

**GAS ASSOCIATION OF NEW ZEALAND  
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**ENERGY EFFICIENCY**

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## **ENERGY EFFICIENCY**

On a 1995 visit to New Zealand, the distinguished legal scholar Richard Epstein made the following remarks:

Whenever somebody tells you that something is special, remember that the history of government failure is littered with arguments that this, that or the other thing is special. We had labour unions in the industrial sector because it was special; we had Medicare in health because it was special; we had subsidised public housing because housing was special; we had price controls in agriculture because it was said to be special. It turns out that there is nothing special about anything. A few central principles consistently applied will tell you the appropriate scope for individual choice on the one hand and for government action on the other.

Epstein was not, of course, denying that all manner of things we use, make and do have distinguishing characteristics. His point was simply that far fewer than is commonly supposed have features that call for exceptions to be made from the general principles of public policy. Much the same goes for commercial strategy as well.

New Zealand has been ignoring this lesson recently. The government regards the labour market as special, not a place where normal contract law should apply. It regards the energy market as special, and intends to return to a form of central planning with a National Energy Efficiency and Conservation Strategy. As yet it has no plans for a national strategy for food production or internet applications, though one hesitates to raise ideas.

I am for energy efficiency. I want to see scarce energy resources used in ways that will make the largest contribution to New Zealanders' living standards. But I am equally concerned about the productivity of labour, land, the internet and all other economic resources. We want to avoid wasteful use of all of them and we want them to be used in activities where they are most valued. This means it may well be efficient, for example, to 'waste' some energy in order to waste less of something more valuable – like human lives.

On the other hand, I see no argument for either special privileges or special penalties for any of these resources. Why should a review of the tax system single out the wasteful use of non-renewable resources as the government is proposing? Surely the aim should be to minimise the waste of all resources, which is the reason for examining the tax burden.

Concerns about energy have been the subject of wild swings in popular opinion in the past 30 years. Julian Simon reported that the percentage of the American public that said energy is "the most important problem facing the nation" jumped from 3 percent in September 1973 to 34 percent in January 1974 following the OPEC oil price increases, and then quickly fell back down to 4 percent. At the time of the second oil price increase in 1979 fully 82 percent said that the energy situation in the United States was "very serious" or "fairly serious" but then public concern quickly dropped again.<sup>1</sup> Today most of the anxieties over energy, population and other environmental 'scares' of the 1970s have largely dissipated as research and experience has shown them to be unfounded, though some interest groups and politicians still seek to fan the fires.

Back in the 1970s and early 1980s we learned some lessons that it would be painful to have to learn over again. The whole Think Big fiasco and the notion that we needed a ministry of energy stemmed from the idea that energy was so special that governments needed to intervene comprehensively in energy markets. We preferred the absurd spectacle of carless days to efficient prices for energy. But bringing in regulations to limit car use is no more absurd than the government's recent decision to bring in regulations to limit energy use in buildings.

There is much confusion over energy efficiency. Four sources of confusion deserve special mention.

First, energy efficiency should not be confused with whether an economy is energy intensive or not. New Zealand's overall energy use per unit of gross domestic product (GDP) – its energy intensiveness – is not out of line with that of many comparable countries – for example many in Europe. To the extent that energy use in some sectors is higher, this reflects things like New Zealand's comparative advantages in some forms of energy production and the preferences of consumers. If we did not exploit these comparative advantages or satisfy these preferences our economy would be less efficient. Some economies will always have a higher energy intensity than others: energy intensity is merely a statistical measure with no automatic connotations for economic efficiency. The draft report by Lee Schipper *et al* for the Energy Efficiency and Conservation Authority confuses the two issues when it talks about the ratio of energy use to GDP as being a "surrogate for energy efficiency".<sup>2</sup> The report's finding that New Zealand's

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<sup>1</sup> Julian Simon, *Hoodwinking the Nation*, Transaction Publishers, New Brunswick, 1999, pp 10–11.

<sup>2</sup> Lee Schipper, Fridtjof Unander, Céline Marie-Lilliu, Ian Walker, International Energy Agency, and Scott Murtishaw, Lawrence Berkeley National Laboratory, 'Indicators of Energy Use and Efficiency in New Zealand in an International Perspective: Comparisons of Trends Through 1995', EECA, August 2000.

energy intensity is declining, and is expected to continue to decline, is confirmed in the Ministry of Commerce's latest Energy Outlook.

Secondly, people confuse economic efficiency (which is what matters for living standards) with the technical efficiency with which energy is used. There is no point trying to maximise technical efficiency if it makes people worse off. To illustrate the trade-offs, lighter vehicles may use less fuel, but they may also be less safe. Similarly, the most energy-efficient buildings may be inconvenient in use and uncomfortably hot in summer. Mandatory energy efficiency requirements are likely to fall particularly heavily on low-income households as they tend to drive up the capital costs of buildings or equipment. Should middle class voters impose their views on what constitutes value for money for the poor?

Thirdly, energy is sometimes regarded as special because some forms of it are non-renewable. But New Zealand minerals such as ironsands and rock aggregates are more or less non-renewable, yet no one proposes special taxes or 'national strategies' for them or regards their depletion with particular concern. There is no evidence, worldwide, that energy resources are becoming more scarce. Julian Simon won the celebrated 1970 bet with environmental doomsayer Paul Ehrlich that natural resources would become cheaper rather than more expensive by 1990, indicating that they would be less scarce. Under the Ministry of Commerce's baseline scenario the prices of electricity, gas, oil and coal to end consumers are projected to stay at current levels to 2020 in real terms. Many of the same people who worry that the world is going to run out of fossil fuels also worry about global warming. They can't have it both ways.

Fourthly, it should not be assumed that greater energy efficiency and a better environment are one and the same thing. It is easy to identify situations where greater energy efficiency conflicts with environmental and other concerns. For example, it might be energy efficient to bulldoze a road directly through an environmentally sensitive area. Alternatively, the more fuel-efficient vehicle may be the noisiest or least safe. In the case of renewable forms of energy, wind farms can be extremely unsightly and are often controversial on environmental grounds.

As the resolution of the oil crises of the 1970s finally demonstrated, private markets are far more effective than government planners in promoting the efficient use of energy resources. Markets are uniquely well equipped to handle adjustments on both the supply side (new exploration, new

technology, substitutes) and the demand side (constraining consumption, substitutes) provided prices are allowed to play their signalling role.

By contrast, the history of government involvement in energy markets worldwide has often been characterised by waste and mismanagement. Politicians typically value votes more than the national interest. Political pricing has favoured some groups (eg households with voting power) over others, prices have been kept artificially low, thus encouraging demand growth and unnecessary investment, and government-owned energy businesses have been over-engineered, used as employment schemes, been slow to adopt new technology and yielded low returns. As we saw with Think Big and in the former Soviet Union, government intervention typically produces bad environmental outcomes as well as bad economic and social outcomes.

There are few 'market failure' problems in the energy sector that justify special government action, provided property rights are clearly determined and prices are allowed to reflect social opportunity costs. Global warming could be an exception, but both the scientific and the economic case for government action are far from established at this stage.

Summing up the debate about the case for intervention in energy markets, Cato Institute energy specialist Jerry Taylor wrote:

Careful analysis reveals that, contrary to popular belief, energy is more abundant today than ever before; there is no wrenching scarcity on the horizon ... Nor do free markets fail to provide for efficient energy use; the so-called market failures of the energy economy either do not exist or are more appropriately labeled "government failures." ... Experience has shown that the invisible hand of the marketplace is far superior in providing for efficient energy use and conservation than is the dead hand of government planners.<sup>3</sup>

Taylor rightly derided the views of energy campaigner Amory Lovins who wrote "It would be little short of disastrous for us to discover a source of clean, cheap abundant energy because of what we might do with it", and Paul Ehrlich who said "giving society cheap, abundant energy ... would be the equivalent of giving an idiot child a machine gun."

The best thing the government could do to promote energy efficiency on a sound basis in New Zealand would be to advance a number of strategies in areas where reforms have stalled in recent years. These would have beneficial economic and environmental impacts. Examples include:

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<sup>3</sup> Jerry Taylor, *Energy Conservation and Efficiency: The Case Against Coercion*, Policy Analysis 189, Cato Institute, March, 1993.

- putting road management and operation on to a proper commercial basis with economic pricing including congestion charges;
- establishing market mechanisms to allocate water between energy-producing and other uses where water is scarce, through the development of water markets;
- clarifying property rights, especially in the case of Treaty of Waitangi claims, and investigating the possibility of privatising mineral rights;
- establishing competitive conditions in all markets through the removal of artificial entry barriers (eg restrictions on vertical integration in the electricity industry). In the absence of entry barriers, real concerns about the problem of so-called 'natural' monopolies are now few and far between;
- privatising central and local government-owned energy businesses to increase their efficiency and ensure their pricing is subject to proper commercial disciplines, and improving governance processes in the electricity sector through industry cooperation; and
- promoting neutral taxation policies. For example, there is no sound case for excise taxes on petrol (in addition to GST and a road user element) or for a preferential regime for petroleum exploration and development.

Regrettably, the government seems disinclined to do most if not all of these things.

By contrast, there is no need for a national energy strategy, mandatory energy standards in the building code, capping electricity line charges, costly forms of information disclosure or an agency like the Energy Efficiency and Conservation Authority. New Zealand businesses and their industry associations should have the courage to debate which policies make sense and which do not; they should not simply go along with the politically correct ideas of the day.

At the commercial level, firms should of course pursue the normal role of business enterprises of striving to meet the needs of their consumers. If there is a profitable demand for more energy-

efficient appliances, buildings or production processes, firms have every incentive to meet it: there is no need for government mandates. If 'green products' are sought after on local or world markets, firms should seek to exploit this new source of consumer demand. The evidence that consumers are prepared to pay a significant premium for green products is mixed, but undoubtedly a market exists for them.<sup>4</sup> If it grows, normal commercial incentives will ensure it is supplied efficiently.

Above all, we need to remember that in the energy sector, as in most others, sound economic strategies and sound environmental strategies are largely complementary. Richer is typically cleaner. A strong economy and high environmental quality mainly go hand in hand, as the experience of rich and poor countries alike demonstrates. If we sacrifice economic growth we are likely to end up worse off environmentally. There has to be clear evidence of market failure and evidence that government intervention will improve matters before it is wise to decide there is anything special about any market. In the case of energy, that evidence is by and large hard to find.

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<sup>4</sup> There is some evidence from the United States, particularly California, that some consumers are prepared to pay a little more to access 'green' energy – the best example is windpower.