

**The restructuring and sale of
Victoria's electricity industry:
is it worth it?**

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Foreword

Why should the Brotherhood of St Laurence care about how electricity is produced, distributed and sold?

This seems an issue distant from more immediate concerns of providing services for low-income people or even advocating for improved incomes through which they can meet their needs.

There are several reasons for producing this paper.

First, because of concerns expressed by our service staff—and the staff of many other agencies—about the experiences of the users of their services in using and paying for electricity.

Electricity is one of a group of commodities and services that all households need and for which low-income Victorians often have trouble paying. What may appear to be small changes to the price of electricity or to the practices of the supplier can have a significant impact on the practical living standards of low-income people, particularly families with children.

Such a situation developed in Victoria over 1992-94. Electricity price rises, coupled with increases in other state taxes and charges, were sufficient to have a marked impact on the standard of living of those Victorians dependent solely on social security pensions or allowances or on very low wages. Since these charges were levied on items which people had little choice but to pay, they meant an effective drop in income—a five per cent fall for a typical sole parent pensioner.

As discussed in this paper, this decline in living standards was exacerbated by less generous treatment of customers with payment problems by the newly corporatised electricity supply bodies.

The second reason for this paper is that the changes taking place in electricity supply are paralleled by changes to other organisations and services that have, in various ways, underpinned living standards. The reconstruction of services in pursuit of efficiency, and the transfer of responsibilities from public to private hands, have raised profound concerns over the extent to which the community will be able to pursue the common good and social protection in the future.

As an organisation that focuses on material poverty and hardship, the Brotherhood of St Laurence takes the economic dimension of human existence very seriously. We have a long-standing belief that policies for

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social reform need to make economic sense. Equally, we affirm that policies for economic reform need to make social sense.

In this case, the Brotherhood is also responding to the direct call by the Victorian Government to look seriously at the economic advantages which it is seeking to achieve:

Removing debt, establishing a viable and efficient industry will pass value on to the whole community, manifest in cheaper electricity, choice, better service, and carried through to cheaper transport, goods, services and greater employment opportunities.

The Government agrees that the needs of the underprivileged and poorer sections of our community should be addressed in undertaking reforms of this kind. By introducing greater efficiency and lower prices, the Government believes it is addressing these needs far more responsibly than maintaining the status quo of poor productivity, excess capital investment and higher than necessary prices for electricity. Together with improvements in the effectiveness of concessions these reforms will benefit low-income households as well as Victorians generally. I urge the Brotherhood of St Laurence to recognise the importance of these reforms to all Victorians. (Stockdale 1995)

This paper assesses the likely outcomes of these reforms. It concludes that the benefits are less tangible than asserted; that real risks and uncertainties remain; and that positive outcomes will involve more government intervention.

For these reasons the Brotherhood believes that the Victorian community would be well served by a fuller and more open debate upon the merits of electricity privatisation before it proceeds further.

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July 1995

Summary

The Victorian Government is engaged in restructuring the electricity industry into a set of privately-owned competitive enterprises, operating under licence in a regulated marketplace.

The Government's fundamental aim is to produce lower electricity prices for business, in the belief that broader economic benefits will flow.

The Government plans, heavily advertised in the media, have sparked considerable public debate, with public opinion in Victoria firmly in favour of the public ownership of electricity suppliers. Welfare organisations have been particularly concerned at the impact on low-income households, especially given price rises, more disconnections and the heightened demands on emergency relief agencies for energy bills over the past two years.

This paper seeks to answer three questions:

1. Is there a need for the restructuring and sale?
2. What will be the consequences?
3. How will low-income households be affected?

The data readily available on the SEC's performance and used by advocates of industry reform do not support the Government's assessment that the SEC had too much debt, had prices that were too high or was very inefficient:

- the SEC debt burden was under control and does not appear to have been an issue of substance or requiring government intervention;
- Victorian electricity prices had been falling in real terms over the 1980s and remained low in global terms and amongst the lowest in Australia;
- measured against the benchmarks of capital and labour productivity seen by the advocates of microeconomic reform as indicating 'best practice', the SEC's improvement was rapid and ahead of most other states so that by 1992-93, it had captured most of these potential benefits; and
- on measures of 'total factor productivity' which impute a charge for all capital used, the SEC—reflecting the greater capital intensity of Victorian brown coal generation—was markedly less efficient than other state authorities over the 1970s, but largely closed this gap over the 1980s.

Explanations of the SEC's position and prospects in 1992-93, particularly when drawing comparisons with Queensland, need to acknowledge the

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depth of the recession in Victoria which meant a very difficult trading environment for the SEC from 1989 to 1993.

Similarly, the performance of the Victorian electricity industry from 1993-94 onwards will be influenced by the economic upswing.

There is no reason why the SEC could not have continued to pay its debts and pass on the benefits of its improved productivity both to the Government and, through lower prices, to the community as it had done over the last decade. The Government does not appear to have published any information suggesting otherwise.

It is far from clear that the result of the changes will be a significantly more efficient electricity industry than would have been achieved under other policies. Informed opinion is far more divided as to the appropriateness of the restructuring and privatisation than the Government suggests:

- the benefits likely to result have been significantly overstated;
- the current policy ethos of maximising competition is not guaranteed to produce markedly superior outcomes, either in terms of efficiency or in broader terms; and
- objections to the current approach are far better-founded than the Government has been prepared to admit.

The facts of past industry performance and that of competitors therefore do not support the view that privatisation is essential for the good of the state. It is not true that the Government has no alternative but to proceed against public opinion.

However, the arrangements being set in place by the Government are likely to produce 'successes'—in the form of falling prices, high profits and higher employee salaries—which may be attributed to privatisation and competition. These will in fact result more from the economic upturn (leading to faster growth in electricity sales), previous productivity improvements within the SEC, and government intervention. Such government action includes both the creation and regulation of the market, the lifting of domestic prices in 1992 and mandating real price reductions over the next five years, and the discounting of public equity built up in the SEC so as to achieve these price outcomes.

A major feature of the restructuring which has already take place is a regressive redistribution of the system cost burden away from business and onto households. If pursued vigorously in the future, this will tend to lead to higher prices for households.

The restructuring of the electricity industry, in concert with the price rise, created real hardship for a large number of low-income households over

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recent years. Disconnection and emergency relief figures are just the tip of the iceberg, although there have been other factors, most particularly other increases in taxes and charges, which have also contributed to the hardship.

The risks of further change are similarly moderate taken singly, but of real concern taken as a group:

- that domestic prices will remain higher than they would have under unchanged policies, as more of the burden is forced onto households by competition for the high-profit commercial customers who gain the benefit of competition;
- that competition may lead retailing companies to try to 'off-load' low-profit households onto some form of 'prepayment meter arrangement, which will actually add to the costs both direct and indirect of gaining electricity for those households;
- that the regulatory apparatus will prove inadequate to the task of developing consistent and adequate responses to the diverse needs of disadvantaged people on the part of the electricity suppliers; and
- the Victorian Government will regard the whole business of electricity supply as no longer its responsibility with a new system in place, and will fail to improve those aspects of the 'safety net' which are its contribution.

While commercialisation and restructuring has produced problems for low-income people discussed in this paper and by other organisations, the sale of the bulk of the industry into private hands poses additional concerns:

- in the longer-term privatisation will weaken the public consensus on entitlement to domestic energy use, threatening energy concessions and other assistance schemes, unless a much stronger regulatory regime develops; and
- if the concerns identified by critics of the Government's approach emerge, and economic gains do not eventuate, reversing the sale of separate elements will be very difficult.

Given uncertain benefits, existing problems and some serious risks, the Brotherhood of St Laurence, along with other church and welfare organisations, has proposed that the Government suspend its planned sales of electricity assets pending a public inquiry. Given widespread dissatisfaction in the community over the sale, this remains the most appropriate way of reassuring the public and is likely to provide an important insurance that the restructuring will achieve the best long-term outcomes for Victorians, particularly those on low-incomes, the prime concern of the Brotherhood of St Laurence.

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Introduction

The Victorian Government is engaged in restructuring the electricity industry into a set of privately-owned competitive enterprises, operating under licence in a regulated marketplace.

This is a profound shift from the pre-1992 structure, which had a single generating, transmission and distribution authority, the State Electricity Commission of Victoria (SEC), responsible for almost the entire industry, including electrical safety standards. While eleven councils distributed electricity in their local government areas, and a number of independent power sources contributed power to the grid, the SEC was essentially a monopoly supplier.

The Government's plans are also very different from changes in other states being undertaken in the name of microeconomic reform, which will generally see state-owned monopoly generators involved in more competitive sale of electricity through a national grid to large buyers, including heavy industry, power traders and publicly-owned distribution entities (Taylor 1995).

The Victorian Government plans, heavily advertised in the media, have sparked considerable public debate, with public opinion in Victoria firmly in favour of the public ownership of electricity suppliers (Saulwick 1995). Welfare organisations have been concerned at the impact on low-income households, particularly given price rises, higher rates of disconnection and the heightened demands on emergency relief agencies for energy bills over the past two years (VCOSS 1995).

At a March briefing of the leadership of welfare organisations and churches, a group which had begun to strongly voice concerns over the restructuring and proposed sale of the electricity industry, the Treasurer and Premier of Victoria spelt out clearly the purpose and rationale of their plans (Stockdale 1995).

The Government's fundamental aim is to produce lower electricity prices for business, in the belief that broader economic benefits will flow. The restructuring and sale are a necessary means to this end.

The central importance of the electricity industry to economic and social life, the sheer size of the sums involved, and the practical importance of essentials of light and power in the lives of low-income households mean that the Government's arguments need to be taken very seriously.

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The crucial issue for the Brotherhood of St Laurence, however, is whether the risks to low-income households are offset by the promise of long-term benefits for low-income households.

The first section of this paper explores the economic case for the restructuring and sale. It examines the Government's rationale for restructuring and sale through its formal documentation (Victoria 1994), the themes of the Treasurer's presentations (Stockdale 1994), the research and argument from which these derive (Moore & Porter 1991), including data collected by the Industry Commission (IC 1991a, 1991b, 1995) and other analysts (notably IAC 1989a, 1989b; SCNPMGTE 1994, 1995; and BIE 1994).

The next section of the paper then summarises arguments and speculation as to the likely consequences of the restructuring and privatisation.

The third section of the paper then examines the possible consequences for low-income households, discussing the Government's agenda of shifting a higher proportion of the system costs off business and onto households, the limited nature of energy assistance and the extent of regulation necessary to achieve more responsive and humane customer practices in the future.

The paper then draws its conclusions together.

THE ECONOMIC CASE

This section of the report examines the economic case for restructuring, for these are the terms in which the Victorian Government has framed its case:

The Government agrees that the needs of the underprivileged and poorer sections of our community should be addressed in undertaking reforms of this kind. By introducing greater efficiency and lower prices, the Government believes it is addressing these needs far more responsibly than maintaining the status quo of poor productivity, excess capital investment and higher than necessary prices for electricity. (Stockdale 1995)

What is the fundamental aim?

There are two reasons why Governments worry about keeping down prices of electricity, particularly to business. Traditionally, the focus has been on cheap energy as a way of attracting investment. This thinking is still behind some explanations of the Victorian Government's purpose: thus 'recapturing our low-cost energy advantage' is the title of the Treasurer's presentation (Stockdale 1994).

However, this desire for 'electro-industrialisation' is today a rather unfashionable objective, and has largely been replaced by the goal of micro-economic reform. The aim of such reform is to unleash the power of competition to ensure that cheaper power is produced, with the cost reductions flowing through to all parts of the economy, producing lower consumer prices and thus higher employment and living standards.

This approach has been spelt out in reports of the Industries Assistance Commission (IAC 1989a, 1989b) and its successor the Industry Commission (IC 1991a, 1991b), which provide considerable data on the electricity industry's performance. This has been further updated by a special inter-governmental Steering Committee on National Performance Monitoring of Government Trading Enterprises (SCNPMGTE 1994, 1995) and by research of the Bureau of Industry Economics (BIE 1994).

If a major aim of reform is to lower business costs, it is worth noting how important electricity is to business.

Electricity is the service provided by governments which contributes most to business costs, outweighing telecommunications, post, gas, transport or water (IAC 1989a, p3), although it is not in fact a very large direct cost to

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business: electricity bills make up just 1 per cent of business costs. This is roughly similar to the impact of state payroll tax on businesses.

Although some particular metals processing is extremely electricity-intensive (aluminium smelters, for example), heavy industry as a whole is not particularly so. The business class for which electricity bills make up the largest fraction of their direct costs (5 per cent) is actually restaurants (IAC 1989a, p60).

However, when the indirect effects of electricity prices (on the prices of other business inputs) are taken into account, electricity influences business costs by around 3 to 5 per cent (BIE 1994, p2).

There is no evidence that Victorian businesses are more electricity-dependent than in other states. Neither does it appear that they were more dissatisfied with the SEC than their counterparts in other states (IAC 1989a, Tables E21-23).

Nevertheless, the Government's assessment of the SEC is that its performance was unsatisfactory: 'charges were too high, it had too much debt and it was inefficient' (Stockdale 1994). Each of these concerns warrant examination.

Was the SEC debt a problem?

The issue of SEC debt is perhaps the easiest matter to quantify—and the point over which there appears to have been most confusion in the public debate.

The size of the debt burden

The Victorian Government has pointed to the high level of debt carried by the SEC, suggesting that this rose from \$4 billion in 1981-82 to \$9.5 billion in 1992-93. While there has been some controversy over what is appropriately classified 'debt', as opposed to other liabilities held by the SEC, this increase is actually a fall in real terms. More importantly, it is only half as significant in terms of the size of SEC sales (Table 1).

Table 1
Measures of SEC liabilities

	1981-82	1992-93
Liabilities (\$b current) ¹	4.9	9.5
Liabilities (\$b 1981-82) ²	4.9	4.6
Liabilities to sales (%)	388	202

Source: SECV 1983, Stockdale 1994

1. Taken as total liabilities less reserves for 1981-82, from Stockdale for 1992-93
2. Deflated by CPI

Data reported to the SCNPMGTE (1994) also confirm that debt declined as a problem for the SEC over the late 1980s, with debt to equity ratios—a standard way of examining the seriousness of a company's debt burden—halving over five years (Table 2).

Table 2
SEC debt to equity ratios

	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93
Debt to equity (%)	861	727	780	402	398	342
Liabilities to equity (%)	946	812	861	444	443	385

Source: SCNPMGTE 1994, p56.

Liabilities include some items (eg money owed to trade creditors) not counted as debt

These ratios are on an historic cost basis and tend to underestimate the extent of equity retained within the SEC. Moore & Porter (1991, p4-3) present data suggesting that in current cost terms, the liabilities to equity ratio of the SEC in 1989-90 was only 126%.

One way in which the SEC reduced its debt burden was through the sale of a share of Loy Yang B to Mission Energy in the early 1990s. But even without this there was a steady if gradual fall in the debt to equity ratio, achieved by expanding sales and income rather than by substantially repaying the principal. This was a conscious choice by the SEC and the Government, who put a high priority on keeping prices down while contributing a dividend to the Government. Debt reduction was a lower priority.

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Concern over debt was, however, a preoccupation of the Tasman Institute/IPA report (Moore & Porter 1991) which offered significant guidance to current Government policy. This report sought to conflate state budget and non-budget sector debt, asserting that by underwriting SEC debt, the state was diverting resources that could be used for other, more socially valuable, purposes. At times the argument was deliberately mischievous, for example mixing the 'State' (the geographic and economic entity) with the 'state' (the Victorian public sector) in what seems a striking example of intellectual dishonesty:

In 1989-90 Victorian state enterprises accounted for around 4.2% of State product, 4.6% of state employment but had generated 46% of state indebtedness. (Moore & Porter, p4-2)

The public discussion of SEC debt has been confused in similar manner since then.

Why was the debt so large?

Power generation requires substantial capital investment in new power stations for several years before any power is sold. Different generating technologies require different lead times—brown coal stations are time-consuming, gas turbines much quicker to install.

This investment can be financed out of retained profits, from borrowings or from private investment. Other things being equal, the first puts up prices in the short term, the last requires significantly higher prices in the long term. Provided the enterprise recovers a reasonable return on the capital it is employing, there is no reason why an expanding profitable enterprise should not have a significant debt. To do otherwise would unnecessarily compel today's consumers to pay in advance for a power station that will be enjoyed by future consumers.

What matters is not the size of a debt but the ability of an enterprise to service it and offer sufficient security to its creditors.

In circumstances of high inflation, an ambitious program of power station construction which is funded largely by debt (to be repaid when the plants come on stream) can produce a situation where the debt rapidly outweighs the book value (but not the real replacement value) of assets built earlier. While guaranteed to produce public nervousness, such a situation does not mean that the power authority is in financial trouble.

In Victoria, the Loy Yang project set out to virtually double the size of the SEC generating system over the 1970s and 1980s. This was a planning mistake, pointed out by community organisations on several occasions, as electricity demand failed to materialise as originally expected (Siemon

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1983). However, the SEC was not alone in this error. Across the industrialised world, lower growth in demand for electricity caught utilities, both publicly and privately-owned, on the wrong foot (Fitzgerald 1995).

There is no doubt that the problem was exacerbated by major cost-overruns on Loy Yang A and, more importantly, by much higher real interest rates than previously experienced in Australia. But even if this had not been the case, the arithmetic of high inflation would still have led to debt (and asset) to equity ratios becoming high. Similarly, the trend gradually reversed over the 1980s as Loy Yang came on stream and as the SEC adjusted to the now permanent high interest rates.

Was the debt a problem for the State?

The current Victorian Government's concerns over SEC debt levels appear to be partly a hangover from the Tasman Institute/IPA report and partly a reflection of the problems of the early 1980s. But are its concerns over SEC debt primarily an ideological instrument, as some critics have viewed its emphasis on budget sector debt?

There are at least two aspects of SEC debt relevant to the 1990s.

First, public enterprise debt can impact on the wider ability of the state to borrow. To the extent that (rationally or not) financial markets and ratings agencies regarded the SEC debt as part of the state's debt, it would mean higher interest rates for the state government.

According to the Treasurer (Stockdale 1994), selling major assets such as the electricity industry is the only way in the immediate future which would see the Government regain its AAA credit rating. Based on the figures in the Autumn economic statement (Victoria 1995a), the interest saving which would result from Victoria being upgraded to AAA is of the order of \$20m pa. This is around 0.3 per cent of Victoria's own revenue and far smaller than discretionary changes which the Government makes to revenue from time to time.

Not only is the additional interest cost relatively minor in the budget context, it is small by comparison with both the cash flows and asset values involved in the electricity supply bodies. As Davidson (1995a) has argued, the losses on selling SEC assets may far outweigh any gains from the AAA rating.

The importance of the AAA rating to the state budget is far less than often suggested and it is not a substantial justification for restructuring and privatisation.

Did the debt make the SEC uncompetitive?

The second issue raised by the Government is that the high interest payments pushed up prices, making the SEC uncompetitive.

The large interest bill of the SEC—around \$1 billion a year—was a consequence of a particular financing decision: that extra power stations needed to meet growing demand should be mostly funded from borrowings until they came on stream, so that prices were kept down in the meantime. While one dollar in three of SEC revenues going to pay interest can be construed as a dramatic state of affairs, the alternative would have been to raise prices earlier and use retained earnings instead to fund the construction of new power stations—or, as the SEC came to decide in the 1990s when it sold a share of Loy Yang B, to bring in outside equity which requires higher dividends and prices in later years.

Victoria's situation appears to have been far from unusual. The Victorian Government has used Queensland as an indicator of the SEC's failings, yet a comparison between the Victorian and Queensland electricity industries (Table 3) indicates that both systems carried significant debt in the 1980s. What distinguishes the two is not the interest burden, but the change in the operating sales margin (effectively the gross profit, before paying dividends, interest or tax) over the five years.

Table 3
Cost structures of Victorian and Queensland electricity supply, expressed as percentages of sales revenue

	1987-88		1992-93	
	Victoria	Qld	Victoria	Qld
Operating sales margin (%)	43	45	27	44
<i>which went to</i>				
Interest (%)	36	34	21	16
Dividends (%)	6	0	6	6
<i>leaving available to retain</i>	1	11	0	22

Source: derived from financial data in SCNPMGTE 1994, pp56, 64.

The government directives given to the SEC in 1980s—to keep prices down, to meet a rate of return target on assets, and to pay a significant dividend to the State in recognition of the public equity accumulated in the SEC over past years—meant that the SEC had limited capacity to

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retain earnings. Although the current Government now points to the interest bill and the dividends as the sources of the problem, it may be more accurate to say that the SEC passed on the benefits of lower costs, via lower prices, to its customers, and failed to extract the monopoly profits which it could have used to reduce debt faster.

Contrary to the suggestion that the SEC was simply able to pass on the costs of its poor investment decisions, the requirement for lower prices as well as a dividend was a deliberate discipline imposed by the then Government, and accepted by SEC management, so as to accelerate efficiency improvements within the organisation.

In retrospect, the squeeze over 1989 to 1992, the years when the recession bit so deeply in Victoria and when electricity sales growth disappeared, was too hard. The State Government, acting as shareholder, should perhaps have eased back on dividend requirements when times were tough. Instead, its own budgetary problems took precedence. Indeed, in 1991-92, the SEC was unable to generate enough operating profit to cover the dividend required after paying interest (SCNPMGTE 1994, p56).

This was a unique event, however, and the figures suggest that the real issue was the drop in the SEC's operating surplus over the recession. Dividends and interest were no more of a drain than in previous years.

The contrast with the experience of the Queensland industry is striking:

- for the past decade, demand for electricity has been growing in Queensland twice as fast as in Victoria (BIE 1994, p43);
- while Victoria experienced the recession more intensely than any other state, it was extremely mild in Queensland. Employment growth there was virtually uninterrupted by any slowdown, for example. By contrast, Victoria still has fewer jobs in mid-1995 than it had in 1990 (ABS 1995);
- in addition, the Queensland industry had no dividend requirement upon it until 1992-93; and
- as a result of all these factors, the Queensland industry was able to maintain high operating surpluses over the early 1990s, and by 1992-93 was paying out noticeably less of its revenue in interest payments than the SEC.

Claims of superior performance by the Queensland industry compared with the SEC need to be assessed in the light of these very different operating circumstances over the past few years. The economic downturn appears to have been a much greater handicap for the SEC than its debt level.

Were SEC charges too high?

There is little evidence to support the belief that Victorian electricity prices have been high by interstate or international standards, nor that they have been worsening. Interestingly, this was not a complaint of the Tasman Institute/IPA report (Moore & Porter 1991) which underlies much of the Victorian Government's approach.

Price movements

Over the 1980s, SEC real prices fell while they continued to rise in some other states (IAC 1989b, figure C3). The Industry Commission (1991b, figure 2.2) suggests that Victoria improved its position from fourth lowest to third lowest over the decade.

Later data (SCNPMGTE 1994) shows Victorian real prices falling much faster than the industry average, by 14 per cent in the last three years of the decade, before rising slightly in 1991-92 and further in 1992-93. These rises appear to have been because of the depth of the Victorian recession, the fall in inflation, SEC efforts to avoid borrowing and a Government requirement that the SEC pay the Government higher dividends, effectively as a tax on households. Prices rose in these years Australia-wide, though by varying degrees.

The impact of the Government's 1992 and 1993 price increases, taken across all consumer groups, appears to have been sufficient to move overall Melbourne electricity prices from second-cheapest of capital cities to the fifth-cheapest (ALP 1995, p14).

Despite this, the BIE (1994, pp10-13) found Victoria in 1993 to be cheapest source of power for industry in Australia in overall terms, ranking eighth out of the forty OECD utilities surveyed.

Victoria versus Queensland

Price comparisons between different states are inevitably controversial. Comparisons based on different tariffs or particular assumptions as to what constitutes a 'typical' purchaser can give quite different results. Particular care has to be taken with industrial price comparisons because some states have special prices which are confidential.

The Victorian Government has paid particular attention to Queensland, seen (as in other contexts) as a benchmark. The debate has not been helped by public confusion between 'prices' and 'costs'. For example, the ALP (1995, p14) claims that 1993 Melbourne prices were 9 per cent higher than in Brisbane (due to the 1992-93 price increases). The Government

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(Victoria 1994) claims, by contrast, that Victoria's 'average cost of supply' in 1993 was 40 per cent higher than in Queensland.

The two claims are readily reconciled. While prices in 1992-93 were quite close, the SEC was operating with a much lower profit margin, as shown in Table 3 earlier. Queensland does appear to be able to produce electricity more cheaply than does Victoria—not because SEC debts were too high or because the Government was extracting unreasonable dividends—but for other reasons. At least part of the reason lies in the much higher growth in demand in Queensland, which allows an enterprise far more ability to lower costs through economies of scale and other productivity improvements (Quiggin 1993).

Prices in Queensland have been declining in real terms more rapidly than in this state, but until 1992 the SEC had delivered real price reductions, met financial targets and retained its position as a cheap source of power for industry. Its ability to continue to do so was being challenged by economic circumstances in the recession. But there is no evidence that other factors within the control of the organisation threatened its continuing progress, let alone its viability.

The Victorian Government's belief that restructuring and privatisation is needed to restore cost competitiveness can be viewed as political unwillingness—a continuation of the same mindset exhibited in the squeeze on SEC profit margins in the recession—to accept the unpalatable possibility that another state might, through its own natural advantages, be able to produce power more cheaply than Victoria.

Was the SEC inefficient?

Electricity price comparisons are not the best guide to whether the industry is working as efficiently as it could. Natural endowments vary; it may be, as the Government suggests (Stockdale 1994), that the SEC's prices should have been far lower, given bulk brown coal and our more compact population. Conversely, prices are open to some political manipulation; it may be that prices were kept artificially low, and that the natural advantages of Queensland open-cut black coal outweigh those of Victoria.

A number of studies have sought to assess the efficiency of Australian electricity production. A range of techniques and measures have been employed (BIE 1994), but most attention has been focused on two sources of inefficiency, and these are also the complaints of the Victorian Government (Victoria 1994, p18):

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- poor capital productivity resulting from bad planning decisions (leading to too many power stations) and from under-utilisation of plant; and
- poor labour productivity resulting from over-staffing.

This discussion focuses on the SEC performance up to 1992-93, prior to the start of restructuring by the Victorian Government.

Capital productivity

To make best use of dollars invested in a power station, the owner has to build the station as cheaply as possible and then ensure that its output is as great as possible. Otherwise, capital is wasted.

Construction cost overruns are the more obvious problem, the 2000 MW Loy Yang A power station having been a major political scandal in the late 1970s and early 1980s. The actual cost of the station was far more than the original estimates—a result of high inflation, high real interest costs as well as cost overruns. These overruns were a result of design changes, poor industrial relations practices by the contractors and contract price variations, and totalled \$500 million (Rosenthal and Russ 1988, p127), increasing the capital cost by around 30 per cent.

Though a striking case, the Loy Yang A situation was not unique in Australia. Despite economies of scale and improved technologies, coal-fired stations became more expensive to construct over the 1970s (Rosenthal and Russ 1988, p50). However, much of the Loy Yang A construction also took place in the 'resource boom' atmosphere of rapid wage growth, when there was a very tight balance between supply and demand, and with a major new power user (Alcoa Portland) about to come on stream. By contrast, the construction of Loy Yang B has not suffered from any cost over-run (Scott 1995), and so presumably this is much closer than to the Government's benchmark.

The Government (Stockdale 1994) has suggested that the SEC's construction costs were up to 60 per cent higher than 'best practice'. This appears to overstate the extent of inefficiency in the area.

The Industry Commission (IC 1995, p261), citing the NSW Government Pricing Tribunal (GPT 1994, p40) who are in turn citing a US study (Kahn and Gilbert 1993), which in turn is citing yet another study, suggests that Australian power station construction costs might be reduced 10 to 15 per cent, based on the difference between US regulated utilities and the 'independent power producers' there.

A more modest appraisal is that the evidence on power station construction costs is not yet clear, according to the latest Bureau of

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Industry Economics report on electricity industry performance (BIE 1994, pp49-50). Construction costs may be a significant source of the different performance of Australian power suppliers and those in the USA, though it is not clear how important this is. If building power stations here do cost more than they do overseas, then 'it highlights the importance of focussing microeconomic reform efforts on the construction industry, particularly as it relates to major power projects'.

Other aspects of over-capitalisation have been more clearly documented in Victoria: building power stations earlier than needed (see p13) and failing to run them effectively. The costs of both can be very large. For example, the power station Loy Yang A was originally forecast to be available for use only 70 per cent of the year. In the early 1980s the SEC was persuaded to aim for 75 per cent; when it came on stream it exceeded 80 per cent, and now it is available for more than 90 per cent of the year. The interest saving on the reduced capital expenditure is probably of the order of \$100m pa.

Victoria generates most of its electricity from brown coal, a very wet—if cheap—form of coal which requires larger boilers and therefore more expensive power stations than in other states. Largely as a result of this, estimates of productivity which assign a cost to all capital used (for example Lawrence et al 1990) suggest that the SEC was the least efficient producer until the early 1980s. Over the 1980s, however, its capital productivity improved markedly (IAC 1989, p87).

This was because the SEC and the Victorian Government focused earlier and more clearly on capital productivity issues than did other states (Swan 1990). The SEC was set an explicit 'return on capital' target out of which it could pay a dividend to the government, service its loans and retain some profits.

Better use of capital was achieved in part by replacement of older, smaller power stations with units of Loy Yang, in part by better plant availability and in part by demand for electricity catching up with supply over the mid to late 1980s, a period of higher economic growth.

As a result, by 1990 the SEC had already reached a situation where it had no excess capacity. In fact it was below the 25 per cent 'reserve plant' threshold—the main indicator of over-investment chosen by the Industry Commission (1995) to define 'best practice' in terms of capital productivity.

Labour productivity

Substantial gains were also made in labour productivity. Real revenue per employee trebled over the five years to 1992-93, surpassing the Australian industry average (SCNPMGTE 1994).

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Drawing on data reported to the SCNPMGTE (1994, 1995), it is possible to compare direct labour productivity measures for the generation, transmission and distribution functions. This comparison (Table 4) suggests that the SEC performance in transmission and distribution (the most labour-intensive area) was quite similar to that of Queensland power authorities, and slightly superior to those of NSW, with very marked increases evident over the late 1980s.

In the generation area the evidence is less clear, with the 1994 data reported in Table 4 suggesting labour productivity was markedly lower than for Queensland, while the later data (SCNPMGTE 1995, p13) suggesting that in 1992-93 labour productivity was similar in both states.

Table 4
Labour productivity measures in different elements of electricity supply

	1987-88			1992-93		
	Victoria	NSW	Qld	Victoria	NSW	Qld
Generation (GWh/emp) ¹ <i>na</i>		6	13	10 ²	12	20
Transmission (GWh/emp) ¹ <i>17</i>		16	25	50	36	56
Distribution (customers/emp) ³		233	154	222	365	262
		286				

Source: SCNPMGTE 1994, pp23-72.

1. NSW comparison is Elcom (Pacific Power), Queensland comparison is with Qld Electricity Commission (QEC) for generation and transmission. Gwh/emp = GigaWatt-hours of energy generated per employee
2. This figure was revised to 19 in the subsequent year's data for 1992-93
3. NSW comparison is Sydney Electricity, Queensland comparison is with SouthEast Queensland Electricity Board. Customers/emp = number of customers per employee.

These changes are all the more impressive in the context of slow growth in electricity sales under which they took place. They suggest that overstaffing has little to do with any lack of cost-competitiveness of Victoria versus Queensland.

Overall, it appears that the SEC was moving rapidly towards what the Industry Commission has set as an achievable benchmark for labour productivity (Table 5) prior to the restructuring of the industry.

Table 5
SEC labour productivity

	1987-88	1990-91	1992-93	IC target
Gwh sold	26,565	30,778	31,811	
Employees	21,800	16,910	13,407	
Productivity (GWh/emp)	1.22	1.82	2.37	3.0

Source: SCNPMGTE 1994, IC 1995

Indeed, if the rate of progress shown over the five years to 1992-93 continued, it would have reached the 3.0 Gwh per employee target at the same time as the Industry Commission was adopting this new benchmark in its 1995 report. And if industry-wide employment actually fell to 8,000 more recently—as claimed by the ALP (1995, p15) and suggested by recent reports of generation employment (Gluyas 1995)—output per employee would already be well beyond this and as low as any utility in the world, other than those with very large bulk sales to other utilities (IC 1995).

The real cost savings resulting from labour productivity are not as large as the spectacular falls in staffing suggest. To a considerable extent, they represent the substitution of contract labour for in-house labour, and so the industry's total cost structure will not be so markedly affected. This was noticeable in Queensland in the 1980s, for example, when labour-shedding dramatically increased labour productivity but was offset by the reduced productivity of 'other inputs' (IAC 1989b)

Further, it is far from clear that contracting out as such is a path to real efficiency improvements. It may be that savings are in large part generated by transfers (lower wages, for example) and cost-shifting (Quiggin 1994a).

Equally, the social impacts of SEC down-sizing, first its construction workforce, then its design capability, and then its operating staff in the La Trobe Valley need to be considered. Cost-benefit analysis tends to ignore these or regard them solely as transitional problems, whereas some critics of the current emphasis on microeconomic reform (for example, Langmore and Quiggin 1994) see them as far more significant in both economic and social terms than most economic modellers presume. This is discussed further in the next section of this report.

The point here is, however, that even using the key measures which the advocates of microeconomic reform of the electricity industry have employed, the SEC appears to have made major improvements in efficiency, both in terms of minimising over-investment and in terms of labour productivity. While the advocates may assert that these

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improvements were the result of the competition agenda, this is far from certain; much was clearly due to the conscious intervention of the Victorian Government.

Measures of overall productivity

Some industry analysts, for example Lawrence et al (1990), have sought to compare electricity authorities on the basis of 'total factor productivity'. Such estimates assign a cost to all capital used and collate this, together with the energy value of the fuel, the number of employees and the costs of other inputs, to provide an index of how well these 'factors of production' are used.

Such estimates depend on the quality of the information as well as assumptions made, for example the discount rate (IC 1991a, pp34-36). For example:

- 1988-89 data used for Queensland and Victoria by Lawrence et al (1990, p5), when compared with those provided to the SCNPMGTE (1994) suggests that the workforce figures are not comparable and this might overstate the 'productivity gap' between the two states; and
- somewhat different rankings, particularly for smaller states, arise when attempts are made to incorporate other factors outside the control of the producers such as fuel quality, population density and availability of gas (Lawrence et al 1990, pp11-15).

Different estimates of total factor productivity (TFP) therefore vary somewhat, although in general they suggest that the SEC was the least productive producer until the early 1980s. After this, however, it largely caught up with the pack other than Queensland, recording the best productivity improvement of any state from 1982-83 to 1988-89 (Lawrence et al 1990, p7), although the early 1990s saw its productivity level off as demand growth stopped. A typical comparison between the states is shown in Figure 1, reproduced from the survey of the data by the BIE (1994, p42), which also indicates that—on this measure—all Australian electricity authorities are less productive than US investor-owned utilities.

'Investor-owned' utilities are a logical basis for comparison not because they are private-sector, but because they have similar characteristics to Australian utilities. There are some important differences: a higher degree of system interconnectedness allows the US industry to run with lower reserve margins, for example (BIE 1994, p29). But the other elements of the US industry, publicly-owned and cooperative utilities, tend to be far smaller, with the exception of the very large Federal generating bodies such as the Tennessee Valley Authority (BIE 1994, p67).

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If comparisons between states are difficult, international comparisons are even more fraught; the London Economics/Electricity Supply Association benchmarking study (London Economics 1993) suggests that the Australian industry's TFP performance is much better than this graph suggests.

Figure 1
Performance of state electricity systems compared with US

Source: BIE 1994, figure 5.2

On the basis of this graph, it can be said that the SEC was 33 per less efficient than the US utilities. But while this comparison has been made by the Victorian Government as proof of the SEC's inefficiency (Stockdale 1994), the BIE discussion of this and other 'total factor productivity' (TFP) analyses rarely receives the same airing as the bald figure.

The BIE review makes it clear that while TFP measures can attempt to accommodate different economies of scale, particular circumstances facing particular producers can still influence the results, making interpretation important. Thus the BIE notes South Australia's sharp decline in transmission productivity in the 1980s and relates this to the investment required as a result of the 1983 bushfires, for example.

The data examined by the BIE suggests that the SEC improved its TFP over the 1980s by constraining its input use more than other states (Fig 5.4), while facing much lower output growth than in WA and Queensland (Fig 5.3).

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Efficient production requires that a producer both choose the best mix of inputs (capital, labour, fuel etc), given their relative prices, *and* make the most out of these inputs. According to the BIE, the SEC improved markedly at both over the 1980s. But while performance at the former was, with WA, better than other states by 1992, its performance at the latter remained the worst of the states. According to the BIE, this was

due in large part to the brown coal technology used in Victoria which is more input intensive, particularly in the larger quantity of capital required for boilers to produce a given quantity of electricity from brown coal. (BIE 1994, p47)

This observation is confirmed by other TFP analyses which ranked Victoria first in terms of its transmission activities, second in terms of distribution, but fourth in terms of power generation (BIE 1994, pp53-56). The graphs also show faster than average rates of improvement in each of these areas.

Overall, the review by the BIE of TFP estimates suggests that the SEC performance markedly improved over the 1980s but that that its essential weakness—from the point of view of these measures—was its brown coal-dominated generating system. Queensland's higher rating appears to be most strongly influenced by its rapid growth in demand, allowing new more efficient power stations to be brought on line (BIE 1994, pp53-54).

The BIE review supports the earlier data and sensitivity analyses of Lawrence et al (1990), and the updated version of this analysis for the Industry Commission (IC 1991a, pp34-36), which also suggest that a significant explanation for Victoria's poorer TFP showing compared to Queensland is to be found in the nature of its generation system, which requires greater inputs of capital to cope with high water content brown coal.

How well was the SEC performing?

The TFP analyses presented by the BIE complement the simpler measures of SEC performance.

The explanation of the SEC's poor showing against US investor-owned utilities and against the Queensland industry is likely to be found in the fundamentally different operating contexts:

- in the case of the US, the high degree of system interconnectedness and high industrial sales;
- in the case of Queensland, the high rate of growth allowing rapid efficiency gains through new generating plant; and

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- in the case of Victoria, the particular fuel—wet brown coal—used to generate most of the electricity, demanding higher levels of capital investment.

The evidence does not support the view that the SEC was failing to act on obvious inefficiencies. Rather, all measures suggest that the SEC productivity improved markedly over the 1980s. In particular, on the key labour and capital productivity benchmarks chosen by the Industry Commission, the SEC was already at or close to 'best practice' prior to the start of restructuring.

How compelling is the case?

This section has sought to examine whether the restructuring and sale of Victoria's electricity industry was or is required on economic grounds.

The assessment of the Victorian Government is that the SEC carried too much debt, charged too much for its product and was inefficient.

The data readily available on the SEC's performance and used by advocates of industry reform does not support such an assessment:

- the SEC debt burden was under control and does not appear to have been an issue of substance or requiring government intervention;
- Victorian electricity prices had been falling in real terms over the 1980s and remained low in global terms and amongst the lowest in Australia;
- measured against the benchmarks of capital and labour productivity seen by the advocates of microeconomic reform as indicating 'best practice', the SEC's improvement was rapid and ahead of most other states so that by 1992-93, it had captured most of these potential benefits; and
- on measures of 'total factor productivity' which impute a charge for all capital used, the SEC—reflecting the greater capital intensity of Victorian brown coal generation—was markedly less efficient than other state authorities over the 1970s, but largely closed this gap over the 1980s.

Explanations of the SEC's position and prospects in 1992-93, particularly when drawing comparisons with Queensland, also need to acknowledge the depth of the recession in Victoria, which meant a very difficult trading environment for the SEC from 1989 to 1993.

Similarly, the performance of the Victorian electricity industry from 1993-94 onwards will be influenced by the economic upswing.

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There is no strong reason why the SEC could not have continued to pay its debts and pass on the benefits of its improved productivity-savings to both the Government and, through lower prices, to the community, as it had done over the last decade. The Government does not appear to have published any information suggesting otherwise.

Competing explanations

In justifying the Government's approach, the Treasurer promotes one view of the situation of the SEC, its history, performances and its prospects.

Under this view, the SEC was an inefficient public service which lacked commercial discipline in its capital-raising and was captured by its employees, both white collar (engineers who liked building power stations) and blue collar (the beneficiaries of feather-bedding). It wasted public funds in inappropriate construction programs and operated power stations inefficiently to the tune of hundreds of millions of dollars. Its improved performance just shows how inefficient it had been before.

The data discussed above support an alternative view, one to which commentators from within the industry (eg Bates 1992, ESAA 1992, Bunyon 1944, Scott 1995) have tended.

In this view, the SEC was a reasonably efficient business which took advantage of its access to cheap finance and, until the end of the 1970s, was caught up in the business of state development and servicing fairly rapid growth in demand for electricity. Like almost all electricity enterprises around the world, it failed to predict the slowing of demand growth and higher real interest rates at the end of the 1970s. Refocussing its energies away from building ever-bigger power stations, in the 1980s it began to:

- exploit other technological improvements and develop a more urgent approach to maintenance, which appears to have reaped major dividends in terms of plant availability;
- wind back its large design and construction workforce; and
- under demand from government for lower real prices, to reduce other parts of its workforce, in part by contracting out.

These two different views of the SEC suggest very different policy paths for Government.

THE CONSEQUENCES OF RESTRUCTURING AND PRIVATISATION

The published analyses of the electricity industry provide little evidence that the Government suggests that the performance of the SEC was such as to require a dramatic intervention as proposed by the Victorian Government.

The Government's approach to the SEC has been break it up into a number of individual competing generators, a transmission authority, a company to facilitate electricity trading, and a number of electricity distribution and/or retailing bodies competing under licence. Generating companies, distribution and retailing entities are expected to be sold into private hands, while the transmission authority—as a monopoly—is to remain in public hands.

While the intended working of the new arrangements has been outlined by the Government (Stockdale 1994, Victoria 1994), many details remain relatively undocumented. This paper therefore does not deal substantially with the detail of the arrangements, although some information is now coming to public light, in particular the Tariff Order (Victoria 1995b) and related documentation.

Within this constraint, this section summarises arguments and speculation as to the likely impact of the Government's reorganisation and privatisation. It first examines the evidence on the nature and magnitude of benefits which are available from efficiency improvements; as implied from the previous discussion, these do not appear to be nearly as great as the Government implies.

It then focuses on alternative approaches to maximising the efficiency of electricity supply before discussing possible outcomes of the restructuring, in particular the likely cost structure and long-term implications of privatisation.

How real are the likely benefits?

Identifying 'best-practice' benchmarks has allowed the Industry Commission to estimate economic gains from microeconomic reform of the electricity industry. Originally it suggested 0.6 per cent higher GDP (1991a); later this was increased when the Commission set a higher labour productivity benchmark and also assumed lower future construction capital costs as a result of competition policy (IC 1995).

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Such benchmark estimates underlie Victorian Government claims of significant economic benefits from electricity restructuring and privatisation, the '\$1500 per household' claimed for the wider Hilmer competition reforms and the recent suggestion that Victoria will particularly benefit from these (Madden 1995).

Will these claims be realised?

In terms of the electricity industry, the Industry Commission assumes that the mechanisms prescribed by competition policy will result in the following changes to the industry performance:

- reserve plant margins falling from 29 to 25 per cent;
- labour productivity improving to 3 Gwh of sales per employee, producing savings and lower prices;
- construction costs for power stations falling by 20 per cent, driven by competition in generation, and a shift to smaller and gas-fired generating units.

Since the SEC was already at 'best practice' in terms of reserve plant margins, no gain would be expected from the first of these.

In terms of labour productivity, the Industry Commission acknowledges that half of the labour productivity gains it views as possible had already been won over the early 1990s (IC 1995, pp256-263), but then ignores this for the purposes of its estimation, the base year for which is 1990. It justifies this by ascribing the benefits to the 'competition agenda'. As previously set out, the SEC had already achieved much of this improvement by 1993, and would arguably have been at this best practice level by 1995 (see p 20 above).

The belief that power stations can be built more cheaply is based on US comparisons between US (private) utility costs and those of the 'independent power producers'. These are companies which sell electricity into the grid, the electricity being produced via cogeneration, wind power and other technologies. It is far from clear the extent to which such a construction capital cost comparison is relevant, not least since these producers are operating outside the standard regulatory regime. This particular estimate was recycled by the Industry Commission from the NSW Government Pricing Tribunal (GPT 1994), which obtained it from Kahn and Gilbert (1993), who in turn cited Kahn (1991) as a source. Given this figure's importance, it is surprising that more systematic investigation was not undertaken.

The benefits purported to result from competition policy more generally have been subject to criticism by some economic commentators (Gittens 1995, Toohey 1995). In particular, Quiggin (1994b) has suggested that the

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real benefits from competition policy are likely to be of the order of one-tenth those claimed by the Industry Commission.

Certainly, it appears that the benefits arising from Victorian electricity reform forecast by the Industry Commission need to be qualified and quite heavily discounted.

What is the best way to improve the efficiency of electricity supply?

It is quite appropriate to remain agnostic over the purported economic benefits of competition policy, as Davidson (1995b) recommends, and focus on the real changes sought. Indeed, the real value of the Industry Commission's work has been in highlighting areas in which the electricity industry could improve its performance.

Prior to the late 1970s, there was relatively little attention paid anywhere in Australia to identifying potential productivity improvements at any point in the economy. For example, in 1983 the Federal government-sponsored steel plan set labour productivity targets for BHP equal to Japanese practice. BHP increased steel mill labour productivity by 60 per cent over three years, almost entirely by increasing output for export (Rimmer 1989).

In the case of the electricity industry, there was a widely-held belief, grounded in the experience of the previous thirty years, that demand would continue to grow rapidly, that technological breakthroughs would continue to provide cost-efficiencies and that economies of scale in generation were the path forward—using the technological improvements to take advantage of the demand growth. Productivity improvements were seen as a natural by-product rather than a goal.

The experience of the late 1970s and 1980s, together with a shift in public attention to the supply side of the economy as demand growth slowed, began a sea change in the electricity industry's perspective. This was directed and spurred on by Government direction, especially in Victoria, and supported by measurement of performance by analysts such as the Industry Commission.

These provided a number of major and important insights about public infrastructure more generally and the electricity industry in particular. Briefly, they were to draw attention to:

- the risk that access to low-cost capital provided little incentive to make good use of capital investments;
- the lack of a national perspective, which meant that artificial state or regional barriers led to unnecessary shortages or over-investment; and

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- the need for producers to raise their sights when measuring their performance, to look beyond price and beyond Australia's borders.

The problem with the Industry Commission prescription—for commercialisation and the introduction of competition—is that it has borne little relation to the actual performance data (Siemon 1991). Its 1991 report, for example, showed the SEC undertaking rapid change, reflecting the conscious intervention of the Victorian Government in its management over the 1980s. The lesson from the report's data could have been read as: 'use economic insights to identify the problem; then get the Government to tell the engineers to fix it'. This is the opposite therapy to that recommended by the Commission.

When it came to power, the current Victorian Government had essentially three options for electricity industry policy. These were:

- to retain the SEC as an integrated monopoly generator and supplier;
- to break up the SEC into three entities along lines already apparent within the organisation: a generating body, a transmission body and a distribution body; and
- as in the UK, to break up the SEC into smaller (private) business units which would compete both in generation and in retailing power.

Each of the first two options can muster significant arguments in its favour; it is far from clear that the third option is clearly the superior alternative.

A continuing integrated monopoly

The case for maintaining an integrated monopoly is based around a quite different conception of the electricity industry than that held by the current Government. There are six key issues.

1. *Economies of scale*: in matters as diverse as management salaries and director fees to borrowing power, large offers noticeable cost advantages over small (Davidson 1995c).
2. *System coordination and integration*: power generators are designed to be run co-operatively in an ordered sequence, not as 'warring fiefdoms' (Lloyd 1995, Uniting Church 1995). The social costs of an integrated producer are lower.
3. *System planning*: taking advantage of brown coal (still a major stated aim of the Victorian Government) requires a long lead time and planning based on a good knowledge of both the coal and the technology. Individual generators, by contrast, would have too short a time horizon, while Government planners would be remote from the

action and lack practical ability to implement system-wide plans. The UK experience was that system planning suffered as a result of the creation of a market (Cragg 1992).

4. *Environmental protection*: least-cost system planning incorporating weightings for environmental impacts offers an opportunity for energy efficiency and renewable energy technologies to gain a foothold in the electricity system. Delivery of energy-efficiency services requires system integration to enable planners to see past short-term losses to future capital savings. Individual producers lack this perspective and other mechanisms are required to accelerate energy efficiency technologies.
5. *National competition*: the national grid (which in practice means greater use of transmission lines between states to facilitate power trading across southeast Australia) means that the Victorian industry needs to be able to compete against other integrated producers. In practice the concern is that Pacific Power will sell surplus power at very cheap rates into Victoria, effectively wasting Victorian electricity generation capacity (Davidson 1995e).
6. *International competition*: only large players with a strong domestic base can compete globally or regionally in provision of energy or related construction services. The SEC had a strong base of technical expertise in a particular form of electricity generation; this base was a potential source of export revenue. Such thinking underlies the Pacific Power strategy in NSW (Bunyon 1993, Forman 1995).

These views are practical and mainstream economic policy concerns of a sort regularly addressed by decision-makers.

They are admittedly concerns given less weight by those policy-makers with a focus on 'consumer sovereignty'. But even here, where a body of economic (and more importantly, management) opinion has been built up around the model of disaggregating and introducing competition where possible, the economic case is not universally supported even in its own terms. King (1994), for example, examines the outcomes predicted from economic theory. He concludes that vertical separation should only be unambiguously favoured if 'the aim of deregulation is to ensure the "success" of (certain) competitors'. King suggests that the 'unambiguous favouritism for separation [disaggregation]' by the Hilmer report, for example, may be misplaced and 'if in doubt, do not divest'.

As discussed earlier, the performance of the SEC suggested that improvements in efficiency were quite compatible with its status as a public-owned integrated monopoly. Although lacking the same degree of integration as the SEC, the Queensland Electricity Commission—the benchmark for so long—has produced similar efficiency improvements.

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More latterly, the NSW electricity commission provides further strong evidence (Pacific Power 1995) that marked improvements in productivity do not require the sort of change which the Victorian industry is going through: there output per employee is up 50 per cent and plant availability up from 75 to 90 per cent in four years.

Finally, the value of a *public* monopoly may have other less obvious benefits, some less amenable to monetary valuation. The common ownership of an entity designed to provide services to all contributes to social solidarity in at least three ways:

- through cross-subsidies (which do not work as welfare transfers but rather as methods of community inclusion);
- through providing an expectation of universal entitlement; and
- through an expectation that the supplier has as its *raison d'être* public service rather than the maximisation of provider incomes.

While these may seem rather abstract concerns, the popular enthusiasm for public ownership shown in a range of opinion polls (eg Saulwick 1995) suggests that these are practical issues for most people, and not just a residual attachment to a past culture. Interestingly, public opinion in the UK remains unconvinced: two-thirds of voters would renationalise electricity five years after privatisation (*Economist* 11 March 1995, p61).

Accessible transmission

The second option, which the Government could have considered far more seriously than it appears to have done, is that apparently being pursued by SEC management in the early 1990s: to separate the three specialist areas of generation, transmission and distribution. This would essentially have traded the advantages of integration for those of specialisation:

1. The separation would have fitted into the model of national competition, and positioned the Victorian industry in a comparable position to that in NSW and Queensland. The Victorian generation system would have remained intact, allowing it to operate as a unit in competition at the national level.
2. The separation would have extended past moves by the SEC to open its grid to independent generators on a fair basis. New technologies (cogeneration, wind) as well as interstate generators could have been made available via the transmission system to Victorian consumers.

Although this option would appear to have been a straightforward response to the national grid and would have allowed SEC management to continue on with their pursuit of productivity and operational efficiency improvements through the upswing of the economic cycle, the Government

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chose instead a far more radical restructuring with the aim of maximising competition.

Competitive private business units

Details of the way the industry is to work has been set out by the Office of State-owned Enterprises (Victoria 1994), with the thinking behind it explained further by the Treasurer in his presentations (Stockdale 1994). The aim of restructuring is to produce a set of privately-owned competing generators and electricity retailers, operating under licence in a regulated marketplace. Electricity is to be traded through a spot purchase market (the 'power pool'), although large industrial consumers will also be allowed to enter into long-term contracts with generators (Legge 1995).

This is a similar path to that taken in the UK, and the Government claims to have learnt from mistakes there, particularly by reducing the size of the competing entities so as to maximise the number of competitors.

The following arguments are central to the case for disaggregation and privatisation.

1. The risk of poor investments will no longer be borne by tax-payers but by private investors, who will have a major incentive to avoid mistakes and to operate plant efficiently. Anglesea and Loy Yang B illustrate the advantages of private ownership through their efficient use of plant.
2. Competition will spur innovation in generation practice and performance, as evidenced by SEC response to the presence of Loy Yang B (Thomas 1995).
3. Competition should be introduced wherever possible with as many players as possible. The UK Government, by contrast, split generation into a duopoly. There is no reason why generating units of more than 1000 MW are needed to capture economies of scale (Forman 1995). The use of a 'power pool' spot purchase market together with the use of hedging contracts will ensure that base load plants are used properly.
4. Separation of the retailing function (buying the power, providing customer services, billing and marketing) from the distribution function (maintaining the power lines from substations to consumers) adds an additional element of competition directly affecting consumers. This will keep the focus on consumer service.
5. Until full competition is reached, strict regulation will apply which will ensure good outcomes. The UK experience shows that the correct combination of privatisation and strong regulation produces results (*Economist* 11 March 1995).

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These arguments relate to the Government's diagnosis of the SEC's failings, discussed in the previous section, and clearly build upon the work of Moore and Porter (1991) as well as the UK experience.

Criticisms of the Government's choice

Critics of the Government's approach have identified a number of risks with this approach. For example, Manning and Armstrong (1993), who have undertaken considerable work in the electricity area for the National Institute of Economic and Industry Research, list a number of economic risks with the sort of managed competition adopted for Victoria. These include the emergence of oligopoly power, ineffective and costly regulation, transition costs, loss of economies of scale and a bias toward gas-fired power stations.

Other criticisms of the Government's proposals have stressed themes, many of which were touched on in the discussion above of the alternative approaches to the industry, including:

- the sale of electricity assets could produce a longer-term cost structure for the industry than otherwise would have eventuated, because of higher costs of borrowing and financing dividends (Davidson 1995a, Quiggin forthcoming);
- if this is not to occur, interest cost savings from the asset sale will be insufficient to cover profits foregone (with the risk that public sector revenue will be lower as a result);
- the sales may be contingent on a tax subsidy from the Commonwealth via higher depreciation rates than would normally be allowed;
- the loss of economies of scale and of integration will increase costs, offsetting whatever other gains might arise (Davidson 1995c; 1995d, Uniting Church 1995);
- over-investment in generating equipment might result, as in the UK (Cragg 1992);
- the possibility of a higher-cost system evolving, as gas plants replace brown coal-fired power stations. Such a shift is in fact explicit in the Industry Commission view of the future industry (IC 1995), though it is unclear why this is desirable;
- the danger of costs—such as bushfire risks—being externalised as pressures for further workforce reductions take place (Davidson 1995d, Thompson 1995);
- poorer electricity quality (lower reliability or more voltage fluctuations) arising either from system coordination problems or from a gradual decline in distribution standards;
- the risks of benefits being captured by shareholders and managers, as happened in the UK (*The Economist* 25 February 1995, p70-71), rather than passed on in lower prices;

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- risks of foreign oligopolies reducing local economic and industrial development (CCJDP 1995);
- the breakdown of the least-cost integrated planning and demand management strategies which had begun to emerge within the SEC, these being key challenges for the future (Fitzgerald 1995, Wilkenfield 1995);
- the virtual abandonment of the quite major SEC commitment to reducing greenhouse gas emissions (Scott 1995) and concern over other environmental impacts;
- the long-term capture of the regulatory apparatus by the industry: a common critique of regulators is that they become 'captured' by the industry that they are supposed to supervise. Conversely, when a regulator responds to 'public concern', they can be said to risk losing the confidence of the electricity companies which will then be wary of investing (*Economist* 11 March, p90);
- social impacts associated with further job losses, particularly in the La Trobe Valley: the indication is that this, as with many other exercises in down-sizing, has contributed to a local polarisation of income as well as uncoded social problems, including the loss of less-skilled employment; and
- finally, the implications of the sale of assets for Australia's foreign exchange situation. Overseas investment into the private generators or distributors may lead to high transfers overseas and a worsening of the current account situation (Jones 1995).

The Government has sought to address some of these problems. For example, the spot electricity market (the 'power pool') should allow power stations to come on line in cost order, replicating via a market mechanism the sequencing practice of the former SEC. It is not clear that even large industrial customers are particularly keen on purchasing electricity this way, however (Taylor 1995, Legge 1995), and it may be that there will be additional complications in the integration between the Victorian pool and the national grid pool (ALP 1995).

Similarly, supply standards are to be specified through the licensing and regulation processes.

This paper does not pretend to offer an evaluation of all of these criticisms or prognoses. All appear to have some substance and require more public attention than they have received to date. It is important to note that most of the risks mentioned are economic and financial rather than social or environmental. Thus the debate over changes to Victoria's electricity industry should not be construed as an argument against the pursuit of economic objectives by those concerned about social impacts.

A matter of faith?

This brief survey of the options available to the Government, and that which it has chosen to adopt, tends to agree with the judgement of Armstrong (1993), who concludes that it is far from clear that the pursuit of efficiency in the electricity industry is best advanced by the competition agenda.

It is even less clear that it is advanced through the sort of more radical restructuring being undertaken by the Victorian Government, with the SEC broken up into several generation and distribution companies set to engage in a form of regulated competition, facilitated by a publicly-owned transmission system and power trading system.

Manning and Armstrong (1993), reflecting on the UK experience of privatisation, identify a number of risks with the pursuit of disaggregation, competition and privatisation, as discussed above. They conclude (p36) that 'given all these possibilities, it is indeed a matter of faith that total reorganisation of the industry, as distinct from the addition of a limited national grid to existing integrated operations, will increase productivity more than persevering with the present structure'.

Why is the Government bent on privatisation? Part of the reason is the quest for the AAA credit rating, but as discussed earlier (p13), this offers fairly modest budget savings.

The Treasurer's more substantial rationale, however, is that to sell the companies into private hands will 'lock in' the gains which will result from its restructuring, presumably so that future governments will not be tempted to recreate inefficiencies through political interference.

This rationale is a strongly ideological one, subscribing to a view of the history of the electricity industry, and the public sector more generally, which is neither empirically-based (Stretton and Orchard 1995) nor widely supported in the community. Nevertheless, it is a common argument, adopted for example by Forster (1992) in his survey of public enterprise productivity improvements. Forster acknowledges the very significant productivity improvements of the 1980s and, which is surprising to him, the extent to which the electricity industry passed these on through lower prices rather than retaining them as monopoly profits or for government revenue. In the end his plea for privatisation amounts to expressing his 'doubts as to how long the gains achieved will last, and whether the present approach will be enough to speed up the rate of performance improvement so that the potential benefits do not take decades to be achieved' (p33).

In fact, as Figure 1 above (p24) shows, Forster's concern is not borne out by the evidence. If the TFP of US investor-owned utilities is a

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benchmark, then it is *their* performance which has been going backwards, while the Australian publicly-owned utilities have been improving very fast, considering the capital intensive nature of the industry, its long investment lead times and its maturity.

What will determine the outcomes?

This short discussion of the possible outcomes of Victorian Government moves to restructure and sell public electricity assets suggests that:

- the benefits likely to result have been significantly overstated;
- the current policy ethos of maximising competition is not guaranteed to produce markedly superior outcomes, either in terms of efficiency or in broader terms; and
- objections to the current approach are far better-founded than the Government has been prepared to admit.

The facts of past industry performance and that of competitors therefore do not support the view that privatisation is essential for the good of the state. It is not true that the Government has no alternative but to proceed against public opinion.

However, it is also clear that the Government will almost certainly be able to point to 'successes' as the new arrangements come into force. For example:

- electricity price falls for households and small business are guaranteed over the next five years, and will be capitalised into the sale price of the generators or distributors when they are sold;
- as in New Zealand, electricity suppliers will probably be able to report higher salaries for their employees as they reduce core staffing levels;
- the new entities will claim the benefit of the impetus towards improved productivity already underway prior to disaggregation;
- the recovery phase of the economy will have provided growing revenue streams and facilitated further productivity reform;
- new owners will claim to offer new services or approaches, even though these may well have eventuated within the SEC in any case (for example, more sophisticated meters, the development of which the SEC had assisted over the 1980s).

The central role of government

These 'successes' will, however, depend heavily on Government intervention rather than simply result from a competitive market, at least in the next decade. The Government is responsible for the creation and regulation of the market, for the setting of prices for the next five years,

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and the discounting of public equity built up in the SEC so as to ensure that these price targets can be met.

Much will depend on the nature and extent of regulation. The Regulator-General, whose role is principally to temporarily oversee competition, is having to adapt his licensing powers to incorporate the many concerns of the welfare and community sector (VCOSS et al 1995). His ability to act without reference to government policy may have significant impacts.

It is clear that the regulation process has already become quite complex, as matters previously handled within the SEC are relocated into the new institutional arrangements. This parallels the UK experience:

When the privatisation programme started, regulation was expected to be 'light touch'—and to get lighter as competition took its place. Until that happened, one of the regulators' key tasks—to keep the privatised companies within their price controls and periodically review those controls—was seen as relatively straightforward.

In the event, putting regulation into practice has been tough for the regulators in ways the government clearly did not envisage. (National Consumer Council 1993, p3)

The justification for the reorganisation and, eventually, privatisation of the electricity industry is that economic benefits will result. As discussed above, the odd thing about this claim is that an interventionist government can produce very good results in terms of such efficiencies—certainly the SEC under the Cain government took major steps towards 'best international practice'.

Underneath the economic justification for privatisation (that private provision is inherently more efficient), there seems to be a political belief that governments are better off washing their hands of these services. It is all too hard; let the impersonal market handle it all, rather than build up public expectations.

This is perhaps the most disturbing aspect of privatisation to many people. It is not just that public assets are being sold, but that governments seem to be saying: 'We are not responsible for your problems. We are not responsible if you have to do without electricity because you cannot afford the bill. We are not responsible if the power fails.'

The belief that some things are a common, or public, responsibility is not an old-fashioned notion, inappropriate to today's sophisticated techniques of assigning costs and benefits to individuals. Rather, it is at the heart of good government.

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In the Brotherhood of St Laurence's experience, the living standards of all Victorians—and those of low-income and disadvantaged people in particular—depend on acceptance of this shared responsibility. How strongly will this shared responsibility be incorporated into new arrangements for the electricity industry , and what will be the practical outcomes for low-income households?

IMPLICATIONS FOR LOW-INCOME HOUSEHOLDS

It is clear from previous Brotherhood of St Laurence research (Trethewey 1986) and service experience, supported by both other Victorian (Kiers 1983, Energy Action Group 1983; 1986) and overseas research (Boardman 1991) that:

- reticulated energy and water are essential services in social terms, as all households rely on them to sustain their standard of living, with few practical alternatives;
- they are also essential in economic terms, in that households of similar size use much the same amount in the home regardless of income;
- low-income people, particularly older people, sometimes go without electricity and gas because of fear of inability to pay, and are more likely to voluntarily suffer hardship this way than they are to be using energy excessively or unwisely; and
- low-income people have limited ability to respond to pricing signals (for example, by changing appliances).

The considerable work undertaken over the past two decades by the welfare sector arose from these facts. Similarly, they gave rise to some significant reform within the utilities undertaken over the 1980s (Energy Action Group 1986).

In the 1990s, Victorian Churches and welfare agencies have expressed persistent concerns that lower-income households might be disadvantaged under the restructuring and sale of the electricity industry (for example Challen 1993; 1995, Uniting Church 1995, CCJDP 1995). These concerns are based on the experiences of low-income consumers under the newly-commercialised distribution companies, including:

- higher disconnection rates;
- increased demands on emergency relief agencies due to higher prices and more stringent billing and debt recovery practices (VCOSS 1995); and
- dismantling or under-use of past assistance schemes (Benvenuti & Walker 1995).

A similar pattern was observed in the UK as privatisation of essential services took place (Ernst 1991, National Consumer Council 1993).

Advocates of commercialisation and privatisation often refer to such matters as 'welfare' issues (or 'community service obligations') which should be delivered, or funded, separately. But while the mechanisms by which these issues should be addressed may vary, the essential nature of

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electricity means that social justice considerations must rank alongside economic concerns in assessing the future of electricity supply in Victoria.

Social justice means more than a reasonable degree of horizontal equity (that is, the equal treatment of equals). It means adequate minimum standards. And most important, it means real and visible vertical equity—the acceptance that different households or individuals have different capacity to pay.

The following questions sum up the key issues for people on low incomes, people disadvantaged through unemployment, age, disability and so on:

- will prices affect the living standards of low-income people unreasonably?
- will the costs be borne more fairly, or less fairly, or in ways which undercut social solidarity?
- will the standard of service decline?
- will the service provider be understanding of the needs of particular disadvantaged groups in the population?
- will privatisation reduce the capacity of future governments to control these outcomes?

This section spells out these concerns in more detail.

Will prices affect the living standards of low-income people unreasonably?

Households need a reasonable supply of electricity or gas for meeting such basic needs as food storage and preparation, lighting and heating. In practice there are few other alternatives; and inability to use electricity supply as needed often leads to other costs for the household, as well as hardship.

In 1992, the Victorian Government lifted the price of electricity to households by 10 per cent. In 1993 it restructured the pricing system, introducing a supply charge of \$33 per quarter; this effectively lifted prices for small users of domestic electricity and lowered them for larger users.

According to the Government (Stockdale 1995), these changes were made in order to fund a special dividend payment from the SEC and to remove an 'intra-class subsidy' from large users to small users. However, the new prices also shifted more of the costs of electricity supply on to households and away from small and medium-sized businesses, which did not experience rises in 1992.

To some extent, low-income households would have received some compensation for the increase through the social security system, since

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pensions and allowances rise with inflation. However, the increases were significantly above CPI; Fitzgerald and Dreyfus (1995) indicate that the cost increase above inflation faced by households was of the order of \$40 to \$60 per year. The actual amount varies slightly with electricity usage patterns—although not as much as might be expected, because of the redistribution associated with the supply charge and the offsetting ‘cap’ concession. The effect of the price rise has probably been to lower the real purchasing power of most social security incomes by around 0.33 to 0.5 per cent.

The direct impact of the higher electricity price rises on low-income households has probably been to divert funds from other consumption into paying for electricity. For some households, the rise might have discouraged use; for others, it has made bills less payable and disconnection more likely.

The combined effect of electricity price rises and other increases to state-based services and taxes was much larger, however, lowering the living standards of low-income households in 1993 quite markedly (VCOSS 1993), and emergency relief providers began to report high numbers of applicants citing bills for state-based services, particularly electricity, as a reason for seeking assistance (VCOSS 1994).

Emergency relief statistics are one indicator of lower-income households feeling intense financial pressure. The higher taxes and charges imposed by the Victorian Government are one source of this pressure; other sources include the particularly high levels of unemployment experienced in Victoria over 1992-95; the less stable employment and lower wage packets associated with this; and more stringent credit control or debt collection procedures by businesses during and after the recession.

The price rises appear to have worsened the living standards of the lowest income Victorians; as a tax measure they were regressive and in combination with other pressures clearly unreasonable.

Between 1996 and 2000, however, the price of household electricity is scheduled to fall by 9 per cent in real terms, bringing prices back to 1992 values for average households, although some small consumers will remain worse off (Fitzgerald and Dreyfus 1995).

While the Government has stressed the guaranteed fall in prices over the coming years, a more appropriate method of judging the outcome of the restructuring would be to compare prices with what might have been expected if no restructuring took place.

Given that prices fell consistently in real terms over the 1980s, there is no reason to imagine that the SEC, left alone, would not have generated real price reductions over the 1990s, even allowing for its operating margins to

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rise after the recession. As noted earlier, the SEC had consistently passed on productivity gains through reducing its prices; to the extent that the labour productivity improvements being undertaken over the early 1990s have borne fruit, these would have produced allowed marked price falls.

On this basis, it is quite reasonable to view the domestic electricity prices from 1995 to 2000 as being significantly higher than they would have been under unchanged policies.

As previously mentioned, the falls in price from 1995 to 2000 are prescribed by government and any losses or subsidies will be capitalised into the sale price of the assets upon privatisation, so these falls provide no indication of either long-term system costs or efficiency.

Beyond 2000, domestic electricity prices will be determined by the extent and vigour of regulation, the extent to which the new arrangements are more or less cost-effective than previous arrangements and the extent to which a further redistribution of system costs results.

In the shorter-term, however, it appears that a principal outcome of the restructuring will be higher household prices than they would otherwise have been. This is principally a result of the redistribution of system costs; thus while household electricity prices are to fall by 9 per cent over 1995-2000, the price for small businesses is to fall by 22 per cent during this period (Stockdale 1994).

Will the costs be borne less fairly, or in ways which undercut social solidarity?

Implicit in the price changes to date and those proposed are actually three redistributions of the burden among electricity users: from businesses to households, from larger to smaller households, and from rural to urban consumers.

The redistribution of costs from businesses to households

The tendency of the electricity pricing system to contain 'cross-subsidies' in favour of households has been one of the 'inefficiencies' identified by the Industry Commission (IC 1991a, 1995) as requiring reform under competition policy.

The term 'inefficiency' has a somewhat different meaning when referring to issues of allocation such as this. Overall community welfare is argued to be improved by the removal of such cross-subsidies, because those who are over-charged under-consume compared to their preferences, and those who

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are under-charged over-consume compared to what they would really be prepared to pay for if the price was higher.

A cross-subsidy is said to exist when one group of users is paying less than the cost of providing the service to them. In this case, it is suggested that it costs more to supply households than the amount received in revenue from them; the difference is made up by other customers, who pay above cost.

These cross-subsidies are probably not the result of conscious political interference with rational pricing by governments eager for re-election, although power prices have often been the subject of public controversy, especially where the public suspects a special deal for heavy industry. Rather, they appear to be a long-term result of commercial demand for power growing about twice as fast as that of households.

According to SEC data (IC 1991b, p40), at the end of the 1980s there was a 23 per cent cross-subsidy in favour of Victorian households and against business customers. The Industry Commission sees that it is essential for these to be removed, not just because this is an 'inefficiency' as such, but as a precondition for fair competition through the national power grid. Although the SEC was the main source of data on cross-subsidies (some other electricity authorities denied that they existed in their states), the Commission assumed that such a cross-subsidy existed throughout Australia and estimated the benefits of removing it.

The principle that one consumer class should not subsidise another seems fair: after all, householders feel upset if their bills are forced up in order to attract the investment of heavy industry. However, the economic benefits of reducing commercial electricity bills and increasing those for households are far from clear, for at least four reasons:

1. Estimates of electricity cross-subsidies usually suggest that it is commercial customers, rather than businesses as a whole, which are subsidising households. This is the customer class which has been growing rapidly. Large industrial consumers are not generally regarded as being over-charged—indeed it is sometimes asserted that heavy industry in Victoria is *undercharged* by as much as 20 per cent (NSWGPT 1994, pA2-5, citing the Victorian Treasury). Price rises for these consumers were not, however, imposed in 1992 when domestic prices were lifted.
2. Estimates of the size of cross-subsidies depend on a whole range of assumptions about how costs should be assigned. As a result estimates can vary quite significantly. The Department of Minerals and Energy (1984, p17) reported that Victorian households were cross-subsidised by 15 per cent using average cost measures, but using long-run marginal cost measures, the cross-subsidy was around 5 per cent.

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Moore & Porter (1991, p4-6) reported a cross-subsidy of 15 per cent for 1989, but the Industry Commission (IC 1991b) reported 23 per cent.

3. In Victoria at least, a large part of the reported subsidy flows to rural households rather than to urban households (Office of Minerals and Energy 1985, p26). The cross-subsidy is therefore in significant part a result of the Victorian practice of charging the same price for electricity everywhere in the state. The effect of eliminating the cross-subsidy between classes but maintaining uniform prices would simply be to overcharge urban households rather than urban small businesses.
4. Finally, the earnest pursuit of removal of cross-subsidies may involve much larger changes than at first stated, as changing price relativities suppress or increase demand in the different sectors and feed back into estimates of the cross-subsidy. Anderson (1993), for example, estimates that eliminating a 21.5 per cent cross-subsidy to urban households would require increasing urban residential prices by 42 per cent.

It is unclear whether Victorian Government policy would countenance such a shift, but do the economic benefits of eliminating cross-subsidies make rapid efforts to remove them, such as has already occurred, worth pursuing? .

The economic gain of removing cross-subsidies was estimated by the Industry Commission (1991a, p48) to be some 0.17 per cent of GDP, about one-third the size of the estimated gains from the other efficiency improvements (increased labour productivity, better use of capital etc). Unlike the effect of these other improvements, however, the result of removing cross-subsidies was to *suppress* real consumption of goods and services by 0.10 per cent.

Anderson (1993) models the impact of removing NSW electricity cross-subsidies, suggesting that in the long-term, lower business costs will translate into higher investment and higher national incomes, but that it will be several years before household consumption recovers.

The effect of shifting more of the costs of supplying electricity onto households and away from small businesses, as promised by the restructuring, is much the same as imposing a new tax on households whilst removing one from businesses. Some macroeconomic models produce estimates of higher growth as a result of such measures simply because of the inherent bias of these models: anything which transfers money from households to investors or businesses is forecast to produce higher economic growth (Quiggin 1992).

It is always possible to suggest that transferring costs off business and onto households will aid growth, and that this growth will result in better living standards for all. The more certain result of undertaking it in this

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manner will be to lower the living standards of low-income households, in the short term at least. Compensation through the inflation-indexing of pensions and benefits will be insufficient, particularly if Victoria pursues the program more vigorously than other states.

At least in the short run, this regressive effect is likely to outweigh any benefits to low-income households through any fall in other consumer prices.

Cost redistribution from large to small households

The \$33 per quarter supply charge introduced in 1993 essentially reversed pricing policies from a decade earlier. The SEC had originally introduced an \$18 per quarter supply charge for electricity in 1981, but this was extremely unpopular and was removed by the incoming Government who replaced it with a minimum charge.

The new supply charge is somewhat higher than that applying in other states, with the exception of Tasmania (GPT 1994, Table 13.1). Victoria continues to be alone, however, in having an 'inverted' block in its pricing structure—the marginal price increases slightly for larger users, whereas in most states the energy price is flat or falls.

The introduction of a supply charge redistributed costs from those households using large amounts of power to those using little. Single age pensioners using little electricity were particularly affected; at the other end of the spectrum, more affluent holiday-home owners would pay more. Larger families and all-electric households—some low-income households among them—would have benefited from the change.

Although a uniform supply charge is often argued for public monopolies like the SEC on economic grounds, its justification in terms of economic efficiency needs considerable qualification (Savage 1994, McGlade 1993). The pricing structure inevitably departs from that prescribed on efficiency grounds; the supply charge should be whatever instrument is available to the authority which best reflects capacity to pay (Savage 1994, p10).

Protecting low-income, low-electricity use households through the concession system is therefore essential. The 'supply charge cap concession' is therefore a valuable addition to the energy concession system, discouraging small users from disconnecting from supply; however, it fails to offset the impact of the change (Fitzgerald and Dreyfus 1995).

What appears to have driven the introduction of the supply charge was that it fitted better the cost structure prescribed for the disaggregated industry over 1995-2000, where households (at least in principle) will be

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able to discern distinct charges for different components of the supply system. Thus the final retail price for electricity will be made up of the wholesale electricity costs (purchased by the retailer through the 'power pool') plus the prescribed transmission and distribution costs (the 'network tariff') plus the retailer's costs and profit (Victoria 1995b, p10). Since the network tariffs provide for a standing charge of around \$50 pa per customer, the supply charge of \$132 pa per customer would leave around \$80 pa per customer to cover the retailer costs of reading meters, billing and providing other customer services. To the extent that price competition exists within the retailing of electricity, it will be in this relatively narrow range.

While future retail efficiencies may allow this margin to fall in future years, it seems that a significant supply charge will remain a permanent feature of electricity prices beyond 2000.

The cost redistribution from urban to rural consumers

Victoria has for many years maintained uniform electricity prices for households across the state. As noted above, this provided a subsidy to rural households, particularly in remote areas. But given that Victoria was smaller than most other Australian states, this subsidy was generally accepted for reasons of simplicity and apparent fairness.

With the creation of competing distribution companies, the Government has set in place an 'equalisation adjustment' to transmission costs in its recent Tariff Order (Victoria 1995b, p115), reducing 'use of system fees' to the western Victoria distributor Powercorp, for example, by some 40 per cent. The Government has also signalled its intention to perpetuate a subsidy to rural consumers by 'writing down' rural assets, presumably accepting a lower price for these so as to allow the distributors to keep rural prices lower than they would otherwise be.

Reflecting these decisions, the prescribed 'network tariffs' (covering transmission and distribution fees, and paid by any company purchasing power from generators through the power pool on top of the cost of power itself) incorporate much lower upfront costs for Powercorp than for the urban distributors, though the unit cost of electricity is higher.

The effect of these government decisions will be to moderate the redistribution of system costs from urban consumers and onto rural consumers, at least in the short term. Since residential prices are prescribed until the year 2000, rural households will presumably be unaffected until then. Beyond that point, however, prices are likely to begin to separate.

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Implications for low-income consumers

The redistribution of system costs away from business is attractive to any government seeking to lower electricity prices for business, whether in pursuit of state development or microeconomic reform agendas. Since the geographical cross-subsidy generated by uniform prices across the state appears to have contributed to the cross-subsidy claimed to exist between business and households, a move away from uniform pricing represents a complementary method of reducing business costs.

Beyond 2000, when prices are to no longer be fixed by Government, it is possible that Victorian households will pay slightly different prices for the supply of their electricity. Those who offer the highest returns—larger users of power located in urban areas—may receive some benefits, since competition amongst retailer may exist where there are slightly higher margins. Smaller users—many of whom will be low-income people—will continue to face a significant supply charge.

The relatively thin margins within which retailers compete may produce other dynamics, however. A minor change in bad debt levels could make a major change to the retailers' income stream, suggesting that debt control and credit control will assume higher prominence than they had in the SEC (where disconnection already allowed very low bad debts by broader commercial standards).

The simplicity of the uniform system—and the sense of both universal entitlement and urban-rural solidarity which it gave, if only in small measure—will have been lost for little in the way of economic gains.

Will the standard of service decline?

Since the disaggregation of the SEC into separate business entities, there has been a decline in the extent to which consumers have been able to obtain services other than those directly associated with buying power. Providing advice on saving energy, for example, did not appear to be of interest to the new electricity companies. The Home Energy Advisory service, a scheme to assist low-income households to reduce their costs through appliance replacement, insulation and energy management, was wound up in 1993. It may be that the introduction of overseas companies such as Pacific Gas and Electric, now a possible buyer of United Energy (David Walker 1995) and which are used to delivering domestic energy efficiency programs, may restore this emphasis, but it is important to realise that in the USA such programs are usually mandated or facilitated by governments or Public Utility Commissions rather than arising spontaneously as being in the supplier's interest.

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As for protecting consumer rights, progress is very slow. Regulation remains fundamentally directed towards ensuring market competition, rather than equitable outcomes for consumers. To date, according to the Consumer Law Centre (Dienecke Walker 1995), the Government's efforts to create a regulatory mechanism have so far failed to achieve anything like a sound environment for generalised consumer protection (for example, adequate complaints mechanisms). Its effectiveness is hampered by the lack of adequate representation of the consumer interest through a specialist public interest group, a vital requirement in areas where the consumer interest cannot be conflated with either that of government or regulator (CLCV 1995).

While some aspects of customer service, such as speed in restoring power, may improve (largely as directed by the Regulator-General), it is possible that the new businesses will sacrifice other aspects. The ability of retailers to compete on price appears to be quite limited, as noted above. If retailing costs are to be met from the supply charge rather than energy charges, then the retailer will have only some \$80 per customer in yearly income. This will provide an incentive to retailers to restrict the attention which they can pay to customer groups seen as difficult or poor credit risks.

The extent of disconnection, and the circumstances under which it takes place, is one outcome over which welfare organisations have expressed considerable disquiet. Since formal protections are minimal, there is considerable latitude for a more aggressive attitude towards debt collection to spill over into hardship for people who are unable to pay their bill. Disconnection rates have already risen markedly with commercialisation; the dynamics of retailing electricity may well produce pressures for large numbers of lower-income households to accept measures (such as prepayment meters) which minimise the costs to the retailer but, judging from the UK practice, might actually increase the costs to the consumer (Calvert & Nelson 1995).

Will service provider accommodate needs of particular disadvantaged groups?

The litmus test of consumer rights will be the way in which low-income and disadvantaged consumers—those people with the least market power—are treated by the electricity businesses.

Since the restructuring has occurred, evidence has accumulated that utility practices are creating greater hardship for consumers; this includes more people having to turn to financial counsellors, more disconnections, and less access to energy relief grants (Benvenuti and Walker 1995, VCOSS 1995).

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People who are on low incomes find it hard to pay for essential services, and suppliers of essential services need systems in place which acknowledge this in a helpful way. These could include alternative payment arrangements, suspension or waiver of debts, and assistance with reducing use while not reducing comfort. Some of these systems existed before, albeit in far from perfect form: the Home Energy Advisory Service, the Easy-Way payment scheme, the Energy Relief Grants Scheme. It appears that the 'safety net' which continues to exist is far from adequate (Benvenuti and Walker 1995). The challenge will be to develop necessary elements in the future.

While the language of the market is that of choice and the ability to meet diverse consumer needs, in practice the theorists of commercialisation or privatisation often refer to such matters as 'welfare' issues (or 'community service obligations') which should be delivered, or funded, separately. Thus, service providers do not have to recognise the diverse needs of consumers; these are a welfare matter.

This is incorrect for two reasons:

1. Given that all households have little option to use electricity to meet basic needs and that for practical purposes households will have little or no choice in terms of their supplier even beyond the year 2000, suppliers have an obligation to respond to the diversity of needs and capacities amongst their customers, including the capacity to pay. The welfare sector has never asked that electricity suppliers be welfare organisations; simply that they respond to customer diversity (Energy Action Group 1985, Siemon 1994).
2. An examination of the notion of 'community service obligations' in the electricity industry (Brotherhood of St Laurence 1993) suggests that in practice this is not a terribly new or useful concept. The Government already pays directly for energy concessions, for example, and in other areas the dividing line between commercial activity and public service is far from clear. It can be far more efficient—when all the costs are added up—to support low-income households through sympathetic treatment by the provider of an essential service, for example, than by forcing people to turn to welfare agencies to deal with the problem.

There are three areas of customer service clearly related to low-income or disadvantaged consumers and clearly the responsibility of the supplier: consumer information, billing and payment arrangements, and credit management and debt collection.

There are no simple solutions which can be prescribed in these areas, although the community sector has considerable experience to contribute (see for example Energy Action Group 1986). It is clear, for example, that pre-payment meters are more a method of disguising fuel poverty than

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assisting it (Boardman 1991). Similarly, the introduction of new metering and the replacement of the current domestic price with 'time of use' based pricing has little to offer low-income households.

Instead, the aim of reform should start from an acceptance of universal entitlement to the service. The introduction of by Telecom of a free 'lifeline' telephone connection is an example of a sensible response; so too is the acceptance of the inappropriateness of disconnection of water supply to households. While the cost structures of these industries are very different, the starting point is the same, and the combination of the pricing system, the concession system and customer practices in the electricity industry can go much further to effect the goal than they have to date.

Irrespective of privatisation, the disaggregation of the SEC means that much work will have to be done to produce outcomes which are broadly satisfactory over the state (Benvenuti and Walker 1995, Dienecke Walker 1995). This will require not only the consultative mechanisms set up by the Regulator-General, but a greater commitment on the part of the Government, which has publicly claimed credit for belatedly moderating the high rate of disconnections which was apparent over 1992-94 (Stockdale 1995).

How responsible is the Victorian Government?

As discussed earlier, the immediate outcomes from the restructuring hinge far more on Government intervention than on the market which the restructuring seeks to create. The role of the State Government will also be vital in the provision of those support mechanisms clearly agreed as its responsibility.

The most substantial of these schemes is the winter electricity concession, which provides a 17.5 per cent discount on six months of electricity, paid for by the Victorian Government. This concession is supplemented by a 'supply charge cap' concession, together with some additional discounts paid to people with particular health-related energy needs.

If the aim of the winter concession is to allow low-income households to pay out the same proportion of their income on energy as do other households, it is inadequate (Energy Action Group 1986). A much higher concession would be needed—say 50 per cent all year round—in order to achieve this goal. This level of subsidy already exists in other parts of the concession system—for example, in tax relief on local government rates.

The long-term effect of the restructuring and sale of the electricity industry might be to undermine the pursuit of such targets, however. The concession system exists as a form of counteracting (at least for social

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security recipients) the regressive nature of state taxes and charges. To the extent that electricity moves from the public sphere to that of private market transactions, so the case for energy concessions will be weakened.

This is one of the starkest long-term risks which privatisation poses for low-income people. If Government is not responsible for the supply of electricity, then the validity of expenditure support is more readily questioned. Concessions can be characterised as a Federal income support responsibility, rather than as an effort to ensure that low-income Victorians gain access to needed electricity. Their delivery can be seen as an onerous imposition on the companies rather than a logical and efficient method of providing a public service.

Other forms of energy assistance are more directly related to fuel poverty. The Home Energy Advisory service, a scheme to assist low-income households to reduce their costs through appliance replacement, insulation and energy management, was wound up in 1993. And the Energy Relief Grants Scheme, designed to pay the debts of people who found themselves with an unpayable bill and the threat of disconnection, is markedly under-funded. This scheme was set up in the 1980s to end the absurd situation whereby emergency relief funds were paying utility bills; yet today the voluntary emergency relief sector is probably contributing several times as much to paying electricity debts as is the scheme (VCOSS 1995).

The practical outcomes for low-income people, in this as in many other areas, have more to do with the commitment of the Victorian Government than to the changes which may or may not flow from the restructuring and sale.

How serious are the risks?

In assessing the restructuring and sale of Victoria's electricity industry, the central issue for Brotherhood of St Laurence remains the likely outcomes for low-income Victorians.

A major feature of the restructuring has been a regressive redistribution of the system cost burden away from business and onto households through lifting of prices to households as a matter of Government policy.

The restructuring of the electricity industry, in concert with the price rise, created real hardship for a large number of low-income households over recent years.

In one sense, the disconnection and emergency relief figures are just the tip of the iceberg—and there have been other factors, most particularly

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other increases in taxes and charges, which have also contributed to the hardship.

Nevertheless, the contribution of higher electricity prices and the changed climate of customer services—which has been reported persistently, if largely on an anecdotal basis, over the past three years—suggests that Government policy in this area has been of real harm.

The risks of further change are similarly moderate taken singly, but of real concern taken as a group:

- the prospect that domestic prices will remain higher than they would have under unchanged policies, as more of the burden is forced onto households by competition for the high-profit commercial customers who gain the benefit of competition;
- the risk that competition may lead retailing companies to try to 'off load' low-profit households onto some form of 'prepayment meter arrangement, which will actually add to the costs both direct and indirect of gaining electricity for those households;
- that the regulatory apparatus will prove inadequate to the task of developing consistent and adequate responses to the diverse needs of disadvantaged people on the part of the electricity suppliers; and
- the Victorian Government will regard the whole business of electricity supply as no longer its responsibility with a new system in place, and will fail to improve those aspects of the 'safety net' which are its contribution (Benvenuti and Walker 1995).

The immediate effects on low-income households will continue to be felt, in the form of higher prices in the short-term than were probably necessary and customer practices which will make survival use of electricity more difficult.

In the longer-term, privatisation will weaken the public consensus on entitlement to domestic energy use, threatening energy concessions and other assistance schemes, unless a much stronger regulatory regime develops.

Conclusions

Electricity remains an essential element in the lives of all Victorians.

This paper does not pretend to be an expert work in either the technology, management or economics of what has been a large and complex industry, additionally complicated by the creation of market institutions and interactions between what were formerly elements of a public monopoly.

Rather, it has sought to examine the extent to which the public rationale of the Government of Victoria in restructuring and transferring electricity industry is supported by a critical examination of the publicly-available evidence to which they refer.

An examination of the industry's progress over the past two decades suggests that there was no substantial problem which the Government's action will fix. The Government's rationale for change is far weaker than it asserts, amounting finally to a belief that Victoria's inability to generate power as cheaply as Queensland is now able to do is a result of SEC inefficiency and mismanagement, rather than issues of natural advantage.

It is far from clear that the result of the changes will be a significantly more efficient electricity industry than would have been achieved under other policies. Informed opinion is far more divided as to the appropriateness of the restructuring and privatisation than the Government suggests.

In the long-term, it is possible that prices will be higher than they otherwise would have been. However, the arrangements being set in place by the Government are likely to produce 'successes'—in the form of falling prices, high profits and higher employee salaries—which can be put down to privatisation.

However, these successes are likely to derive from factors other than the economic benefits of restructuring and privatisation. These factors include the economic upturn in Victoria, leading to faster growth in sales; previous productivity improvements within the SEC; and conscious government intervention. Government action includes both the creation and regulation of the market, the setting of prices for the next five years, and the discounting of public equity built up in the SEC so as to subsidise prices.

It is far from clear that the pursuit of efficiency in the electricity industry is best advanced by the agenda of competition, much less by the radical restructuring which the Government plans.

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The complex new arrangements—all in the pursuit of ‘efficiency’ and lower prices—effectively disguise a regressive redistribution of the system cost burden away from business and onto households. The immediate effects on low-income households of this will continue, in the form of higher prices in the short-term than would otherwise have come about and through customer practices which will make survival use of electricity more difficult.

Competition appears likely to produce negative outcomes for households who have trouble paying, but much depends on the strength and capacity of regulation to enforce standards which recognise the essential nature of electricity supply.

The practical access of low-income households to the electricity they need will be determined to a great degree by how effectively the regulatory apparatus mandates a systematic response—in the form of appropriate customer policies and procedures—across all the supply businesses. The nature of the competition created may tend to encourage suppliers to limit services to customers seen as high-cost or poor credit risks.

While commercialisation and restructuring has produced problems for low-income people discussed in this paper and by other organisations, the sale of the bulk of the industry into private hands poses additional concerns:

- in the longer-term privatisation will weaken the public consensus on entitlement to domestic energy use, threatening energy concessions and other assistance schemes, unless a much stronger regulatory regime develops; and
- if the concerns identified by critics of the Government’s approach emerge, and economic gains do not eventuate, reversing the sale of separate elements will be very difficult.

Given uncertain benefits, existing problems and some serious risks, the Brotherhood of St Laurence, along with other church and welfare organisations, has proposed that the Government suspend its planned sales of electricity assets pending a public inquiry. Given widespread dissatisfaction in the community over the sale, this remains the most appropriate way of reassuring the public and is likely to provide an important insurance that the restructuring will achieve the best long-term outcomes for Victorians, particularly those on low-incomes, the prime concern of the Brotherhood of St Laurence.

References

- Armstrong, G 1993, 'Competitiveness—the role of the energy industries', *National economic review*, no. 25, May, pp49-58.
- Australian Labor Party (ALP) 1995, *Securing the future: Labour's policy for your SEC*, ALP, Melbourne.
- Australian Bureau of Statistics (ABS) 1995, *The labour force Australia*, cat. no. 6203.0, January.
- Bates, G 1992, 'Feds power paper disappoints ... expecting something better', *Express*, 23 May, p2.
- Benvenuti, J 1994, unpublished speech to VCOSS policy development forum 'Gas, water and electricity: everyone's right to essential services', 17 June, Melbourne..
- Benvenuti, J & Walker, D 1995, *Switched off: case studies of consumers' experiences with energy and water utilities*, Consumer Advocacy and Financial Counselling Association of Victoria, June, Melbourne.
- Boardman, B 1991, *Fuel poverty: from cold houses to affordable warmth*, Belhaven, London.
- Brotherhood of St Laurence 1993, Community service obligations of state-owned enterprises, submission to the Victorian Department of Treasury, unpublished, Brotherhood of St Laurence, Melbourne.
- Bunyon, R 1993, 'Australia's electricity industry: looking inward and outward in the nineties', speech to 1993 Energy and Minerals Outlook Conference, Pacific Power, Sydney.
- Bureau of Industry Economics (BIE) 1994, *International performance indicators: electricity update 1994*, Research report 54, BIE, Canberra.
- Culvert, J & Nelson, D 1995, 'Share greed', *Observer*, London, 14 May, p10-11.
- Catholic Commission for Justice Development and Peace (CCJDP) 1995, *The reform of Victoria's electricity industry*, Discussion paper no. 1, CCJDP, Melbourne.
- Challen, M 1993, Privatisation of state utilities, speech to Peoples Committee for Melbourne public meeting, 23 March, unpublished, Brotherhood of St Laurence, Melbourne.

The restructuring and sale of Victoria's electricity industry: is it worth it?

Challen, M 1995, Treatment of consumers by energy and water suppliers, speech at launch of CLCV, CAFCA and VCOSS reports, June, unpublished, Brotherhood of St Laurence, Melbourne.

Consumer Law Centre Victoria (CLCV) 1995, *Regulation of Victoria's energy and water utilities: options for an organisation to represent consumers and the public interest*, CLCV, Melbourne.

Cragg, C 1992, 'How gas won the day over common sense', *Guardian weekly*, 25 October, p5.

Davidson, K 1995a, 'An assets test that just doesn't add up', *Age*, 20 May, p23.

_____ 1995b, 'Deliver us from evil, lead us not into privatisation', *Age*, 12 April, p15.

_____ 1995c, 'Connection missing in power sale debate', *Age*, 25 February, p15.

_____ 1995d, 'Don't cry yet for the SEC, Victoria', *Age*, 4 March, p23.

_____ 1995e, 'The French connection in state's power game', *Age*, 17 June, p23.

Electricity Supply Association of Australia (ESAA) 1992, Australia's electricity supply industry: successful micro-economic reform, ESAA, Canberra.

Energy Action Group 1983, *Fuel poverty in Victoria*, Energy Action Group, Melbourne.

_____ 1986, *Energy: an essential for all. A community perspective on fuel poverty and comments on the DITR review of energy assistance programs and customer services*, Energy Action Group, Melbourne.

Ernst, J 1991, 'The British experiment in privatising essential services', *Policy issues forum*, November, pp11-16.

Fitzgerald, P 1995, 'Victorian energy privatisation—is it the answer?', *Just policy*, no. 3, July, pp17-19.

Fitzgerald, P & Dreyfus, S 1995, *The price of power*, consultancy report to the churches, Brotherhood of St Laurence, Melbourne.

Forman, D 1995, 'Hilmer bucks NSW power reform program', *Business review weekly*, 12 June, pp23-24.

The restructuring and sale of Victoria's electricity industry: is it worth it?

- Forsyth, P 1992, *Public enterprises: a success story of microeconomic reform?*, ANU Centre for Economic Policy Research discussion paper no. 278, November, Australian National University, Canberra.
- Gittins, R 1995, 'Time to deflate hype on Hilmer', *Sydney morning herald*, 15 April, p24.
- Gluyas, R 1995, 'Power monopoly's inefficiencies exposed', *Australian*, 13 June, pp6,62.
- Government Pricing Tribunal of New South Wales (GPT) 1994, *Paying for electricity: an interim report*, vols 1&2, GPT, Sydney.
- Industries Assistance Commission (IAC) 1989a, *Government (non-tax) charges, volume 2, The importance of government (non-tax) charges, Appendices C to F*, report no. 422, AGPS, Canberra.
- Industries Assistance Commission (IAC) 1989b, *Government (non-tax) charges, volume 4, Studies—public rail freight, electricity and workers' compensation arrangements: the electricity supply industry in Australia*, report no. 422, AGPS, Canberra.
- Industry Commission (IC) 1991a, *Energy generation and distribution, vol. 2: report*, Report no. 11, 17 May, AGPS, Canberra.
- Industry Commission (IC) 1991b, *Energy generation and distribution, vol. 3: supporting appendices*, Report no. 11, 17 May, AGPS, Canberra.
- Industry Commission (IC) 1995, *The growth and revenue implications of Hilmer and related reforms: a report by the Industry Commission to the Council of Australian Governments*, March, AGPS, Canberra.
- Jones, E 1995, 'The standard of "expert" opinion', *Australian financial review*, 4 May, p17.
- Kiers, D 1983, *Tariff reforms and the social obligations of energy policy*, Centre for Urban Research and Action, Melbourne.
- Kahn, E 1991, 'Risks in independent power contracts: an empirical survey', *The electricity journal*, vol. 4 no. 9, pp30-45.
- Kahn, E and Gilbert, R 1993, *Competition and institutional change in US electric power regulation*, Program on Workable Energy Regulation, University of California, Davis, May.
- King, S 1994, *Competition and vertical separation*, Discussion Paper no. 317, October, Centre for Economic Policy Research, Australian National University, Canberra.

The restructuring and sale of Victoria's electricity industry: is it worth it?

- Langmore, J and Quiggin, J 1994, *Work for all*, Melbourne University Press, Melbourne.
- Lawrence, D, Swan, P & Zeitsch, J 1990, *The comparative efficiency of state electricity authorities*, University of NSW Australian Graduate School of Management Working Paper 90-034, October, UNSW, Sydney. Later published in Johnson, M, Kriesler, P & Owen, A 1991, *Contemporary issues in Australian economics*, MacMillan, Sydney, pp183-199.
- Legge, J 1995, 'Victoria's electricity debate: power versus competition', *Australian financial review*, 13 July, p16.
- Lloyd, B 1995, 'Don't be gulled by privatisation pap', *Age*, 28 March, p14.
- London Economics 1993, *Measuring the efficiency of the Australian electricity supply industry*, Electricity Supply Association of Australia, Sydney.
- Manning, I and Armstrong, G 1993, 'The electricity supply industry—lessons and opportunities for Australia', *National economic review*, no. 24, March, pp31-41.
- McGlade, M 1994, 'Does water pricing reform make economic sense?' *Brotherhood comment*, November, pp11-12.
- Moore, D & Porter, M (eds) 1991, *Victoria: an agenda for change. Project Victoria 1991: a project initiated by business organisations in Victoria*, Tasman Institute and the Institute of Public Affairs, Melbourne.
- National Consumer Council 1993, *Paying the price: a consumer view of water, gas, electricity and telephone regulation*, HMSO, London.
- Office of Minerals and Energy 1985, *Energy pricing 1985-86: information paper*, July, Office of Minerals and Energy, Melbourne.
- Pacific Power 1995, *Annual report*, Sydney.
- Quiggin J 1993, *The Industry Commission approach to public sector reform*, Evatt Foundation, Sydney.
- _____ 1994a, 'The fiscal gains from contracting out: transfers or efficiency improvements?', *Australian economic review*, 3rd quarter, July-September, pp97-102.
- _____ 1994b, *Does privatisation pay?*, Australia Institute, Canberra.

The restructuring and sale of Victoria's electricity industry: is it worth it?

_____ forthcoming, 'Private infrastructure: what economic theory suggests', *Just policy*, no. 4..

Rimmer, R 1989, 'Employment implications of improved labour productivity in the Australian iron and steel industry', *Economic record*, vol. 65, June, pp114-129.

Rosenthal, S & Russ, P 1988, *The politics of power: inside Australia's electric utilities*, Melbourne University Press, Melbourne.

Saulwick, I and Associates 1995, *SEC privatisation survey, a survey conducted for the Commission for Mission*, Irving Saulwick and Associates, April.

Savage E 1994, *User pays pricing: a critique of the practice*, Discussion Paper no. 33, Public Sector Research Centre, University of NSW, Sydney.

Scott, D 1995, Epitaph for the SECV and its leaders, unpublished.

Siemon, D 1983, 'The La Trobe Valley; in the shadow of Loy Yang?', *Environment Victoria*, no.47, pp7-10.

_____ 1991, 'Energy savings in the balance', *Australian society*, March, pp18-19.

_____ 1994, Quality of service delivery: meeting the needs of a diverse population, unpublished speech to VCOSS policy development forum 'Gas, water and electricity: everyone's right to essential services', 17 June, Melbourne.

Steering Committee on National Performance Monitoring of Government Trading Enterprises (SCNPMGTE) 1994, *Government trading enterprises: performance indicators 1987-88 to 1992-93*, June, SCNPMGTE, Melbourne.

Steering Committee on National Performance Monitoring of Government Trading Enterprises (SCNPMGTE) 1995, *Government trading enterprises: performance indicators 1989-90 to 1993-94*, April, SCNPMGTE, Melbourne.

State Electricity Commission of Victoria (SECV) 1993, *Annual report 1982-83*, SECV, Melbourne.

Stockdale, A 1994, 'Enterprise Victoria: recapturing our low-cost energy advantage', unpublished notes of presentation, Melbourne.

Stockdale, A 1995, letter from Treasurer of Victoria to Brotherhood of St Laurence, undated.

The restructuring and sale of Victoria's electricity industry: is it worth it?

- Stretton, H & Orchard, L 1994, *Public goods, public enterprise, public choice: theoretical foundations of the contemporary attack on government*, St Martins Press, New York.
- Swan, P L 1990, 'Real rates of return in electricity supply: New South Wales, Tasmania and Victoria', *The economic record*, vol. 66 no. 193, June, pp93-109.
- Taylor 1995, 'The switch to power trading', *Australian financial review*, 8 May, p21.
- Thomas, T 1995, 'Power station amazes doubters', *Business review weekly*, 20 March, p69-70.
- Thompson, C 1995, 'The bushfire risks in power privatisation', *Age*, 11 May, p16.
- Toohy, B 1995, 'The Hilmer fairytale', *Canberra times*, 15 April, p9.
- Trethewey 1986, "When the pressure is really on". *The interim report of the income-expenditure study*, Brotherhood of St Laurence, Melbourne.
- Uniting Church 1995, *Privatisation of the Victorian SECV: background briefing paper*, April, Uniting Church Synod of Victoria, Melbourne.
- Victoria 1994, *Reforming Victoria's electricity industry: a competitive future for electricity. A summary of reforms*, December, Office of State Owned Enterprises, Department of the Treasury, Melbourne.
- _____ 1995a, *Autumn economic statement 1995*, Department of the Treasury and Finance, Melbourne.
- _____ 1995b, Electricity industry act 1993. Section 158a. Victorian electricity supply industry tariff order, June.
- Victorian Council of Social Service (VCOSS) 1993, *Submission to the Victorian Government on the 1993 budget*, VCOSS, Melbourne.
- _____ 1995, *Unplugged: utility demand on Victorian emergency relief agencies*, VCOSS, Melbourne.
- Victorian Council of Social Service (VCOSS) et al 1995, letter to the Premier and Leader of the Opposition, 24 March.
- Walker, David 1995, 'United Energy bidder shows no fear of power', *Age*, 5 July, p22.

The restructuring and sale of Victoria's electricity industry: is it worth it?

Walker, Diencke 1995, *Regulation of Victoria's energy and water utilities: an analysis of the protection of consumers and the public interest*, CLCV, Melbourne.

Wilkenfield, G 1995, 'Energy policy vacuum a big hurdle for electricity reform', *Australian financial review*, 14 June, p20.