

# AN EXAMINATION OF THE REASONS AND OUTCOMES ASSOCIATED WITH THE RESTRUCTURING AND PRIVATISATION OF ENERGY MARKETS DURING THE 1990s

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## Introduction

What were the key drivers and results from energy sector reform of the 1990s? This paper examines this question, having particular regard to the privatisation programme of the United Kingdom, the modern birthplace of industrial restructuring and privatisation.

Also considered at length is the privatisation of British Telecom. While not an energy company, BT proved to be a cornerstone for the way in which energy companies have been privatised since. Analysis of the BT and later privatisations of British Gas and the UK electricity sector also raise questions over which of pre-privatisation restructuring and the actual asset sales has been most beneficial to stakeholders.

Finally, consideration is also given to reform that came later in Australia and New Zealand, with some conclusions being made regarding the need for continuing post-privatisation reform.

## The United Kingdom Experience

### Privatisation as a New Paradigm – A Background

Privatisation is synonymous with Margaret Thatcher's Conservative government of 1979 – 1990. However, the British model of privatisation ought to be called "reprivatisation", for the die for the sale of state owned businesses was cast in the UK following WWII. Then, Clement Atlee's socialist Labour Party swept into power and a consequence was the nationalisation of the coal, electricity and gas industries between 1947 - 1949.

The model for public ownership of Britain's energy businesses was not seriously questioned until the late 1970's. The first modern privatisation was of energy company British Petroleum (BP), signalling the first stage of the British privatisation programme. During this period, which lasted until the privatisation of British Telecom (BT) in 1984, state assets that were sold were businesses already operating in a competitive marketplace (de Montford, 2002).

### The Sale of British Telecom – A Model for Private Network Utilities

Early on in the Thatcher administration, the government was faced with the need to make a massive injection of capital into BT. However, this came when the Conservatives were committed to reducing public sector borrowing (Green & Haskell, 2000). The solution was the privatisation of BT, an ironic conclusion given that this was the same reason the Atlee government nationalised key businesses in the post war era.

BT was sold to the public through an initial public offering, partly to create widespread public ownership, thereby making re-nationalisation of BT difficult for Labour governments that followed.

Access to the capital markets was a most positive outcome for BT and other businesses privatised since. In the five years following BT's privatisation, some £15 billion was invested in the telecommunications network, more than double the level of investment in the five years leading to the sale of BT (de Montford, 2002).

BT's sale had the added outcome of causing labour reform through the separation of politics and commercial objectives. Trade unions and collective bargaining came under hitherto unfelt pressure from the now privately owned BT. With the British coal miners strike of 1984 – 1985 happening in parallel, this feature was not lost on Thatcher's government.

### *Protecting Consumer Interests*

A question for government was how to pass the benefits of reduced labour costs and other efficiency gains onto consumers. As BT was a natural monopoly, the protection of consumer interests also created a need to find a balance between regulation and competition. The government anticipated that market forces would ultimately regulate privatised businesses, but that some regulation would be required until then (Green & Haskell, 2000). An early challenge, then, was the construction of a regulatory system that would provide suitable consumer protection. The outcome of this thinking was the establishment of an independent telecommunications regulator by statute.

What would this new regulator use as a basis for its determinations? The approach of controlling rates of return used in the United States was considered, but a price control alternative was developed instead. This alternative required BT each year to drop its prices by inflation less a factor X. The system became known as RPI - X and became a benchmark for the regulatory system developed for most electricity and gas businesses that were privatised in the 1990s.

## **British Gas – The First Major Energy Privatisation Under the “BT Model”**

### *Mixed Results*

In 1982, the Oil and Gas (Enterprise) Act paved the way for British Gas's privatisation in and third party access to its pipelines to encourage competition. However, North Sea gas producers sold most of their gas to the privatised British Gas and did not favour new entrants. Differential transport pricing combined with limited information disclosure by British Gas to market participants created further impediments (Green & Haskell, 2000). Consequently, little competition in the privatised gas industry occurred until a range of strong measures by the gas regulator, OfGas, and the Mergers and Monopolies Commission brought about a restructuring of British Gas and a fully competitive market in 1996. A full demerger of British Gas into BG (transport, International and exploration & production) and Centrica (Gas supply, services and retail) followed in 1999.

### *Reform Vs Privatisation – Which Yielded the Best Outcomes?*

The post privatisation review and restructuring of British Gas brought about the benefits that the BT sale proved could occur, but the pre-privatisation restructuring of British Gas proved not to attain the British government's stated goals of a better deal for consumers.

A later analysis of various levels of pre-privatisation reorganisation caused Green and Haskell to question whether the benefits of privatisation came through the transfer of ownership or the industrial reform that preceded it. Robinson contended that liberalisation of privatised industry was actually "not one of its main features: the emphasis was on ownership transfer". Nonetheless, reform became more involved with each privatisation, as was the case with restructuring of the electricity industry.

## **Electricity Sector Reform**

At the heart of restructuring the electricity industry was the division of generation, transmission and

distribution/ retail activities and the creation of a wholesale electricity market (pool).

Transmission was considered to be a Natural Monopoly and not capable of competition, so responsibility for transmission was vested in the heavily regulated National Grid Company, which is also responsible for operation of the pool.

### *Distributor/ Retailer Efficiency Gains Underestimated*

In 1990 all twelve regional electricity companies (RECs) responsible for distribution and electricity retailing in Britain were privatised. Regulation of these businesses was also by reference to price control using an RPI – X formula. However the cost savings actually achieved by the RECs was considerably greater than that the regulator expected and these savings were passed on through super profits to shareholders until the regulator imposed significantly higher X factors during later regulatory reviews.

### *Generator Sales Produce Insufficient Competition*

In 1991 the two generating companies, National Power and PowerGen were privatised. These generators supplied 70 percent of Britain's electricity. As the dominant participants, they were able to exert significant control over power supply. This dominance was eventually broken as a result of two actions:

- Regulatory pressure by the regulator forcing the two companies to sell off some of their power stations and;
- Competitive pressure through the entry into the market independent power producers (IPPs) that developed high efficiency combined cycle gas turbine facilities such as Teeside, Barking and the Medway facility.

These projects had the benefit of a lower project cost per megawatt and cheaper fuel costs than coal fired plant. Thus, gas-fired generators were able to sell wholesale power more cheaply than their coal-fired counterparts. Gas-fired power stations could also dispatch more quickly than coal-fired plants, making gas-fired stations a cost-effective source of power right across the load curve.

Overall, IPPs had the effect of reducing wholesale electricity prices and Britain's reliance on coal for electricity production, providing greater fuel diversity and security of primary fuel supply for the country.

## *Development of New Financing Techniques and Hedging Markets*

IPPs were financed on a stand-alone basis using limited recourse financing techniques, which have now become a default form of financing new energy capacity. In Asia, for example, while privatisation of state-owned utilities has been much slower than in Europe and Australasia, the project financing of IPPs has found favour. The two UK Gencos, finding growth prospects limited at home, also played a large part in developing the Asian IPP market. However, several forays into that region, particularly with National Power in Pakistan, Malaysia and China were unsuccessful.

The development of private financing of IPPs in the UK also forced lenders to consider the risks of selling into a volatile wholesale market. One answer to this was the development of contracts for differences, made between generators and retailers so that payments would pass between them such that each achieves an agreed strike price. A similar development occurred later in Australia, through the development of vesting contracts. However, in New Zealand the electricity hedging market has not become as well developed and generators have instead bought retail electricity businesses to create a "natural hedge".

## **Later Privatisation Outcomes - Australasia**

The distinctions between the British model of reform and Australasian models centred around:

- Further dividing distribution and retail into separate operations. This occurred in both the gas and electricity sectors and helped to avoid the excess profits UK electricity distributors achieved;
- Creating a market operator that is separate from transmission;
- The introduction of greater levels of competition than was seen in the UK gas and electricity privatisations.

### **New Zealand – Some Outcomes of Reform**

The hand of industrial reform has touched the New Zealand energy market more than it has been by privatisation. While New Zealand was an early adopter of deregulation and privatisation by comparison with Australia, progress slowed at the end of the 1990's under the labour government of Helen Clark. The energy businesses that have been privatised in New Zealand are Petrocorp (1988), New Zealand Liquid Fuels (1990), the Power Company (1998) and Contact Energy (1999). Electricity generators and retailers Genesis, Meridian and Mighty

River, together with Transmission company Transpower and coal mining company Solid Energy remain as State Owned Enterprises. The labour government has banned further privatisations but is cautiously receptive to public private partnerships.

The sale of Petrocorp, an oil and gas exploration and production company, gives some basis for the Labour government's disquiet. In 1987, the government divested 30% of PetroCorp through a listing and the company became wholly owned by Fletcher Challenge the following year. The sale of Petrocorp becomes significant as the Maui gas field is depleted, yet replacement gas has not been found. Accordingly, there is a risk of gas fired electricity generation plant being decommissioned and stranded costs occurring. If so, it would be questionable whether a profit maximising commercial gas exploration company is more motivated in the search for new gas resources than a governmental organisation seeking wider strategic benefits.

A further and as yet unresolved outcome of New Zealand energy sector reform exists. New Zealand is now facing dry year shortages of electricity during winter periods. This is partly due to a significant reliance on hydro-electric generation, yet renewable energy sources will only increase as a result of New Zealand's agreement to the Kyoto Protocol. It is also due in part to systemic problems - in the absence of some degree of centralised generation planning, the government relies on market participants reacting to market signals and installing new capacity before shortages occur.

A further compounding factor to New Zealand's electricity supply dilemma is that private companies will naturally aim to maximise profits through *inter alia* maximising consumption while marginal returns are positive. That approach is not conducive to demand side management, unless regulatory incentives are imposed.

Overall, New Zealand energy reforms have been positive, but conclusive outcomes have yet to be achieved. Therefore, the post-privatisation reform process must continue for the sector to achieve maturity.

### **Australia**

In Australia, the emphasis on competition was enshrined in the National Competition Policy following the Hilmer Report. While the coal sector was largely inherently private and competitive, Australia's gas and electricity businesses were not and they were not in all cases separate. In Western Australia, for example, SECWA was an integrated gas and electricity that was later separated into AlintaGas and Western Power. The latter of these is still state owned, with AlintaGas having been privatised despite having several of the anticompetitive features

(Harman, 1999) that hampered the privatisation of British Gas.

The federal nature of Australia's political system meant that privatisation of Australian energy businesses had a further layer of complexity to overcome by comparison to the programme of privatisation in the United Kingdom. Each State has developed its own programme, but with differing timetables.

The balance between regulation and competition is also not uniform amongst the states (e.g. Western Australia's Office of Energy does not impose economic regulation, but open access to third parties is required (Harman, 1999). By comparison, in Victoria, competition in generation was introduced through the creation of five generation companies (compared to the UK's two) but significant revenue cap regulation also exists.

Victoria's privatisation programme has been successful as a capital raising exercise, but concerns remain about the prices paid for privatised businesses. The Loy Yang power station, for example, relied heavily on a tax driven structure that has proved fragile. The consequence is that the state treasury has yielded substantial proceeds, but without the tax benefits the project is overgeared. A lesson for future privatisations might be a requirement that the purchaser demonstrates that a credit rating of a suitable standard (e.g.  $\geq$  S&P BBB+) is obtained.

Consumption of brown coal by generators like Loy Yang is posing an increasing problem in Australia, accelerated by grid interconnections between states. Victorian Brown coal generators have been able to compete on price more effectively than their black

coal burning competitors, yet brown coal consumption poses environmental considerations of increasing importance. The dominance of large low cost brown coal consuming generators continues to be a barrier to entry for renewable sources.

The brown coal problem in Australia contrasts with New Zealand's high level of renewable energy capacity that was developed before reform. Ironically, it is unlikely that New Zealand would be able to develop a similar level of capacity today due for economic and environmental reasons.

## Conclusions

The British programme of energy reform is the foundation for restructuring in other countries. While the initial motivation might have been asset transfer, the benefits of deregulation and privatisation include: maximising competition by separating out those components capable of competition; end user price reductions; increased productivity and customer service; capital raising for government and a reduction in public debt; the introduction of foreign investment; energy business having access to capital markets and improved financial performance for shareholders. However, some uncertainty remains about whether a transfer of ownership is necessary to achieve these outcomes. Achieving the right balance between regulation and competition is also a continuing debate. That debate is fuelled by private companies having a profit maximising objective that encourages consumption at the expense of demand side management. These outcomes will continue to be debated as efficient resource management increases in importance.

## References

- Barry, Phil (2002). *The Changing Balance between the Public and Private Sectors*. Paper prepared for the New Zealand Business Roundtable. Wellington: Astra Print
- De Montford, R (2002). *Privatisation: Sharing the Experience*. A paper presented by Pricewaterhouse Coopers to Japanese executives, February 2002. Retrieved 17 March 2003 from the World Wide Web [www.pwcglobal.com](http://www.pwcglobal.com)
- Green, R & Haskel J (2000). *Seeking a Premier League Economy: The Role Of Privatisation*. A paper prepared for the CEP/IFS/NBER conference. Retrieved 17 March 2003 from the World Wide Web <http://www.nber.org/books/bcf/privatization9-12-01.pdf>
- Harman, F (1999). *Restructuring Public Utilities in Western Australia: an Assessment of the impact of National Competition Policy*. A paper prepared for presentation at the 28<sup>th</sup> Annual Conference of Economists. Retrieved 17 March 2003 from the World Wide Web [cleo.murdoch.edu.au/teach/econs/cfe/](http://cleo.murdoch.edu.au/teach/econs/cfe/)
- King, Stephen & Maddock, Rodney (1996). *Unlocking the Infrastructure – The Reform of Public Utilities in Australia*. Sydney: Allen & Unwin
- Nestor, Stilpon & Mahboobi, Ladan (1999). *Privatisation of Public Utilities: The OECD Experience*. Organisation for Economic Co-Operation And Development. Retrieved 17 March 2003 from the World Wide Web [www.oecd.org/pdf/M000015000/M00015630.pdf](http://www.oecd.org/pdf/M000015000/M00015630.pdf)

Robinson, Colin (1997). *Pressure Groups and Political Forces in Britain's Privatisation Programme*. Retrieved 17 March 2003 from the World Wide Web

Sidorenko A, Findlay C and Bosworth M (2002). *Australian and international experiences in market policy design and implications for the asian developing countries*. Retrieved 17 March 2003 from the World Wide Web [www.adb.org/Documents/Events/2002/ADF/sidorenko\\_paper.pdf](http://www.adb.org/Documents/Events/2002/ADF/sidorenko_paper.pdf)

Willis, James (1999). *The New Zealand Gas Industry Legal and Commercial Highlights of 1996 and 1997: Competition Emerges*. Internal publication. Retrieved 20 March 2003 from the World Wide Web [www.bellgully.co.nz/publications/ener\\_1999\\_05\\_nz\\_gas.html](http://www.bellgully.co.nz/publications/ener_1999_05_nz_gas.html)

United States Department of Energy (1997). *Electricity Reform Abroad and U.S Investment*. Departmental publication. Retrieved 19 March 2003 from the World Wide Web [www.eia.doe.gov/emeu/pgem/electric/es.html](http://www.eia.doe.gov/emeu/pgem/electric/es.html)