6 STEPS

TO A SUSTAINABLE ENERGY FUTURE FOR AUSTRALIA

RoundTable
RENEWABLE & SUSTAINABLE ENERGY

RENEWABLE & SUSTAINABLE ENERGY ROUNDTABLE POLICY PROPOSALS

Introduction

The Renewable and Sustainable Energy ROUNDTABLE (ROUNDTABLE) supports the development of renewable and sustainable energy technologies that by their nature underpin the principles of ecologically sustainable development. The ROUNDTABLE believes that renewable and sustainable energy technologies can significantly reduce the nation's greenhouse gas emissions. In the immediate term, these technologies can result in the Australian Government successfully achieving its Kyoto Target commitment of increasing greenhouse gas emissions by 8% of 1990 levels by 2010.

Ecologically Sustainable Development principals must underpin sustainable energy projects

Also in the immediate term ROUNDTABLE believes that the Australian renewable and sustainable energy industry is poised to become a significant contributor to GDP. If it can develop a leadership role to harness and nurture Australia's budding renewable and sustainable energy businesses, growing overseas export markets can be captured. This policy proposal provides six steps for how these Australian industries can grow and contribute to a viable domestic and international renewable and sustainable energy industry market.

In the long term, renewable and sustainable energy technologies can substantially mitigate urban pollution and replace the consumption of finite fossil fuel resources, at the same time as providing the nation with an economically sustainable employment generating industry.

The ROUNDTABLE is aware that for the full benefits of renewable and sustainable energy technologies to be enjoyed, projects must be implemented with careful consideration of wilderness values, species habitat and biodiversity. These considerations are also essential prerequisites for the industry to continue to receive the high level of community support that it currently enjoys.

With these basic principles in mind, the ROUNDTABLE has adopted the following specific policy positions.

STEP 1 Reduce greenhouse gases through the staged introduction of energy targets.

STEP 2 Streamline planning and approval processes for sustainable energy projects across jurisdictions.

STEP 3 Have appropriate economic incentives for sustainable and renewable energy projects.

STEP 4 Change the National Electricity Code.

STEP 5 Ratify the Kyoto Protocol.

STEP 6 Increase public awareness.

STEP 1

Reduce Greenhouse Gases Through the Staged Introduction of Energy Targets.

This proposal consists of the following components:

1(a) Electricity Sector - build on existing initiatives now

- Increase and enhance the Mandatory Renewable Energy Target (MRET).
- Introduce a national greenhouse gas abatement scheme to build on the MRET.

1(b) Industry Wide - introducing new initiatives now

- Introduce mandatory cross-sectoral cogeneration and energy efficiency mandatory targets.

1(c) Mandatory Sustainable Energy Target (MSET) - enhance these initiatives in the future

- Introduce a Mandatory Sustainable Energy Target (MSET) that integrates steps 1(a) and (b) from 2010 to 2020, and continues onward to 2050.

STEP 1(A)

Electricity Sector Greenhouse Gas Abatement Measures – build on existing initiatives now

RENEWABLE ENERGY

Setting ambitious but achievable sustainable and renewable energy targets is an important way to ensure the development of renewable energy in Australia. The Federal Government's 2% Mandatory Renewable Energy Target (MRET) is a good initiative but will not deliver the significant boost in market share that is required for renewable generation. The MRET will actually only deliver a 0.5% increase rather than the 2% increase it was intended to deliver, given the Electricity Supply Association of Australia's (ESAA) projected growth in electricity consumption of 60 TWh from 2000 to 2010 in Australia.

The renewable energy target should be increased to 10 percent by 2010 and 20 percent by 2020

The MRET is conservative compared with some initiatives in other parts of the world. Denmark, for example, has proposed that one third of electricity consumption be supplied from renewable energy in 2005. Denmark has maintained primary energy use at the same level for 25 years whilst increasing its GDP. In May 2001 the European Union stated that it will meet its Kyoto commitments as a first step, and thereafter reduce atmospheric emissions by an average of 1% of 1990 levels per year up to 2020.

The ROUNDTABLE believes that the renewable energy target under the current MRET scheme should be increased, to (1) demonstrate to the international community that Australia is strongly committed to meeting greenhouse targets and (2) secure the greenhouse, employment and other benefits associated with developing the renewable and sustainable energy industry.

Recommendation 1:

The MRET should be increased to 10% above 2001 levels by 2010, and further increased to 20% above 2001 levels by 2020. These targets should be based on a percentage of consumption rather than fixed targets. Targets beyond 2020 should increase by an additional 1% per year every year until 2050 to bring Australia in line with our international counterparts.

A linear phasing path is required to achieve the targets in Recommendation 1. This would build on the momentum generated by the introduction of the MRET, and has greater potential to establish the market whilst encouraging local manufacturing capability.

Higher early targets set under a linear approach will ensure development of a greater diversity of renewable energy sources, and will allow the benefits of the measure to be felt throughout Australia. This strong early growth in renewable energy generation will also stimulate a supporting domestic manufacturing industry. For example, higher early targets will allow installing wind turbines to a total capacity of at least 50-100 MW per year, which is the threshold demand needed for an Australian turbine manufacturing industry to be viable.

A linear phasing path for annual renewable energy targets will assist the development of the fledgling renewable energy industry

Linear targets are likely to reduce the overall cost of the recommended measure. Strong development in renewable energy sources with significant future potential, such as wind, bioenergy and solar, will encourage the cost of those technologies to fall. This means that the significant growth in these sectors that is required towards the end of the implementation period can occur at a lower cost.

Recommendation 2:
A linear phasing path should be used to achieve the new renewable energy targets.

Under current arrangements, the value of the Renewable Energy Shortfall Charge will fall from $40 per MWh in 2001 to $24 per MWh in 2020 in real terms, assuming current inflation rates.

The Renewable Energy Shortfall Charge will lose its value as a compliance incentive if it is not linked to CPI

The Renewable Energy Shortfall Charge must be linked to the Consumer Price Index (CPI) to ensure it is an effective incentive for compliance. A failure to adjust the charge for inflation will see returns to investors decrease over time, as liable parties choose to pay the penalty rather than purchasing Renewable Energy Certificates (RECs) from generators. For example, a review by investors in renewable energy projects for the commercial return on their investment would see their revenue decreasing over time in real terms, such that that the total returns from the proposed investment will be insufficient to clear the commercial test. This will halt investment in renewable energy projects and thus thwart achieving the current 9500 GWh target. If, however, the shortfall charge is linked to CPI increases, this would make renewable projects commercially viable.

Recommendation 3:
The Renewable Energy Shortfall Charge should be linked to the Consumer Price Index (CPI).

Revenue from the charge should go to fund renewable and sustainable energy R&D

The destination for the revenue raised from the collection of the Renewable Energy Shortfall Charge has not been addressed. This revenue could usefully be channelled back into the renewable and sustainable energy research and development sector to further stimulate growth in these areas.

Recommendation 4:
Revenue raised from the collection of the Renewable Energy Shortfall Charge should be made available for further research and development in this industry.

The ROUNDTABLE supports the review of the MRET that will be undertaken in 2003 as required by legislation. However, it notes that many issues need resolving to ensure that the measure treats all generators fairly.

Recommendation 5:
The 2003 review of the MRET should ensure that all generators are treated fairly under the measure.

NATIONAL GREENHOUSE ABATEMENT SCHEME

A national greenhouse abatement scheme that builds on MRET should be introduced

The ROUNDTABLE recommends introducing a national greenhouse abatement scheme that compliments and builds on an increased MRET target, and is consistent with introducing a domestic emissions trading scheme that leads towards international emissions trading.

The NSW Government has proposed an Electricity Retailers Benchmark Scheme where electricity retailers are to reduce their per capita greenhouse emissions to 5% below 1989/90 levels by 2006/07 (presently per capita emissions are running at 10% above 1989/90 levels).

A similar nation-wide scheme could be an effective step towards Australia introducing a domestic emissions trading program and should build on existing national schemes such as the MRET.

Under the NSW scheme it is proposed that electricity retailers failing to meet greenhouse performance benchmarks will pay a penalty. Retailers can reduce emissions through: purchasing rights from renewable generators and low emission generators such as gas and coal waste methane; improving performance of existing generators; planting trees as carbon sinks; energy efficiency; and demand side management.

The penalty needs to be set at a level that sends appropriate market signals to stimulate the development of low emission and zero emission technologies. Benchmarks need to be set at a level that would achieve most of the reductions in greenhouse gas emissions required for Australia to reach Kyoto target.

Recommendation 6:
A National Greenhouse abatement scheme should be introduced to build on and compliment an increased MRET target, introduce marginal emission cost signals and be consistent with developing a domestic emissions trading framework.

STEP 1(B)

Introduce Industry Wide Mandatory Greenhouse Gas Abatement Measures

COGENERATION TARGET

Gas-fired cogeneration is one of the most effective means to reliably achieve large scale emissions reductions. It also substantially reduces the energy cost for industry and supports regional industry development. However, there is a need to bridge the gap to economic viability in a market environment and regulatory structure that would otherwise deliver centralised coal-fired generation. This can be done by recognising and rewarding the reductions in greenhouse gas emissions that cogeneration delivers.

Cogeneration improves the economic viability of processing industries that provide a market for agricultural and resource production. Cogeneration greatly assists the "value-adding" to Australia's raw materials, with these facilities generally located in regional and rural centres. Cogeneration is generally found in processing industries that require heat and electric energy, such as the dairy, food processing, paper and mineral processing industries.

Cogeneration, like energy efficiency and demand side management, has failed to deliver on its potential in Australia. This is largely due to market and institutional impediments and the fact that one of its key benefits (reducing emissions) is not recognised and rewarded. Establishing a mandatory target for cogeneration similar to that of the MRET is a market based method of recognising the abatement potential of cogeneration. The target should be initially set at 5% (23,750 GWh) by 2010, with a penalty for non-compliance set at the equivalent of $10 per MWh. This measure will result in emissions reductions of more than 15 million tonnes by 2010.

Recommendation 7:

A national mandatory 5% target (or another 23,750 GWh of supply) for cogeneration should be implemented industry wide.

ENERGY EFFICIENCY CERTIFICATES

Significant greenhouse gas emissions reductions can be achieved through energy efficiency measures. A subtarget in the MSET is needed for energy efficiency.

The ROUNDTABLE recognises the critical and complimentary role that the energy efficiency industry plays in reducing greenhouse gases and other environmental emissions, and in achieving a sustainable future for energy use in Australia. The ROUNDTABLE also recognises the role energy efficiency plays in making renewable energy options more cost effective by increasing their productivity.

In this context the industry notes the critical importance of both aspects of energy efficiency: end use efficiency and low emissions generation. Inefficient use of energy is costly, but improving energy efficiency is one of the most cost-effective ways of reducing greenhouse gas emissions both in Australia and around the world.

The Energy Smart Business Alliance initiative of the ESAA, SEIA and AEPCA (supported by the Australian Greenhouse Office) aims to achieve (1) a cost effective 20 TWh in savings, (2) $10 billion in avoided new electricity supply infrastructure and (3) 20 million tonnes of cost effective carbon dioxide emissions abatement through energy efficiency in the commercial building sector by 2010. It is estimated that this will create 50,000 new jobs by 2010.

To create the right incentives for the uptake of this initiative, the ROUNDTABLE calls for a national trading scheme in Energy Efficiency Certificates to deliver mandatory energy and demand savings from the non-residential building sector.

Recommendation 8:

A national mandatory trading scheme in Energy Efficiency Certificates should be created by 1 January 2003 in order to achieve a 5% reduction above business as usual energy use by 2010 (compared to a 2000 year baseline) through energy efficiency savings.

MANDATE 5 STAR BUILDING GREENHOUSE RATING FOR GOVERNMENT BUILDINGS

In order to stimulate energy efficiency in non-residential buildings, the ROUNDTABLE recommends that State and Commonwealth Government agencies mandate a 5 Star Building Greenhouse Rating performance for all office accommodation. This will set defacto energy efficiency standards for non-residential buildings.

This measure will address the 30 Mt increase in CO2 emissions in the non-residential market predicted by the *Institution of Engineers Australia Sustainable Energy Building and Construction Taskforce Report 2001*. It would also stimulate the implementation of the Energy Smart Business Alliance initiative to achieve a cost effective 20 TWh in savings, $10 billion in avoided new electricity supply infrastructure and 20 million tonnes of cost effective CO_2-e abatement through energy efficiency in the commercial building sector by 2010. This initiative is also supported by the AGO, the ROUNDTABLE, AEPCA and the ESAA.

In addition the Mandatory Greenhouse Benchmarks for Electricity retailers set at 20 Mt by 2005 and 40 Mt by 2010 with penalties set at $10 to $12 per tonne (the estimated marginal cost of abatement) will provide the financial incentives to achieve this outcome through gas and energy efficiency strategies.

ENERGY PERFORMANCE CONTRACTING AS A DELIVERY MECHANISM

Energy Performance Contracting (EPC) is a delivery mechanism that guarantees cost effective energy and greenhouse savings with no capital requirements. The ROUNDTABLE recommends that the Commonwealth Government provide $2 million per year for the next five years to promote the uptake of EPC amongst Federal

departments and Greenhouse Challenge members. Funding is to be used for market intermediary activities such as providing program facilitation managers and training and development.

EPCs are an effective delivery mechanism for aggregating consumers and to guarantee energy and demand savings outcomes, thus minimizing both perceived and actual risk. They also address the perceived risk and reliability issues of demand side management as compared to supply side options.

STEP 1(C)

Introduce a Mandatory Sustainable Energy Target (MSET)

The analysis and recommendations above are based on the ESAA's predictions of additional electricity requirements by 2020 increasing by between 50,000 and 60,000 GWh per year compared to 2000, with related greenhouse gas emissions of between 40 and 50 million tonnes. A national electrical energy efficiency program could reduce demand by 20,000 to 30,000 GWh by 2010, saving between 18 and 27 million tonnes of greenhouse gas emissions. It will also save customers between $2-3 billion per year. This will reduce new electricity supply infrastructure by $10 billion, saving an additional $600 million per year in deferred interest payments by 2010. To sustain the industry momentum generated by the above measures, it is important that they are extended beyond 2010 to 2020, and onward to 2050. The Mandatory Sustainable Energy Target is a three phase policy program to transform the current fossil fuel based Australian economy to a sustainable energy economy.

A staged approach leading to the overarching long-term goal of MSET can be achieved by:

STAGE 1: 2000 to 2010

- Increase the current MRET Target from a 2% increase in market share (9500 GWh) by 2010 to an approximate 10% increase in market share (30,000 GWh). Penalties to remain at $40 per MWh indexed.
- Create National Greenhouse Benchmarks for Electricity Retailers set at 20 Mt of abatement by 2005 and 40 Mt abatement by 2010 to be delivered by renewables, energy efficiency and gas fired cogeneration. Penalties to be set at $13 per tonne for Gas Energy Certificates (GETs) and Energy Efficiency Reduction Certificates (EECs).
- Introduce industry wide cogeneration and energy efficiency targets.

STAGE 2: MSET 2010 to 2020

- Consolidate stage one mechanisms into a comprehensive MSET policy.
- Expand the MRET legislation to a further 10% increase in market share (30,000 GWh) above 2010 levels for Sustainable Energy from all sources by 2020. Penalties to be maintained at $40 per tonne indexed.

STAGE 3: MSET 2020 to 2050

- Create a Sustainable Energy Target set at a total of 60% of Australian electricity production through a 1% per year increase in market share. Penalties to be set at the marginal cost of CO_2 abatement.

Recommendation 9:

With the introduction of Steps 1(a) and 1(b) to 2010, combine and expand these initiatives to form the Mandatory Sustainable Energy Target (MSET) which aims to work towards achieving a sustainable energy future to 2050.

STEP 2

Streamline Planning and Approval Processes for Sustainable Energy Projects Across Jurisdictions

The ROUNDTABLE, noting widespread reports from members and particularly those from the Australian Wind Energy Association (AusWEA), Australian Ecogeneration Association (AEA) and the Renewable Energy Generators of Australia (REGA), expresses its concern at the failure of Australia's planning approval processes to deal effectively, efficiently and in a timely and economic manner with new sustainable energy projects.

There are currently significant delays to sustainable energy projects because of poorly coordinated government planning processes

Commonwealth and individual state jurisdictions have different approaches to sustainable energy planning and policy. This distorts investment decisions and acts as a barrier to interstate trade in sustainable energy.

In particular, the lack of defined, uniform and transparent planning processes is unnecessarily delaying the implementation of a number of developing wind energy projects. The rapid emergence of wind power as one of the most viable grid-connected sustainable technologies has left many regulatory agencies (at both local and state government levels) playing "catch up" in establishing planning approval criteria. As a result, whilst developers have moved to capitalize on the rapidly growing demand for sustainable energy sources, the uncertainty and risk associated with planning approvals for major developments is still a key impediment. Developers invariably face a long, tedious and expensive approval process.

The wind energy industry itself has moved to establish best practice guidelines for wind energy developments in Australia. However, a concerted and coordinated effort is required by both state and federal governments to ensure that decision-makers and stakeholders are fully informed of all of the issues.

ROUNDTABLE requests the Commonwealth Government and Parliament to take a leadership role in developing overall national planning guidelines with clear and consistent criteria for the efficient, effective, timely and economic approval of Australia's sustainable energy development projects.

There are also a number of changes needed to the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999* to avoid unnecessary delays to sustainable energy projects while still allowing due process to be followed.

Recommendation 10:
The Commonwealth Government and the Parliament should develop overall national planning guidelines with clear and consistent criteria for the efficient, effective, timely and economic approval of Australia's sustainable energy development projects.

Recommendation 11:
AusWEA's best practice guidelines for wind energy developments should be used as a guide for statutory and policy implementation.

Recommendation 12:
The Parliament should amend the* Environment Protection and Biodiversity Conservation Act 1999 *to provide for sustainable and renewable energy projects as follows:

- *Improved requirements for consultation between the applicant and those administering the legislation.*
- *Reduce the time involved to obtain an approval under the Act by the introducing a realistic mechanism and time limits for the consultative process.*
- *Allow the applicant to request and be granted a hearing by the Minister prior to the issue of an approval containing conditions.*
- *Develop firm and effective protocols to effect the adoption and, where appropriate, reform of state and local Government processes and agreements relating to sustainable energy development projects.*

STEP 3

Have Appropriate Economic Incentives for Sustainable and Renewable Energy Projects

GOVERNMENT SUPPORT FOR SUSTAINABLE AND RENEWABLE ENERGY PROGRAMS

ROUNDTABLE appreciates Federal Government support to date and recognises that continued Government financial support is needed to grow the sustainable energy industry

The ROUNDTABLE acknowledges Federal Government support to the sustainable and renewable energy industry. These initiatives include developing the National Greenhouse Strategy, establishing the Australian Greenhouse Office (AGO) and implementing the Renewable Energy Action Agenda (REAA). These and other government initiatives to date play a vital role in establishing a viable sustainable and renewable energy industry in Australia.

Various studies have found that there are areas within the sustainable and renewable energy industry that need further support. These include domestic and export industry development and innovation in research and development.

In addition, the AGO portfolio lacks funding for research and development (R&D). Since the Energy Research and Development Corporation closed in 1997, there is no Federal Government agency that directly supports R&D in the sustainable energy area. There is a danger that unforeseen and decisive technology advances may not be realised, and that much of the benefit of previous AGO commercialisations will flow overseas for further development.

Expanding the export market for sustainable energy products is crucial for the industry. Capability and capacity developed to service the domestic market should help the industry capture global export opportunities. The Australian sustainable and renewable energy industry's experience in rural and remote areas means that the industry is especially well placed to take advantage of the demand for rural electrification in developing countries. Demand for sustainable energy services, particularly those related to project management, maintenance and education and training, is also expected to grow strongly.

Recommendation 13:
All Australian Greenhouse Office (AGO) programs and the Renewable Energy Action Agenda (REAA) initiatives should continue to be funded.

Recommendation 14:
Additional funding should be made available to the Australian CRC for Renewable Energy (ACRE).

Recommendation 15:
Additional funding should be made available to the sustainable energy industry as follows:

- ***an Industry Development Grant of $1.5 million per annum over three years for developing the sustainable energy industry, covering accreditation, standards and promotional activities for all sectors of the industry;***
- ***an Innovation Fund of $20 million (funded by a levy on all fossil fuels and increased MRET penalties) for sustainable energy technology innovation to promote Australian leadership in the technology areas related to renewable energy and energy efficiency; and***

- *an Export Development Fund of $4 million per annum for five years to develop and promote Australia as the leading provider of sustainable (renewable) energy goods and services in the Asian market.*

TAX REFORMS

Simple tax reforms will stimulate the sustainable energy industry.

The ROUNDTABLE believes that introducting tax credits for sustainable energy projects would encourage their development through providing appropriate financial incentives. For example, an accelerated depreciation allowance of 125% on sustainable energy assets in the year of investment, subject to a pre-qualification of eligible equipment and projects, would provide a significant stimulus for developing new projects of this type. This in turn would assist in reducing greenhouse gas emissions.

It is acknowledged that some consumers are unable to pay a premium on their present electricity bills, or may be unwilling to pay for a seemingly intangible environmental benefit. As an incentive to encourage and enable customers to voluntarily choose Green Power, the ROUNDTABLE believes that the premium paid should be tax deductible.

Removing GST from renewable and sustainable energy products and services will provide further economic incentives for this industry.

Recommendation 16:

Taxation reforms for sustainable and renewable energy projects should be implemented, including tax credits, such as accelerated depreciation of assets for taxation purposes, tax deductibility of green premiums and removal of GST from sustainable energy products and services.

STEP 4 Change the National Electricity Code

The reform and restructuring of the electricity industry was a key component of the broad micro-economic reform agenda agreed by all levels of Government in the early 1990s. Apart from delivering reduced electricity prices to customers, electricity industry reform was supposed to provide opportunities for sustainable generation and demand side management to compete once exclusive monopolistic supply arrangements had been removed.

The National Electricity Code (the Code) states that:

A particular energy source or technology should not be treated more or less favourably than any other energy source or technology [paragraph 1.3 (b) (4)]

There are a number of changes required to the National Electricity Code if it is to achieve the above objective.

The National Electricity Code needs to be reformed to overcome access issues, impediments to energy efficiency measures and inappropriate technical standards.

ACCESS TO GRID

The Code sets down requirements for new generators to access the national electricity grid. In reality network owners are usually not equipped to deal with such applications and developers are frequently frustrated by lengthy negotiations. Indeed in the current market, which is far from operating in a genuinely deregulated environment, it is often not in the best commercial interests of network owners to facilitate interconnection by new market generators.

New generators have to register the new generation, which has many unrealistic requirements. Wind power does not meet NEM requirements and nearly all new generators have to seek a variation for non-conformance.

Fair network access and cost reflective network pricing, including time and location sensitive signals, needs to be achieved. This involves reducing the extensive costs and delays that embedded generators face to connect to the network. In addition, the lower distribution and transmission costs created by embedded generation should be rewarded and network pricing implemented to ensure equity between local and distant generators and between local generators and transmission options.

Wind power by its nature is not dispatchable into the market, but projects can get dispensation for being dispatched if the plant is less than 30 MW in which case the market sees these generators as "negative load". However this becomes limiting as wind power projects become larger, in the hundred MW range.

Recommendation 17:
A uniform and streamlined process for connection and access regimes throughout Australia should be adopted.

Recommendation 18:
Fair network access and cost reflective network pricing, including time and location sensitive signals, needs to be achieved. All transmission cost savings that result from local generators should be recognised and passed through to the generator.

ENERGY EFFICIENCY

Reducing electricity use, through energy efficiency measures, is cost-effective for consumers and greenhouse effective. Additional electricity requirements by 2010 will increase by between 50,000 and 60,000 GWh per year compared to 2000. A national electrical energy efficiency program could reduce demand by 20,000 to 30,000 GWh by 2010, saving 20 million tonnes of greenhouse gas emissions and avoiding $10 billion expenditure on new electricity supply infrastructure.

There are, however, significant technical, regulatory and economic barriers to energy efficiency measures.

Recommendation 19:
The NEM Review must urgently address impediments to intemplementing demand side measures, including rules and bidding processes in the current NEM Code.

TECHNICAL STANDARDS

The energy market in general, and the registration provisions of the Code in particular, do not adequately cater for smaller generators connected to the distribution network. This is because standards within the Code effectively relate to base-load coal fired power stations, rather than to sustainable generation facilities, most of which are embedded into networks. To deliver efficient and competitive outcomes, market arrangements must be modified to make it easier for these generators to connect. Technical standards should be set that are site and scale specific so that small generators are not disadvantaged.

Recommendation 20:
Technical standards should be set that are site and scale specific so that small generators are not disadvantaged.

NEM REFORM PROCESS

To deliver a level playing field for sustainable generation, the National Electricity Market (NEM) must be changed. These changes should promote market driven investments rather than state government intervention. Acceleration of the reform process for the NEM should include the following issues:

- Introduction of full retail contestability

  This should lead to more cost-reflective pricing for all consumers, although the ROUNDTABLE recognises that the community may not be willing to accept the higher prices or loss of service quality that may accompany such tariff changes. While the ROUNDTABLE accepts that governments may intervene in markets to address public policy concerns, it believes that governments should not intervene in ways that undermine the efficient operation of energy markets and discriminate against efficient sustainable energy solutions.

- Inclusion of environmental sustainability in the Code objectives

  It is clear that greenhouse gas emissions are imposing significant costs on electricity consumers and the Australian community. As the largest single contributor to greenhouse emissions, the electricity supply industry must recognise and deal with these increasing costs. Environmental sustainability must be re-established as one of the objectives of the Code, as was initially envisaged.

Recommendation 21:
The reform process for the National Electricity Market should be accelerated, particularly for issues such as the early introduction of full retail contestability and the inclusion of sustainability into the National Electricity Code objectives.

STEP 5

Ratify the Kyoto Protocol

Scientific evidence is strengthening to support the view that global warming is real and attributable to anthropogenic influences.

Australia must ratify the Kyoto Protocol or risk international economic isolation.

The Australian Government has received an overwhelming expression of opinion from the Australian public: 80% are in favour of ratifying the Kyoto Protocol. Now that the parties to the UN Climate Change Convention in Marrakech have finalised the Kyoto Protocol details, Australia must consider how to ratify the Protocol to avoid being isolated internationally. To become legally binding the Protocol must be ratified by at least 55 countries that account for a lease 55% of the total 1990 carbon dioxide emissions of developed countries. The first threshold, has been met - as of 14 August 2002, 79 countries had ratified the Kyoto Protocol, though, only 36% of emissions are represented by those countries that have ratified. At the time of printing, however, China and Russia have indicated their support of the Kyoto Protocol. If these countries ratify, the second threshold will be met and the Protocol can take effect.

The Australian Government should increase its efforts in international forums to secure a commitment from all developed and developing nations to reduce greenhouse gas emissions.

Recommendation 22:
The Australian Government should ratify the Kyoto Protocol and encourage every other country to ratify.

EMISSIONS TRADING AND GREENHOUSE BENCHMARKS

The future cost of greenhouse gas emissions from energy production must be recognised today. Electricity generated by fossil fuels, particularly greenhouse gas intensive brown or black coal, brings significant future environmental costs. These costs must be recognised in the cost of electricity produced and consumed now.

Incorporating an emissions cost into energy investment and purchasing decisions through market-based measures such as emissions trading will address this issue. Market based measures, such as emissions trading, are generally recognised as the most efficient mechanisms to deliver policy outcomes at the lowest overall cost to the community. The debate now is really around the allocation of permits and the scope and timing of introducing emissions trading.

International and domestic emissions trading scheme should be introduced as early as possible.

In Australia, the arguments for delaying the implementation of emissions trading focus on: (1) whether Australia should lead in this area; (2) that Australia should not implement any measures until all countries (including Annex B countries) are bound by an emissions cap; and (3) that such a scheme needs to cover every emissions source. These arguments fail to recognise that the Australian community is presently creating a future legacy of significant costs for greenhouse abatement.

An emissions cost should be introduced into the "stationary energy sector" as soon as possible, as this sector accounts for the majority of Australia's total emissions, is growing at the fastest rate and has demonstrably not been controlled by other policy measures. Other countries have taken this approach, such as the United Kingdom which has introduced a Climate Levy and other European countries that have established carbon taxes. These measures ensure emissions costs are recognised in the marketplace and therefore impact on investment and purchasing decisions.

The ROUNDTABLE recognises that, while it is vital that the cost of electricity recognises its environmental impact, the new measures must be implemented in a financially prudent manner. Some sectors have argued that reducing emissions in a country like Australia is quite expensive. However, an international emissions trading market will allow further flexibility by creating a larger market and facilitate cost-effective reductions in greenhouse gas emissions. Trading in emissions permits will allow developed countries with high costs of abatement to purchase surplus emissions allowances from other participating countries that are able to reduce emissions (or produce credits through programs of sequestration) at a lower cost. International trading is also a means of encouraging wider global participation in greenhouse gas abatement programs and reflects the truly global nature of the greenhouse problem.

Recommendation 23:
The Australian Government should facilitate a National Greenhouse Emissions Trading Scheme by 2003 and give support for, and participation in, an international Greenhouse Emissions Trading Scheme.

STEP 6 Increase Public Awareness

EMISSIONS DISCLOSURE AND ELECTRICITY LABELLING

Efforts to reduce greenhouse gases will be assisted through increasing public awareness of greenhouse gas emissions associated with electricity use.

Electricity labelling involves disclosing information directly to consumers in a standardised form. This may entail disclosing greenhouse gas emissions and/or fuel mix information directly on consumer electricity bills.

At present, consumers cannot derive information about their electricity from the product since in many states retailers deliver their electricity through the same electricity grid. By providing consumers with information that they could not otherwise easily access, electricity labelling gives consumers more power to make choices in the electricity market by making them aware of the greenhouse impact of their energy purchasing decisions. This effectively supports competition in the retail market.

While retailers can be expected to supply environmental performance information if consumers prefer it, it is less likely that this information would be presented in a way that facilitates easy comparison between products. A standardised electricity label ensures that consumers will receive the environmental information they want, and in a format they can comprehend and use.

Recommendation 24:
Retailers should be required to incorporate an emissions disclosure in a simple and understandable way on consumers' bills.

RENEWABLE ENERGY AND GREEN POWER

There is evidence to show that customers are willing to pay more for power from environmentally preferred sources if they believe that it is better for the environment. However one of the major impediments to the uptake of Green Power is that many people are unaware of the environmental impact of their present source of electricity.

There is a wide belief in Australia that electricity is "clean" power, with NSW studies showing that the majority of people think hydro and solar are the dominant fuel source. This is despite the fact that 85% of Australia's electricity is actually produced from the burning of coal. The studies also indicate that two thirds of consumers are interested in buying power from environmentally preferred sources.

This suggests that incorporating emissions disclosure on customers' electricity bills, as per Recommendation 24, will contribute to a greater take-up of renewable energy and, specifically, Green Power. It will encourage retailers to differentiate products by offering energy source with lower emissions and allow consumers to make informed choices about their retailer based on the real environmental emissions impact of energy supplied. The small cost involved in implementing this measure means it is a cost-effective way to reduce greenhouse gas emissions and it should be implemented nationally as soon as possible.

Recommendation 25:
The Federal Government should be encouraged to initiate a national promotional campaign to raise community awareness of and the uptake of renewable energy and Green Power.

Recommendation 26:
The Federal Government should mandate that government departments and agencies source at least 10 % of their power from Green Power.

ROUNDTABLE *Participants*

Alternative Technology Association	ATA	www.ata.org.au
Australasian Energy Performance Contracting Association	AEPCA	www.aepca.asn.au
Australia and New Zealand Solar Energy Society	ANZSES	www.anzses.org
Australian Business Council for Sustainable Energy	ABCSE	www.bcse.org.au
Australian Cooperative Research Centre for Renewable Energy Ltd	ACRE	www.acre.murdoch.edu.au
Australian Institute of Energy	AIE	www.aie.org.au
Australian Wind Energy Association	AusWEA	www.auswea.com.au
Bioenergy Australia	Bioenergy Australia	users.bigpond.net.au/bioenergyaustralia
Centre for Alternative Design and Dissemination of Energy Technologies	CADDET	www.caddet-re.org
Environment Business Australia	EBA	www.environmentbusiness.com.au
New Zealand Wind Energy Association	NZWEA	www.windenergy.org.nz
Northern Territory Centre for Energy Research	NTCER	www.ntu.edu.au/ntcer
Renewable Energy Generators Australia Ltd.	REGA	www.rega.com.au
Sustainable Energy Development Authority (New South Wales)	SEDA (NSW)	www.seda.nsw.gov.au

ROUNDTABLE *Observers**

Australian Greenhouse Office (Commonwealth Government of Australia)	AGO	www.greenhouse.gov.au
Department of Industry and Trade (South Australian Government)	DIT	www.business.sa.gov.au
Department of Industry, Tourism and Resources (Commonwealth Government of Australia)	DITR	www.isr.gov.au
Environment Protection Agency (Queensland Government)	EPA	www.epa.qld.gov.au
Sustainable Energy Authority of Victoria	SEAV	www.seav.vic.gov.au

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