of the further reforms remained much as before but with added pressure to see downward movement in the price of delivered energy. (The Government also announced its intention to sell its shareholding in Contact Energy through a public share float combined with a cornerstone share sale and it implemented this step.)

These changes took effect early in 1999. The forced split of line and retailing activities resulted in a major structural change in the industry. All but a small number of distribution lines companies opted to retain their line functions and divest retail and generation activities. The

¹ Entities established under this Act are referred to in this paper as SOEs.

buyers of these were the three new SOE generators, Contact Energy and TrustPower, a distribution company that opted to remain in retail and generation. TrustPower built up a portfolio of small generation schemes previously operated by distribution companies throughout the country and purchased a sizeable retail customer base. Only one significant retailer without a generation base, TransAlta, resulted.

Late in 1999, shortly before the expiry of its parliamentary term, the Government introduced further measures to help ensure grid security (this action arose largely over the failure of electricity supply to the central business district of the City of Auckland in early 1998).

Of importance, however, the major retailers were (and still are) owned mainly by the major generators and, somewhat ironically in terms of the Government's earlier privatisation objectives, over 50% are under State ownership.

In February 2000, following a change in government, a Ministerial Inquiry was instigated to review the industry structure, including regulatory issues and reform options – see [5] and [6]. The inquiry panel recommended: (a) the overhaul and consolidation of electricity market governance arrangements; (b) continued self-regulation of the supposedly competitive parts of the industry, namely generation and retailing; and (c) devolution of the regulation of the natural monopoly parts of the industry to the Commerce Commission, along with powers to impose price control. The Government accepted the main recommendations but reserved for itself further regulatory powers, to be exercised if industry self-regulation did not meet its desired objectives, and other wide-ranging powers to be exercised, if considered necessary, for industry governance.

POWER SHORTAGE AND FURTHER CHANGE

A very low-rainfall winter in 2001 led to a power shortage and further concern over the suitability of the industry structure – see [7]. Interestingly, not only hydropower generators but also thermal generators bid prices up.² The one retailer without generation incurred large losses because of not being hedged adequately and its owners sold its customer base to two of the SOE generators and left the business. This further consolidated retail activities into government ownership.

The major generator/retailers were also becoming increasingly regional in both their generation and retail activities and competition for customers, after initial

² Theoretically, the correct economic response would have been a sharp rise in retail prices but that did not happen. Instead, a government plea for savings, combined with various industry initiatives, achieved a 7% reduction in demand during the crisis.

flurries, was decreasing. This resulted in ongoing concern about the lack of retail competition as the four major players dominated both the supply and demand sides of the market: and, of them, only one was truly a nation-wide retail operator.

By mid-2002, it was recognised that the arrangements proposed for self-regulation of the industry were not suitable and the Government considered further options before establishing, in 2003, a government-appointed Electricity Commission to be the chief regulatory agency for the electricity supply industry.³ Its function is to govern the electricity sector, taking primary responsibility for achieving the Government's policy objectives. Its responsibilities include: making available information on supply and demand; maintaining security of supply; contracting for reserve generation for dry years; transmission system planning, pricing and investment decision-making; functioning of the wholesale market, including improving demand-side participation in it; setting terms and conditions for the use of distribution lines by competing retailers; and introducing consumer protection measures such as minimum terms and conditions for consumer contracts.

At the time of writing the author's 2005 paper, the Electricity Commission was implementing these tasks⁴ whilst the Commerce Commission initiated its regulations for the control of lines business charges, based on a CPI-X price path threshold and a quality threshold.

IMPACT OF EXTERNAL EVENTS IN 2006

Three external events occurring in 2006 led to further changes in the sector environment. Heavy snow in the South Island resulted in power cuts in rural areas and towns lasting several weeks in some cases and a mechanical failure on an overhead line at one of the main substations supplying the City of Auckland led to loss of power to the city for around eight hours. Considerable pressure was brought to bear on the Electricity Commission and transmission operator (an SOE) by the Government as a result of these incidents, leading later, amongst other things to the departure of the chairman of the Electricity Commission. The Government also considered it necessary to announce that it would review certain aspects of its energy policy to place more emphasis on security of supply.

Almost at the same time, the Commerce Commission announced that it intended to take control of the retail prices charged by the country's largest electricity distribution lines business for alleged breaches of the regulations. The company responded, saying that investment would be curtailed and security of supply would suffer. The matter

³ Confusingly, a committee of Parliament, the Commerce Committee, established an inquiry of its own into the industry at the same time.

⁴ It was given its full powers only in or around October 2004.

attracted considerable publicity as the distribution business was listed on the stock exchange and its share price was affected adversely.

These incidents demonstrated that in spite of having set up a system to allow the market and private sector monopoly lines business owners to determine their actions in accordance with commercial imperatives, the Government still considered itself responsible, in the national interest, for the adequacy and security of electricity supply.

CURRENT ISSUES

In spite of the positive impacts of the reforms, reported by the author in 2005, most of the issues identified then still characterise the sector and have been joined by others. The main issues at present are these.

Changing Structure of the Energy Sector

The structure of the energy sector in New Zealand is changing, due amongst other things to depletion of the country's natural gas reserves and an accompanying change in the retail price of gas as new fields are explored and brought into production. Other factors include the changing economies of wind-generated electricity and policy changes by the Government to reduce the effects of climate change. The result is an added level of uncertainty in the sector and a further tightening of the electricity demand-supply balance.

The situation is compounded by a lack of adequate investment over the last decade in the transmission system although opponents of that viewpoint say that there is still time to add the requisite capacity even if there is doubt about where it will be required.

As can be imagined, the debate surrounding the future structure of the energy sector has quickly become entangled in arguments over environmental protection and other considerations.

Impact of Consumer Trust Ownership

The ownership of many of the distribution network businesses by consumer trusts is another issue as it has the effect of blocking reforms in the distribution sector and has created governance problems in some cases. The trusts argue in their defence that consumers prefer trust ownership as the perception is that it keeps electricity retail prices down.

Inadequacy of Wholesale Electricity Prices

The low level of wholesale electricity prices reported by the author in 2005 persists and thus the doubt remains about whether the needed investment funds for new plant will be forthcoming to the full extent required.

The small number of market participants, small market size and tight supply-demand situation are expected to continue

to contribute to a thin hedge contract market, which in turn will continue to place stress on companies during dry weather years when the ability of hydropower generators to produce electricity is constrained.

Structural Flaw in the Market

A structural flaw in the market, reported in 2005 by the author, is the preponderance (around 60%) of hydropower generation in the system with limited storage. This continues to lead to ambiguity in prices with periods of excess supply distorting price signals to the market, particularly in relation to the commitment of new generation investment. The nature of the market thus strongly favours vertically integrated (generation and retailing) companies that act as a natural hedge and as a barrier to new entrants.

Lack of Retail Competition

There is continued evidence that efficiency gains in the distribution lines businesses have been captured by retailers and not passed on to retail customers. There is little active prospecting for customers and the generator/retailers are content to maintain the balance between generation capacity and retail sales that they currently enjoy, effectively self-hedging and blocking new entrants.

Growing Regulatory Risk and Compliance Costs

The sector is accompanied by increasing regulatory risk, whether perceived or actual, and growing compliance costs. The increasing risk acts, amongst other things, as a deterrent to new investment. The costs arise through the growing numbers of staff and consultants employed at the Commerce and Electricity Commissions and by the companies themselves. Both factors are of concern.

A detailed discussion of these issues is beyond the scope of this paper but several of them have been discussed in the author's 2005 paper. Suffice it to say that continuing structural and regulatory change in the sector is not conducive to investment and may weaken future market outcomes.

CONCLUSION

In conclusion, the principal objectives of the reforms – to deliver lower prices to customers and to ensure adequate and economically efficient supply – have not yet been achieved, with only transmission and distribution charges falling in real terms and with inadequate investment being made over the last decade in both generation and the transmission grid.

It continues to be the case that New Zealand has created a model that is a mix of market and regulatory forces and a growing tendency towards political direction. It is likely that further changes will be needed in the sector before it is determined whether, ultimately, the industry should be market or regulatory driven.

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