Australian Conservation Foundation

Inquiry into Energy Efficiency and Renewable Energy in Western Australia
Conservation Council of Western Australia (CCWA) and Australian Conservation Foundation (ACF)
Submission - Part 2

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1.0 Introduction

The Conservation Council of Western Australia (CCWA) and the Australian Conservation Foundation (ACF) are pleased to provide input into the Economics and Industry Committee's Inquiry into *Energy Efficiency and Renewable Energy in Western Australia.* CCWA and ACF consider that this inquiry could be a useful first step in creating a supportive policy framework for renewable energy (RE) and energy efficiency/ demand management (DM)[1], which will facilitate a move towards a truly sustainable economy for Western Australia (WA). Given the seriousness of the climate change challenge facing WA, CCWA and ACF hope that the government will match the resources and funding for the development and implementation of DM and RE strategies, with that allocated previously to electricity market reform.

1.1 Benefits of RE and DM outcomes

If WA can create an environment in which emerging and vital RE and DM technologies can flourish, many positive economic, environmental and social outcomes will be achieved:

Improved overall economics and sustainability;
Improved reliability and security of our electricity supply through diversification;
Reduced need for expensive large power stations and concentrated generation sources;
Greater proximity to reactive power for customers, improving power quality, reducing losses and maximising the use of network components.
Improved employment opportunities. Small-scale renewable projects have been demonstrated to provide more jobs per MWh of electricity produced than conventional energy sources. Reduced greenhouse gas (GHG) emissions.

1.2 Reducing GHG emissions and the impacts of climate change

CCWA and ACF's primary interest in developing the RE and DM industries stems from the contribution that these industries can make to reducing WA's GHG emissions and improving the long-term sustainability of WA's economy. The phenomena of global climate change is one to which Western Australians make a disproportionate contribution, having amongst the highest rate of per capita GHG emissions in the world.

WA will experience significant impacts resulting from climate change. Fortunately we have resources and

[1] Throughout this submission we have used the term 'demand management' (DM) synonymously with energy efficiency. DM programs generally fall into two main categories: energy efficiency and conservation - programs to reduce energy use by improving the efficiency of equipment buildings, and industrial processes and load management - programs to redistribute energy demand to lessen peak demand and hence reduce peak load on generation and transmission facilities and, sometimes to fill in troughs (to strategically increase energy use during periods of low electricity demand).

infrastructure to prepare for these threats and make changes now, unlike many less developed countries where extreme weather events and health impacts are being felt more acutely. Local examples of the predicted impacts of climate change on WA include but are not limited to:

- more frequent and prolonged droughts
- more frequent bushfires,
- increased susceptibility to pestilence,
- increased spread of vector-borne diseases such as Ross River Virus
- more frequent heatwaves
- increased potential for storm surge along coastal developments.[2]

It is therefore necessary from both a global equity and self-interest point of view, that WA contribute to the global effort to abate GHG emissions. Scientists have recommended that emissions reductions of 60-80 per cent of 1990 levels are required to stabilise GHG concentrations in the atmosphere at the present levels [3] CCWA and ACF consider that the WA Government has a duty of care to future generations to significantly contribute to the global effort to abate greenhouse gases and to plan for a carbon constrained world where there may be a price on carbon that will significantly impact on WA's economic well-being.

1.3 Capacity for RE and DM

WA is endowed with abundant RE resources, yet continues to rely heavily on coal and gas to meet its energy needs. While the Western Australian public is greatly supportive of RE, this is not reflected by Government actions. Western Power Corporation (WPC)'s website boasts that: 'For more than 25 years Western Power has been at the forefront of developing renewable energy generation'[4]. While this may be debatable, it has not resulted in an above average application of this technology in WA. The reality is that the percentage of WA's electricity that is currently generated from RE sources is less than one per cent.[5]

The recently released Clean *Energy Future Study*[6] showed that it is possible to achieve a 50 per cent reduction in Australia's GHG emissions within 40 years, without compromising GDP growth, nor prematurely retiring capital stock, utilising a combination of demand-side and supply-side options. CCWA and ACE believe that many aspects of this study must be applied immediately in WA, and that a legislative framework to enable this is required as an urgent priority.

1.4 Terms of Reference

The Committee's Terms of Reference request information on measures available to WA, which encourage efficiencies in electricity production and consumption, and the use of RE. To that end, the recommendations within this submission focus on policy initiatives available to the WA Government.

[2] CSIRO, *Climate* Change *Impacts for Australia,* May 2001. http://www.marine.csiro.au/iawg/

[3] Friends of the Earth International, *The Human* Cost *of Climate* Change, October 2001, page 22. Original Source, The Met.Office, *Climate* Change *and Its Impacts,* Briefing Paper October 1999.

4www.westrnpower.com.au/business/environmentlrenewable energy/renewable_history

[5] Based on information contained in *Installed Electricity Generating Capacity in Western* Australia (As at 30 September 2000), Office of Energy, http://www.energy.wa.gov.au/html/energy_resources_in western au.html, and *Sustainable Energy Development Office, Major WA initiatives,* http://wwwl.sedo.energy.wa,gov.au/pages/waproj.asp

[6] A Clean *Energy Future for* Australia, www.wwf.org.au/News_and information/Features/feature10.php

2.0 Overall Comments Regarding the Scope, Timing and Structure of this Inquiry

In order for the *Energy Efficiency and* Renewable *Energy in* Western *Australia* inquiry to meet its potential, supplementary public studies should be undertaken that provide much needed information to the community and decision makers. These studies should provide the following information:

2.1 Energy Regulatory Framework

- Current status of the primary government policies, statements and legislation currently guiding energy policy in WA, including relevant guidelines and codes.
- A review of interstate Government policies, statements and legislation guiding energy policy, including relevant guidelines and codes.
- A review of the position of RE and DM industry representatives regarding the effectiveness of interstate regulatory regimes.
- A historical overview of the development of the jurisdictional regimes, including economic analysis of RE and DM industry development.
- A review of Federal Government policy and legislation, including relevant guidelines and codes.
- Review of some overseas regulatory programs and analysis of industry development, preferably from countries that have achieved substantial growth in the RE and DM industries.

2.2 Renewable Energy

- Current installed capacity -- in the SWIS and the NWIS, including regional and, to the extent possible, private installed capacity.
- Cost per kWh of current installed capacity.
- Current projects in development and applications for distribution and transmission access awaiting approval.
  Presentation of this information as a percentage of current annual average generation capacity.
  Review of Federal and State subsidies available for RE, from generators of fewer than 100kW to projects of hundreds of MW.
- Investigations into barriers to RE. This should consist of two separate studies; one addressing large RE generators and one addressing barriers to small-scale 'distributed generation' (DG)[7]. NSWs' Independent Pricing and Review Tribunal (IPART) and Victoria's Essential Services Commission (ESC) have undertaken such investigations.

2.3 Demand Management

The potential application of DM technologies in WA. This should be determined through an Inquiry such as those undertaken in other jurisdictions. For example, in 2002 (PART undertook the Inquiry into the Role *of* Demand Management and Other Options in the Provision *of* Energy Services and Energy South Australia released several papers addressing potential DM application in South Australia [8]

[7] Distributed generation (DG) typically refers to small-scale generation systems (less than a kilowatt to 30MW) that supply power directly into the distribution system. Typically these systems are close to the electricity load. Examples of DG include natural gas or diesel generators, wind turbines, photovoltaic arrays, biomass and micro-hydro generators and fuel cells, although this paper is only concerned with RE DG.

[8] These papers and several other jurisdictional DM studies are available at http:/lwww.sustainable.energy.sa.gov.au/pages/programs/dsm/elec_dsm/papers_links/papers links.htm:sectID=10 8&templD=63

2.4 Coordination with other Inquiries

Much of the content of this submission is drawn from the CCWA and ACF's comments on the draft WA Greenhouse Strategy, submitted to the Greenhouse Taskforce on 31 March 2004. In addition, CCWA's comments regarding access for distributed RE generation to the distribution networks are based on our submission into the public consultation into the *Electricity Networks Access* Code. We therefore hope that as part of its investigations the Economics and Industry Committee fully investigates submissions into and outcomes from current related inquiries and reviews, as many stakeholders do not have the time or resources to participate in all consultation processes, especially those that are poorly publicised.

2.5 Scope of Inquiry

CCWA and ACF are aware that there are many experts interstate and many interested community stakeholders that were not aware of this inquiry. In order to reach sound conclusions and make appropriate recommendations it is essential that the committee advertise much more significantly. Specific groups such as the Australia New Zealand Solar Energy Society (ANZSES) and the Alternative Technology Association (ATA) are examples of community groups whose members have a high level of experience and expertise and whose views should have specifically been sought.

2.6 Political Will is the Primary Requirement

Overall, CCWA and ACF consider that a robust policy framework is the primary requirement to encouraging increased use of DM and RE. The current lack of industry development is due to a failure of policy, not a lack of potential. The following recommendations are made in the hope that the current members of the WA Government will commence a process of genuine commitment to energy sector reform that will acknowledge the urgent need to restrict growth in energy consumption, shift away from fossil fuel dependency and reduce GHG emissions.

3.0 Policy Framework to Encourage Efficiencies in Electricity Production and Consumption and the Use of Renewable Energy

3.1 WA's Energy Plan - Energy 2050

The lack of a long-term energy plan for WA hinders the development of RE and DM resources and industries, and allows the historical ad hoc approach to continue without reflecting on the full environmental and social ramifications.

A long-term (50 year) energy plan for WA should be developed. Carriage of this initiative should rest with Premier and Cabinet, and be an all-of-government undertaking. *Energy 2050* must address the reliability, affordability and environmental sustainability of WA's electricity supply. Specifically, it must develop plans to shift WA's reliance on centralised greenhouse intensive electricity generation so as to achieve a reliable and affordable energy supply, while significantly reducing greenhouse emissions from the sector. *Energy 2050* must also address private electricity generation as well as regional and remote power generation.

Recommendation:

Develop and implement a long-term (50 year) energy plan for WA.

3.2 GHG Reduction Target

CCWA and ACF consider that, for GHG reduction purposes, and stimulation of the RE and DM industries, a GHG reduction target must be adopted and enshrined in legislation. An appropriate target for the Gallop Government to adopt is a 10 per cent reduction of GHG emissions from 1990 levels by 2012, with incremental reductions of 5 per cent every 5 years thereafter.

Although such a policy is primarily a GHG reduction policy, rather than an RE and DM industry development driver, adoption of such a policy will send a clear message to all energy industries about the values and intended direction of energy development in WA. Although the potential exists initially for the gas industry to be more stimulated than the RE and DM industries, a opting a portfolio of complementary policies would ensure the development of RE and DM.

Recommendation.

Adopt a legislated target of a 10 per cent reduction of GHG emissions from 1990 levels by 2012, with incremental reductions of 5 per cent every 5 years thereafter.

3.3 End fossil fuel use for baseload and peak power generation, and provide a just transition for affected communities

CCWA and ACF recognise that WA relies less heavily on coal-fired power generation than the eastern states. However, coal is still WA's primary energy source and thus it is vital that WA begins to phase out coal-fired power generation, due to its greenhouse intensity[9]. Transition strategies that consider the significance of future energy sources, demand and supply for the WA economy must be developed as a matter of urgency. Such strategies are essential to reduce WA's reliance on energy intensive projects and industries and to ensure that our economy is not compromised during the inevitable shift to a carbon-light future. The immediate commencement of a phase-out of coal-fired power generation would send a clear signal to the RE and DM industries that WA provides a sound long-term investment environment

Recommendations:

The Western Australian Government must not allow any more fossil-fuel power stations to be constructed in the state. Renewable energy and demand management must be used to meet the state's future electricity needs.

Transition strategies for communities that have traditionally relied on fossil fuel mining and combustion for their economic production must be developed and implemented as a matter of urgency.

3.4 Electricity Reform

CCWA and ACF are aware that many of amendments achieved through the passing of the *Electricity Industry Bill* 2003 will serve to benefit the RE industry.

CCWA and ACF continue to consider it a matter of priority to examine ways to separate the network services and system operation from the generation and retail arms of WPC, with independent accountability direct to government.

[9] See Appendix 1 for a comparison between fossil-fuel generation greenhouse intensities.

The current state of the electricity market of Western Australia continues to inhibit network access for RE generators. CCWA and ACF consider that the objects of the *Electricity Networks Access* Code ('the Code') must include sustainability objectives rather than only economic efficiency objectives. All aspects of the Code must enable RE generators to access distribution and transmission networks and ensure that DM projects are undertaken in preference to network augmentation.[10]

The bilateral trade design contains an inherent bias against small participants and intermittent generation, which disadvantages RE generators.

The reform process has not paid enough detailed attention to environmental sustainability, particularly with making demand management and energy efficiency priority outcomes of the reform process. The current market lacks appropriate demand side bidding and infrastructure. Energy efficiency needs to be institutionally embedded, with a structural context of State regulations.

CCWA and ACF also reiterate that it is irresponsible to implement any restructure without wide community consensus. A lack of public understanding and support would render any new structured market unstable, and politically untenable in the long-term.

Recommendations:

The Western Australian Government should continue to examine ways to place network services and system operation at arms length from Western Power's generation and retailing arms as soon as possible, with accountability direct to government for system operation, system planning and network access.

Institute a new taskforce with appropriate terms of reference and membership to reconsider restructuring options, including market design, regulations, market design, primary energy sources and end-user participation.

Ensure the *Electricity Networks* Access Code does not discriminate against renewable energy and demand management by adopting the recommendations in the CCWA's submission on the Public Consultation draft of the Code.

[10] See Appendix 2 for CCWA's submission to the Electricity Networks Access Code public consultation.

3.5 Removal of Public Subsidies to Fossil Fuels

It is widely recognised that WA's GHG emissions are predominantly the result of energy-intensive industry. What is unclear is the extent to which the activities are supported financially by the WA government. The 2001 Senate Inquiry into Global Warming, *The Heat is On*, found that the fossil fuel industry in Australia receives direct and indirect subsidies in the order of $6 billion per annum[11]. According to the National Institute of Economic and Industry Research (NIEIR)[12], public agencies in Australia provide basic geological information, databases and other information and management services to fossil fuel exploration and production companies at nominal costs. This is effectively a subsidy to the coal, oil and gas industries in Australia. It has been estimated that WA's public sector agency contributions to fossil fuel industries through non-recouped costs in 2000- 2001 were:

Office of Energy -	$13.1 million
Department of Minerals and Energy-	$28.3 million
Dept of Resources Development-	$13.7 million

Other possible subsidies include direct subsidies and rebates, favourable tax treatment and public contributions for research and development.[13]

Given the issues in WA concerning the role of energy-intensive industry, a primary objective must be to make any government support for fossil-fuel industries transparent. This will enable the RE and DM industries to have adequate information with which to make investment decisions. Removal of fossil fuel subsidies will correct a market imperfection and improve the competitiveness of RE and DM industries. These industry sectors could further be developed if savings were directed into the promotion of RE and DM.

Recommendation:

The Western Australian Government should commission an independent inquiry into the form and quantity of any subsidies, whether direct or indirect, to fossil fuel-based industries in Western Australia. The findings of this report should be made public and all subsidies that do not serve an environmental or social welfare function removed.

3.6 Integrated Least Cost Planning (ILCP)

Integrated Least Cost Planning involves delivery of services at minimum total cost, where economic, environment and health costs are all taken into account[14] Methods of Integrated Least Cost Energy Planning (ILCP) promote DM planning and analysis of site-specific strategies for reducing energy consumption.

The current structure of the energy market in WA does not provide for ILCP. In failing to account for environmental and health costs associated with fossil fuel use in energy production, the government is effectively subsidising those costs of energy use.

11 *The Heat is On: Australia's Greenhouse Future,* Report of the Senate Environment, Communications, Information Technology and the Arts References Committee, Executive Summary, November 2001. http://www.aph.gov.au/Senate/committee/ecita_ctte/gobalwarm/report/bOl.htm)

12 Chris Reidy, *Public* Subsidies *and incentives to fossil fuel production* and consumption *in Australia: A Draft Discussion Paper,* November 2001. www.isf.uts.edu.au/publications/reidy.html

13 Chris Reidy, *Public Subsidies and incentives* to fossil *fuel production and consumption in Australia: A Draft* Discussion *Paper,* November 2001. www.isf.uts.edu.au/publications/reidy.html

14 ILCP generally involved reducing demand as well as utilising appropriate supply technologies. The result is generally economic and environmental savings. 2323 Sustainability Centre Pty Ltd, www.sustainabilitycentre.com.au/consultinq.html

Recommendation:

Aspects of Integrated Least Cost Planning should be incorporated into WA's electricity system, and take into account the environmental and health costs of energy production.

4.0 Policies to Encourage the Use of RE

4 1 Renewable Energy Target

WA should establish its own Renewable Energy Target (WARET). This measure would place an obligation on electricity retailers and large generators to purchase electricity generated from renewable sources in WA. The adoption of WARET legislation would provide a clear signal to investors and enable confident investment in renewable infrastructure. Western Power and other potential electricity retailers already have the expertise needed b comply due to the current Mandatory Renewable Energy Target (MRET).

CCWA and ACF note that as part of negotiations for the electricity reform legislation, the WA Government offered a 10 per cent RE target. CCWA and ACF consider that if this target were achievable in the circumstances of achieving the desired legislative outcome, then this should be achievable regardless of disaggregation. Given the obvious imperative to reduce WA's GHG emissions, and the Labor Party's stated commitment to the RE industry, matching that commitment through the delivery of a RE target should be a high priority.

Recommendatio

The WA Government should introduce a legislated Western Australian Renewable Energy Target (WARET). WARET should set increasing annual targets to reach at least 10 per cent by 2010 and 20 per cent by 2020.

4.2 Resolution of planning Issues

Renewable Energy Guidelines

CCWA and ACF support the development of wind farm and biomass planning guidelines. The development of such guidelines would make RE proponents and opponents aware of their rights and the processes required of RE generators.

Recommendation:

Develop and implement renewable energy planning guidelines.

Development and adoption of a strategic planning framework for wind farms

A strategic framework for wind farms that dispatch to the South West Interconnect System (SWIS) should be developed.

Although some mapping of the wind resource of WA has been undertaken, detailed public monitoring of numerous selected sites is still required.

Recommendations:

Development of a comprehensive, detailed map of the wind resource in WA.

Introduce incentives to stimulate private investment that enhances the diversity of geographic locations (that is, to drive investment in potentially less lucrative sites). For example, a government contribution of $10/ MWh capped at $15 million over five years. Further research is required to establish the optimum cap and timeframe.

4.3 Sustainable Energy Development Office (SEDO)

CCWA and ACF support the continuation of SEDO but considers that the funding provided to SEDO is inadequate and its grant scheme is too narrowly focused. SEDO's grant scheme should also provide support to homeowners and businesses to install rooftop photovoltaic (PV) systems, community wind farms and solar hot water systems. This could be via grants or low interest loans.

CCWA and ACF also recommend that the Government honour its election commitment to make SEDO an independent agency that reports directly to the Minister (Statutory Authority), so that it can promote the development of sustainable energy industries free from interference from the Office of Energy. SEDO is being unnecessarily stifled by its subservience to the Coordinator of Energy and will not be able to carry out its role effectively unless it can report directly to the Minister. If it continues in its present location it will be no more effective than the Alternative Energy Development Board (AEDB) that preceded it.

Recommendations:

Significantly increased funding to the Sustainable Energy Development Office (SEDO).

Larger budgets and broader diversity of grant schemes operated by SEDO.

Change SEDO to a Statutory Authority.

4.4 Government Leadership

The draft Western Australian Greenhouse Strategy proposes that the WA Government source 5 per cent of its electricity from renewable sources by 2006-07. The CCWA and ACF consider that this target is far too modest.

Recommendation:

The Western Australian Government should commit to purchase ALL of its electricity from renewable sources by the beginning of the 2006-7 financial year.

4.5 Green Power

Increased uptake of Green Power options would stimulate the development of the RE industry in WA. Currently WPC's *Natural Power* is the only product available for the purchase of RE for consumers.

WPC's new EarthFriendly scheme does not have the support of CCWA or ACF because it does not induce consumers to reduce energy use or switch to renewable resources. CCWA and ACF consider there are greater

benefits in encouraging consumers to purchase renewable zero emission electricity through NaturalPower, rather than offsetting emission intensive electricity through EarthFriendly.

Recommendations:

The WA Government should encourage all Local Government Authorities to subscribe to Western Power's Natural Power or other similar 'green power' schemes if available, for all their electricity needs.

The WA Government should promote community awareness about the availability of the choice of renewable energy through NaturalPower and provide incentives for people to switch to Natural Power.

The WA Government should legislate to require WPC to show GHG emissions on all electricity bills and on all Alinta gas bills.

4.6 Development RE Development Strategy and Bio Energy Strategy

The draft WA Greenhouse Strategy proposed to develop both a RE Development Strategy and a Bio Energy Strategy. CCWA and ACF support both of these objectives and considers their development and implementation to be an urgent priority.

In the case of the Bio Energy Strategy, emphasis must be placed on the ecological sustainability of crops used for bio energy. Adequate community consultation must form part of the development of each strategy.

Recommendation:

Develop and implement a Renewable Energy Development Strategy and a Bio Energy Strategy, following community consultation, with emphasis placed on the ecological sustainability of crops used for bio energy.

5.0 Policies to encourage Energy Demand Management in Western Australia

5.1 Energy Efficiency to reduce demand

Energy DM through improved energy efficiency and reduced energy use can deliver economic, social and environmental benefits.

CCWA and ACF are concerned that the DM industry has been entirely neglected in both the greenhouse strategy and energy reform process. The recent National Framework for Equipment Energy Efficiency Framework (NAEEEF) discussion paper estimates 'energy consumption in the manufacturing, commercial and residential sectors can be reduced by 20-30 per cent with the adoption of current commercially available technologies with an average payback of four years.' [15] According to the discussion paper, the modeling results for the more conservative scenarios show that 12 years after the commencement of energy efficiency improvement, enhanced energy efficiency delivers the following economic benefits:

- Real GDP would be $1.8 billion higher (+0.2 per cent).
- Employment would increase by around 9000 (+0.1 per cent).

[15] *Towards a National Framework for Energy Efficiency - Issues and Challenges: Discussion Paper, Section 2. Energy Efficiency* and Greenhouse Working Group, November *2003* http://www.seav.vic.gov.au/ftp/news/nfee/nfee_discussionpaper.pdf

- A 9 per cent reduction in stationary final energy consumption (-213 PJ).
- A 9 per cent reduction in greenhouse emissions from the stationary energy sector (-32MT).[16]

Further, it stated that: "The gains would be much larger if a concerted effort were made to capture all cost-effective gains. While it is recognised that it would be unrealistic to expect to capture all cost-effective measures, the analysis does indicate that achieving even a modest proportion of the potential offers considerable economic and environmental benefits."[17] The major obstacle to achieving these benefits is the 'absence of a strong DM services industry with adequate resources to demonstrate and promote DM effectively.'[18]

Recommendation:

That Energy Demand Management is made a priority of all areas of Western Australian planning and decision making affecting current and future energy sourcing and delivery, accounting for the economic, environmental and social benefits of DM.

5.2 National Framework for Energy Efficiency

A framework on energy efficiency for governments, industry and the community is a valuable approach for achieving reductions in WA's and Australia's greenhouse emissions. CCWA and ACF welcome the development of the National Framework for Energy Efficiency.

Recommendation:

That the WA government engage in the process for developing the National Framework for Energy Efficiency.

5.3 Mandating Energy Demand Management through legislation

The impetus to implement DM strategies in WA could be greatly enhanced by legislation. For example, the United Kingdom has a Sustainable Energy Act (2003) which:

Requires the Government to report annually to Parliament on the 135 commitments in the Energy White Paper regarding reducing emissions of C02 and ending fuel poverty;
Requires the Government to set an energy efficiency aim for residential buildings;
Enables the Government to set binding targets for local authorities who are required to improve energy efficiency by 30 per cent under the Home Energy Conservation Act (1995);
Requires the Government to set a target for Combined Heat and Power (a way of using 'Waste heat' to generate electricity so reducing emissions) in Government buildings;
Requires the gas and electricity regulator to publish environmental impact assessments of its actions;
Releases £60 million for developing renewable sources of energy.[19]

[16] *Towards a National Framework for Energy Efficiency, Section 2.*
[17] *Towards a National Framework for Energy Efficiency, Section 3.*
[18] *Demand Management and the National Electricity Market, Total Environment Centre, Next Energy, February 2003, page 10.*
http://nccnsw.orq.au/member/tec/projects/Energy/DMNEM.html
[19] UK Energy Efficiency *Commitment, http://www.est.co.uk/est/est-energv-efficiency-commitment.html*

Recommendations:
Create a WA Sustainable Energy Act, following thorough industry and community consultation.

Implement a System of Mandatory Energy Efficiency Targets for energy generation.

Implement a system of energy efficiency targets for Energy Retailers and encourage `market based' mechanisms and community partnerships to deliver against these targets.

5.4 Energy Efficient Buildings

The design and operation of both residential and commercial buildings in WA has historically neglected energy efficiency principles. It is possible to make significant improvements to the efficiency of buildings through retrofitting existing buildings and considering energy efficiency at the design stage of new buildings.

Recommendation:

Implement a Sustainable Building Code that mandates:
- A nationally consistent energy efficient rating for all new buildings (Currently there are a number of different rating schemes used, which continue to be changed and developed. A uniform approach to rating buildings is highly desirable.)
- Greenhouse-efficient (solar or high-efficiency equivalent) hot water systems for all new buildings.
- AAA water-rated fittings and appliances in all new buildings.
- Disclosure of Energy Ratings at point of sale of all buildings.

5.5 Leadership

Recognition of the importance of leadership at all levels, contributes to the development of a culture of energy efficiency in Australian businesses and communities.

Recommendation:

That the state government provide leadership on DM and recognition of community and business leaders in DM practice.

5.6 Motivating Change and Targeting Barriers in the Community

WA ought to capitalise on the accumulated knowledge around 'social change', 'community based social marketing' and 'fostering sustainable behaviour' if it is to bring about lasting efficiency gains in energy use.

Recommendation:

Target barriers to householder uptake of energy efficiency through energy pricing structures that reward efficiency and provide financial assistance for retrofitting and funding of community-based support programs.

Undertake a broad-scale community awareness campaign about climate change and the need to reduce emissions through a more sustainable approach to energy production and consumption.

5.7 Peak energy Demand Management

Management of energy use in industrial processes and of peak electricity loads can deliver reductions in overall energy consumption and thus reduce energy demand. Technical strategies can be designed to redistribute energy demand to decrease the peaks in demand and hence reduce peak load on generation and transmission facilities. Sometimes this may include filling in troughs (to strategically increase energy use during periods of low electricity demand) through offering reduced priced electricity at minimum peak periods.

Recommendation:

Strategies for redistributing energy demand ought to consider ways to reduce peak loads as well as reduce overall energy consumption.

5.8 Demand Management Services Industry

In order to foster a competitive and effective DM industry it is essential to have both appropriate rules and a funding regime that allows the development of a market mechanism parallel to the electricity supply market. Experience overseas shows that, 'without a specific funding mechanism that establishes a DM market, there will continue to be a lack of dedicated, well-resourced DM proponents capable of effectively representing DM opportunities...'[20]

Recommendations:

That the WA government foster the development of a Demand Management services industry. The Government should allocate a funding mechanism to ensure the development of an effective demand management services market.

That demand management resources are integrated into Western Australia's electricity system. Examples include free smart meters for time of use charges and rebates on funds expended for energy efficiency projects.

[20] *Demand Management and the National Electricity Market, page 4*

5.9 Industry Regulation for energy efficiency

In order to maximise the gains to be achieved from energy efficiency, and to contribute to the development of a robust DM industry, energy efficiency requirements placed upon industry must be stringent.

Recommendations:

That the Government require Western Power Corporation, or any other Network Service Providers that may become established, to solicit proposals for demand management solutions prior to augmenting networks.

That the Government introduce legislation that will ensure that greenhouse assessments are included in all environmental assessments and licence approvals. Greenhouse assessments will require the setting of emission quotas and incur a penalty for non-compliance.

6.0 Conclusion

CCWA and ACF consider that there is enormous opportunity within Western Australia to introduce policies and measures that encourage the efficient combustion and use of electricity and the use of RE. While it is technically feasible for Western Australia to vastly reduce its GHG emissions through application of these policies and measures, political will is required. CCWA and ACF urge the members of the Economics and Industry Committee to build on the outcomes of this Inquiry through further research and application of the recommendations contained within this and other submissions.

References

CSIRO, *Climate Change Impacts for Australia,* May 2001. http:/www.marine.csiro.au/iawg/

Energy Efficiency and Greenhouse Working *Group, Towards a National Framework for Energy Efficiency- Issues and Challenges: Discussion* Paper,Section 2, November 2003 http://www.seav.vic.gov.au/ftp/news/nfee/nfee_discussionpaper.pdf

Friends of the Earth International, *The Human* Cost of Climate *Change,* October 2001, page 22. Original Source, The Met.Office, *Climate Change and Its Impacts,* Briefing Paper October 1999.

Office of Energy - http://www.energy.wa.gov.au/html/energy_resources_in_western_au.html

Reidy, Chris. *Public Subsidies and incentives to fossil fuel production and consumption in Australia: A Draft Discussion Paper,* November 2001. www.isf.uts.edu.au/publications/reidy.html

Report of the Senate Environment, Communications, Information Technology and the Arts References Committee, *The Heat is On: Australia's Greenhouse Future, Executive Summary,* November 2001. http://www.aph.gov.au/Senate/committee/ecita_ctte/gobalwarm/report/b0l.htm

Sustainable Energy Development Office, *Major WA initiatives,* http://www1.sedo.energy.wa.gov.au/pages/waproj.asp

The Clean Energy Futures Group, *A Clean Energy Future for Australia,* March 2004. www.wwf.org.au/News and information/Features/feature10.php

Total Environment Centre, Next Energy, *Demand Management and the National Electricity Market,* February 2003. http://nccnsw.org.au/member/tec/projects/Energy/DMNEM.html

UK Energy Efficiency Commitment - http://www.est.co.uk/est/est-energy-efficiency-commitment.html

Western Power -www.westrnpower.com.au/business/environment/renewable_energv/renewable_history