



COOPERATIVE RESEARCH CENTRE FOR COAL IN SUSTAINABLE DEVELOPMENT
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**SOCIAL CHANGES AND INDUSTRY COOPERATION REQUIRED FOR A
SUSTAINABLE ENERGY FUTURE**

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Introduction

A carbon shock – driven by global climate change concerns – is beginning to impact on Australia's hitherto secure supply of cheap and plentiful energy. Great change to the generation, supply, and use of energy in Australia has been foreshadowed by governments and is starting to occur. A fifty year goal to reduce the nation's greenhouse gases by 60% is firming as policy. If reductions of that order are to be achieved, work needs to start now and must involve changing institutions, attitudes and habits within society.

CCSD Project 1.4 aims to provide the coal mining and electricity generation industries with current thinking on the role of coal in the transition to a sustainable energy future for Australia, so that these industries can carry out their strategic planning effectively. In 2004 Project 1.4 addressed this question and identified research 'hotspots' relevant to the CCSD¹. A key research area identified was 'Social Acceptance of Changes' - "It was broadly recognised that even the best solutions might not be able to be implemented without a greater level of community acceptance. It was stated repeatedly that technical research should be given lower priority as we need more social research to achieve change."² The latest work in Project 1.4, reported to this seminar, *focuses on the social aspects of achieving the move to a sustainable energy future for Australia*. We have explored this through 2 of 3 small discussion forums – 'Explorums'. The 2004 project also found: "There is a need to build trust within the community through genuine cooperative actions to reduce emissions – this is necessary for a 'social licence to operate'. There is a perception that a lot of the coal industry operates behind closed doors."³ The 3rd 'Explorum' aims to address this aspect of social change in the context of the coal industry in a sustainable future.

Explorums 1 and 2 addressed the question "*What social change is necessary for the development of a sustainable energy system for Australia?*" Explorum 1 brought together high level 'opinion leaders' and 'experts' from a range of relevant fields, and Explorum 2 involved 'grass roots' leaders working on energy/climate change projects with the public. Each Explorum was divided into two key parts. Part 1 explored the key barriers to the social change necessary in a move to a sustainable energy system. This was followed by Part 2 – a discussion of possible solutions.

Explorum 3 focussed on "*The feasibility of the various stakeholders in Australia's electricity sector cooperating to develop a sustainable energy system*". The starting assumption was that greenhouse gas reductions of the order required to avoid serious climate change impacts will require significant and ongoing changes to the electricity sector. Cooperation between the various stakeholders (fossil fuel, renewable energy and energy efficiency industries, large energy users and community groups) will increase the likelihood of this transition occurring smoothly. It was assumed that abatement technologies are available, but due to lack of policy are not being deployed and this was a consequence of the mixed messages that governments receive from the various players in the electricity sector. Thus, cooperation between stakeholders will make it easier for governments to move ahead and develop appropriate policy.

¹ See J-A Lacko, R Passey and R Harding (2005) 'Exploring alternative perspectives on the role for coal and the coal industry in the move to a sustainable energy system', CCSD General Report 6. Available at <http://www.ccsd.biz/publications.cfm?PubID=501>

² Ibid, p 6

³ Ibid, p 6

Explorums – the process

The Explorums brought together 7 people for Explorums 1 and 2; and 8 people for Explorums 3. The Explorums were facilitated over 2 hours. The participants were chosen to reflect a range of expertise, views and experience relevant to the topic. The participants and their affiliations are listed at the start of each of the following Explorums summaries.

The Explorums took place under a modified version of The Chatham House Rule. This rule reads as:

"When a meeting, or part thereof, is held under The Chatham House Rule, participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed".⁴

We modified this Rule such that participants and their affiliations are reported in the Explorums summaries, but, as with The Rule, comments and quotes are not attributed to particular individuals. In line with The Chatham House Rule participants agreed not to discuss individuals' contributions to the Explorums.

In the following summaries of the Explorums we have provided an overall picture of the key points of consensus as well as matters of disagreement. We have reflected the range of views through 'quotes' (in italics). These are not necessarily direct quotes. Changes have been made to allow for the translation of spoken into written English whilst retaining the meaning.

Explorums 1 and 2, which covered the same topic, have a combined Executive Summary which also serves to compare the results of the two Explorums. This is followed by the Explorums 3 Executive Summary, then by the main reports for each of the Explorums.

Explorums – Seminar

The outcomes of these Explorums were presented at the seminar *Social Challenges of Technological Change* held in collaboration with the CSIRO at the Sydney Harbour Marriott Hotel on the 26th July 2006.

The seminar explored the social contexts within which energy technologies must be accepted, and addressed the question 'what social change is necessary for the development of a sustainable energy system and how might this occur?'. Whereas the CCSD work focused on *expert* and *opinion leader* views, the CSIRO work explored *public* perceptions.

Professor Steve Rayner set this Australian work in context by providing perspectives on leading international thinking on understanding the social contexts within which energy technologies must be accepted. Professor Rayner is James Martin Professor of Science and Civilisation at the Saïd Business School at Oxford University and Director of the James Martin Institute for Science and Civilisation.

⁴ See: <http://www.chathamhouse.org.uk/index.php?id=14>

EXECUTIVE SUMMARIES

EXPLORUMS 1 & 2: SOCIAL CHANGE FOR A SUSTAINABLE ENERGY FUTURE

These Explorums focused on the social dimension of change, exploring

"What social change is necessary in a move to a sustainable energy future".

The first Explorums targeted key opinion leaders and experts in the area, while the second Explorums targeted grass-roots leaders involved directly with the community, at the 'coal-face' so to speak. This report is a synthesis of the diverse opinions presented in each Explorums. Areas of general agreement and disagreement are identified, along with supporting thoughts or views.

Explorums 1

The key barriers identified were:

- (i) A lack of knowledge in the community regarding where energy comes from, the impacts of climate change and what to do about it. The uncertainty and complexity of these issues, as well as the intangibility of the causes and impacts of climate change exacerbated this.
- (ii) Current beliefs and values including the emphasis placed on wealth creation and individualism were a barrier to the social change needed for a sustainable energy system. Other limiting beliefs and values were an inherent 'resistance to change' as well as a fundamental belief in human's dominion over the Earth; and
- (iii) The current political and commercial climate which includes a lack of leadership; short-term focus and the government's wish for a 'quick-fix silver bullet technology'. In addition, the community lacks faith in the government's ability to solve the 'big issues'.

A number of solutions were proposed for the various barriers, and it was stressed that a coordinated approach is needed:

- (i) Effective public dialogue and campaigns need to start from 'where people are at' and focus on what motivates them, such as concern for their children. More emphasis should also be placed on what scientists do agree on rather than points of disagreement;
- (ii) Although beliefs and values are difficult to change, it was thought that external events such as increased storms, seen as due to climate change, could cause rapid changes in behaviour. Research has shown beliefs can change quicker than values, especially if people believe their actions will make a difference;
- (iii) It was agreed that a government with a vision and political will could make effective changes. A leadership change in Australia and the US is required. A number of institutions could galvanise government or take a leadership position themselves, including business and civic leaders, the community in general, and the coal industry in particular.

Explorums 2

The key barriers identified were:

- (i) A lack of effective communication, and messages that constantly change. Mass marketing campaigns are often ineffective. Overload of information was also seen as a problem, and possibly 'dumbing down' by a media unwilling to deal with complex issues. All these lead to people often having a low level of understanding of practical solutions;
- (ii) Increased consumer expectations with emphasis placed on affluence and the 'big-better-more' drive, especially as these expectations are shared by Third World countries; and
- (iii) A lack of leadership at the political level with a focus on deferral of action, not long term planning. The self-serving agendas of powerful bureaucrats and large organisations also had too much influence over government policy.

Other important barriers were; people being too time-poor to deal with climate change issues, the appearance that 'everything is fine' in Australia, and being overwhelmed by the problem when it is understood.

Solutions proposed for the three main barriers were:

(i) The message should be independent and credible, and instead of using expensive social marketing exercises it would be better to create relationships with community leaders and so build community infrastructure. It's also important to recognise the heterogeneity of the community and relate to all spectrums of people. Messages should be made personal and tangible, and emphasise the possibility of change. Equipping people who are interested in the issue with the information they need to convince others is very important;

(ii) Rather than fight the consumer ethic, it would be better to accept that this is where people are at and so 'come in alongside and work with people' and give them information that can reduce their impact. It was thought that because of this consumer ethic and the lack of action by business that good leadership and regulation is required; and

(iii) People are basically well meaning, they just need leadership. Although it was unclear whether leadership is better from above or below, it was agreed that any such leadership should be simultaneous. While community leadership is necessary, business leaders and government still have a role to play.

Comparison of the two Explorums

The two Explorums identified similar barriers to social change, with different emphases and, of course, different and interesting supporting anecdotes. The differences between the two groups are more apparent in the discussion of solutions or 'how these changes might occur'.

(i) Knowledge and communication

Explorums 1 had a stronger focus on lack of knowledge being a key barrier, exacerbated by the 'uncertainty' and 'complexity' of the science as well as the intangibility of climate change's causes and impacts. Explorums 2 identified ineffective 'dumbed down' mass marketing campaigns and information overload as a cause of the community's lack of interest and knowledge of practical solutions. When it came to solutions, Explorums 1 suggested focussing on 'where people are at' and what motivates them, with more emphasis placed on what scientists agree on. Explorums 2 emphasised the need for independent and credible programs that created relationships with community leaders. Such programs should relate to all spectrums of people, be personable and tangible, and emphasise the possibility of change.

(ii) Beliefs, values and consumer drive

Explorums 1 focussed on broad beliefs and values such as wealth creation and individualism, but also 'resistance to change' and a fundamental belief in human's dominion over the Earth. Explorums 2 focussed more specifically on increased consumer expectations with emphasis placed on affluence and the 'big-better-more' drive. Explorums 1 thought that external events such as increased storms seen as due to climate change could cause rapid changes in beliefs and so also in behaviour, especially if people believe their actions will make a difference. Explorums 2 accepted that these 'big-better-more' aspirations are unlikely to change and suggested solutions that minimised the damage caused by increasing consumerism - such as choosing better alternatives, and strong government leadership that enforces regulations.

(iii) Political and commercial leadership

Lack of effective leadership on climate change was identified as a key barrier by both Explorums. Responsibility was most often assigned directly to Prime Minister John Howard. Explorums 1 identified lack of leadership in both government and business due to their short-term focus, especially government's fixation with politically expedient quick-fix silver bullet technologies. Explorums 2 focussed more on lack of leadership from government that resulted in deferral of action and lack of long term planning, and this was exacerbated by the self-

serving agendas of powerful bureaucrats and large organisations. Both Explorums believed that government was capable of leadership. Explorum 1 thought that leadership ultimately had to come from government and identified a number of institutions that could galvanise it into action, including business and civic leaders, and the coal industry. Explorum 2 saw more of a role for leadership from below than did Explorum 1, but agreed that while leadership from below was necessary, business and government leadership were also required.

EXPLORUM 3: COOPERATIVE ACTIONS FOR A SUSTAINABLE ENERGY FUTURE

This Explorum brought together a cross section of the Australian electricity industry to focus on:

The feasibility of the various stakeholders in Australia's electricity sector cooperating to develop a sustainable energy system.

The attendees were from a coal mining industry association, a large energy user, an environmental NGO, two renewable energy industry associations, the finance sector, a business with interests in gas-fired generation, distribution and retail, and also included an exCSIRO scientist. Although the stakeholders concerned often have very different perspectives and priorities, their cooperation will increase the likelihood of the transition to a sustainable energy system occurring as smoothly as possible. One of the most striking outcomes of the Explorum was that the expressed positions were often not from the sector traditionally associated with that perspective but in fact from a sector that is generally considered to have an opposing viewpoint.

All participants agreed that now is a good time to act cooperatively. Three main reasons were given: (i) the limited time for effective action on climate change, (ii) to take advantage of the recent move within some companies to be more proactive, (iii) to take advantage of the 2007 election. The consensus view was that an industry-led multiparty dialogue would be a good way forward to encourage government to develop effective policy. A multiparty dialogue would result in accountability of industry players, increased government acceptance of proposals and increased trust and certainty for industry sectors.

Although as many sectors as possible should be involved, interest in a multiparty dialogue is not a sector-wide phenomenon, and so it would be best to involve specific businesses initially. Although industry associations have the potential to play a significant leadership role, they have to represent their entire constituency and may be restricted by the least progressive of their membership. It is very important to involve CEOs as they can drive interest internally and between companies, and confer credibility in the eyes of government.

To get as many companies involved as possible, the process used to establish and conduct the dialogue is critical. It should focus on broad goals initially, not specific solutions, and aim to find common ground. A common theme was the need for a safe place or 'relaxation zone' where ideas can be placed on the table for discussion. This would increase the likelihood of agreement and increase the credibility of the outcome. The dialogue could take the form of an informal group or 'odd bedfellows' network under the Chatham House Rule. It was suggested that an independent body could take responsibility for facilitating this process. Two broad types of outcomes were thought possible. Either as many businesses as possible could go to government as a group, or go separately but with a similar proposal.

There was a significant amount of discussion of the 'Roundtable Report' - *The Business Case for Early Action*. Although significant industry sectors weren't included in its development - large energy users and the coal industry - there was general agreement with its recommendations. It was still considered to be a good platform for multiparty dialogue.

A number of topics relevant to the creation of a sustainable energy industry were also discussed. The main points to emerge were: (i) A number of different technologies and policies are going to be needed to significantly reduce emissions, and there will be no silver bullets; (ii) A price on carbon is necessary but insufficient to ensure sustainable change and

so other policies will be needed; (iii) For most of the economy, a carbon price will have little negative impact, however for energy intensive industries the situation is different; (iv) Economic modelling and analysis have a role to play but this is currently overstated; (v) The Government's objectives are different to those of any industry sector; (vi) Community pressure on government is important, however there may not be time to wait for the community to act; and (vii) The Government review on nuclear energy may be an important opportunity to push for a sustainable energy system, or it may just be a distraction.

EXPLORUM 1 – OPINION LEADERS/EXPERTS: 24 MAY 2006

WHAT SOCIAL CHANGES ARE NECESSARY FOR A SUSTAINABLE ENERGY FUTURE

Attendees:

Roger Beale Allen Consulting

Greg Bourne WWF

Ian Kiernan Clean Up Australia

Adam Kilgour CPR Communications &
Public Relations

Graeme Pearman Graeme Pearman Consulting,
previously CSIRO Division of Atmospheric Research

Anna Littleboy CSIRO

Roberta Ryan Urbis JHD

Facilitated by Alan Tate Cambiar

Starting assumptions: We assumed the following general characteristics of a sustainable energy system in Australia by 2050: a 60% decrease in greenhouse emissions driven by a portfolio of abatement options on both the supply and demand side (no magic bullet technologies), also focusing on risk minimisation, energy security and social equity. We did not include the transport sector or coking coal in the discussion.

The Explorandum was divided into two key parts. Part 1 explored the key barriers to the social change necessary in a move to a sustainable energy future. This was followed by Part 2 – a discussion of possible solutions.

Part 1 - What are the key barriers to social change?

The majority of barriers discussed are summarised into the following three areas:

1. Knowledge and Communication:

- o Lack of knowledge (where energy comes from, its consequences and the impacts of climate change). The reasons for this were deemed to be:
 - o Uncertainty and complexity regarding causes of climate change, the impacts of climate change and what to do about it
 - o Intangibility of causes and impacts of climate change and overwhelming-ness of the issue
 - o Bad communications at many levels of society: science; media; government – and an air of uncertainty at all levels

2. Beliefs & Values

- o Materialism
- o Individualism

3. Political and Commercial Context

- o Short term focus whether it be the election cycle or the company quarterly financial report
- o Commercial and political expediency
- o Lack of government leadership, especially regarding the reality of climate change and what to do about it
- o Lack of faith in government to solve the 'big issues'

Key Barrier 1 – Knowledge & Communication

The majority, but not all, of the group believed a key barrier is lack of knowledge about the issue, including: where energy comes from; the consequences of our actions, the impacts of climate change and what to do about it. One participant stated:

Poor understanding in the community at large – at both the individual and institutional levels. The rationale or reasons for reductions are not understood – due to lack of political will/leadership, due to long term impacts and due to poor scientific communication

However, the 'explorum' did not have consensus that 'lack of knowledge about climate change' is the key issue:

I disagree with the statement that people don't know about the issue. Over the past couple of years we have done quantitative surveys of hundreds to thousands of people and have seen a big increase in recognition of the climate change issue such that 70% to 80% agree climate change is a major issue. The 20% who don't see it as a major issue tend to be in poverty...with more pressing priorities. The top 20% of active people tend to be affluent. And the other 60-70% are open to making changes themselves and want governments to do something

Uncertainty and complexity pervade messages about climate change.

To make a scientific statement you need 99% certainty and there is uncertainty around climate change because of the huge number of variables. Thus scientists have inadvertently added to the confusion as they talk of uncertainties.

Those that speak responsibly regarding the science of climate change sensibly talk about uncertainty and long time-frames. Therefore, people talk about 'probable'; 'possible' and 'scenario' futures. The message from scientists is not "CRISP". There are too many uncertainties with both the problem and the responses/solutions and the public like clear messages regarding issues

Most speakers reiterated that the causes, problems and solutions to climate change are complex. This, coupled with the enormity of the problem becomes overwhelming for people and they choose to ignore the problem.

Intangible nature of energy and climate change

Good knowledge and understanding (as well as motivation to act) is hampered by the intangibility of energy and climate change

Energy and climate change are not "tangible issues" like water. The water issue becomes real when the river is dry – climate change is less tangible. Therefore it is harder to understand and easier to defer action.

Not surprisingly, given the above barriers, there is a seeming lack of desire for knowledge by the community.

It was noted that even when correct information is communicated effectively to a group of people and the group become convinced that climate change is a real and immediate issue, there is a lack of knowledge regarding the impetus to take action.

The attitudes we are measuring don't test for 'readiness' for change ie people's capacity or willingness to change. Our program of informing people – shows 'radical' shifts in attitudes. However the key barrier is we don't know how to realise this potential for change or precipitate 'readiness' to change.

Media reporting of climate change reduces credibility

Climate sceptics are given equal weight in the media despite being outnumbered many times by those that predict increasing climate change events

Key Barrier 2: Beliefs & Values

High value given to wealth generation

Most participants spoke of the pursuit of personal wealth and a growing economy to be an impediment to the social change necessary to reduce greenhouse gases. Comments included:

We currently operate under a paradigm of net wealth generation...This is a problem for society as we are all trapped by it. (i.e compelled to demonstrate economic value of everything) This is a major problem since climate change is a sustainability issue and we need to consider across the triple bottom line.

Dominating all this ... is that we believe wealth generation is so fundamental that the economic models ... tell us how the future will be. That is a real problem.

People today are consumed by the stock market prices

High value given to Individualism

The individualisation of our society – wonderful response to the excesses of nationalism and religious fervour in the past - but a problem when trying to gather united support and get a societal response.

People believe they can 'free-ride'. Someone else can take action and I'll benefit anyway or conversely 'if I make lots of changes and most others don't'- there is no real benefit.

There is a prevailing attitude of 'does it affect me'? While there are some common impacts ie on insurance policies – climate change will affect different people different ways. The worst effects will be felt by people in poorer countries.

Additionally,

While the above values and beliefs were voiced by most participants, individuals also suggested the following inhibitors to social change.

The first being “**human’s inherent resistance to change**”:

The major social barrier is 'the need to change' and Australians don't like being told what to do or else they have other drivers that prevent them changing.

The second being the Western fundamental “**belief that human’s have dominion over the earth**” and can handle all the consequences. Also another historic, particularly Western, belief that competition and conflict are more effective than cooperation.

Historically the normal response to a resource constraint is conflict. We've never had complete global cooperation before and we need cooperation for a sustainable energy future

Key Barrier 3: Political and Commercial Context

Commercial Context

It was said, the economic system often drives people to think short term and to make unsustainable actions whether it be farmers' unsustainable overuse of land driven by the need to pay the mortgage and feed the kids, or banks agreeing to fund an unsustainable mine project because the competition would if they don't.

Business has a very short term focus – generally annual and often quarter to quarter

When a national emissions trading scheme was almost established, a group of CEOs from the resources industry complained to government about the cost and loss of dollars to them, the government thought the price was too high and it was scrapped.

The banking/financial industry need to take on real change – the insurance industry has taken climate change seriously but banking and finance hasn't. Banks say they must respond to 'client pressure' eg if a mining company wants a billion dollars to fund a mine – if the bank says no the client will go to another bank

A key barrier to change in Australia is that the price of energy is too cheap.

Political Context

No leadership

Political systems, in Australia, are set up for 'managership' rather than 'leadership'. 'Managership' focuses on cycles, whether the quarterly budget cycle or the 3 year election cycles.

If politicians don't have a vision of the future and are not prepared to tell it, how can you take the first step?

Mixed messages from government

Messages from politicians differ – Beattie for coal; Howard for nuclear; etc

Recently there is a fair amount of agreement that climate change is occurring and something must be done and that a 'one solution, so-called 'silver bullet'' won't work but policy statements by politicians don't reflect this and society at large hears and reacts to the political statements.

No commitment from government to run a clear communication campaign

Federal and State governments don't spend on climate change campaigns. Most states have spent lots on water conservation campaigns (\$5-30 million each) and this has been effective however, it takes a few years to 'bite'.

The public belief that government cannot solve the big issues

This statement was repeated by a number of participants from very different backgrounds

If we sell climate change as the 'big Issue', most people don't believe government can solve 'big issues'

Voters don't choose or vote based on the environment because they don't expect government will do anything NOT because they're not interested in the environment.

The government's wish for a politically expedient 'silver bullet' approach

The majority of participants agreed the government response was to look for a 'silver bullet', one single solution to the problem rather than the 'portfolio' approach recommended by scientists, non-government organisations and most businesses. It was believed this 'political expediency' blocked current solutions from being enacted as it deferred action to a future time and by implication, a different electoral cycle.

Such an approach involves development of technologies for use at some stage in the future such as nuclear or geo-sequestration which partially postpones giving people economic signals they will find painful in the short term.

Part 2 - How might this social change take place – some solutions

Just as no one technology will solve climate change, nor will one key action bring about the social change required. The group emphasised the need for a coordinated approach

We need: policies, measures, leadership and targets.

There are all kinds of tools in a social change model we need to get us there (policy, education, communication, and regulation for the people at the bottom end of the bell curve who are amenable to education). Integrated policy and tools responses are needed to make this change.

Solutions ranged from directly addressing identified barriers to enabling social change, such as: effective communication and persuasion; influencing beliefs to enable community to take informed action; altering the political and commercial context; and shifting fundamental values at a global level that promote global cooperation and harmony rather than conflict and individualism/nationalism. In order to gain acceptance all solutions need to address the sections of society, within Australia, that are adversely affected by greenhouse abatement actions.

Effective Communication/Persuasion (some solutions)

Public dialogue – we need to start from "where people are at".

Sometimes impacts that motivate people most aren't rational. E.g the election campaign that interest rates would increase under Labor – no rational reason to believe this but it hooked into people's fear or aspirations. It can work.

Sounds folksy, but people are motivated by 'for the future of our kids' whether they have children or not. This is demonstrated by 'the worm' on election nights. This goes vertical if the discussion addresses the problem from the perspective of children or grandchildren etc.

More confusion than there needs to be: scientists argue about 5% of differences rather than clearly communicating the agreed 95%

No point trying to change the media – the media is all about polarities ... therefore media will stay exactly as is.

Beliefs and Values (some solutions)

Understandably, little was said about potential shifts in Western values of domination over nature and value of material wealth. Although, one participant proposed the value of individualism might be modified with a 'world first' of global cooperation and harmony.

In addition, emerging studies on behaviour change in this context suggests people's beliefs (if not values) can change rapidly with information and a sense of empowerment of 'making a difference'.

Research suggests people are prepared to change (regardless of their values) if they 'believe' their actions will make a difference down the track. Beliefs change faster than our values.

Some shifts in behaviour may result from external events.

Increasing climate events may help [persuade people they need to make changes]. There have been significant changes in public attitudes - some of which is possibly related to storms, which have made climate change more tangible.

On the other hand, we could take the 'first time ever' approach of global cooperation:

I believe we can choose a harmonious world rather than disharmonious. Contrast a positive and bleak future - present these scenarios to politicians and the people. The positive scenario would include a first time on Earth concept... That we all (6.5 billion of us) need to co-operate ...we can globally co-operate is a first time ever

It was argued that global cooperation would not necessarily have significant costs.

World transfers between the developed and developing world that are required for China and India to go in a much more efficient pathway are roughly equivalent to world aid (0.4-0.5% of world GDP).

However, the possibility of global cooperation that was not too costly was not shared by all. Another participant thought the costs of abatement were prohibitive and it would take strong action to overcome the resistance to expensive actions. In addition, it was thought to be 'dangerous' and unrealistic to expect or rely on global cooperation. However, a compromise of the world moving at different speeds toward the same goal was considered viable.

It is dangerous to say that there has to be a global agreement - hard to get that in 10-15 years. We need global confidence with local actions. There is room for a 'multi-speed' world - before we have unity. We have a precedent in the European Union, there was a 'multi-speed' Europe before the existence of the European Union

Political and Commercial Context (some solutions)

Political Context

All participants agreed political strength and will is needed. One solution included the current government to make the decision to have a vision and enact it.

Within the current democratic political system - our leader can take us to war without asking us, our leader can stop immigration without asking us. Our leaders can take us 'there' to the required solution with no changes to our democratic political system. Governments can say we want to go 'there' and lead the way.

We need a vision of where we are going to (locally, globally, nationally). Policy doesn't happen in a vacuum.

There is a significant interest in the community around environmental issues, but leadership is required to harness the latent interest in the environment. Leadership in this context is about responding to where the community is at.

However, if government will not act of its own accord, there were suggestions of how to galvanise leadership from below:

In the end it's about leadership and managing the information getting to Prime Minister Howard and Cabinet, and this comes very definitely from business and from civic leaders - not media. There are approximately 1,000 people in Australia that can effectively make a difference. And they can't be at ends of the spectrum.

To galvanise leadership – look to hook the issue to where people are at. For example, the stormwater cleanup campaign started with litter – not the consequences of stormwater. Start with issues people can relate to and then move toward the big important issues.

Other institutions, including the community and the coal industry, have a role to play in galvanizing leadership or taking a leadership position themselves.

Institutions working together, demonstrating that something needs to happen, can provide a leadership trigger

The coal industry, to ensure its long term future in a carbon constrained economy, must take a leadership role in going to government saying 'we recognise the problem and give the government licence to act'. We recognise that we must have lower environmental impact and here are the technologies that enable us to do that. Here's our contribution to helping support those technologies.

On the other hand, the current leaders in Australia and the US were seen as the key barrier themselves and better leadership will occur once they are not in power.

On the leadership question, things will change dramatically when Bush and Howard go, even if replaced by a conservative. There is quite a lot of undercurrent in government about what could and should be done at that time. Certainly at the State level.

Commercial Context

Despite fears that the costs of greenhouse gas abatement are too high, opportunities are readily available.

Higher prices can be a lever for reduction and better innovation and cleverness. These possibilities need to be communicated.

Markets will play a part but price elasticity doesn't always work. The public has absorbed the equivalent of \$300 a tonne of tax credits for greenhouse emission reduction in the increase of oil from \$30 a barrel to \$70 a barrel. There hasn't been much noise about this increase until the last couple of years. No politician could have thought of applying a \$300/tonne to start stimulating differences in car driving.

Again, it was suggested that the economic impacts of abatement aren't that significant:

AGL/WWF/Frontier Economics work showing that the eastern seaboard could (without stranding any coal assets) achieve a 40% cut in emissions by 2030 adds roughly 40c per person/week. There are equity effects but it is doable.

Examples of maximising commercial opportunities in a carbon constrained economy were raised including Toyota's development of a fuel efficient hybrid vehicle. Another market measure that would increase commercial opportunities is a carbon tax where revenue raised is reinvested into research and development of greenhouse abatement technologies.

As one participant summarised '*Overall, we need to tread the fine line and take our eye off the black bottom line without getting sacked.*'

On a closing note, the social dimension of choosing abatement options/solutions must be addressed regardless of solutions chosen

All options for greenhouse abatement require a change from 'Business As Usual'. These changes will mean there are some 'winners' and some 'losers'.

The losers in mitigating emissions are clearly and sharply identified. They will identify themselves and fight hard to stop this – the biggest beneficiaries of change actions are not in our polity and they don't vote in our elections.

A solution for this was given as:

Work out who's got the most to lose, and who has the political power to stop it happening and find some way of dealing with them, or accommodating them. How you deal with those who are immediately hurt defines whether solutions are publicly accepted

Consequences are different in the market depending on strategies taken. For example,

If we accept geo-sequestration, there will need to be huge tax transfers to coal for these investments. To raise this money we will need to pay more taxes and/or pay more for energy. Each solution will create massive changes for communities and we need to prepare for that. This includes changes to jobs, energy behaviours etc.

EXPLORUM 2 – GRASS ROOTS LEADERS: 30 JUNE 2006

WHAT SOCIAL CHANGES ARE NECESSARY FOR A SUSTAINABLE ENERGY FUTURE

Attendees:

Tanya Cameron Country Women's Association NSW

Mary Crooks Victorian Women's Trust and Watermark

David Eckstein BASIX - Building Sustainability Index - NSW Department of Planning

Danny Kennedy Greenpeace

Sue Lennox Oz Green

Ross Tzannes Ethnic Communities Council of NSW

Dave West Consultant - Power to Change

Facilitated by Alan Tate (Cambiar)

Starting assumptions: We assumed the following general characteristics of a sustainable energy system in Australia by 2050: a 60% decrease in greenhouse emissions driven by a portfolio of abatement options on both the supply and demand side (no magic bullet technologies), also focusing on risk minimisation, energy security and social equity. We did not include the transport sector or coking coal in the discussion.

The Explorandum was divided into two key parts. Part 1 explored the key barriers to the social change necessary in a move to a sustainable energy future. This was followed by Part 2 – a discussion of possible solutions.

Part 1 - What are the key barriers to social change?

The majority of barriers discussed are summarised into the following three areas:

1. Knowledge and Communication

- Effective means of communication aren't used
- Changing messages
- Information overload or even 'underload' in the context of climate change
- People lack information regarding practical solutions
- Evidence of misinformation

2. Increased Consumer Expectations and Aspirations:

- Shifting rich-poor divide as the poor move closer to 1st world standards of consumerism
- Affluence – consumption binge
- 'Big-better-more' drive

3. Leadership

- Lack of 'top down' leadership
- Retreat of leadership – winding back of government is problematic
- Focus on deferral of action, not long term planning
- Power agendas at institutional level

Other important barriers:

- Time-poor – so people don't get involved in issues outside the immediate family;
- Inertia caused by a reality gap – everything seems OK – why panic
- Despair - once people, especially young people, realise the enormity of the problem, they are immobilised by the feeling that nothing they can do is big enough to make a difference
- Price, markets and accessibility – too much protection for fossil fuels and energy is too cheap in Australia

Key Barrier 1 - Knowledge and Communication

- Governments don't employ the most effective means of communication

Expensive social marketing exercises, such as those typically used by governments, are not effective
- Changing messages

Different scientific messages today from yesterday. Because the messages are different we start to discount everything and the layman's interest flags. For lay people 'the last thing heard is the truth'. This means that politicians won't 'nail themselves to the mast' because things will change.
- Information 'overload' or even 'underload' in context of climate change

Information overload – people unable to sift wheat from chaff – a result of saturation marketing

However, another participant:

rejects the 'overload' theory and rather suggests 'underload'. ie government agencies because of overload have 'dumbed things down'. Media won't try to deal with complexity. Editors won't allow the needed 4000 words to clearly and truthfully explain the issue. TV messages on energy/climate change typically show transport examples, ie car exhaust but not stationary energy – so it's hard for people to make the link with their own energy use

- People often have a low level of understanding of practical solutions

People are generally aware of the problem but don't know what to do about it.

People are confused about alternatives in their energy use – some understand and accept alternatives, others are confused and don't accept alternatives.
- Evidence of misinformation

The Institute of Public Affairs and others – misinform and mislead – giving governments and institutions the opportunity to not act.

There is a problem with credibility and trust on both sides of the debate. Politicians deliberately try to increase scepticism.

Key Barrier 2 – Increased consumer expectations

- Shifting rich-poor divide as the poor move closer to 1st world standards of consumerism

It will be a global nightmare if the 3rd world standard of living comes close to even half the level of 1st world standards. This is happening and is a serious problem. You can forget what we do in Australia – we will be engulfed. It is inevitable that Third World countries will aspire and move toward First World consumption practices
- Affluence – consumption binge

We have been on a consumption binge for 20 years and show no signs of abating.

The increasing diversity of energy using products on the market has the potential to undermine gains in energy efficiency achieved elsewhere.

- o 'Big-better-more' drive

Not just in Australia but also in places like Pakistan where there are 300 new car registrations per day in Lahore

There is increased expectation regarding people's comfort levels – we have become spoilt. But this is also tied to security – eg we can't leave doors open in the cities and therefore need air conditioning.

Key Barrier 3 – Leadership

There is a lack of leadership at the political level plus particular power agendas of bureaucrats and big organisations.

- o Top down leadership is necessary because of the intractable nature of Key Barrier 2 – people's desire to want 'more'.

'If climate change is such a big issue surely politicians would tell us so?'

- o Retreat of leadership

'...into neo-liberalism – winding back of government leadership – governments are even timid and coy regarding stewardship functions and public sector investment.'

- o Politicians focus on reannouncing existing policies and deferral of action, not on long term planning

- o Power agendas at institutional level:

Government ministers etc having their own agenda to increase their influence and power base

Corporations high level business, ie BHP Billiton and Rio Tinto, have far too much sway over Australian politics.

The Prime Minister, John Howard, was deemed ineffective on this issue by a number of participants 'he is a populist who brings out the baser instincts in people'.

Other important barriers:

- o Time-poor – so people don't get involved in issues outside their immediate family

Travel takes up too much time – there is too much distance between home and work; people commute, go home tired, retreat and don't want to go out and be involved in community activities unless they are really social nights

- o Inertia – reality gap – everything seems OK – why panic

In Australia, when you get up in the morning and look around, the world is fine. Australia is insulated from the realities of the world.

- o Overwhelming despair – once people, especially young people, realise the enormity of the problem, they are immobilised by the feeling that nothing they can do is big enough to make a difference.

People 'don't believe in tomorrow' – so they might as well 'live it up' now."

- o Markets and Accessibility

The market is controlled in favour of the oil and fossil fuel companies

Price – energy is too cheap in Australia

Many people can't afford energy efficient alternatives

Part 2 - How might this social change take place – some solutions

Communication – some solutions

Importance of the message being independent and credible

Need to build community infrastructure, not just provide a big spin program. The community has scepticism of government big spending publicity campaigns.

Don't use expensive social marketing exercises but instead focus on understanding how people learn and then use that knowledge

Education programs should be run by NGOs since they are more trusted than alternatives as they are seen to be independent and not self-interested.

Research has shown NGOs have 98% credibility compared to governments' 60% on environmental issues.

However, also noted was the reality that many charities and NGOs are subsidised by government or have a large contract with government and are contractually obliged not to criticise government and thus are not truly independent.

There is a need to understand the heterogeneity of 'the community'.

Women make 85% of the decisions relevant to the water conservation issue but the main water authorities (run by men) don't target women

In selling Green Power, women were three times more likely to sign up immediately whereas men 'had to consult with the woman'

Create relationships with potential community leaders - those that will influence their social or work spheres – church, social and school groups.

It is very important to be able to relate to all spectrums of people. People from different ethnic backgrounds may have very different perspectives on the environment.

You've got to link into their own particular world, their own particular experience, and also realise that they have things to teach as well as to learn. This recognition is important because unless you tailor your programs to connect with people and take that into account, then you're going to fail. As long as the message is relevant to them and 'user friendly' you will get a positive response.

Make messages clearer or accept that the message is complex. Both views were expressed by Explorom participants.

Leave climate change out of messages – people don't know what to believe – focus on 'energy crisis' and give people tools to do what they can to help.

Making messages personal and tangible.

"Make it real, make it personal, make it visible".

It is necessary to emphasise there is possibility of change and support people in their learning, preferably in a safe environment with friends. Make it easy for people to participate in discussion. Appeal to people's reason and 'good side'.

Target people 'who are a bit closer to the 'starting line'. Equipping people who are interested in the issue with the information they need to convince others is very important.

Developing a skills base is really important. It's about critical thinking skills, listening skills, strength and emotional intelligence and strategic questioning. It's about harnessing that intelligence and creativity and passion once you get through that 'oh I don't know what to do stage'.

Smart metering that shows energy use in the house is a practical, personal and immediate feedback system to the householder of their energy use. It needs to be subsidised because the current cost of \$1,000 in a new home and \$2,500 in an old home is prohibitive.

The media were not seen as useful. While they may be part of the solution, there is a need to move away from reliance on them.

Just get on and do it ourselves focussing more on people to people communication.

Fear as a motivating tactic

Educating the public is needed and based on history – the only times radical change has happened has been in times of adversity – even if it was manufactured adversity. Fear is the key. Eg the Grim Reaper advertisement changed habits. There has got to be a stick and carrot approach at the top. We can only change behaviour through fear.

The role of fear in campaigns was contentious with the Grim Reaper advertisement, used in AIDS prevention campaigns, seen by others as having no effect on sexual behaviours unlike the more successful community outreach programs and facilities. Also fear and despair sometimes became debilitating immobilising factors with an accompanying belief 'nothing can be done'. To combat despair we need to appeal to people's best and 'create the idea of possibility.'

Increased Consumers' Expectations – some solutions

It was recognised that this is a deep set barrier. It must be accepted this is where "people are at" and rather than fight it, come in alongside and work *with* people,

In the water situation there is no point telling people with European plants that require high water – don't do this. Rather, work with people's interests and strengths; show that their garden can be even more beautiful with some natives – ones that are similar but need less water. Inspire people to take the challenge of growing a garden with less water rather than saying they shouldn't water.

Giving consumers effective information, to enable better consumer choices and what to do at a practical level e.g.

Smart metering can lead to a huge shift in electricity used. Smart meters are expensive but effective.

There was much discussion on *working with* people rather than being *confrontational* - *telling people what to do*. However, it was also stated that because of this 'intractable' nature of people's desire to consume more and the reluctance of business to practise energy efficiency in both the manufacture and the performance of the actual products, good leadership and regulation is required.

Must accept people 'as they are'. Essentially people are 'moderately interested' and will do something if it is made easy for them. Thus we need good education, leadership/regulation and easy, comfortable and fashionable alternatives to high energy consumption. It's not easy for the consumer to do the 'right thing' and businesses need to make this easier.

Leadership – some solutions

Need to embrace regulation and re-regulation. This should be at the Federal level so the competing States are not fearful of losing business from taking abatement actions.

People are basically well meaning, they just need leadership. Explorum participants were divided on whether the focus should be on leadership from the top or leadership from below.

Leadership from below – *“Answers lie in the community and we just have to get it active”*

Leadership from above: - *“It’s a pipe dream to expect a bottom-up solution. It needs to be top-down. Leadership from below won’t work because of the drive for more consumerism. Hence, leaders need to regulate appropriately.”*

There was general agreement that leadership from above and below should be simultaneous. It needs to be symbiotic (similar to the chicken and egg question in that it’s difficult to say which comes first). While community leadership is necessary, business leaders and government have to play a role.

To get this to happen it is necessary to talk one on one within each of these groups, explain the situation and give people options.

Good leadership is working to people’s ‘best’ compared with John Howard who works to people’s ‘worst’. In this context, while Howard may be an ‘effective’ leader, he is not a ‘good’ leader.

COOPERATIVE ACTIONS FOR A SUSTAINABLE ENERGY FUTURE

EXPLORUM 3 – 30TH JUNE 2006

Attendees:⁵

Greg Bourne WWF Australia

Tristan Edis Business Council for Sustainable Energy

Rick Humphries Comalco

Mark O'Neill Australian Coal Association

Graeme Pearman Graeme Pearman Consulting, previously CSIRO Division of Atmospheric Research

Andrew Richards Pacific Hydro, AusWind

Lorraine Stephenson Origin Energy

Ian Woods AMP Capital

Facilitated by **Alan Tate** Cambiar

Starting assumptions: Australia needs a 60% decrease in greenhouse emissions by 2050. In the stationary energy sector this will be driven by a portfolio of abatement options on both the supply and demand sides. The technologies required to start Australia on the path to a 60% decrease in emissions are currently available but government has yet to develop the policy framework required for their deployment. In part, this is likely due to the mixed messages governments have received from the energy sector regarding the reality of climate change and what to do about it.

Thus the aim of this Explorandum was to bring together a cross section of the Australian electricity industry to focus on:

The feasibility of the various stakeholders in Australia's electricity sector cooperating to develop a sustainable energy system.

Although the stakeholders concerned often have very different perspectives and priorities, their cooperation will increase the likelihood of the transition to such a system occurring as smoothly as possible. A cooperative approach has been suggested by people from the various sectors, and this workshop was a valuable opportunity to develop the idea.

The Explorandum was facilitated by Alan Tate (Cambiar) and started off with the question "Is now the time to act cooperatively?". From there it was a fairly free flowing discussion covering a number of issues. These have been collated under the following headings, and unless otherwise stated, are consistent with the consensus position expressed by the participants.

- There is a need for government policy
- There is a need for a multiparty dialogue
- Who could be involved in such a dialogue?
- The nature of the process and outcomes
- The Roundtable Report
- General topics of discussion

The discussion took place under a modified version of the Chatham House Rule⁶ and so in this report contributions have not been attributed to particular individuals. Some of the quotes have been altered slightly for privacy and grammatical reasons. One of the most striking outcomes of the Explorandum was that the quotes are often not from the sector traditionally associated with that viewpoint but in fact from a sector that is generally considered to have an opposing position.

⁵ Unfortunately, just prior to the Explorandum, attendance apologies were received from representatives of both a coal mining company and a coal-fired generator.

⁶ The participants agreed that while the discussion outcomes would be reported publicly, and statements made by individuals would be used, these would not be attributed to particular individuals. Nor would participants in discussions outside the Explorandum attribute views to particular individuals or organisations.

Is now the time to act cooperatively?

All participants agreed that now is a good time to act cooperatively. Three main reasons were given:

(i) The limited time for effective action on climate change

"It's essential that we cooperate given the time constraints for deep cuts and cost implications for the economy, and to avoid short sharp shocks to the economy."

(ii) To take advantage of the recent move within some companies to be more proactive,

"I get the feeling that within the leadership companies there is a discernable shift and the time is right to start exploring pathways. There is a willingness and a recognition that now is the time to play a more proactive and positive role."

"We are quite a way down the path to burying the hatchet. There is more dialogue between different sectors."

"Industry Associations and coal companies have been making a journey over the last few years. It's now all about how can this be done rather than should it be done or how can it be avoided."

"Yes the time is right and this is fairly widely accepted. There are many examples of this where companies have taken the initiative. But the integrated action across sectors is new."

(iii) To take advantage of the 2007 election

"Next year is an election budget so to the extent that anything will require the involvement of the Treasurer, we need to do it by November. There are other elements that can be done throughout the election cycle and not appear in the budget papers in May."

"The time is right now. We're heading into an election cycle."

There is a need for government policy

There was general agreement that government policy was required for effective action to reduce emissions.

"Business is looking for certainty and we collectively want something similar across the board."

"The White Paper was about delaying action. It does no-one any good. A number of our members who are also in coal want/need to put these technologies into place but we can't if there are no financial incentives."

"One of the challenges is how individual companies can make investment decisions, and these decisions do not always align with social benefits – there is a disconnect. We need government policy to provide an incentive for companies to act."

There is a need for a multiparty dialogue

The consensus view was that an industry-led multiparty dialogue would be a good way forward to encourage government to develop effective policy.

"I think there'd be enormous benefit in having some kind of regular institutionalised dialogue, roundtable type, where people can come together and put some ideas on the table, then we can say - this is a proposal we'd like to put to government, what do you think?"

"Whenever there has been some sort of dialogue, the fact that government is running it seems to drive people into their fox holes. So the industries need their own dialogue."

There were three clear reasons given for engagement in a multiparty dialogue.

(i) accountability of industry players

"The power of a dialogue is that it forces all players to be accountable for their perspectives and take other people into account. We all have to be held accountable for our views, and that way you'll get to something better."

(ii) increased government acceptance

"We're trying to work out what we think might work and be palatable to government but we realise that eventually we need to show government how this fits into a broader scheme of things that involves a range of technologies and sectors. We know the power of going to government and saying there's a fair bit of agreement around this sort of package."

"There's no point in taking these measures to government unless there is something for everyone including renewables."

(iii) increased trust and certainty for industry sectors

"It's possible that NGOs may agree to further conventional coal power plants if that was part of an overall transition plan that said these were the last two and so provided certainty over where we are headed. Likewise the coal industry may be happier to cooperate if it was confident that people saw a role for them going forward. Or if the aluminium sector knew that prices were going to go up a little bit but they weren't going to skyrocket then they'd be more relaxed."

Who could be involved in such a dialogue?

It was clear that as many sectors as possible should be involved. However, there was also a view that although a number of companies in the energy intensive and coal industries would be willing to cooperate, this was not a sector-wide phenomenon. As a result, it would be best to involve specific businesses initially.

"You'd need the respective companies at the table in a manageable group. You'd need Rio Tinto and BHP Billiton represented at a senior level. You'd need to draw up a list of companies that have been either a barrier in the past, or perceived to be a barrier, as well as those who don't know where they stand, as well as some of the more progressive businesses."

"There is a lot of diversity within the sector so this is more of an approach by specific businesses at this stage. For example, the Aluminium Council is a broad church and

there is not universal agreement. So, it would be a good idea to be selective when picking companies to cooperate with."

"We can't hope to move the opinions of entire sectors, just leaders within each sector.... The larger and the stranger the group of bedfellows the better."

"Do not underestimate the fact that people who see themselves as losers will not be willing. People with a very short term view - eg. GDP growth is more important than anything else - will not be interested."

Similarly, it was thought that industry associations would have limited capacity to be involved as they have to represent their entire constituency. However, it was suggested they have the potential to play a significant leadership role.

"Industry Associations tend to be caught by the lowest common denominator within their membership."

"Industry Associations are constrained but can still play a role in changing opinions. Part of role of Industry Associations is to help change the company line where it may be in the long term interests of the industry."

The importance of involving CEOs in the process was also made clear.

"The reason the Roundtable worked in the end was that it was answerable to CEOs, who took a personal interest in it, and that made a huge difference internally."

"It's important to recognise the power of CEOs, they have a great impact and may even underestimate their own power. Cooperation will most probably happen at the level of CEOs finding common ground on a way forward – they can then walk in and talk to the PM."

The nature of the process and outcomes

To get as many companies involved as possible, the process used to establish and conduct the dialogue is critical. It should focus on broad goals initially, not specific solutions, and aim to find common ground.

"There is agreement on a broad pathway but there is difficulty getting into specific solutions."

"You don't want too much focus on the agenda items. You need more focus on the things that will bring the key players into the tent where they feel comfortable to have these sorts of discussions in a more open and safe place."

"Need to focus on finding common ground and don't dive into a solution upfront. Companies have in common that they want to spend money on an investment but are worried about stranded assets."

"The minute you dive into economic arguments about costs the role of modelling is raised and you start to get into details that will derail the exercise."

A common theme was the need for a safe place or 'relaxation zone' where ideas can be placed on the table for discussion. This would increase the likelihood of agreement and increase the credibility of the outcome. It could take the form of an informal group or 'odd bedfellows' network under the Chatham House Rule. It was suggested that an independent body could take responsibility for facilitating this process.

"Unless there is a safe place where each party is held accountable for their particular point of view, constructively, so that we do come to a real world agreement about an overall path, then we're never going to get there."

"You need to get discussion in a neutral, high profile, robust process. It would attract an enormous amount of political attention without necessarily being overtly political."

"We may not need a formal group. We may just need the right representative group of people to shop our proposal around a small group to get agreement over time. This is more realistic than trying to get people around a table to agree to a proposal."

"We should do our individual thinking perhaps but then bring it together and massage it enough that we can take it forward."

"Maybe what we need is an 'odd bedfellows' network – 25, 30, 40 names on an email list. Which we could use as a Chatham House forum, where proposals can be put on the table for feedback. This would be slightly more formal than is currently the case. A network that crosses borders and boundaries and builds a bit more trust - is informal yet formal."

"Maybe what it needs is a nominally more neutral body to take this exercise to the next level, or assist that process whereby a comfortable exploration space is created where this can be worked on."

Two broad types of outcomes were thought possible. Either as many businesses as possible could go to government as a group, or go separately but with a similar proposal.

"We either need ten different groups to go in with something that looks exactly the same or a collective group to go in with a proposal and say we all broadly agree with this."

"We need to get more business consensus but at a majority level (not necessarily full consensus) to go to Government (really John Howard as he's the only one that really matters) and say if you do this, then we'll support you."

The Roundtable Report

There was a significant amount of discussion of the 'Roundtable Report' - *The Business Case for Early Action*.⁷ Although there was general agreement with its recommendations, significant industry sectors weren't included in its development, specifically those likely to be impacted by a price on carbon - large energy users and the coal industry. It was pointed out that this occurred because at the time the report was floated, three and a half years ago, there was little interest from these industries, and from many, such as the Business Council of Australia, there still isn't.

Although this lack of inclusion has reduced its impact on government, it was still considered to be a good platform for dialogue, and would probably attract more interest than it did three and a half years ago.

"Not sure where the Roundtable is going, but it would be a shame not to build on it. We could look at the recommendations and shop it around over coffee. The Roundtable recommendations are absolutely reasonable. So don't lose this. Could have this as something specific floating around – use it as a catalyst."

"It was a different era, things have radically changed, it was too close to the White Paper, there were political investments made that kept certain key players away, and having an NGO involved meant it was politicised from the beginning."

⁷ *The Business Case for Early Action*, by the Australian Business Roundtable on Climate Change, April 2006. Funded by BP Australasia, Insurance Australia Group, Origin Energy, Swiss Re, Visy, Westpac and the Australian Conservation Foundation.

General topics of discussion

A number of topics relevant to the creation of a sustainable energy industry were also discussed. The main points to emerge are summarised below.

(i) A number of different technologies and policies are going to be needed to significantly reduce emissions; there will be no silver bullets, and the uncertainties mean industries will have to take some risks.

"We need to map out the various potential pathways to get there. We need to work out which policy instruments and technologies are best for the nation."

"The task is so great, I can't see us getting to anything like a 50% reduction without really major increases in renewables. Existing coal-fired plant will be cash cows⁸ if a price is placed on carbon so I can't see us moving away from them very quickly. I can't see us doing it with any one technology. Gas is great but it is not enough."

"For all the technologies and all the options there are uncertainties. So you'll have to accept that none of the people round the table know the answer but what you'll be trying to do is create a policy in which each player can minimise your risk and maximise your chances. Industries will have to take some risks."

(ii) A price on carbon is necessary but insufficient to ensure sustainable change and so other policies will be needed.

"The C price required to bring different technologies through in an economically efficient way varies enormously. Therefore we need a market-based approach. But we also need a mix of policies to bring expensive technologies through on a cost reduction curve."

"The level of C price that people are talking about as something the economy can deal with is not going to get us close to pulling through the technologies we're interested in at their current stage of development. So we need additional instruments that might do that."

(iii) For most of the economy, a carbon price will have little negative impact, however for energy intensive industries the situation is different.

"As most of the calculations show, the impost on the economy of reducing emissions is not that big, and they will be insignificant compared to the impacts of climate change on the economy."

"CSIRO scenarios show that under any of the scenarios we still get richer, it just takes two weeks longer."

"Even at \$60-\$70/tonne if you have a transitional approach, this leads to only a 1% per year increase in electricity bills. The problem is ABARE's analysis."

"Example of oil price increase from \$30 to \$70 barrel is the same as a C tax of \$300/tonne and the oil price increase has had almost no impact on the economy."

"Although prices for small consumers go up, their costs don't necessarily as they have many options to reduce demand. Small to medium enterprises are different to energy intensive industries because the latter have fewer options to reduce use."

⁸ If emissions permits are grandfathered to existing coal-fired plant they will be a significant source of revenue.

(iv) Economic modelling and analysis have a role to play but this is currently overstated

"Why does everything have to be least-cost? It has to be most practical depending on how much the electorate is prepared to pay. All that broader economic debate that's rooted in some economic theory that's all about lowest cost and cutting it to the bone – the economy doesn't act like that. No business is that efficient. It's a nonsense theoretical argument that doesn't reflect reality."

"Regarding portfolios, the focus is currently on least cost but it can also be on risk. A focus on least cost can in fact mean high risk."

"The economic modelling conversation is occurring in a vacuum of what climate change is costing us today. It also doesn't take into account the national security risks and other impacts such as climate refugees."

"It is very difficult to place a cost on climate change impacts such as loss of species, loss of water etc."

(v) The Government's objectives are different to those of any industry sector

"The problem is that government is trying to achieve multiple outcomes, not just economic outcomes."

"John Howard's policies are not so much due to industry lobbying, they are due to the effect of Greenhouse policy on energy prices and international competitiveness."

"Climate change requires a global solution. Unfortunately nations tend to get in the way. Companies are multinational in that if Comalco moves to Kalimantan it's not a problem for Comalco or WWF, but is a problem for Australia."

(vi) Community pressure on government is important, however there may not be time to wait for the community to act.

"The government is not in a position where they want to change, and it makes it very difficult for individual parties around this table to go and have a constructive conversation with them. Unless we get the electorate to go and knock their door down they're not going to start listening to us seriously."

"Given the timeframe I agree a community signal is required to motivate government but our company has concluded that we can't wait for the community to act."

(vii) The Government review on nuclear energy may be an important opportunity to push for a sustainable energy system or it may just be a distraction.

"The nuclear review is an opportunity to push a broader agenda. There's going to be commentary around the place. Economic instruments are going to be a huge part of the discussion."

"The original Terms of Reference were essentially about the economics of nuclear power, with climate change just used as a justification. So be very careful."