

New South Wales Energy Policy Directions

Submission to the New South Wales Government

By Alan Moran

FEBRUARY 2005
ENERGY ISSUES PAPER NUMBER 35



Institute of
Public Affairs Ltd
Lvl 2, 410 Collins Street
Melbourne Vic 3000
Tel: (03) 9600 4744
Fax: (03) 9602 4989
Website: www.ipa.com.au

SUBMISSION TO THE NSW ENERGY DIRECTIONS GREEN PAPER

Introduction

The Green Paper raises serious issues that confront policy makers in the State over coming years. Unfortunately part, in fact the greater part, of the material it assembles is an arrangement of specious arguments which are designed to mask a crisis in the state's electricity industry, a crisis which the current government has created and is paralysed to resolve.

The report's material is posited on three bases:

- First that electricity demand, particularly peak demand, is growing rapidly in NSW and there will be a need for increased peak capacity or its equivalent in terms of demand side savings by 2008/9 and for increased base load plant by 2012/13;
- Secondly, it is claimed that the regional effects of anthropogenic induced global warming exacerbate the effects of other pressures in NSW to require the State to reduce its own use of greenhouse gas emitting energy sources
- Thirdly, that the Government wishes to avoid further taxpayer investment in electricity generation.

The objective is “to place NSW on the pathway to a new carbon constrained future, while maintaining a prosperous economy and managing the impacts of climate change on the NSW community.” The Green Paper is an attempt to provide a rationalisation of the Government's regulatory interventions and portray them as positioning the state for a successful future. It purports to follow the advice of a select group, commissioned by NSW, Victoria and SA, of proponents, of greenhouse gas reduction policies – the “Kyoto Ratification Advisory Group¹”.

In fact, the intensive regulatory regime the Government has established and its failure to follow a private ownership base for the power industry guarantees an erosion of the state's prosperity levels. The hostility of Government policies towards coal based power makes it unlikely that efficient new generation facilities will be commissioned in time to prevent serious power disruptions and price increases.

¹ The group comprised:

- Mr Peter Duncan (Chair) former chief executive of the Shell group of companies in Australia;
- Ms Gwen Andrews, former Chief Executive of the Australian Greenhouse Office;
- Professor John Hewson, former leader of the Australian Liberal Party and currently Chair of Global Renewables Pty Ltd;
- Mr Jon Stanford, Executive Director of The Allen Consulting Group; and
- Mr Phillip Toyne, former Executive Director of the Australian Conservation Foundation and currently head of EcoFutures Pty Ltd.

The Need for New Generating Capacity

The Green Paper draws together well established material to demonstrate the need for the State to build new generation capacity and the timing of when this is likely to be required.

It also examines other options to new capacity and refers to a study by Charles Rivers and Associates which indicates that considerable peak shaving is available if the correct incentive structure is in place.

More controversially, it addresses options for Demand Management like the recently introduced BASIX which requires energy and water efficiency in new homes. Similarly, it is claimed that people may be better off with lower usage. This is highly unlikely to be an outcome of regulatory forced price increases choking off demand. Moreover, it is easy to reduce energy usage by simply mandating that this be done, or shutting down the system but such measures will be politically unpopular.

No measures, especially those that place an uncosted regulatory burden on households should be immune to evaluation.

In any event, the energy usage reductions from Minimum Energy performance Standards and other similar measures are quite modest. At best some 0.2% of energy savings are available (see IPA Submission to the PC Inquiry into Economic and Environmental Potential of Energy Efficiency²). Often these savings are achieved at a high cost which discriminates against those least able to afford the lower energy-using products and which is hidden from view and not open to the scrutiny that governments say they wish to ensure.

These rather novel alternatives to increased supply enjoy support within certain quarters of academia and within green groups. While there is much that can be done and is being done to conserve supply and save on demand, there is no alternative to increasing supply unless the State is to go into economic decline.

The Green Paper is somewhat sanguine in its hopes for the competitiveness of exotic renewable sources like wind. However it is also realistic in its assessment of the deficiencies of such uncontrollable sources except in the longer term.

The Green Paper makes several assertions about the preferred type of plant that may be used. It argues that coal based stations will become increasingly constrained at a global level and that “the price of carbon dioxide emissions is likely to increase” and coal will become less competitive than gas because of the latter’s lower carbon:energy output. To be fully operative, this requires that governments set a tax/tradeable right on greenhouse emissions. Australia and the US have determined not to introduce such measures. Though the NSW Government is very much convinced about the need for it, its jurisdiction does not extend to national policies.

However the propagation of material against coal fired generation – and the very real moves the NSW Government has made to disadvantage it – bring a strong disincentive for new coal based electricity generation. This, in effect, raises the

² <http://ipa.org.au/files/Energy33.pdf>

cost/risk premium for coal generators thereby dampening investment incentives. As coal remains the cheapest source of base load electricity in NSW, the cost premium created by government statements and actions against it will mean some risk to timely low cost new supply.

The paper recognises that a shift to natural gas would be expensive in terms of infrastructure (both in costs and in energy losses in transit) and is no supply panacea notwithstanding its lower carbon/energy content. It also recognises that reliance on transmission of electricity from other jurisdictions might be costly in terms of the facilities themselves and might even be counterproductive in reducing greenhouse gas emissions if the other jurisdictions' plants were coal intensive.

Added to this is a further consideration not addressed. That is, to the extent that higher power prices results in a less competitive tradeable goods sector in the State, the energy using industries will migrate elsewhere. This could bring an outcome of even greater aggregate global energy use with higher greenhouse gas emissions, especially if the resulting increase in output were in areas that are less energy efficient than Australia. China is a clear case in point. That country to which a great deal of the world's footloose industry is gravitating has far less efficient energy plants than Australia and its Government is adamant that it will not restructure industry or energy in order to reduce greenhouse gas emissions.

Public Ownership as a Cost to NSW Efficiency

Deficiencies of Politically Appointed Boards of Directors

The Government makes it clear that it wishes to avoid new generator investment on behalf of the taxpayer. The present administration has, in the past, made efforts to obtain support from the State Labor Party to have the industry privatised.

Difficulties always arise with government ownership even when there are ostensibly independent corporatised boards. Inevitably these tend to be appointed, at least in part, to reward or succour political support. While this may be less important for Liberal Party appointments, since many of the beneficiaries are from the business community, for the ALP it often means some appointees with agendas that are contrary to sound management. Many supporters that ALP governments wish to reward with their patronage or to sustain in order to retain their active support have deep misgivings about the merits of the marketplace in producing efficient outcomes. Many wish to pursue goals other than "maximising the wealth of the firm's shareholder", which must be the focus of a corporation's board, opting to adopt as co-equal goals notions of social justice or preferred environmental outcomes.

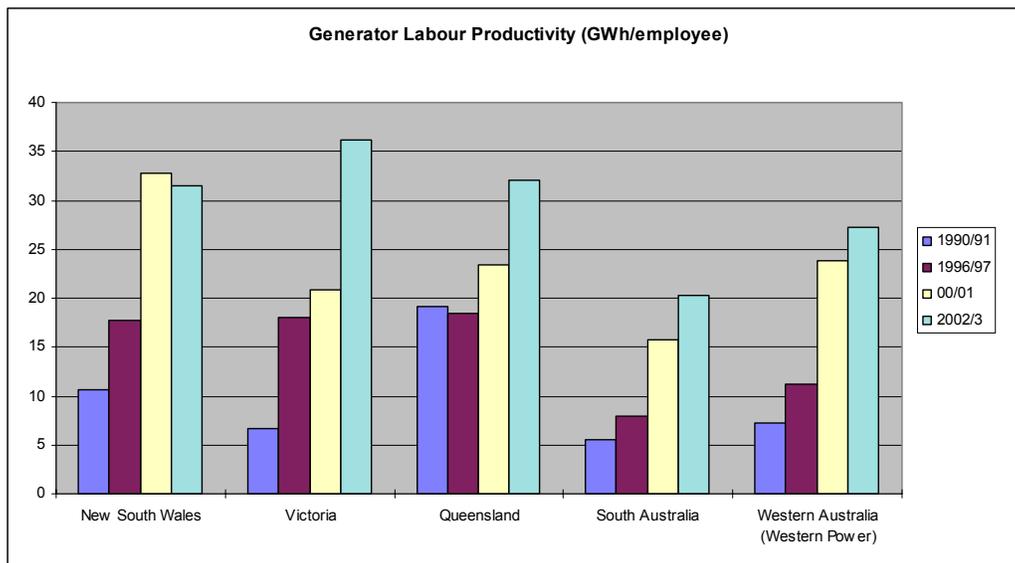
Political appointments are evident in NSW. Thus, the Government "parked" Jenny George, a trade union leader with no business experience, on the board of Delta Electricity while she was between jobs awaiting her Parliamentary inauguration. Of greater importance than the direct costs the taxpayer bears, such appointments can undermine corporate efficiency. Doubtless, this would have been the case with the appointment of Ms George, who would have used her influence to ensure union privileges were maintained to the detriment of the firm's costs and efficiencies.

This outcome was more clearly evident in the early days of energyAustralia. The Government had appointed a CEO who observed the economies being made in the privatised Victorian electricity retailer distribution businesses. The CEO was frustrated and eventually fired for seeking to emulate these cost savings. This outcome was engineered by a Government appointed Board of Directors that was chaired by an ALP sympathiser and included other True Believers, including a trade union representative.

Comparative Efficiency of Public and Private Energy Suppliers

It is for good reason that the Government would prefer not to have increased public sector investment in electricity generation. There is no more case for such ownership in power generation than in banks, gaming or other activities that governments around the world have exited. Such activities clearly have no natural monopoly features and consequently even fewer claims on government finance than roads, transmission lines or gas pipelines, all of which are also being placed within private sector ownership in recognition of the greater efficiencies and risk management benefits this brings.

The benefits of private ownership of electricity generation are abundantly evident from an examination of the industry in Australia. Labour productivity in the electricity generation sector has increased across the country. However the outcomes have been far from uniform. In the privatised Victorian and South Australian systems, labour productivity has respectively increased fourfold and threefold. NSW with its government owned generation business and Queensland, under predominantly government ownership, have seen more modest increases - twofold in the case of NSW.

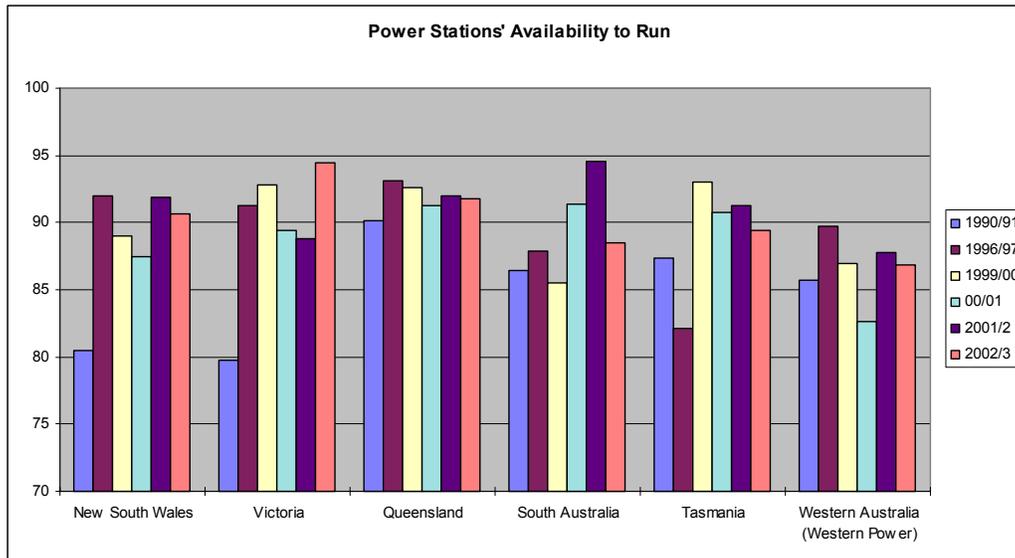


Source: ESSA

Having started the 1990s with a labour productivity half of that of the NSW industry, the Victorian generators now use fewer employees per unit of output. Part, but by no means all of this improvement is due to greater use of contractors in the privatised

Victorian industry. Moreover, to the extent that NSW uses fewer contractors this is likely to be a reflection of its shareholder's preferences for union labour and would contribute of itself to lower levels of efficiency.

Notwithstanding the fewer people they now employ, power stations have improved their availability to generate, as can be seen below.



Source ESAA

Again it is the privatised Victorian system that has shown the greatest improvement. It would have been considered incredible ten years ago that a brown coal based system would demonstrate greater availability to run than a black coal based system. The Victorian power stations' use of poor quality brown coal fuel and the additional processes this requires makes them inherently less reliable. Yet in the years since their privatisation, on average the Victorian generators have performed better than those of NSW and even in some years better than the newer and traditionally well run Queensland generators.

The NSW Government has stated that it does not intend to build additional generation facilities. There is a consequent reduced role for the existing generators, which are left without the key strategic options of any corporation: expansion or rationalisation by disinvestment. This further reduces the abilities of those businesses to attract capable executives.

The Public Sector and Future Investment in Electricity Generation

In addition to bringing a more efficient generating sector, privatisation of the existing assets is very important to attract further private sector funding for new stations. Wherever the Government has businesses that compete with private sector providers the latter will harbour fears that state owned politically controlled competitors may be willing to operate non-commercially and bring about unfair competition.

The Green Paper says (p. 51) that the Government recognises that private sector investors will be wary of committing funds while there is a risk of this being stranded by “non-commercial” investments by government businesses. However, private investor confidence in the Government’s acceptance of market forces will be diminished somewhat by its statement that it will develop an alternative strategy, “if it becomes clear that new generation plant will not be developed in time to meet NSW’s potential supply needs”. (p.53)

Such a statement is pregnant with risk of stranding. It suggests that the Government has foresight superior to that of the private sector in determining the optimal time to commission new plant. Such a point of view defies the costly boom bust experience of generation plant construction that was prevalent in NSW and other state owned systems. More importantly, for private investors, it signals a government intent to override commercial considerations if these provide a lower level of investment than the government would itself wish to see.

However in many respects the statement is an acknowledgement that the investment conditions the NSW Government have created will backfire on the timely market provision of low cost new generation. The many obstacles and uncertainties that the government is putting in the way of new electricity generation developers makes it inevitable that investors will require a risk premium before committing funds, thus increasing the price of electricity in the state and the risk of shortages.

That risk premium is likely to have been increased as a result of the sovereign risk demonstrated in the treatment of a private sector investment undertaken by the US firm National Power. This stemmed from a commitment – in the event an unwise commitment - by energyAustralia, the biggest retailer in the NSW (and in Australia). This involved a 35 year deal with National Power for two new power stations, Redbank 1 and 2.

Soon after the deal was struck, the price in the market halved and remains 30 per cent below the Redbank contract price. Some estimates put the contract loss at \$750 million. The NSW Government sought to renege on the deal but the courts refused to overturn it.

Redbank 1 has been operating for the past three years. But Redbank 2 was still to be built and the NSW Government set up an inquiry into it. Various Government funded green groups chipped in with a chorus of opposition to the project. Citing greenhouse gas emissions, the Government refused it development approval, thus avoiding an onerous contract. Rather than face interminable legal delays and uncertainties, National Power announced in September of last year that it would not proceed with Redbank 2.

Using approval processes to cancel contracts smacks of banana republic government practice. That aside, opposition to the development on environmental grounds is ironical. A few years ago there would have been green accolades for the Redbank project because it uses waste coal which could otherwise pollute the Hunter River. Indeed, in 2001 Redbank 1 won the Institution of Engineers Award for Environmental Excellence.

Playing the Green Card to energize radical environmentalists is a risky political game. Giving green lobbyists a voice in deciding which sort of power stations might be built can rebound savagely on power system security. The Government's performance on this matter must add to the risk premium required of private sector developers of power stations and will probably require some enforceable undertakings before any private funding is extended to coal based generation in the state.

In addition, private sector investors, especially in coal based generation, would hardly be re-assured by the Green Paper. This expresses considerable hostility to new coal power, canvasses greenhouse taxes and a policy (p.24) by mid century ranging from stabilisation of emission at current levels to reducing them by 40 per cent. In terms of a business-as-usual growth in energy demand at two per cent per annum, this range of outcomes would amount to a highly ambitious reduction of between 60 per cent and 75 per cent in emission levels. In claiming in concert with this, that the Government will let the market decide which technologies should be developed, the Green Paper is giving expression to grand sounding laissez faire principles that clothe a highly intrusive policy approach.

The Government canvasses the idea of extending the NSW Greenhouse Gas Abatements scheme beyond 2012 to 2020. Left unchanged, by 2011, that scheme together with the Commonwealth's MRET scheme, will have condemned NSW consumers to a growing proportion, 23 per cent by 2011, of high cost generation supply.

The Green Paper predicates the idea of extending NSW Greenhouse Gas Abatements scheme on the basis that a national emissions trading scheme will not be in operation. The Commonwealth has said it will not ratify the Kyoto Protocol. State Ministers are exploring possible cooperative approaches for a national emission reduction strategy that do not involve the Commonwealth Government. However, even if such a scheme could be made consistent with s92 of the Constitution, which requires freedom of trade between the states, it is unlikely that state ministers would find grounds for agreement. Any conceivable agreement would mean Queensland abandoning its "manifest destiny" to become the federation's low cost energy state, other states agreeing to subsidise South Australia's wind industry and Victoria acquiescing in the early eclipse of coal based generation from the La Trobe Valley.

Combating Anthropogenic Induced Global Warming

It's not Cheap to Be Green

Greenhouse issues dominate the Green Paper. They and related matters comprise about half of its pages. This is not surprising given the actions of the Government in ensuring that the issues will dictate the provision and nature of future industry investment.

Much discussion of greenhouse turns on replacement power in the form of exotic renewables like wind and solar panels. Many green advocates, industry lobbyists and those in search of research grants claim that these new energy forms, sometimes in

coordination with energy restraining requirements on consumers, will yield net benefits. Some argue this to be the case even without factoring in an environmental penalty for emission levels of fossil fuels.

While we are clearly yet to benefit from the much vaunted silver lining that capitalises on the white heat of the claimed renewable industry's technological revolution, considerable costs are already being incurred to promote greenhouse policies even in non-Kyoto ratifying Australia. Some of these have already been alluded to.

Government energy sparing measures were first established to counter the 1970s policy vogue, stemming from the 'energy crisis'. At that time the scare involved energy depletion rather than it asphyxiating us. These policies which focus on mandatory levels of energy efficiency have been extended and have morphed into greenhouse gas savings.

These have been added to be programs that are embedded in many different government departments, the extent of which no government is capable of determining. The table below attempts a summary of part of the costs but does not include all of the direct costs nor those stemming from energy saving requirements for houses and a range of consumer durable products.

Summary of Greenhouse Taxes and Expenditures

	Annual Costs M
Commonwealth, NSW and Queensland Abatement Requirements on Retailers	\$669 (2010)
Royalties	\$844
Commonwealth Government Disbursements	\$124 (2006/7)
State Government Disbursements	\$32
Total	~\$1669

Several of the programs seek to address greenhouse issue alongside other targets. This applies to the MEPS programs and to the Queensland 13 % gas program, which seeks to substitute gas for coal based electricity inputs.

The main schemes that tax electricity in NSW, ostensibly with a view to imposing penalties to encourage consumption of fuels that produce lower carbon dioxide emissions per unit of energy, are:

- the Federal Government’s Mandatory Renewable Energy Target (MRET); and
- the NSW Greenhouse Gas Abatements scheme.

These schemes’ costs are

Commonwealth ³	\$380M
NSW ⁴	\$221M

The MRET scheme’s focus is on renewable energy and requires retailers to acquire and annually surrender a progressively increased number of Renewable Energy Certificates (RECs). The major beneficiary was hydro in 2003, with Snowy having some 490,000 RECs, worth some \$16 million to the business. Although accounting for only 10 per cent of the RECs created in 2003, wind is likely to increasingly account for the growth in new RECs.

The NSW scheme seeks to introduce a penalty on CO2 graduated in line with the emissions per unit of energy of each electricity generation source.

The default penalty costs of the two regulatory measures provide a cap on the costs they are likely to entail. These costs entail a premium over the costs of conventional electricity to retailers. By 2010, when the schemes are at full maturity, the fall back penalty rates for the Commonwealth and NSW schemes respectively are \$40, and \$14.3 per MWh⁵. These rates provide the (maximum) subsidies to the non-carbon or low-carbon emitting fuels. In after-tax terms, costs to retailers of the two schemes’ subsidies are \$57 and \$20.4 per MWh. respectively. These costs are over and above the basic wholesale (contract) price of electricity, which is likely to remain close to its present level of \$35 per MWh.

For NSW, existing requirements of NSW Greenhouse Gas Abatements scheme and MRET combined will force an increase in sub-optimal energy supply from 5 per cent in 2004 to over 23 per cent in 2011 (see Attachment). By that time, based on the penalty costs of the MRET and NSW schemes, the annual cost per household in NSW will reach \$59.

³ Based on 9,500 GWh at a penalty cost of \$40 per GWh

⁴ Based on:

- benchmark of 7.27 tonnes CO2 per capita totalling 52.054 million tonnes in 2010
- 2010 business-as-usual emission level estimated at 71.406 million tonnes
- Giving State gap of 19.352 million tonnes CO2 less MRET credit estimated at 2.808 million tonnes
- Giving 16.544 million tonnes
- With penalty rate at \$13.36 per tonne CO2 (\$10.5 escalated at 3.5 per cent per annum)
- Gives total cost at \$221 million

⁵ Penalties under the NSW scheme are subject to indexation; annual inflation of 3.5 per cent is assumed.

Alternative Low Emission Fuel Sources

With no nuclear and relatively little hydro, Australia has one of the world's highest fossil fuel shares of energy.

As has long been commonplace with messianic reviews of energy policy, options that focus on lower levels of carbon dioxide emission, there is no discussion in the Green Paper of nuclear power, the one proven form of low cost energy that can achieve this. Many Asian countries with relatively high cost local coal or requiring imports that are also costly once landed are installing considerable nuclear capacity. In the UK, Prime Minister Blair is also clearly shifting to a policy in favour of nuclear power station building recognising that the fabled low cost exotic revolution is not going to happen.

Nuclear is likely to remain higher cost than coal in Australia though for base power it would probably be competitive with gas.

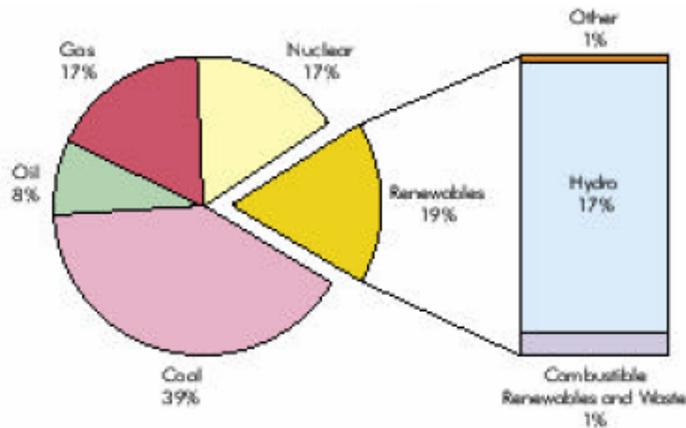
Gas already has a firm place in Australian power generation and is likely to increase its share in view of the greater demand for peaking plant where gas can be a more flexible fuel than coal. The limitations of gas, especially in NSW are accurately summarised in the Green Paper. Similarly, coal seam methane (CSM) is reviewed. In Australia this accounts for 8-9 per cent (60 PJ) of gas and ABARE forecasts it to be 100 PJ per year by 2020, when it would comprise some 12 per cent of Australian gas production. Its carbon emission:energy levels are half those of coal.

Australian CSM inferred reserves at some 275,000 PJ, are in excess of conventional natural gas reserves (estimated at around 160,000 PJ). A natural gas deposit located near a main population centre or on an established, underutilised pipeline is likely to provide cheaper gas than any CSM source. But CSM from coal close to the surface and located hundreds rather than thousands of kilometres from major markets will normally offer cheaper delivered energy.

Like natural gas, CSM is likely to show an increase in its usage in Australia, and especially in NSW and Queensland (brown coal does not offer a potential for methane production). It is not at present envisaged to be available in sufficiently large quantities or at sufficiently low costs to be a major source of fuel for low cost electricity generation.

The modest share of exotic renewables is illustrated below

Global Share of Renewables



Source: International Energy Agency, Renewables in Global Energy Supply, Nov 2002.

Wind power has continued to increase but is a tiny fraction of total generation.

Across the world, the strong increase in wind generation installations has been on the back of hefty subsidies. These include offering a premium price (Germany, Spain, Italy) tax credits (US), tradeable credits (Italy, UK, Australia) and capital grants (Greece, Sweden).

Denmark has been the stand-out case with up to 13 per cent of its electricity coming from a total of over 6,000 wind turbines. But this share of the total is being pared back by a new government keen to address electricity costs which, as a result of existing energy policy, are three times the Australian level. Moreover, the need for fast start follow-on capacity to offset the oscillations in availability of the wind power is taxing the abilities of the Nordpool system in spite of its considerable hydro capacity.

Denmark has created a major industry out of wind farming. There are about 4,000 people employed in its turbine factories and about 10,000 jobs with suppliers. Gullible politicians and activists use this to claim that there are excellent prospects of new job opportunities that accompany subsidies to wind power. Leaving aside the fact that such winner-picking policies have been discredited, it is highly unlikely these benefits would actually will materialize in Australia. The industry here is technologically dependent on firms that have pioneered the technology overseas and Australia can never be a substantial market for the final product.

Installations of wind facilities are shown below.

Global wind power installed in 2003

Country	Total installed during 2002	Total installed by end of 2002	Total installed during 2003	Total installed by end of 2003
NORTH AMERICA TOTAL	450 (6.5%)	4,921 (16%)	1,768 (22%)	6,691 (17%)
Canada		236	81	317
USA		4,685	1,687	6,374
EUROPE TOTAL	5,983 (87%)	23,308 (74.5%)	5,467 (67%)	28,706 (73%)
(EU 15 TOTAL)	5,871	23,098	5,411	28,440
Germany		11,994	2,645	14,609
Spain		4,825	1,377	6,202
Denmark		2,889	243	3,110
Netherlands		693	226	912
Italy		788	116	904
UK		552	103	649
Sweden		345	54	399
Greece		297	78	375
France		148	91	239
Austria		140	276	415
Portugal		195	107	299
Ireland		137	49	186
Belgium		35	33	68
Finland		43	8	51
Luxembourg		17	5	22
(ACCESSION STATES TOTAL)	29	61	41	102
Poland		27	30	57
Latvia		24	0	24
Czech Republic		3	7	10
Hungary		3	0	3
Estonia		2	1	3
Cyprus		2	0	2
Lithuania		0	0	0
Malta		0	0	0
Slovakia		0	3	3
Slovenia		0	0	0
(OTHER EUROPE TOTAL)	83	149	15	164
Norway		97	4	101
Ukraine		46	11	57
Switzerland		5	0	5
Romania		1	0	1
REST OF THE WORLD TOTAL	435 (6.5%)	2,999 (9.5%)	898 (11%)	3,897 (10%)
India	195	1,702	408	2,110 (5.4%)
China	68	468	100	568
Japan	140	414	272	686
Australia	32	105	93	198
Other countries	-	310	25	335
GRAND TOTAL	6,868	31,228	8,133	39,294

Source: EWEA. AWEA

In Germany wind costs have been particularly well documented in the annual wind reports of e.on⁶. More recently, an official report critical of wind as a power source was suppressed by the government. According to the London Daily Telegraph (**Germany shelve report on high cost of wind farm-produced energy** By Tony Paterson in Berlin, (Filed: 30/01/2005)

"A damning report warning that wind-farm programmes will greatly increase energy costs and that "greenhouse gases" can be reduced easily by conventional methods has been shelved.

"The findings of the 490-page report, commissioned by the German government and due for publication last week, were so embarrassing that ministers have sent it back to be "re-edited". Jürgen Trittin, Germany's Green Party environment minister, said: "We do not want the findings of this report to be misinterpreted."

⁶ Wind Report 2004, www.eon-netz.com

"The inquiry into wind farm growth was compiled by the government's energy research agency and two other independent bodies. Its conclusions are awkward for Germany's ruling coalition of Social Democrats and Greens, which has overseen widespread growth in wind farms. With more than 15,000 turbines, Germany has the highest number of wind farms in Europe and the government is committed to doubling the number by 2015."

Estimated wind power costs are as follows

Country	Australian cents per kwh
Germany	15
Spain	10.7
USA	9.8
Italy	16.9
Ireland	6.2
UK old	5.5
UK new	8.6
Australia	7.5

Source: Sinclair Knight Metz

By contrast, black and brown coal costs are around 3.5 cents with gas around 4 cents. And although considerable cost reductions have been observed in wind generation these are now leveling off and wind is unlikely to be available at less than twice the cost of coal generation – far more than this once back up and increased transmission investment is included in order to compensate for wind's inherent irregular availability.

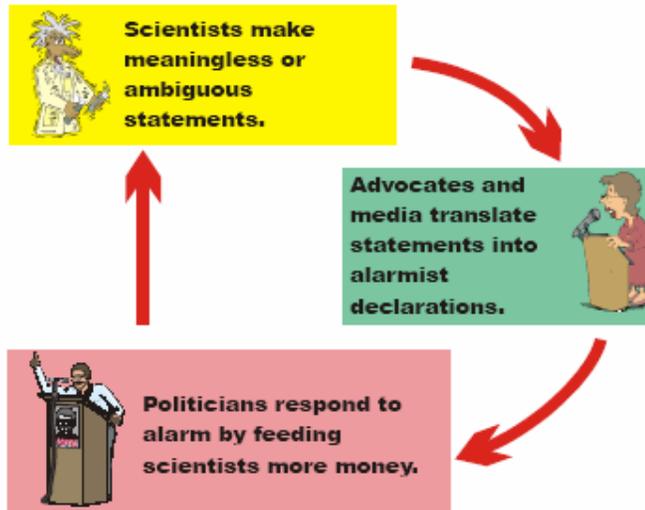
Catastrophic Anthropogenic Global Warming: Myth or Reality

Dr. Christopher Landsea, a scientist at the Hurricane Research Division of the U.S. Department of Commerce is one of the world's foremost experts on hurricanes. He resigned from authorship of an upcoming United Nations report on climate change, charging that the U.N.'s Intergovernmental Panel on Climate Change (IPCC) is "both being motivated by pre-conceived agendas and being scientifically unsound."

He was prompted to resign by the actions of his senior IPCC member, Dr Kevin Trenberth who has not undertaken any research on hurricane variability. Dr Trenberth issued public statements on the matter which argued, contrary to the evidence, that there would be an increase hurricane frequency and wind speed.

The corruption of the science observed in the IPCC processes goes even further than the following cartoon which eminent atmospheric physicist, Richard Lindzen has developed

**The sad tale of the iron triangle (of alarmism)
and the iron rice bowl (of science)**



Many governments, and that of NSW is a leading example, have been the key proponents of action. Thus, the NSW government commissioned a report from CSIRO, which permitted itself to be used to support spurious claims that it could model a regional greenhouse picture for the State. We must remember that no global climate model has been validated, let alone one that seeks to disaggregate the results into geographic areas the size of NSW.

In fact the CSIRO, in time honoured language said that their research shows, “the *likely* impacts of climate change *may* include” (our emphasis) a series of adverse effects. These are listed below and counterpoised by equally plausible outcomes of the developments in climate trends:

The NSW Government Hypotheses	Equally Plausible Hypotheses
A 70 percent increase in drought frequency by 2030, leading to less rain and less water for farms, cities, power stations and rivers;	A 70 percent reduction in drought frequency by 2030, leading to more rain and more water for farms, cities, power stations and rivers
Major costs to farmers of managing impacts such as reduced water availability, increased hail damage and the spread of tropical pests;	Major benefits to farmers of increased water availability, reduced hail damage and fewer tropical pests;
Increased risks to buildings and infrastructure from storms, bushfires, floods and lightning strikes;	Reduced risks to buildings and infrastructure from storms, bushfires, floods and lightning strikes;
Higher insurance premiums, more restricted insurance coverage and the withdrawal of cover from the highest risk areas;	Reduced insurance premiums, more restricted insurance coverage and the withdrawal of cover from the highest risk areas;
An increase in the number of extremely hot days each year;	No increase in the number of extremely hot days each year;

Extinctions of threatened animals and plants;	Continued absence of extinctions of threatened animals and plants;
Threats to human health from heat stress, mosquito born diseases and injuries from storms and floods.	Reduced threats to human health from heat stress, mosquito born diseases and injuries from storms and floods.
Specific impacts on the electricity sector may include: <ul style="list-style-type: none"> • Increased risks of storm, lightning and bushfire damage to electricity infrastructure; 	Specific impacts on the electricity sector may include: <ul style="list-style-type: none"> • Reduced risks of storm, lightning and bushfire damage to electricity infrastructure;
<ul style="list-style-type: none"> • Reduced water availability for cooling inland power stations; 	<ul style="list-style-type: none"> • Increased water availability for cooling inland power stations;
<ul style="list-style-type: none"> • Increased peak electricity demand for air conditioning due to the increased number of extremely hot days; and 	<ul style="list-style-type: none"> • No change in peak electricity demand for air conditioning due to the increased number of extremely hot days; and
<ul style="list-style-type: none"> • Reduced operational capacity of electricity networks at times of high temperatures, making more investment necessary to expand capacity to cater for a given level of demand. 	<ul style="list-style-type: none"> • Enhanced operational capacity of electricity networks at times of high temperatures, making less investment necessary to expand capacity to cater for a given level of demand.

The commissioned report’s justification of action to combat global warming is reinforced by other measures and expenditures in which the NSW Government is prominent. In one set of analyses, the Premier catapulted himself into becoming a “taskforce member”⁷. This argues for policies it says will keep temperature increases below 2°C above the 1750 level (presumably since this date marks the start of industrialisation but it is also the bottom of the Little Ice Age temperature levels).

Offering a rationalisation for the costly energy policies being pursued by the NSW Government, the Taskforce says the lower emission levels can be met at affordable costs, adding the silver lining that, for “those nations and companies that choose to move quickly, there is a real opportunity to get ahead of the technological curve.”

If such benefits are not enough to propel any political numbskull into action it adds the threat

Exceeding a global average increase of more than 2°C could also imperil a very high proportion of the world’s coral reefs and cause irreversible damage to important terrestrial ecosystems, including the Amazon rainforest.

Above the 2°C level, the risks of abrupt, accelerated, or runaway climate change also increase. The possibilities include reaching climatic tipping points leading, for example, to the loss of the West Antarctic and Greenland ice sheets (which, between them, could raise sea levels more than ten meters over the space of a few centuries), the shutdown of the thermohaline ocean circulation (and, with it, the Gulf Stream), and the transformation of the planet’s forests and soils from a net sink of carbon to a net source of carbon.

⁷ *Meeting the Climate Challenge*, Recommendations of the International Climate Change Taskforce, http://www.tai.org.au/Publications_Files/Papers&Sub_Files/Meeting%20the%20Climate%20Challenge%20FV.pdf

Such scary stories with scant scientific support are becoming commonplace. Only days after its release, the Taskforce was made to seem wimpish by claims by another source, (a collaborative venture involving 90,000 personal computers, which like the Taskforce was largely engineered by the British Hadley Centre). This claimed that global warming could be up to 11°C. In fact a reading of the material suggests a broad range of temperature increases centred on 3.4°C, with some actually showing temperature increases.

As William Kininmonth, former deputy head of the Australian Meteorology Office pointed out in a letter to the Australian, (28/1/05) the model's temperature rise is due to it incorporating a positive feedback affect involving an increase in the amount of water vapour, a far more heating intensive gas than CO₂. Kininmonth observed that the oscillations in global temperature over the millennia have not resulted in such feedback in the past and there is no reason to expect it in the future.

Response to Particular Issues Raised

Is Extending the NSW Greenhouse Gas Abatement Scheme to 2020 the best way to proceed?

The NSW Government has created an impending energy crisis. Its roots stem from the greenhouse policies it has put in place and the failure to privatise the electricity system.

The greenhouse abatement policies it has put in place owe much to the environmental extremism of the State Premier. Mr Carr has stated his firm belief that all energy technologies presently in use – even nuclear – are mere transitions to a solar future. Whether or not this is true, Government action to prevent coal based technologies has seriously raised the risks of investment in the state. Government funding of environmental agitators has fuelled these risks.

It is doubtful that any private sector firm would undertake the expensive pre-feasibility assessment, still less the actual investment in a coal based electricity plant unless the Government were to supply gold plated assurances against the sovereign risks its actions have fostered. For an advanced western sub-economy this is a humiliating position and the path to obtaining the necessary assurances would itself add considerably to regulatory costs.

The NSW Greenhouse Gas Abatements scheme, on top of the Commonwealth's MRET scheme is imposing a considerable cost on the NSW economy. The state is no longer a preferred location for energy intensive industry and all industry and household costs have been boosted by the Government's policies. It would be very damaging to the state's economy if the NSW Greenhouse Gas Abatements scheme were to be extended.

The history of such market subsidies is revealing in terms of their economy poisoning outcomes.

The Commonwealth's MRET scheme started with the Prime Minister's 1997 announcement that electricity "retailers and other large users" would be required "to source an extra 2 per cent of their energy from renewables by the year 2010". At the time "2 per cent additional energy" would have amounted to some 4,000 GWh per annum by 2010. However, lobbyists descended on Canberra and reinterpreted this to be the current 9,500 GWh. This amounts to over 4 per cent of total energy by the year 2010 and is given a subsidy of \$40 per MWh, more than twice the cost of alternative conventionally derived electricity.

This has brought pressures for further expansion, which the Commonwealth Government resisted (but which the ALP in the recent election were persuaded to agree to). One outcome was a further flurry of lobbying. Following the release of the Howard government's policy, according to a report in *The Age* 24 June 2004, "*Shocked wind power advocates say only aggressive lobbying, or the election of a Labor government, will save the market that was poised to reap billions of dollars in potential investment and dramatically reduce Australia's level of greenhouse gas emissions.*"

As a result of the Government not committing to even more generous subsidies, Pacific Hydro's manager of marketing and external affairs, was quoted as saying that his company will withdraw plans for \$1.5 billion in wind farm investments over the next five years. He was also reported as adding that the Government's announcement has chased away a further \$5.5 billion of investment from Australia. *The Age* also reported that Danish company Vestas, the world's leading manufacturer of wind turbines, is to reconsider "plans to build a multimillion dollar turbine blade manufacturing plant at Wynyard in Tasmania's northwest". All of this is nonsense – indeed to the degree that we have avoided \$5.5 billion in high cost poor reliability wind generation, the economy has received an economic reprieve.

The MRET experience shows the dangers of embarking on a system of subsidies even those that at the outset appear almost token in nature. Present costs of MRET are \$380 million per year in subsidies with much more in terms of second round effects on investment. The wind industry in particular is very highly organised as a lobbyist for government hand-outs. Once a shift to subsidies begins, it and other groups supported by the many environmental groups, many of which are substantially funded by government and vested interests, will seek to wrest further concessions from government.

Setting Emission Limit Levels for New Generating Plant

The proposals for the Government is to set two stages of emission limits, with the second more onerous than the first to reflect likely technology changes. It also canvasses views on offset activities that could be used in conjunction with the proposals.

The NSW Government in these approaches is attempting to displace the Commonwealth, arguing that the Commonwealth has failed to act responsibly in not pursuing sufficiently draconian emission abatement measures and failing to ratify the Kyoto Protocol.

All such measures by the NSW Government should be abandoned. There is no smart way of avoiding the unnecessary costs that would be entailed in failure to seek out the lowest cost options for future power generation.

Policies to Ensure New Sources of Gas and the Role of Gas in New Electricity Capacity

New sources of gas may be discovered in NSW although the state is not considered particularly prospective. Coal seam methane is likely to become increasingly available as long as it is not stifled by regulatory restrictions, but this is usually more expensive than similarly located natural gas deposits.

The government should leave to market forces both the decisions on the use of different fuels for electricity generation and the availability of such fuels. The Queensland Government's 13 per cent Gas policy is a poor model to follow for sound energy policy as it will increase the costs of generation other than gas fired generation and increase overall costs. Low cost, reliable electricity is the objective and electricity plant should not be regarded as an end in itself.

Policies to Develop Low Emission Technologies and those Technologies' Future Role

Low emission technologies, as with other technologies, meet a global need. It is unlikely that NSW is well placed to find breakthroughs in this field nor are there any features of the state's economy or natural resource base that would seem to merit offering particular support to the development of such technologies.

The government should not seek to have low emission technologies play a role in providing new electricity capacity.

Mandating the Roll-Out of Interval Meters

Like a mirage, smart metering always seems to be about to make incontrovertible economic sense. There have been many examples cited of mandatory roll-outs about to be implemented by visionary governments being aborted. One exception may be in Italy where Enel's "Contatore Elettronico" is to involve a remote metering management rollout over a three year period to 27 million Italian households. This is to involve digital electricity meters, capable of being integrated into a complete home networking infrastructure.

The reason why there remain no full roll-outs presently in operation is the cost, which, although likely to continue to decline remains excessive. According to a recent UK Department of Trade and Industry study⁸, the cost per meter is 800 pounds (\$2,000) once metering and metering services are accounted for. It estimated that a saving in terms of reduced energy use per household would be 5-7.5 per cent, or about 40 pounds per annum. This seems small and its 20 year payback would not warrant the

⁸ http://www.dti.gov.uk/energy/environment/energy_efficiency/smartmeter.pdf

costs involved even if the savings made were net savings to the customer. It may be that there are additional benefits that are shared with the retailer from negotiating contracts that allow the retailer to implement full or partial use reduction in periods when pool prices are at needle peak levels.

In Australia, Victoria has draft provisions requiring full roll-out by 2013. EnergyAustralia has embarked on a smart meter roll-out based on replacing existing meters over a 20 year period.

Our view is that markets that offer the correct signals will result in the appropriate expenditures on measuring. Some things are “too cheap to measure” and measuring costs for these are deadweight losses; in other cases the benefits of tighter control and more accurate pricing signals that measuring are overwhelmed by the cost.

It seems that the present situation is akin to this. The gains from a wholesale replacement of existing meters by smart meters appear to yield inadequate benefits to justify the cost. The potential gains may be understated as a result in market deficiencies that distort price signals. Among these are the price controls in place and the ostensible right in New South Wales for a household customer to revert from a contract to a host retailer at controlled prices.

At the very least, NSW should leave options open to examine outcomes of mandatory roll-outs in other jurisdictions, especially Italy, before embarking on this path. Naturally, removing distortions to price stemming from retail price capping and asymmetrical contract requirements should be a prelude to any such policy directions, and should be pursued in any event.

Deregulation of Prices

The Green Paper makes some commendable suggestions for lifting price regulation between now and 2007. Such a plan should be put into effect. They need to be introduced and the Electricity Tariff Equalisation Fund (EETF) abolished. In spite EETF and the price caps there has been some significant churn among NSW customers. Around 10 per cent had switched from their franchise retailer as of December 2004 (in Victoria around 25 per cent had switched) and many more had re-negotiated contracts with their franchise retailer.

The justification for EETF is the regulated nature of the price to small customers. In Victoria and South Australia regulated prices have not required the additional regulation of an EETF scheme. Though it might be argued that this is because the other states have been less draconian than NSW in forcing prices below their market levels, the fact that churn is occurring in NSW indicates pricing headroom for some smaller customers. Even if it maintains price regulation – and the degree of new competition shows this to be unnecessary – the Government should raise the maximum price level to enable more meaningful levels of competition and allow price to become a more accurate market signal of the demand and supply balance.

Because it operates as a form of mandatory insurance for the small customer load (half of the market), EETF prevents the normal interplay of commercial responses to consumer need. It also inhibits out-of-state retailers with no regulated hedge with the

state generators from competing for customers. The Green Paper, quite appropriately, recommends the policy be allowed to expire on its due date of June 2007.

One issue not flagged for comment is the Green Paper's musings about the best industry structure. The proposed approach is to seek vertical integration and a consolidation of the existing state owned retailers. This seems to be an example of the policy makers deciding the optimal market outcome. It can never be clear whether a process of full integration is the lowest cost outcome. While it is certainly true that private sector retailers are engaged in some backward integration, this appears to be a risk reduction strategy alongside other such strategies. Similarly the large generators (including Snowy Hydro) are acquiring some in-house retail capacity. In no case however is there a full scale integration.

Moreover, at the same time as some vertical linkages are being forged we are witnessing the emergence of small retail only firms, like Powerdirect, which may be increasing their market share.

It is likely that, as in virtually all industries, the vertical/disaggregation split will never be settled and it would be unwise for the NSW Government to attempt to anticipate the most appropriate industry structure and risk locking its industry into highly inflexible and difficult to manage arrangements.

New Generation Plant

The Green Paper points to the difficulties of having public sector owned generators and seeking new proposals from the private sector. It is doubtful that new proposals for major entrepreneurial private generators will be forthcoming in NSW under current circumstances with the potential for stranding by government investment and a carbon tax driven investment climate.

The government should announce the termination of its abatement scheme, prevent the Premier and other Ministers from making inflammatory anti-development statements and cease funding green agitational groups.

NSW retail licence requirement

	2003	2004	2005	2006	2007	2008	2009	2010	2011	
Calc of Electricity Sector Benchmark										
Emissions Benchmark (Tonne Co2 / capita)	8.65	8.305	7.96	7.615	7.27	7.27	7.27	7.27	7.27	
NSW Population (k people)	Assumes 1% p.a.	6678	6752	6812	6880	6949	7019	7089	7231	
NSW Benchmark set by MEU (ktonnes CO2 eq)	57768	56076	54226	52394	50521	51026	51536	52052	52572	
Calc of Total Emissions										
Total Electricity Purchased Assume 2% increase	63,178	65,671	66,611	67,943	69,302	70,688	72,102	73,544	75,015	
Emission factor	0.897	0.906	0.913	0.930	0.930	0.930	0.930	0.930	0.930	
No Measures Emissions (ktonnes CO2 eq)	56671	59498	60816	63187	64451	65740	67055	68396	69764	
Calculation of REC Surrender under MRET										
Renewable Power Percentage	0.009	0.013	0.016	0.020	0.025	0.029	0.034	0.039	0.038	
Number of RECS converted to CO2	499	744	967	1295	1602	1938	2302	2690	2676	
State Gap (ktonnes CO2 eq)	-	1,596	2,678	5,623	9,498	12,328	12,776	13,217	13,655	14,515
Penalty under scheme (\$/tonne CO2)	10.50	10.87	11.25	11.64	12.05	12.47	12.91	13.36	13.83	
total penalty cost (\$ millions)	-16.76	29.10	63.25	110.57	148.54	159.33	170.59	182.41	200.70	
Total gap	-1097	3422	6590	10793	13930	14714	15518	16344	17192	
NGAC proportion	1.45	0.78	0.85	0.88	0.88	0.87	0.85	0.84	0.84	
MRET proportion	-0.45	0.22	0.15	0.12	0.12	0.13	0.15	0.16	0.16	
Factor	-	0.31	0.28	0.17	0.14	0.13	0.15	0.17	0.18	
credit for recs	499	744	967	1295	1602	1938	2302	2690	2676	
renewable share	-0.017371458	0.052104209								

