



Centre for Energy and
Environmental Markets

**Submission to the
Consultative Reference Committee
Inquiry into Electricity Supply in
New South Wales**

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Attention:

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About CEEM and this submission

The UNSW Centre for Energy and Environmental Markets (CEEM) undertakes interdisciplinary research in the design, analysis and performance monitoring of energy and environmental markets and their associated policy frameworks. CEEM brings together UNSW researchers from the Australian School of Business, the Faculty of Engineering, the Institute of Environmental Studies, and the Faculty of Arts and Social Sciences, working alongside a growing number of international partners. Its research areas include the design of spot, ancillary and forward electricity markets, market-based environmental regulation, the integration of stochastic renewable energy technologies into the electricity network, and the broader policy context in which all these markets operate.

This submission responds to the invitation from the Government of New South Wales to address the 12 criteria that it has asked the Consultative Reference Committee for the Inquiry into Electricity Supply in New South Wales to address. The overarching theme of this submission is that the process of reviewing the NSW electricity industry has, to date, paid insufficient attention to the massive changes now required to tackle the imminent global threats of dangerous climate change and oil flow constraints (“peak oil”), and the associated pressures on human society and global ecosystems. In the words of Spratt and Sutton (2008), we are facing a “sustainability emergency”. To the extent that these concerns are real, and there is much evidence that they are, the New South Wales government has a social obligation and a historic opportunity to ensure that they are addressed within its jurisdiction. Assessed in this light, privatisation of significant parts of the NSW electricity industry may distract policy makers and energy market participants from focussing on meeting what is arguably the most important set of challenges that human society faces today.

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1 Background

In May 2007, the NSW Government appointed Professor Anthony Owen to conduct an *Inquiry into Electricity Supply in New South Wales* with the following terms of reference:

1. Review the need and timing for new baseload generation that maintains both security of supply and competitively priced electricity.
2. Examine the baseload options available to efficiently meet any emerging generation needs.
3. Review the timing and feasibility of technologies and/or measures available both nationally and internationally that reduce greenhouse gas emissions.
4. Determine the conditions needed to ensure investment in any emerging generation, consistent with maintaining the NSW AAA Credit Rating.

On 10 December 2007, following receipt of the inquiry report, the NSW Government announced that it would:

- Lease existing State-owned electricity generators to private operators, while keeping them in public ownership;
- Retain the 'poles and wires' assets of the State-owned companies Energy Australia, Integral Energy and Country Energy in Government ownership, while their retail lists and functions would move to private operators; and
- Introduce number of safeguards to protect and create jobs, keep prices as low as possible and protect the environment.

In January 2008, the Premier of NSW established the Consultative Reference Committee to test the impacts of changes to the State's electricity industry that the NSW Government announced last year. In the formulation of its impact statement, the Committee was asked to examine the following criteria:

1. The direct and indirect social usefulness of a public asset, service or utility.
2. The original purpose of the enterprise and whether that purpose remains valid, is being appropriately addressed through existing arrangements or could be satisfied by alternative arrangements;
3. Where the original purpose (as discussed above) has become redundant, the other social, redistributive or regulatory roles that have evolved must be taken into account;
4. The retention value of the enterprise measured against its sale value. Any calculation of retention value should incorporate both commercial and non-commercial functions;
5. The current structure of the market place (i.e. monopoly, oligopoly or competitive) and the public sector's role as a competitor and/or regulator in that market;
6. The impact on specific groups or regional areas especially those groups or areas that are already disadvantaged. The assessment should include all factors including the real costs of compensation and/or support that will be needed if the role of the public sector were to change;
7. The impact on employment, skills, training and conditions and the protection of the

- existing workforce and/or the reform of industrial relations practices in any new enterprise or project;
8. The existing competing demands on the NSW public sector and existing budgetary constraints and/or the alternative sources of funds for public sector investment;
 9. The current environmental impact and the need to continue to enhance environmental protection;
 10. The administrative economies of scale and coordination that is facilitated by public ownership and control;
 11. Appropriate weighting of long-term as well as short to medium term considerations; and
 12. Where the money is going (i.e. ensuring that the proceeds of the disposal of assets are responsibly directed to priority public capital needs).

The Government noted that the Owen Inquiry was based on an extensive public consultation process including written submissions, which would be drawn upon by the Committee. Additional public submissions were invited that addressed the above 12 criteria.

This submission responds to that invitation. Its overarching theme is that the process of reviewing the NSW electricity industry has, to date, paid insufficient attention to the massive changes now required to tackle the imminent global threats of dangerous climate change and oil flow constraints (“peak oil”), and the associated pressures on human society and global ecosystems. In the words of Spratt and Sutton (2008), we are facing a “sustainability emergency”. To the extent that these concerns are real, and there is much evidence that they are, the New South Wales government has a social obligation and a historic opportunity to ensure that they are addressed within its jurisdiction. Assessed in this light, privatisation of significant parts of the NSW electricity industry may distract policy makers and energy market participants from focussing on meeting what is arguably the most important set of challenges that human society faces today.

2 Responses to the Consultative Committee criteria

2.1 *Criteria 1-3: Direct & indirect social usefulness of a public asset, service or utility; its original purpose & its evolving social and regulatory context*

The electricity industry has a societal value beyond that which can be commercially measured. This is due to its role in providing an “essential public service”, supporting social welfare and providing economic infrastructure, and its continuous flow nature, leading to a requirement for coordinated decision-making by all industry participants beyond that which can be achieved by commercial means alone. Moreover, the industry has extensive environmental impacts that require societal evaluation and management.

The existing state-owned generators have the following key assets:

- Power station sites with approval to conduct certain functions on those sites
- Buildings and equipment on those sites designed to produce electrical energy
- Network connection assets, which permit the injection of electrical energy into the NSW electricity network.

- Access arrangements for sourcing the primary energy resources required to produce electrical energy
- Access arrangements for process and cooling water if required in the production of electrical energy
- Facilities and access arrangements (for coal-fired power stations) for the disposal of waste products from the electricity generation process
- Employment arrangements with the skilled workforces required for them to conduct their business activities.

These assets are responsible for most of the climate change emissions associated with electricity consumption in New South Wales and the greatest future social usefulness of these assets would derive from reconstructing them to dramatically reduce those emissions, which NSW government policy has to date sadly failed to achieve (Passey et al, 2007).

Leasing the assets in their present state would seriously jeopardise this imperative. Rather, it would be preferable to demolish the existing coal-fired power stations in a staged sequence prior to lease with a condition that no new coal-fired power station be constructed on a leased site unless it incorporated a fully proven technology for carbon capture and storage. Such a strategy should only be implemented in a carefully planned and executed fashion, in conjunction with strategies for radically improving the efficiency of electricity use (end-use efficiency), enhancing natural gas resources (with particular emphasis on coal seam methane) and facilitating competitive deployment of renewable energy generation.

Workforce retention and development will be a key issue in allowing NSW to make the necessary changes. Without investing in human resources, it is most unlikely that the State will be able to make the necessary reductions in climate change emissions from electricity generation in NSW.

The existing state-owned energy retailers have the following key assets:

- Historical information on end-user energy consumption and cost of supply
- Knowledge about current trends in energy consumption and costs
- Established relationships with energy users
- Employment arrangements with the skilled workforces required for them to conduct their business activities.

Radical improvements in end-use energy efficiency are a critical part of an emission reduction strategy but they are proving very difficult to achieve both in Australia and elsewhere (Commission of the European Communities, 2008). The state-owned retailers in NSW could be used to spearhead a drive to deliver improvements in end-use efficiency by redirecting their focus from energy sales to energy services – specifically the delivery of economically efficient, socially equitable and environmentally sound end-use energy services (Outhred and MacGill, 2007).

It is highly unlikely that such an outcome could be delivered if the retailers were sold and continued to operate in their present state. Rather, the NSW government should first redefine their business activities to focus on energy services through licence conditions and legislative changes if necessary, and the retailers themselves should then reinvent themselves as energy service companies. This would allow them to implement much more effectively policies such as the Carbon Emissions Reduction Target applied to UK energy retailers by the UK government (Ofgem, 2008).

2.2 Criteria 4-5: Retention versus sale value, market structure and public sector role

Following on from the discussion on criteria 1-3, the question of retention versus sale value depends entirely on how the critical issues of climate change, energy flow constraints and social coherence are addressed. Given the radical changes that are now required in the electricity industry, the generator and retailer businesses in their present form have little future value (see for example, Hamilton, 2008) in a carbon-constrained world. Sale of the assets in their present form is likely to yield a lower price than would otherwise be realised, reflecting the impending ‘obsolescence’ of the assets. Alternatively, the government may be tempted to provide implicit or even explicit guarantees against future carbon price risk. In contrast, the net value of the generator and retailer businesses could be greatly increased if the NSW government first implemented the reorientation strategy proposed in Section 2.1.

2.3 Criteria 6-7: Impacts on regional areas, the disadvantaged and the workforce

While government could direct private electricity retailers to act in a way that minimises deleterious impacts on regional areas, the disadvantaged and the workforce, this would probably curtail their activities and reduce their sale value accordingly. Also, it may be difficult to deliver legitimate social policy objectives in an efficient manner using this approach. In the context of the major social pressures that both climate change itself and climate change response strategies may induce, it would be prudent to retain the retailers in public hands during the transition process.

2.4 Criteria 9 - 11: Environmental protection, benefits of public ownership and control, and long-term considerations

One of the clear advantages of public ownership is that it offers government strong and effective tools for delivering radical change in a fast and efficient manner, where market signals are in themselves absent or ineffective. For example even if an effective and efficient national trading scheme can be implemented, the delay in achieving measurable outcomes is too long to tolerate given the “sustainability emergency” that we now face. Once the industry has been reoriented to an energy service culture and climate change emissions are being reduced, it would be appropriate to review the arguments for and against privatisation.

3 Conclusions

Human societies are facing a “sustainability emergency”, which can only be effectively overcome by, amongst other measures, deep and rapid reductions in the climate change emissions from the electricity industry. The New South Wales government’s plan to lease the state-owned generators and sell the state-owned retailers in their present state would severely complicate and delay the necessary changes in New South Wales.

By contrast, retaining the generators and retailers in public ownership while reorienting the industry to a dramatically more sustainable structure would serve the long-term public interest both by reducing climate change impacts and by enhancing the value of the state-owned enterprises in the emerging low-carbon economy of the future.

4 References

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