Focus on the Future

Opportunities for sustainability in Western Australia

A response from BP Australia Ltd

Introduction

BP is one of the world's largest energy groups with activities spanning 100 countries in six continents and employing over 100,000 people.

Our philosophy on our role in society is simple. We believe a good business should be both competitively successful and a force for good. At the core of BP is an unshakeable commitment to human progress. Our products and services are creating the freedom to move, to be warm, to be cool, to see and enjoy a better quality of life. We believe this freedom is inseparable from the responsibility to produce and consume our products in ways that respect both human rights and natural environments.

> Western Australia accounts for nearly two thirds of BP's total investment across Australia. Our capital employed here is equivalent to around $3,000 for every West Australian.

BP's operations in Australia can be viewed as three distinct business segments: namely Upstream, Downstream and Solar. The Upstream business relates to exploring for and developing natural gas and oil in the North West Shelf. Our Downstream business manufactures petroleum products at our refineries in Western Australia and Queensland and markets fuels and other products through BP service stations as well as to distributors and commercial customers. Our Solar business provides a full range of renewable energy products for the remote rural community and complete power systems to commercial customers, and exports products throughout South East Asia.

> A Triple Bottom Line approach to the State's economic management has the potential to provide WA with a sustainable competitive advantage for all of its businesses and communities.

Measured by the amount of Capital Employed in Australia, Western Australia hosts by far BP's largest single presence. Some 5.4 billion dollars of investment capital are employed in our Upstream business in WA (a one-sixth share of the North West Shelf joint venture) and when this is added together with our downstream business (our Kwinana Refinery, our six distribution terminals in Perth and regional WA, and our network of more than 50 owned service stations) WA accounts for nearly two thirds of BP's total capital employed across all of Australia – around $3,000 for every person living in WA.

BP commends the WA State Government for its work in developing a sustainability strategy for the State, and welcomes the opportunity to contribute to the consultation paper. Individual governments, just like individual companies and individual people, cannot deliver sustainability on their own – global approaches are required as well as local approaches, and partnership is essential. But governments can achieve a significant amount, by the example of how they operate their own organization, the policies they pursue and by the leadership they show to others.

BP in Australia is committed in the long term to implementing sustainable business practice throughout the organization using a Triple Bottom Line (TBL) approach – focusing not only on financial performance but also economic, social and environmental performance. BP believes that a TBL approach to business makes good business sense and will provide us with a sustainable competitive advantage. By extension of the same principle, a TBL approach to the State's economic management by the Government has the potential to provide WA with a sustainable competitive advantage for all of its businesses and communities.

Our submission to the WA Government

In this submission, we firstly outline why we as a company believe that the pursuit of sustainability is not just desirable but imperative, and why we believe that government, business and the community must work together to overcome the very significant challenge that sustainability presents to us and to our ways of life.

Secondly, we highlight some examples from our own business of how we have begun to make a start on a more sustainable approach. In them, we seek to highlight some lessons that may be of relevance to the Government's own strategy: for example the power of strong leadership and clear target setting, and the need to empower consumers and employees to make their own difference.

Thirdly, drawing upon our experience in Australia and around the world, we make some small but specific recommendations which may indicate the best practice that WA's Government might choose to follow.

Finally, we include as an appendix BP Australia's submission to the Council of Australian Governments' review of energy policy, which sets out in more detail the strategic directions and practical steps which we believe that Australia as a whole needs to adopt.

Why the pursuit of sustainability is essential

The pursuit of sustainability is not just worthwhile: it is imperative. Growing concerns about the environmental and social impacts of human activity are a reality and have already led to the introduction of regulations and changes to address them. BP believes that the changes that have happened to date are only the start, and that there will be a major upheaval for the world's carbon based energy economy, which we call the "carbon shock". Unlike the dramatic and genuinely surprising "oil shocks" of the 1970s and 1980s, this one is very clear on forecasters' radar screens, so there is no excuse for business and government if they fail to prepare. BP's business judgment is that the inevitable outcome will be a higher price of burning carbon. The price may be set by market-driven emission trading, by regulatory-driven taxes, by other measures, or by a hybrid set of options. But come it will.

The pursuit of sustainability is not just worthwhile – it is imperative

In response to this challenge, government, business and the community face a stark choice. Together, we can seize the opportunity of the sustainability challenge to create new technologies, new industries, and new prosperity. Or we can turn away in a futile attempt to delay or hide from the inevitable – missing out on the opportunities and in the end making changes belatedly to comply with the standards that others have set.

Here's one example of how easy it is to lose an opportunity. Some years ago BP was involved in a solar power project in the Philippines that was made possible by funding from Australia's overseas aid program, and which sourced solar technology from Australia. Then pressure from NGO watchdog groups pushed the Federal Government to change a policy of tying aid to Australian industry opportunities in favour of untied aid – a policy approach not shared by many of the nations with which Australia competes for economic opportunities around the world.

Recently the Philippines sought a second stage of the highly successful project. Australia's new aid policy meant it could not help with funding, so the Spanish Government stepped in with aid funding for the $40 million project. The solar technology being used still originates from Australia, but now the hardware is being supplied from a BP Solar factory in Madrid. Australia is the loser, because

solar is a major commercial technology of the foreseeable future, and potentially a significant earner of carbon emission rights under the Kyoto Protocol's Clean Development Mechanism for developing world projects. Spain and the Philippines are winners.

The role of government, business and the community in sustainability

Government, business and the community have to work in partnership to achieve a more sustainable society – no one single element on its own can achieve everything.

Our current reliance on high levels of materials and energy inputs to maintain our lifestyles cannot be sustained. Australia will not be able to overcome these problems without some restructuring of our economy. We will see changes in our manufacturing and resource industries. We will see changes in our industrial practices. We will see a growth in our service and environmentally based industries. And we will see changes in our communities. The challenges of these changes will not be met without a concerted, co-ordinated effort by government, business and communities.

> The challenge of sustainability will not be met without a concerted effort by government, business and communities.

But business and government in particular do have a role to play in providing leadership and the basis for common action. Businesses can moved towards sustainable practices in their own organisation, can provide opportunities to the community by presenting sustainable products to consumers as a marketing choice, or for example can research and develop new ways of producing goods. Governments can support research and development, can help nurture sustainable businesses through policy instruments like the fiscal system, and also of course can ultimately set regulations to make a certain sustainable behaviour mandatory.

This last approach can be essential if, for example, an environmentally sustainable approach makes a product more expensive without delivering any change in functionality to the consumer, who may therefore be unwilling to pay for it.

> An example of this approach in the oil industry has been the move towards cleaner fuels – for example by removing lead, or limiting sulphur. Within certain limits, petrol from one pump is the same to the consumer as petrol from another pump: the consumer is unable to identify, for example, any noticeable difference between a high sulphur product and a low sulphur product. Consequently, given that dirtier products are cheaper to produce, the market is likely to favour them in the short term even thought they may be more costly and unsustainable in the longer term. Therefore the approach to clean fuels has needed to be a

partnership approach between government (who set the regulations), the car manufacturers (who deliver the engine technology to run on cleaner fuels) and the oil industry, which invests to be able to refine oil to the higher standard.

In Western Australia, the Government adopted a leadership position on clean fuels that has seen the early introduction of standards that will not apply federally until 2006 and beyond. Not only has this made a significant contribution to the avoidance of air pollution in Perth, it has also given the state a competitive advantage. Some refineries in other states have delayed and must now view the investment to make clean fuels as a compliance cost not a business opportunity – in WA, however, the refinery at Kwinana has now become one of the region's leading clean fuels producers, and is able to export around the region and to the United States, supporting jobs and income in WA.

Government has a further role to play as well, in mitigating some of the negative effects of change upon the community. Many of the older industries that are being replaced by more sustainable approaches (for example, coal mining being replaced as the energy sector moves towards gas) were labour intensive and their passing will cause anxiety and hardship for their workers and their families. But this anxiety and hardship can be mitigated – the new industries will be job creators too – if government is there to help people adjust to these inevitable developments.

Examples of how BP has sought to achieve greater sustainability

Different organizations have been able to innovate in different ways to move towards a higher level of sustainability. Not all of these will be relevant to the Government's position, but here we give five examples from different parts of our business which we believe may have something useful to offer the wider debate.

1. The importance of strong leadership and target setting

In 1997 the Global Chief Executive of BP John Browne gave a speech at Stanford University in California – and in it he acknowledged the impact of climate change and committed BP to reducing its own carbon emissions to 10% below a 1990 baseline by the year 2010. At the time, this was seen as a radical figure and many harboured doubts about its achievability – indeed, the same target is still the subject of controversy today, with some countries arguing that it is too tough to be set as the target of the Kyoto protocol.

Yet just five years later, John Browne was back at Stanford to announce that BP had already achieved the target, seven years ahead of schedule. That means our emissions of carbon dioxide have fallen to almost 80 million tonnes, 10 million tonnes below the level in 1990… and 14 million tonnes below the level they had reached in 1998. Importantly, this achievement was made at no net economic cost. In fact we added over $600 million of value, because most of those reductions were achieved through simple efficiency – eliminating waste and leaks and cutting the amount of energy we use.

The next challenge is to achieve stabilization – to hold levels of carbon in the atmosphere below the level of risk. Clearly, BP cannot do that alone, but we can play our part. In fact, that is our next target – to hold emissions of carbon dioxide at 10% below 1990 levels through 2012. This is despite business growth which, if we did nothing, would see our emissions rise from 80 million tonnes to 130 million tonnes in the same period, so in practice the new target is the avoidance of some 50 million tonnes of CO_2 – more than half of total current output.

BP's refinery at Kwinana in WA has been making its own contribution to offsetting greenhouse gas emissions through the planting of trees. Cultivated in nurseries at the refinery, saplings are planted in areas of country WA where they can not only offset

carbon emissions but where they can help tackle the problem of salinity too. Working in partnership with the WA Government's Forest Products Commission, BP has planted some two million trees since 1998 covering a land area of 350 hectares a year.

What BP has learnt from its carbon reduction experience so far is that by setting clear leadership and clear targets, empowering people throughout the organization to contribute with ideas and innovations, our potential to make significant change has been greater than many people first thought. The same opportunity lies before the Government in WA – to set out similar challenges, to enroll the support of the people and to provide them with the opportunities to make their own contribution.

2. Offering consumers the choice to be green

For many consumer goods, the impact which their production has upon the environment is hidden from the final consumer – it may be geographically remote, or take a form which is not readily obvious to people outside an industry or without particular knowledge of environmental science.

However that is not exclusively so – it is possible to put products on the market that target a group of consumers who would like to purchase sustainably. The purchase of recycled paper and growth of organically produced food at supermarkets are very clear examples where many consumers are prepared to buy goods whose production has been sustainable, even if it costs them slightly more to do so. Our BP Global Choice™ programme is an initiative that allows consumers to do the same with petrol, by purchasing products specifically linked to greenhouse gas abatement projects. When customers buy BP Ultimate™, they not only buy Australia's cleanest petrol, the first product to have received the AGO's Greenhouse Friendly Branding certification, but we also set aside money for an independently run Global Choice™ fund.

This fund is investing to support greenhouse reduction projects, such as:

- **Renewable energy** (clean energy from solar, wind, tidal and hydro)
- **Greenhouse gas capture** (turning methane gas from landfills into electricity)
- **Planting new forests** (to absorb CO_2 from the atmosphere)
- **Innovative technology** (providing cleaner technology solutions)

Project selection is managed by the Commonwealth Bank of Australia and verified by independent auditors. Here in Western Australia, a project at the South Cardup Landfill is capturing the methane that previously vented to atmosphere – methane is a powerful greenhouse gas. Landfill Management Services Pty Ltd (LMS) is a specialist landfill gas company, and BP Global Choice™ has enabled them to utilize an enclosed flare (predominantly methane) which ensures that their overall activities at this site are producing less greenhouse gas emissions.

BP Global Choice™ has also been extended to our commercial customers who can now link whatever product they buy from our motor spirit and diesel range with an investment in Global Choice™. This second phase of BP Global Choice™ involves giving commercial customers the opportunity to offset all or part of their GHG emissions. By paying a very small premium on all or part of their fuel purchases, they can choose the proportion of emissions they want to offset. Therefore, in this phase of BP Global Choice™ we are giving our commercial customers the opportunity to assist the environment through their day-to-day operations.

If these commercial customers are part of the AGO's Greenhouse Challenge, they are also able to use this programme to assist them in meeting their Greenhouse Challenge targets, by offsetting all or part of their emissions through BP Global Choice™.

Across Australia, over 105,000 tonnes of CO_2 equivalent greenhouse gases have been reduced already. This is equivalent to filling an area equivalent to the Melbourne Cricket Ground with greenhouse gas over 57 times.

BP also offers to Commercial customers in WA and QLD the cleanest fossil diesel in Australia – Eco Ultra™. BP Eco Ultra™ has a maximum sulphur content of just 50 parts per million (ppm) which is 100 times lower than the current Australian diesel fuel standard. Reducing the sulphur content of diesel fuel is the best way to reduce exhaust black smoke and other particulate emissions. BP Eco Ultra™ is a highly refined diesel that produces significantly less carbon monoxide, hydrocarbons and nitrogen oxides than the current Australian diesel fuel standard and has the potential to reduce gaseous emissions by up to 30%.

3. The human side of sustainability

The focus of sustainability is usually environmental – the impact of human activity on the atmosphere, landscape, flora or fauna. But there is a human element too, and organizations need to behave in a manner that is socially responsible as well as environmentally responsible. We clearly affect the lives of our employees very materially. And the impact of significant industrial developments upon local communities can be quite profound too. For BP, working with local communities should be about more than waving a chequebook at the latest good causes. Instead, we want to find ways to bring our skills to bear in helping communities making sustainable improvements.

In north western WA, near the Karratha operating site for the North West Shelf oil and gas venture in which BP has a one-sixth share, BP has been working with the local indigenous community at Roebourne. Cultural tourism is now considered a major source of income and self-sufficiency for indigenous people across Australia, and aboriginal art and cultural practices are increasingly sought after by overseas tourists in particular. The Roebourne aboriginal community has identified their unique position on the Number One Highway and their proximity to Karratha as a distinct advantage in accessing this emerging market.

Assisting the community to create this new economic base through the establishment of a new cultural centre, on a par with Uluru and other successful Aboriginal tourism businesses, would deliver clear employment, training and secondary businesses to this area. BP is well placed to provide a range of skills to help turn the concept into reality – and to provide practical support too, for example by using its solar resources to ensure the centre itself also demonstrates energy use best practice. The key is for BP to take its involvement beyond the traditional sponsorship or marketing approach to community involvement, to help create sustainable enterprises owned and driven by the community which can also be sustainable beyond BP's presence.

4. Sustainability begins at home

One area where we can all make a difference, whether as members of the community, as businesses or as the government, is to better manage the impact we have upon the

environment in the normal course of our daily lives – the way we dispose of waste, how we recycle, or the energy we consume. By getting smarter on all of these things, we can not only diminish our impact – we can also save money too.

BP Australia instituted a "Green Office" programme (or Environmental Improvement Programme) in 1997 to reduce the impact of our buildings and daily work practices on the environment. Since then, it has achieved significant success against its target areas:

- **Waste sent to landfill** has been reduced by 79% against the 1997 baseline.
- **Paper consumption** has been reduced by 59% since 1997.
- **Energy consumption** has been cut back by 24% since 1997.
- **A financial saving** of over $180,000 has been made as a result**.**

The Green Office has harnessed the energy of individuals and collectively brought about behavioural and cultural change. People now sort their waste, compost and recyclables into separate bins, think before they print to save on paper and turn off lights and computer monitors.

What started as an environmental improvement program based on office waste has become a capacity building opportunity about sustainable development and society.

The impact of Green Office has not been confined to the BP workplace. Staff have reported that the scheme has motivated them to improve their recycling practices at home, whilst our outreach/consultative work continues to grow. For example, we worked with Melbourne City Council and Waste Audit Consultants to establish a commercially viable compost collection for the Melbourne CBD.

5. Working in partnerships for major progress

Much of what we have discussed has been about achieving sustainability through the incremental steps that we can all take relatively easily to make a difference. These are crucial steps to take because added together they make a significant difference, and they enable all of us to become part of a sustainable future. But major projects need to be delivered as well, and the Kwinana Refinery Water Optimisation Strategy is an example.

In 1996 Kwinana Refinery was the biggest user of potable water in Western Australia. Consequently, the Refinery implemented a water reuse and minimisation programme in 1997 with four key objectives:

- to minimise total water use;
- to maximise water reuse in refinery processes;
- to use low quality water (ground water) in place of potable water;
- to minimise discharge to Cockburn Sound.

Replacement of potable water with lower quality ground water, a number of low cost projects to reduce and recycle process water, together with an operations excellence drive resulted in a 70% reduction in potable water use and a 30% reduction in effluent water flow. Savings in water purchase costs were in the order of A$0.9 million/annum.

An ongoing monitoring programme with yearly targets was implemented to drive performance improvement, and we are not stopping now. The second phase of this project for the refinery is to target zero use of potable water for industrial purposes and zero discharge into Cockburn Sound.

And by working with public bodies, we hope to be able to achieve further improvements that can be of benefit to all Western Australians. BP has been a driving force in the development of the future Kwinana Water Recycling Plant, a joint initiative between the Water Corporation and Kwinana Industry. Water Corporation will own and operate the plant, which will take treated domestic wastewater from the Cape Peron Outfall Pipeline (CPOP) as feed water, and supply treated, high quality water to Kwinana industry, thereby reducing industry's use of valuable potable water. Participating industry will divert their treated wastewater from Cockburn Sound to the CPOP line. This has a significant environmental benefit as the Cape Peron Outfall discharges through an efficient diffuser and is then flushed by a large body of moving water, as opposed to discharge into the relatively 'still' waters of Cockburn Sound. This project is a true example of a sustainable contribution towards a critical resource issue for Western Australia with environmental, economic and community benefits.

BP would like to make some recommendations to the WA State Government as it establishes its sustainability strategy. Although we believe we still have a long way to go in achieving sustainability ourselves, and although many other organizations will also have valuable lessons to share, we hope that these recommendations which we make by drawing upon our experience both in WA and globally are of interest and use to the Government.

1. We recommend that all government departments and agencies be set a target date for the introduction of **Triple Bottom Line** reporting. The discipline of creating a TBL Report causes organizations to become more aware of the impact that they are having on the outside world. Moreover, although some impacts are very difficult to measure, a TBL Report at least provides a basis to set targets and verify improvement.

2. We recommend that all government departments and agencies be tasked to produce and implement a **Green Office** strategy to minimize the impact of government activity upon the environment. This practical first step can also be used to spread best practice amongst the voluntary sector and to help people green their own domestic arrangements.

3. We recommend that the Government consider ways in which it can facilitate the dissemination and adoption of **best practice**. It can be argued that larger organizations have a greater ability and resource to focus on making a difference; whilst as individuals or members of small organizations the best steps to take may not be readily apparent. But the Government is well placed to identify best practice in WA, and through education and advice services to help the whole community to adopt it.

4. We recommend that the Government aim to **support markets** for environmentally and socially beneficial products and services. These are products and services that provide important stepping stones to sustainability: they might demonstrate that they can be produced with less energy, materials and water, or in ways that involve the community, or that they can reduce emissions and waste in their use or disposal. Their commercialisation is usually difficult because the market tends to externalize many of the environmental and

social benefits they provide. Governments can take a role in recognizing these products – possibly through favouring them in government procurement, or through the establishment of "kitemark" schemes that can be used to appeal to consumers. This is a way of re-directing economic activity to the drive for environmental protection while providing a better society.

5. We believe it is important for the Government to **measure progress**. Progress towards sustainability is often measured in physical terms – improvements in key environmental and social indicators such as those reported in WA's State of the Environment Report. These indicators of course provide a useful bedrock for measurement, but we believe they can also be widened to address key processes, for example to measure the quality and quantity of community (or other stakeholder) involvement in sustainability strategies, or the scope of developing partnerships.

6. The WA Government can also use its own energy procurement process and its policy influence to ensure that it is backing **sustainable energy**. BP believes that sustainable and renewable energy investments are an opportunity to drive sustainability which are currently being under utilised. In its recent submission to the COAG Energy Review (attached) BP called for an increase in the Mandated Renewable Energy Target (MRET) under the Renewable Energy (Electricity) Act 2001 to 10% by 2010. Renewable energy such as Solar Photovoltaics (PV) has the potential to replace the use of high carbon fuels or restrict their growth, thereby improving local and global environmental outcomes, empowering consumers to take action on these pressing environmental issues, and driving economic growth and jobs, particularly in rural areas. BP urges the WA Government to join the call for an increased MRET, to ensure renewable energy continues to enjoy support from the Commonwealth Government, and to help tailor existing support packages to ensure the widest penetration of renewable technologies within WA.

7. BP is aware of two specific opportunities for WA to move towards more **sustainable cities** – the use of integrated PV systems in buildings and the use of cleaner fuels. PV panels can now be integrated into the panels of new buildings, to generate power for use in those buildings and to bring 'distributed

generation' to urban areas. This helps capture one of our abundant renewable resources – sunlight – and addresses some of the infrastructure issues associated with energy use. The WA Government already has a good track record on the second opportunity to move towards sustainable cities: cleaner fuels, both through its introduction of high environmental fuel standards and through its support for the Hydrogen Fuel Cell bus trials in Perth scheduled for 2004. Cleaner fuels reduce emissions of greenhouse gases and air pollutants, reduce engine wear and tear, and facilitate the introduction of more advanced engine technologies which can offer further improvements in fuel efficiency. Thus they provide societal benefits in the form of cleaner air and benefit the driver through improved efficiency and in some cases reduced maintenance. BP supports the cleaner fuel standards in WA, and is also proud to join the WA Government as a supporter of the Hydrogen Fuel Cell bus trials – we urge the Government to support the wider market penetration of cleaner fuels.

8. Finally, because of the importance we attach to **strong and clear leadership** from government, we recommend the Government uses its own Sustainability Strategy document to send the clearest possible signal about the future direction of WA. In doing so, it may be helped by considering the establishment of a West Australian Sustainability Panel to give advice to the Government on the changing needs of the sustainability agenda. This Panel should help the Government to provide the leadership and co-ordinating role which is essential if we are to work together effectively to overcome the challenges of sustainability, and it should be established so that it reflects all the voices and concerns in the sustainability debate.

Conclusion

BP welcomes this opportunity to contribute to the WA Government's consultation on its Sustainability Strategy, and commends the Government on its work to date in developing that strategy. We believe that the pursuit of sustainability is not just worthwhile but imperative, and BP in Australia is committed in the long term to implementing sustainable business practice by using a Triple Bottom Line approach. A Triple Bottom Line approach to the State's economic management has the potential to provide WA with a sustainable competitive advantage for all of its businesses and communities.

The challenges of sustainability are very real, and can only be met with a concerted approach by government, business and communities. But we do fundamentally believe that sustainability presents opportunities as well as challenges, and that together we can seize the opportunity to create new technologies, new industries, and new prosperity.

The lessons of our own experience so far have been clear:
- that with clear leadership and target setting we can empower individuals to help us make collective achievements far beyond what we at first thought possible;
- that it is possible to use the market to promote sustainability by offering it as a consumer choice;
- that we can make a difference not just in what we do, but in how we do it, by improving awareness of the impact of our day-to-day operations;
- that it is possible to work in partnership across public and private sectors to deliver major projects;
- and that there is a crucial human and social element to sustainability which we must not allow to be forgotten.

We hope that these lessons from our experience, together with some of the recommendations we have felt able to make, prove to be informative and useful to the WA Government. We look forward to continuing opportunities to work together with the Government as the sustainability consultation process develops.

Changing course: A sustainable energy future for Australia

Submission to the COAG Energy Market Review,

April 19, 2002,

BP Australia

Introduction

The March 2002 COAG energy review briefing paper concentrates heavily on the domestic electricity market. The original COAG energy policy details released last June, however, underscored the importance of a more holistic approach to developing Australia's energy future, also identifying transport in the introductory paragraph as an "essential underpinning of Australia's economic, environmental and social goals".

BP Australia believes that the national interest requires a wide-ranging re-examination of all aspects of energy policy, whether that arises through this current more narrowly confined review, through some future government and/or business-led process, or via greater community awareness and public debate. We aim to be a strong and forward-looking voice in an emerging energy policy debate, and we hope that debate will be one that:

- Creates a vision for a sustainable energy future that places equal importance on economic growth, environmental protection and social equity
- Includes all of the key issues and all relevant "voices" - from government, business and civil society - in the visioning process
- In particular, tackles greenhouse issues front and centre
- (But) progresses beyond the current arguments for and against the Kyoto Protocol to the inevitable shift in the global energy economy towards a low-carbon future
- Focuses on using innovation and creative solutions to manage the transition process so as to produce more winners than losers in terms of outcomes for the economy, society and the environment, *and*
- Leads to the development of ambitious national goals, a long-term "roadmap", specific actions and initiatives, and milestones to guide Australia's successful transition to a low-carbon future

BP Australia has three main drivers for taking a strong, constructive interest in the COAG review and the wider issues of energy policy for Australia. They are:

- BP's global participation in the formulation of good public policy around energy issues
- The shared learning opportunities created by strong parallels between the challenges that we face as a trans-national energy corporation operating here, and those Australia faces as a net energy-exporting nation integrated into the global marketplace, *and*
- BP's relevant business interests in Australia including its upstream natural gas/LNG, downstream petroleum refining and retailing, and solar photovoltaics

As a general comment, we feel that Australia just hasn’t given energy the national priority it deserves and we absolutely have to do so now. BP has been making this case very strongly in the media and in public and private fora over the past year.

A “Carbon Shock” Is Coming

Australia and the world now face a future where the traditional key drivers of energy policy – low cost and supply security – have been joined by a new one, environmental protection. There are a number of very important environmental issues associated with burning fossil fuels, including urban air quality, but the most powerful of all is international concern about global climate change. According to mounting evidence gathered by hundreds of the world’s most reputable scientists, people burning low cost, readily available, carbon-rich fossil fuels are causing our climate to change.

BP accepts there are serious risks from the climate change trend – with its now familiar list of major threats to environmental and human health and security - and it accepts the need for sustained precautionary action. On this we are unequivocal. We see a “carbon shock” coming. Unlike the dramatic and genuinely surprising “oil shocks” of the 1970s and 1980s, this looming shock already is very clear. Australia, BP, and other energy “economies” can prepare for it, but to do so requires vision, leadership and plenty of action.

Currently Australia is missing out on opportunities for greater prosperity because we lack alignment on energy policy across the nation, and this threatens our future competitiveness in the international arena. We don’t have clear coordination of the nation’s energy challenge across key federal portfolios like industry, foreign affairs, trade, environment, natural resources, science and others; between the Commonwealth, the states and territories and even local government; within business; and within the community.

Australia needs to be forward looking in defining what its sustainable energy future will look like in 2050 and beyond, and then cast back to establish its transition path and the milestones it needs to meet in 2010, 2020, 2030 and so on. In doing this, Australia needs to maintain its ability to be flexible, innovative and bold. In essence, Australia needs to find its own “elegant solution” to meet the carbon shock. The final ingredients of this solution will only be clear after Australia has the energy debate it needs to have, although the experiences of major companies like BP and other countries offer valuable pointers.

The current COAG review should be a launching pad for this debate, not the entirety of it, and finding Australia’s elegant solution requires a more agile and holistic approach to reviewing national energy policy.

BP’s Position

BP’s own business judgment is that the inevitable outcome of the carbon shock is a higher price on burning carbon. The price may be set by market-driven emission trading, by regulatory-driven taxes, by other measures, or by a hybrid set of the available options. BP is already generating strong business responses to these far-reaching changes in the global energy equation. These responses - some of which are outlined below – reflect leadership, a holistic vision and plenty of action to drive lasting change by starting at the margins.

We see strong similarities in the challenges faced by Australia the country and BP the company. Both are significant energy-based economies, both want to keep growing and both are significant greenhouse gas generators. Australia emits about 400 million tonnes of carbon equivalent greenhouse pollution a year – not counting its land-clearing impacts. BP emits about 80 million tonnes from the equity share of its own global operations, but when our customers use our oil and gas products the emissions they release total about 800 million tonnes.

BP is one of the world's top three oil and gas companies. Australia is the world's number one coal exporting nation, and relies on coal for more than 85 percent of its domestic electricity generation. A drastic switch out of fossil fuels is not possible for BP as a company, and nor is it possible for Australia as a country without causing massive social and economic dislocation.

But the difficulty of bringing about change, even over the medium to longer term, in no way justifies inaction or manifestly inadequate action.

In terms of its own local actions, BP is investing in natural gas projects, like Australia's largest-ever resource development, the North West Shelf Gas project; in solar manufacturing, marketing and technology commercialisation (in the form of photovoltaic cells); and over $500 million upgrading of our refineries to produce Australia's cleanest transport fuels.[1] These are examples of things we can do as a company and we believe they help to propel Australia along the path towards opportunity, prosperity and greater equity, and a sustainable energy future.

Beyond Kyoto

While Australia still argues about the Kyoto Protocol nearly five years on, BP has moved *beyond Kyoto* – and also beyond the Protocol's modest first target of reducing developed world greenhouse emissions by 5 to 6 percent by 2012.

In 1998 BP set its own target of reducing its greenhouse emissions by 10 percent from 1990 baseline levels by 2010. Lord Browne's leadership, supplemented by the company's values and the employees' own commitment, meant this would be treated like a hard financial target, not a soft environmental one.

On March 11 2002 Lord Browne[2] announced that BP had achieved its corporate target eight years early. We've created value for our business while doing it, totaling about $US 650 million at last count, while learning invaluable lessons for the coming carbon price shock. Now we aim to hold our emissions flat up to 2012 while continuing to grow. We don't think that will be the end of action because the carbon shock is still to come – it is only the start.

[1] For further information about BP's operations please see www.bp.com.au and the BP Australia Triple Bottom Line Report at www.bp.com.au/environmental_social/location_report/location_report.asp
[2] See text of Lord Browne's speech at www.bp.com/centres/press/stanford/index.asp

BP does not seek to tell the Australian Government – or any other sovereign government – one way or the other what it should do about ratifying Kyoto. But this should not be confused with any doubts on BP's part that greenhouse action, and a major overhaul of energy policy more broadly, is needed. As we see it, if Kyoto goes ahead it will be a beginning not an ending. If Kyoto lapses, the world will need some other far-reaching, internationally coordinated response to climate change. Either way, BP's strategy is to look *beyond Kyoto*, and guide our transition from an oil and gas company to a more diversified, lower-carbon future, including non-fossil fuel energy technologies based on solar and hydrogen.

Wherever BP operates in the world we welcome vigorous national debate around greenhouse issues and energy policy. In the US, where BP is the largest single producer of oil and gas, there is vigorous political debate occurring around the Bush Administration's energy policy legislation. The UK has a major energy policy review under way and is contemplating tough targets to raise the energy efficiency and renewable energy generation capacity of the nation.

In times of great and disruptive change, there is no guarantee that past winners will remain winners in the future. The jobs, export opportunities and environmental gains from a low-carbon energy future may well far outweigh a role for coal over time. For example, planting trees in well-managed forests to sequester carbon and fuel biomass generators may create far more value in the next 200 years than clearing our native trees has in the past 200, given the toll on our landscape through salinity and other land and water degradation.

The Role of Government

Energy policy is a fundamental plank of government.

The need for government to take a leadership position on energy policy is now greater given the fundamental changes that are now required. Government has to balance issues such as the provision of reliable, competitively priced energy services to Australian industry and households with the forthcoming 'carbon shock.'

As BP has argued, the environmental cost of carbon must now be factored into the equation. Good energy policy-making in the 21st Century will demand vision and leadership from both government and business if Australia is to successfully transition to a future where renewables like wind, solar and tidal power generation displace current sources of energy.

BP believes that government should set a number of long-term policy goals in relation to a sustainable energy policy. These goals should recognize that the fundamental changes that are coming would require action in a wide range of areas – economic, social, and environmental – if there is to be a smooth transition to a low-carbon future. In short, a 'whole of government' approach is required.

As well as setting goals, government must manage and support the transition process. Moving to a low-carbon future will result in dislocation for individuals and communities

and governments must be prepared to plan for and take actions that will optimise the outcomes.

Governments must also monitor progress towards their goals and if necessary intervene with appropriate ‘carrots and sticks’ to ensure delivery.

In parallel with this government action, businesses also have a role to play. They should seek to reduce emissions, improve energy efficiency and report on their progress.

Seeking Australia's elegant solution

The international expert in modern business strategy, Harvard University's Professor Michael E. Porter, holds that nations can best compete in a globalised world by identifying their greatest natural advantages and promoting the expansion of industry clusters around them. From a forward-looking perspective, one of the key candidates for this status in Australia could well be environment-related industries in general, and cleaner, more efficient energy-related technologies and processes in particular.

Nevertheless, Australia has a lot of work to do to identify it's own roadmap towards a sustainable energy future, especially if it wants to find winning solutions that outweigh the inevitable losses that major change creates. This design work has to be done by Australians, and in Australia's broad national interest. But around the world there are a growing number of countries, communities and corporations that have undertaken major, often difficult transformations towards more sustainable operating models.

Australia, therefore, doesn't have to reinvent the wheel. It can learn from the experiences of others, including from BP. Drawing on these broad lessons, and on specific success stories around the world in the energy area, BP has identified six priority areas that could help Australia to achieve its elegant solution. They are:

Set bold national goals. Australia needs bold targets because they help to shape a better future faster. The Renewable Energy Action Agenda is aiming at a $4 billion industry by 2010. The Prime Minister's Science, Engineering and Innovation Council three years ago foresaw a global marketplace for environment industries, including clean and efficient energy solutions, worth $US500 billion a year. It suggested Australia pursue a five percent share of this. In BP's experience a bold goal needs to be considerably more ambitious than already established performance targets, but realistic enough so that it drives action rather than skepticism. On greenhouse, for example, Australia already says it will voluntarily meet its allocated Kyoto target of reducing the growth in emissions to eight percent of the 1990 baseline by 2012, whether or not it ratifies the binding Kyoto treaty. A bolder goal could stretch the target to zero emissions growth over the same period.

Bold goals, however, won't drive enough change if nobody believes in them, and nobody strives to achieve them. So what steps would help Australia to be confident in setting and then meeting bold goals of its choice?

Engage the widest possible range of stakeholders – BP welcomes the broadest possible participation in this vital national debate, including activist green groups and other non-government organisations. BP is currently seeking to engage progressive players regardless of whether they come from politics, bureaucracy, business or civil society.

This needs to be a whole-of-economy and indeed a whole-of-society debate, not one confined to narrow and vested interests. Traditionally in the energy sector some groups have been much more powerful in making their case than others. This debate on energy must listen for the soft voices as well as the loud ones. Furthermore it must strive for community participation, which in turn requires consumer awareness on energy issues, as through education consumers become active agents of change – at the ballot box and at the cash register.

BP will work with other progressive business leaders, NGOs, and its own customers to effect positive change. BP would like to see all stakeholders engaged in the process of mapping out the roadmap for the forthcoming energy transition.

Improve the pricing of energy – BP believes harnessing market forces by sending the right price signals is the best way to ensure that cost, security of supply and environmental and social equity concerns are addressed, efficiently and effectively.

Historically, energy and other policy settings have led to an increase in Australia's greenhouse gas emissions, e.g. as brown coal has been used more widely. Competition is to be welcomed but in the energy sector it has promoted short-term financial cost minimisation instead of overall economic efficiency. Because there are significant negative externalities (i.e. greenhouse gas emissions) associated with electricity generation, it cannot be assumed that price reductions flowing from increased competition will result in the more efficient allocation of resources.

Fundamentally improving energy pricing means internalising the cost of carbon – to facilitate the shift to low carbon growth.

Experience shows that prices alone are not sufficient to efficiently and effectively deliver all energy policy objectives – measured policy intervention may be also required. Several economic measures are available to governments – the most common are indirect subsidies (eg. accelerated depreciation of assets, provision of infrastructure),

differentiated fuel excise regimes, revenue neutral energy taxes, and cap and trade emissions trading systems. Economic measures can be used as "carrots" to drive leaders further forward and at the same time act as "sticks" to require action from laggards. They are particularly powerful when supported by other measures, such as mandating of quality standards, codes of conduct and energy efficiency targets.

Australian governments already make considerable use of economic measures in the energy sector. For example governments collect about $12 billion each year through fuel excise. Experience shows that subtle variations in the use of such measures can deliver change – for example, the introduction of unleaded petrol, with its fuel excise differential over leaded petrol amounting to several percent at most, proved enormously effective at changing consumer behaviour, when backed by a clearly articulated and implemented policy framework.

Australia needs a price system that better reflects the impacts of different types of energy on the environment, and this is only possible with the right settings from Governments.

BP has considerable experience in the use of internal financial and policy instruments to achieve its energy objectives. In particular BP operates its own emissions trading system, and it supports the adoption of similar systems in the markets in which it operates. Furthermore BP believes the considerable scope to use targeted economic measures to facilitate the shift to lower carbon growth. In particular BP believes new, ongoing and increased incentives should be provided for rooftop PV systems, cleaner fuels and to develop deep-water gas reserves

BP believes taxes and incentives on energy must meet the following criteria:

- Be clear on the purpose of the tax or subsidy – is it to raise general revenues or is it targeted to charge users for service e.g. for road use?
- Be free of economic distortions as between competing energy sources of equal environmental value
- Be free of economic distortions as between geographic areas and support the efficient allocation of resources
- Be free of in-built incentives to rort the system
- Allow for incentives to cleaner energy and efficiency in energy use
- Allow for the efficient provision of incentives to business
- Transparency and have low costs of administration and compliance i.e. a simple system
- Be equitable.

Achieve a step change in energy efficiency – A priority across all major energy use sectors, including industry, domestic, commercial and transport, because currently Australia lags most of the OECD in reducing the energy intensity of economic growth. International Energy Agency data[3] show that the Australian economy is around 20% more energy intensive than the OECD average, and more than 50% more energy intensive than Western European economies, although it's less energy intensive than the world average.

[3] IEA Key World Energy Statistics 2001 Edition page 49

BP knows from its own experience that significant cost savings are available through greater energy efficiency. Better energy efficiency is the “low hanging fruit” of the energy challenge.

BP sees both the need for companies to reduce energy use per unit of output, and the need for efficiency standards to be applied to products and services like appliances, motor vehicles and electricity generation.

The recent review of energy policy in the UK has canvassed energy efficiency targets of 20 percent improvement by 2010 with another 20 percent by 2020. BP believes targets such as these will be required in Australia to take energy efficiency forward, for commercial and residential buildings, appliances, vehicles and so on. New or increased mandated energy efficiency standards must address:

- Building energy performance standards, in the commercial and residential area – to take forward the recent investigative/consultative work in this area undertaken by Sustainable Energy Development Authority and others
- Appliances – energy labelling of appliances has already yielded impressive results, and should be continued with relevant enhancements
- Vehicles – aggressive targets are required for cars and other vehicles. Ultra fuel-efficient vehicles, including Hybrid Electric Vehicles, have been on the market for a year but are yet to capture market share. Recent announcements in NSW about differentiating Stamp Duty on motor vehicle registrations on the basis of fuel efficiency is a start in addressing the need for incentives to support advanced engine technologies that deliver greatly improved efficiency

In industry, current Government programs are encouraging improvements in the energy efficiency of production – such as the Energy Smart Program run by SEDA in NSW and the Commonwealth Government’s Energy Efficiency Best Practice Program and eco-efficiency agreements with sectoral/industry associations. While such programs raise the profile of energy efficiency, and their participants are to be applauded, the voluntary nature of these programs is insufficient to drive major improvements in energy efficiency across industry. Voluntary programs require greater levels of incentives and in some case the threat of regulation to improve their effectiveness.

Drive growth in renewable energy – Australia must be more ambitious with renewable energy, as electricity accounts for about 40% of Australia’s greenhouse gas emissions. We need to speed the shift to renewables – wind, solar, tidal, mini hydro and sustainable biomass are key technologies – and we need more challenging mandated government targets to do it. Australia lags many OECD countries with its current targets to increase the share of renewables, even though we have abundant renewable energy resources/feedstocks.

Renewable energy is critically important in making the transition to lower carbon growth. While renewables will not replace hydrocarbons as the main source of energy for at least the next 50 years and probably much longer, renewable energy has considerable potential in the current development of the energy sector. This potential will not be realised while the cost of carbon remains external to energy prices, and if energy policy is disconnected from regional, trade, environment and social policies. Electricity

generation is only one of many benefits that renewables plants offer, alongside regional development and jobs, and other environmental benefits. Renewable energy technologies and clean energy services also have considerable scope as exports to the region.

The green power industry and major green groups are advocating an increase in the Mandated Renewable Energy Target to 10% by 2010. They believe such a target can easily be met. BP believes in setting challenging targets, and we support this one.

The mandated renewable energy target is a major driver for the growth of renewable energy, but the target itself is only part of what's required to drive development of the renewable energy industry in Australia. Other policy requirements include:

- Develop portfolio targets and development strategies for each renewable energy technology – for solar, wind, sustainable biomass, waste-to-energy, tidal, mini-hydro, etc
- Provide greater certainty in support programs – eg. continuing current funding levels for Photovoltaic programs – Photovoltaic Rebate Program (PVRP) and Renewable Remote Power Generation Program (RRPGP)
- Fine-tune existing support programs to provide more flexibility and increase effectiveness.

Deliver creative solutions – We face big challenges in the energy sector, but also have some big opportunities for win/win solutions. Precisely because energy is such a broad topic, the stage on which the debate plays out and on which the action unfolds has to be broad too. Solutions lie in better transport and land use planning, new technologies and knowledge-based industries, land and water restoration, regional development and many other areas.

We should look everywhere for opportunities, and not be afraid to change the way we do things. For example with the right policies, we could use the development of renewable energy industries, and those industries that depend on them, to reinvigorate some of the depressed regions of Australia. The renewable energy industry may well create more regional jobs and growth than big fossil fuel fired generation, but is not yet cost-competitive (although the gap is narrowing). Policy support is needed, from regional development, employment and training, environment, and trade portfolios, to facilitate the growth of renewable energy in these regions.

A critical element of the solution will be the identification and adaptation of the best of the world's technologies and not necessarily diverting too many resources to reinventing the wheel locally. BP's experience has shown that it is the ones who can adapt and exploit the best technology that win.

Further, strong cooperation between different sectors will underpin the delivery of creative solutions. For example oil companies and car manufacturers could produce big environmental gains through working together – cleaner fuels and more advanced engine technologies would improve fuel efficiency and safety, and reduce emissions of pollutants and greenhouse gases. Such partnerships can be powerful but will depend on

political leadership to make them happen. BP has already seen this potential with its cleaner fuels – delivering environmental (air quality), social (public health) and user (reduced maintenance costs, increased mileage) benefits.

We need to invest in innovation to drive smart, low carbon growth into the future, especially through renewables and hydrogen. And right now we need to drastically clean up conventional energy – coal and oil – while we support the uptake of new energy sources. Justifying support for these actions will be easier, and implementation of policy objectives will be more effective, if we can join up policies and portfolios across the board.

SECTION 2:

A SUSTAINABLE ENERGY FUTURE FOR AUSTRALIA: APPLICATION TO SPECIFIC ENERGY SECTORS

The previous section of the submission sets out the broad issues facing Australia and the strategy to address these issues.

This section briefly looks at some specific sectors and their issues, and ways of taking these sectors forward within the broad framework.

1. SOLAR PHOTOVOLTAICS

The Photovoltaic (PV) industry is a worthy recipient of Government support. It generates considerable inward investment in Australia, creating growth and jobs in regional and rural Australia. Compared with conventional hydrocarbon energy plants, renewables projects generally require higher levels of capital expenditure per unit energy output. They have a higher proportion of that capital sourced in Australia, and provide more jobs per unit capital, during construction and operation, compared with coal and gas plants.

An analysis[4] carried by Australian Ecogeneration Association (AEA) in concert with the Australian Cooperative Research Centre for Renewable Energy (ACRE) determined that renewable power delivers double the local investment and five times more ongoing direct jobs than conventional generation. Among Renewable energy sources, PV provides the highest employment creation per dollar invested, per MW installed and per MWH generated. Furthermore, although Australia currently uses less than 2% of the worldwide demand for PV, its industry represents more than 7% of the worldwide production capacity of PV. The potential for new or expanded manufacturing capacity, coupled with large potential export markets, adds another dimension to the future of the PV industry development.

Among Renewable Energy sources, solar energy is a unique source of electricity, providing a host of benefits beyond power generation:

1. Solar is an ideal peak shaver because it produces the most electricity when the solar radiation is strongest, which generally coincides with when the electricity demand and its price are highest.
2. Solar is a distributed power source; it can be easily generated at or near the site of use. This means solar has the ability to supply energy close to the point of consumption thereby eliminating transmission losses and reducing strain on transmission grid.
3. Solar can be a reliable, grid-independent source of backup power for critical uses such as public safety needs and remote communities.
4. Solar is silent and unobtrusive. It can be deployed quickly and easily on pre-existing infrastructure, especially the rooftops of businesses and homes throughout the states and territories, allowing individuals and the private sector to play a direct role.
5. Solar generating capacity is modular and scaleable.

Solar does all of this with zero emissions, near zero maintenance and zero fuel use at point of generation.

In Australia, the Mandated Renewable Energy Target (MRET) under the *Renewable Energy (Electricity) Act 2000* is a major driver for investment in renewable energy.

BP Solar supports the call for an increase in the MRET to 10% by 2010 (that is, for new renewables to constitute 10% of electricity supply in 2010). Furthermore BP Solar is calling for portfolio targets to be established under the MRET to ensure support for PV, which is not as cost-competitive as other forms of renewable energy such as wind. Portfolio targets would require all stakeholders in the various renewables technologies to develop a strategy for meeting those targets.

[4] "The Economic Development and Job Creation Potential of Renewable Energy; Australian Case Studies", ACRE, AEA and Renewable Energy Generation Association (REGA) Jan 2002.

Globally the investments in PV are most rapid in Germany, Japan and the UK, where Government support programs drive them. As the PV industry is global, future PV investments are likely where incentives are most attractive. Australia has a world-class R&D capability in PV and from this supports a vibrant and rapidly growing industry. BP Solar believes we must continue to invest in R&D, the commercialisation of PV technologies and support for the industry to retain our position in the PV industry.

Government support is also available for PV systems in Australia, through the PV Rebate Program (PVRP) and Renewable Remote Power Generation Program (RRPGP). These support programs are vital to the establishment of a viable PV market in Australia. BP Solar believes there is considerable scope to increase the level of support under these programs and to make them more effective policy tools to drive PV investments.

BP Solar supports:

- The extension of the PVRP and RRPGP to provide greater certainty for those investing in the PV and to bring them on a par with Government support programs in other countries, such as Japan and most EU countries. BP Solar is concerned that the amount of money available under these programs may not be maintained.

- Fine-tune existing PV support programs to provide more flexibility with their use:
  - Allow developers and investors to access PVRP grants, as well as owner-occupiers, removes the risk for developers and PV manufacturers in 'going solar' with large developments at the time of construction.
  - Expand PVRP or create a new program to promote building integrated PV for the commercial market
  - Increase the level of rebate in PVRP – from $5 to $7 per watt
  - Allow mini-grids to access funding under the RRPGP enables solar to displace diesel as the base load for remote communities, with diesel retained for peaking

- Remove barriers in the electricity market for renewable energy - eg. technical standards should not disadvantage small generators; equalization of transmission charges should not disadvantage energy efficiency, co-generation and renewables; support a simplified (one page) Connection Agreement between the householder and the licensed electricity supplier (voluntary agreement or mandatory requirement).

- Stream-line and harmonising the environmental planning and development approval process across jurisdictions for renewable energy projects; give more active consideration to PV on public sector buildings (voluntary agreement with developers and Government departments)
- Provide tax credits for accelerated depreciation of renewable energy assets. Accelerated depreciation encourages faster replacement of older equipment and makes the commercial application of new technology more viable – most renewable energy systems and high-efficiency equipment rely on new technologies; provide individual homeowners with personal tax allowance for installing PV.

2. THE DOWNSTREAM PETROLEUM INDUSTRY

2.1 Introduction

Petroleum Products constitute the major energy source in Australia at present and will continue to do so well into the future.

The Downstream Petroleum Industry (refining distribution and marketing) is a key segment of this sector and, while most of the consumption is in transport fuels, it is unavoidable to consider a comprehensive energy policy without some consideration of the issues for this sector.

Energy policy objectives would be to move over time to a long-term sustainable energy outcome. This will take time. Liquid hydrocarbons will continue to be important for the next 20 years or so.

The questions facing this industry are: -

- Where is it now in terms of sustainable energy – economically, environmentally, and socially?
- What does it need to do to move down the path at an appropriate speed?

2.2 The Current State of Play

The Australian industry does not meet normally accepted criteria for sustainable energy.

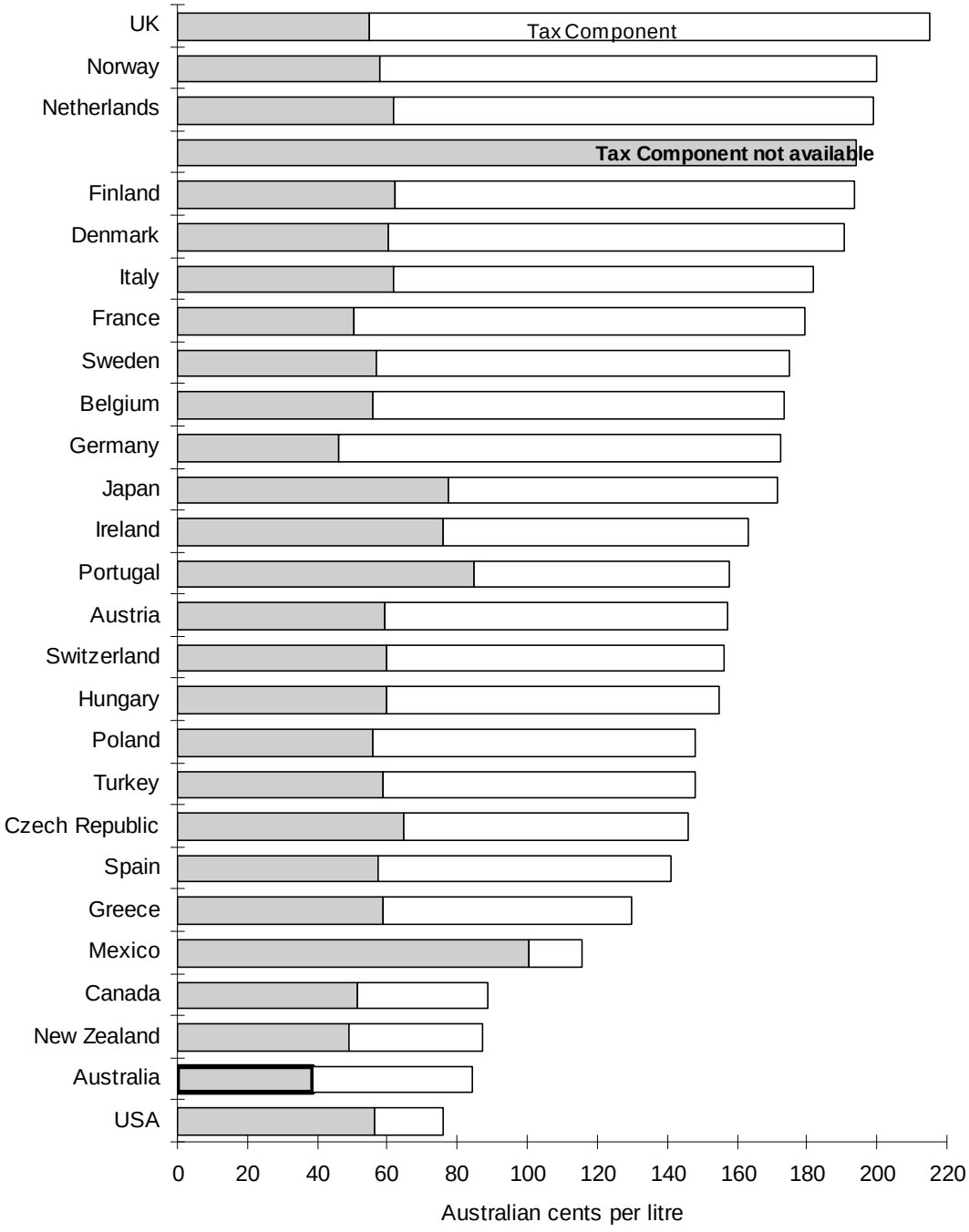
Environmentally, there are encouraging signs - especially in terms of tightening national fuel standards - but there is an element of "catch up" taking place, with much more to be achieved.

Economically, the industry is performing poorly. In 2000, the industry made a loss of $160m. Underlying Earnings before Interest and Tax over Total Assets were just 0.7%. The record in the industry over the past decade has been poor or modest returns.[5] These returns are for the large players, but we believe the medium and smaller players are experiencing similar difficulties.

Socially, the industry continues to face problems in public acceptance due to issues of large fluctuations in weekly price cycles in metropolitan areas and differences in country prices vis a vis metro prices. There are periodic charges of price gouging etc. This is paradoxical given the financial performance of the industry, the intensity of the competition, and the fact that Australia's pre-tax prices are at or about the lowest in the OECD.

[5] Ernst & Young Report on the Downstream Petroleum Industry 2000; http://www.aip.com.au/news/reports/Ernst%20&%20Young%20Report%202000.pdf

Petrol Prices and Taxes in OECD Countries
September Quarter 2001



Source: International Energy Agency and DITR

2.3 What is required to move towards Sustainable energy at an appropriate speed?

(a) Environmental

For reasons of cleaner air and the consequent positive benefits to health, and Greenhouse Gas abatement, the industry - and the transport industry it serves – must proceed down a path of cleaner and more efficient fuels.

There have been encouraging moves in this direction:-

- The National Fuel Standards implemented on 1 January 2002 represent a significant step along the path of clean fuels and improved air quality, but are by no means the end game
- The Government's undertaking in 1999 to provide an excise differential incentive for Ultra Low Sulphur Diesel (ULSD) as from 2003 is another important step
    - BP and the rest of the industry await the introduction of this incentive.
- BP has built the capacity to produce ULSD; and has led the way with other clean fuels eg Lead Replacement Petrol, and BP Ultimate (the lowest sulphur, lowest benzene fuel in Australia)
- BP is also trialling ethanol in petrol in Queensland, with the help of a Commonwealth Government Greenhouse Gas Abatement Grant amounting to $9m
- BP has also introduced globally its own internal emissions trading scheme (with its Australian businesses taking part in this)
- For the consumer, BP has also introduced Global Choice - a Greenhouse Gas abatement scheme whereby consumers can zero sum their emissions from driving.

These steps are in a real sense a beginning of a journey towards clean fuels.

The opportunities and problems facing clean fuels can be demonstrated by BP's experience with Ultra Low Sulphur Diesel (ULSD). While we have had the capacity to produce this for well over a year now, there is minimal production. This is because the cost of production of these higher quality fuels is higher (not substantially – but enough to deter purchase in the intensely competitive transport sectors), than for Low Sulphur Diesel. While there is a general desire to introduce clean fuels, businesses are reluctant to be competitively disadvantaged in the purchase of it. This constitutes a form of market failure. The poor financial performance of the refining sector provides a further need for some incentive to invest.

For this reason, a carrot and stick approach is desirable:-

- A carrot that encourages producers to provide the cleaner product earlier to the market by way of an excise differential incentive
- The stick to provide regulation requiring an improved standard of fuel

The ULSD is such a case. The incentive is to apply as from 1/1/03, until ULSD is nationally regulated on 1/1/06. As we understand it, all refining companies are examining ways to implement ULSD capacity before this date because of this.

It is therefore crucial, given timing, for the Government to formally announce the implementation of this as soon as possible.

Clean Petrol

In the same way, there is potential for a similar incentive to apply to gasoline, in consultation with the oil and auto industries.

There is the real potential to introduce a low sulphur low benzene, 95 octane gasoline into Australia in concert with the auto industry's moving to new generation engine technology which is both cleaner and more efficient.

There are advantages in terms of reduced sulphur emissions and lower benzene. There are also efficiency advantages in moving to 95 octane (around 2% fuel efficiency) if the existing fleet were moved over time from 91 octane to 95 octane.

But the biggest advantage lies in the fuel being a facilitator for the new engine technology such as Gasoline Direct Injection (GDI). The potential for this technology is to obtain around 15% fuel efficiency increase, which is that expected to be sought by the Government for new vehicles by 2010. In broad terms, the impact of this on our GHG emissions would be substantial, as shown below:-

	Efficiency Increase (%)	% GHG reduction if fully implemented	% National GHG Reduction [6]
Move Fleet to 95 octane	2%	6.6%	1%
Move Fleet to GDI and other new generation technology	15%	20%	4%

Bearing in mind the government's commitment to meet a Kyoto target (or its equivalent), and the difficulties other sectors may have in making a reduction, the potential for this is obvious.

There is also a need to "go early". The impact of this would be gradual. The new vehicle fleet each year amounts to about 7% of the existing fleet, and it consumes 10% of the fuel. Were Australia to only do this is 2009, there would be little impact on GHG emissions. However, were it introduced in 2006 or earlier, the impact by 2010 would be significant.

A logical outcome here would be a Government sponsored and coordinated move with the oil and auto industry with appropriate incentives and certainty to move down this path in the coming years.

[6] Assumes transport contributes nearly 20% of GHG emissions, and assumes full fleet conversion. The numbers here are intended to give the order of magnitude and potential of this.

We see this as a 5 Win National Outcome:-

- A Win for the refining industry in being encouraged to invest as an industry before their Asian rivals
- A Win for the auto industry in similarly moving to be ahead of the regional industry technologically
- A Win for air quality and public health
- A Win for GHG abatement, and
- (we believe) a Win for the consumer as, while the cost of the cleaner fuel will be marginally higher, the cost per driven kilometre may be lower due to the fuel efficiency gains.

We recommend that the Minister for Industry, Tourism and Resources sponsor this as a National Goal and form a framework (oil, auto, other Federal) to examine this over the next 12 months.

Zero Sulphur Diesel

The ULSD incentive would cease in 2006 as this fuel becomes regulated.

Zero sulphur diesel has similar advantages to low sulphur petrol. That is, it opens the way to more efficient engine technologies as well as having air quality and health benefits.

We believe there is a similar potential to encourage zero sulphur (<10ppm S) diesel at this time via a similar mechanism, ie:-

- an excise incentive to produce this as from 2006, and
- a regulation that it be required circa 2009.

We are advocating a long-term policy of incentive and regulation which moves Australia down the path of cleaner and more fuel efficient fuels.

Other Instruments

Instruments such as BP's *Global Choice*™ or variants of an emissions trading scheme, applied to this industry, will assist.

Alternative Fuels

Alternative fuels have a role to play in transport provided they are economic and meet environmental (GHG and other environmental).

(b) Social

The key objective here would be to restore public confidence in the industry through increased transparency. This would ideally lead to some reduction in metropolitan price volatility and to a reduction in the issues relating to country/metro price differences.

BP believes that these problems are in part a function of the regulatory and non-regulatory heritage of the industry.

Some of the problems here have been:-

- the use of refinery exchange in Australia, which, while it has served Australia well, has tended to blur the ex-refinery price (and hence value) of product in Australia
- the former ACCC Maximum Endorsed Wholesale Price (still used as a List Price) which served as a ceiling with discounts and price support offered off that.
- Other Federal regulations that encouraged continuation of the status quo.

We see a way forward as comprising:-

- greater transparency of pricing at the wholesale level, through the use of:-
    - buy/sell arrangements at the refinery level instead of refinery exchange will help present to market players the true price of the product
    - moves to a terminal gate price – whether voluntary or regulated – will also help an appreciation of the true wholesale price
- Regulatory Reform would also assist.

In terms of benefits, this would:-

- Provide price transparency at the wholesale level
- Provide a genuine transparent marker price at the wholesale level
- Promote competition at this level
- Facilitate understanding of industry pricing
- Over time facilitate a reduction of the fluctuations of the weekly price cycle in metropolitan areas. By having a clear wholesale price, buyers, sellers, and consumers alike will be able to gauge better what constitutes the right retail price for fuel
- Fill the knowledge gap in the price chain for fuel as it goes out to rural areas, and will add to competition in those markets.

We believe in time that this new approach would yield a greater understanding of fuel prices for consumers.

Separate to this, to help gain the public confidence, there may be a need for some form of governance of the industry during the period of change. This could be done by COAG.

(c) Financial Viability

We believe that financial viability will improve as the above steps are implemented, while still retaining a highly competitive industry. It would also be inevitable that rationalization (at both refining and marketing levels) be allowed to occur (not unnecessarily inhibited).

2.4 Way Forward – Actions

The actions to move the industry forward are:-

- Increase transparency in the industry, with further moves towards terminal gate pricing and refinery buy/sell arrangements (government and industry)
- Regulatory reform in the industry to allow the industry to perform at its most efficient (government and industry)
- Government and ACCC not impede refinery rationalization[7]
- Short and long term strategy to encourage cleaner fuels and coordination with auto industry (government and industry)
- Governance of the industry over the short term to assist public confidence (COAG)

Some of these actions may be already commencing.

The action and interaction of these measures would take this industry strongly down a path of sustainability.

[7] As recommended in Commonwealth Government Report on Downstream Action Agenda, 1999

3. Upstream Oil and Gas

The Submission by APPEA has outlined the natural gas resource potential that Australia is endowed with. The nation, therefore, has the opportunity to move quickly along the path towards a sustainable energy future through accessing its own resource base. It is also in a favoured position to play a key role in providing Asian markets with a long-term energy supply that will be key to their economic development and their move towards a lower-carbon future.

In order to maximise the economic, social and environmental benefits of our natural gas resources, there are a number of initiatives the Government needs to ensure are in place:-

- Support identification and commercial access regimes to the gas resources,
- Provide an appropriate investment framework to attract companies to explore and develop our natural gas resources, particularly the deep water resources, and
- Continue to support efforts to access markets in the Asia-Pacific region,

BP looks forward to discussing and elaborating on these issues with the Panel.