

Beyond Petroleum - learning to achieve prosperity through sustainability

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West Australian Business Leaders Breakfast

August 3^d 2005

Perth, WA

Good morning, Ladies and Gentlemen, and thank you for joining me for breakfast today.

First, may I start by saying how grateful I am to the West Australian Business Events Program for inviting me here today and allowing me the opportunity to talk to such a distinguished group of business leaders, representing a city and a state that plays a vital role in all our businesses.

This speech is the second of three being given in Perth by BP leaders this year.

In May, my colleague Thys Heyns, Managing Director of our oil refinery down the road at Kwinana, talked about the economic impact of BP in Western Australia and about the future of energy.

Today, I am going to focus on our response to the debate on climate change.

And in September, my colleague David Knox, Managing Director of our oil and gas exploration and production business, is going to address the issue of Corporate Social Responsibility and thus complete a series of discussions on the economic, environmental and social aspects of our business.

Today then, I want to put forward my views on how we as a business community, and how Australia as a nation, can achieve prosperity **and** sustainability through our response to

climate change. I will first tell you a little about BP's own experience in reducing greenhouse gas emissions, which has been a very profitable experience for us. But I really want to focus on the opportunities that will flow from a more progressive approach to climate change. I believe these opportunities are available right across the business community, and it's time to recognise and respond to them.

To get started I would like to briefly describe BP.

Globally, this is one of the biggest companies in the world - on some measures, the biggest.

2004 turnover was in excess of 285 billion US dollars.

Market capitalisation as at 31 December 2004 was 210 billion US dollars - which is something between a third to a quarter of the entire Australian Stock Exchange's collective capitalisation.

We serve 13 million customers every day at more than 25,000 service stations in over 100 countries, providing an estimated billion litres of refined product daily.

So globally, this is a very big business indeed. And here in Western Australia, the business is also characterised by scale.

BP is the largest single fuel brand in WA with 23% of all outlets. 50 Perth service stations are directly owned by BP, and dozens more throughout the State are independently owned but branded and supplied by BP.

Our oil refinery at Kwinana conducts trade which adds nearly \$1 billion to the state economy each year, or 1% of Gross State Product - not to mention the vast bulk of the fuels that make our economy tick. Jet fuel for the airports, bunker fuel for the ports, petrol and

LPG for cars, diesel for trains, trucks, buses, cars, machinery and power generation; bitumen for roads; and lubricants for a huge range of purposes.

Further up the coast, we are a participant with roughly a one-sixth share in the North West Shelf Venture, Australia's largest resource development producing oil, condensate, liquid petroleum gas, natural gas for use in Western Australian homes and industries, and liquefied natural gas for export to countries like Japan, Korea and China.

We are a participant in the massive Ilo/Ilo/Jansz field and some other nearby fields, commonly referred to as part of "Greater Gorgon" and also the Browse Basin off the Kimberley coastline, both of which have enormous potential not just for us but for WA as a whole and we are very excited about developing them.

Our solar business is still growing here, but we were delighted that two weeks ago the Premier of Western Australia, Dr Geoff Gallop, launched a consortium including BP and several government agencies to bid for the Federal Government's "Solar Cities" programme. This leadership is welcome - it is extraordinary that over in Sydney, BP is operating the largest solar electric panel factory in the southern hemisphere, but is exporting 85% of its product because it can't get fair access to Australian electricity networks. This is despite solar being an economic means of offsetting the peak power generation crisis, which frankly has pushed our electricity networks to breaking point.

All of this activity in WA has led the independent economic analysts, ACIL Tasman, to conclude earlier this year that BP is "one of Western Australia's largest businesses... a major contributor to the economic wellbeing of WA."

Why am I telling you this?

It's because with size and influence comes responsibility. A business of our size has a responsibility to show leadership on issues that could materially impact not only our operations, but the countries in which we operate and the customers we serve.

Today I would like to share with you our response to such an issue - the issue of climate change.

But I acknowledge the current public interest in oil supplies and fuel prices. I don't want to spend too much time off the topic of leadership on climate change, but sometimes when your audience has an issue at the front of their minds it is helpful to acknowledge and make some simple points in order to be better able to return focus to the main purpose of the speech.

In that spirit let me make some brief remarks, and of course I am happy to take questions at the end too.

There is no doubt that fuel prices are currently high and that that is hurting some sections of society and the economy - albeit that in real terms fuel prices are still substantially below the levels reached in the oil shocks of the 1970s.

We should all be clear that the current high prices are not "made in Australia". Australian fuel prices and taxes are amongst the lowest in the OECD, and retail margins have if anything been compressed in recent times due to the entry of the supermarkets with cross-subsidised discount schemes. The retail fuel market is extremely price sensitive, and the higher the fuel price, the more sensitive it becomes. Consumers become more likely to respond to discounts, and retailers are more likely to offer them - whether in the form of shopper dockets or the occasionally frustrating discount cycle. I know it is small consolation to the motorist who is having to dig more deeply into their hip pocket, but - on the theme of Leadership Matters - as leaders in business, politics or media we should recognise that times are pretty tough in the downstream fuel industry too.

The reason for higher fuel prices sits squarely with international oil and refined product prices which are themselves a reflection of global energy supply and demand. In 2004, demand for oil products rose at a faster rate than economic growth for the first time in decades, driven by sustained growth around the world and particularly in China. This eroded spare capacity in the oil industry to bring oil to market - not a shortage in oil supplies per se, rather a tightening in the availability of infrastructure to produce and refine it. When the gap between supply and demand grows, prices inevitably rise - as does the markets susceptibility to short term price spikes in response to any additional problems such as civil unrest or hurricanes in oil-producing areas.

That said, the market has worked. There has been no actual shortage of oil. Higher prices are spurring greater investment in infrastructure. It is rash to try and make predictions about future oil prices, because there are too many unknowns. But I would have to say that prices are just as likely to fall back (maybe not as low as they were five years ago, but lower than today) as they are to continue rising.

This is because there is no fundamental issue with oil reserves themselves, and let me use this point to move along from the question of current pricing back to my main theme of Leadership on Climate Change.

Let me start by considering Climate Change in light of an issue that has recently been gaining significant attention, the so-called "Hubbert theory" of "peak oil" or "the big rollover".

This is a theory that suggests that at some point, oil will be discovered at a slower rate than it is consumed, pushing up prices as the stocks in the ground dwindle, and therefore prompting the growth of alternative energy supplies.

Now, you'd probably expect me to rubbish that theory - so I'm not going to! Oil is a finite resource, and sooner or later we will reach a peak, that much is obvious.

The point is that we don't know when the peak will come. This year? Next year? Next decade? Or the decade after that? The 2005 BP Statistical Review of World Energy shows that if global oil consumption remains unchanged at 2004 levels, currently proven reserves will last for another 40 years. Of course demand will grow; it will not stay at last year's levels. And reserves will also increase.

No one can predict exactly when the peak will come. In fact, the history of the industry over the last few decades is one of consistently proving wrong anyone who predicted the rollover is upon us.

For the last twenty years new discoveries and better technologies have allowed us to increase consumption at more or less the same pace as we have increased proven reserves, meaning that we still have over forty years of supplies left - just as we did in the late 1980s, and more than we did in 1980 when we thought we had less than thirty years left.

That is why I get concerned that in WA, so much of the argument about why society should be moving towards more sustainable, greenhouse-friendly energy sources is being underpinned by the threat of energy prices in an oil-constrained world. I concede (with all respect to our hosts) that it may be easier to get a headline in the West Australian by saying we are headed towards petrol at three-dollars-a-litre. But if that headline is the only reason why people think we should behave more sustainably, then what will happen if those prices don't materialise? Should we put sustainability on hold until they do?

My view is that we are running out of **time** to deal with the environmental consequences of fossil fuels much faster than we are running down our **stocks** of them - after all, the stone age didn't end because we ran out of stones, so let's not wait for us to run out of oil before we start working towards a sustainable future.

This is a challenge of Leadership: and the challenge is much harder than the advocates of “peak oil” make out. We don’t have to move away from fossil fuels because they are too scarce and expensive – if only that were true it would be easy, the free market and the price mechanism would deliver the change. We have a much harder challenge. We must reduce our dependence on fossil fuels even though there are plentiful and cheap supplies of it still in the ground.

Let me explain why, by turning directly to the issue of climate change. And in doing so strongly welcome the statement made by the Prime Minister on the new Asia-Pacific partnership for Clean Development and Climate.

This signals the start of a more-rounded and effective discussion on climate change, engaging the big-hitters and encouraging the development and deployment of cleaner technologies where they can have the greatest impact. This will be an important part of building a multilateral plan of action, but it is just the start.

I don’t want to dwell on the science of climate change, and I wouldn’t dream of giving a lecture on the science when just a few points will suffice. There is a lot we know about how the world is warming, and there is a lot more we will find out over the coming decades. In my view we know enough now to act.

Yes, some aspects of the science are still provisional. But science is always provisional and in business we are used to working in circumstances where we don’t know all the facts for certain.

You have to make judgments in conditions of uncertainty and in BP’s view the right judgment on the basis of the available evidence is that there is a powerful case for early precautionary action.

It would be too great a risk to stand by, do nothing and to wait so long that when the impact on the climate really **does** begin to be felt, we have to collectively take action which is so disruptive that it causes serious damage to the world's economy.

This is not a radical view. Whilst there is a significant debate on what sort of action to take, these days very few people, aside from some pretty blatant vested interests, now challenge the basic need to take on the issue.

For example, the current US administration, which is often held up as an opponent of action, recently endorsed the following statement from the G8 Summit at Gleneagles;

"Climate change is a serious and long term challenge that has the potential to affect every part of the globe. We know that increased need and use of energy fossil fuels, and other human activities, contribute in large part to increases in greenhouse gases associated with the warming of our Earth's surface. While uncertainties remain in our understanding of climate science, we know enough to act now to put ourselves on a path to slow and, as the science justifies, stop and then reverse the growth of greenhouse gases."

In BP, we publicly acknowledged the need to take precautionary action on Climate Change in 1997, and set a target to reduce greenhouse gas emissions from our operations to 10% below 1990 levels by 2010.

At the time, we did not know how to reach the target, but the very fact of its existence permitted - in fact mandated - our managers to find a way. Coupled with an internal emissions "cap and trade" system to ensure efficient capital allocation, this mandate was enough to see us meet the target nine years early in 2001 - and unlock 650 million US dollars of value in the process.

Since meeting our target in 2001, our knowledge of climate science has increased and the debate over what action we need to take has evolved.

The latest assessment by the Intergovernmental Panel on Climate Change (IPCC) shows that stabilisation of atmospheric greenhouse gas levels at around 500-550 parts per million may enable us to limit the increase in the world's temperature to about 2 degrees Celsius above the pre-industrial level.

This, we believe, is a reasonable precautionary planning assumption and could act as a long term policy objective. This is, of course, the best current estimate and as knowledge advances, and the IPCC update their work, that estimate could be adjusted and refined.

But what would it mean in terms of levels of greenhouse gas emissions?

By 2050 it is estimated that world energy demand will have doubled, yet we need to plan to bring global emissions back down to around the same level as they are today -that's around 7 billion tonnes of carbon being emitted each year - to achieve stabilisation in the atmosphere.

Let me stress this important point. **Double** the energy, with **no extra** greenhouse emissions: that is the challenge.

To achieve this, we need to create mechanisms which will eliminate increasing volumes of greenhouse gases as the years pass, reaching 7 billion tonnes of avoided carbon emissions by 2050.

BP has sponsored a major research programme at Princeton University, in the US - jointly with the Ford Motor Company - which looks at the interventions that would be required to achieve atmospheric stabilisation of greenhouse gas concentrations at around 500-550 parts per million by the year 2050.

The work at Princeton has provided a simplified model which brings together the various options. These options are known as "wedges" because on the chart they each start small

and then flare out to reach the potential to avoid 1 billion tonnes of carbon by 2050. In total then, we would need only 7 wedges to be delivered in order to avoid the expected emissions growth.

These wedges include existing technologies that have already been demonstrated at scale, including energy efficiency, switching to lower carbon fuels, carbon capture and storage and renewable energy.

One wedge, for example, envisages doubling the fuel economy of two billion cars - which may well be the number we have in 2050 - from 12 to 24 kilometres per litre.

Other wedges that would avoid a billion tonnes of carbon include:

- replacing coal with gas as the feedstock for 1400 power stations;
- capturing and storing CO₂ at 700 coal-fired power stations;
- increasing bio-fuel production 50-fold;
- increasing solar capacity 700 fold;
- reducing emissions from buildings and appliances by around a quarter.

The wedges model shows us three things clearly.

First, whilst there is no single “magic bullet”, we are optimistic that a portfolio approach can be successful - and we have choices that can be made.

Second, the technologies which are capable of solving the problem are all in existence. As the Princeton team have written;

“Humanity can solve the carbon and climate problem in the first half of this century simply by scaling up what we already know how to do.”

Third, the issue can be solved within a generation. The 45 year timeframe makes sense. It concentrates the mind. It is the length of a career. It is the lifetime of a chemical plant or a power plant. It means starting now. And it means that Leadership Matters.

Of course, there are many uncertainties. Some of the wedges may require changes in life style that could prove unacceptable. Some of the technologies under development today may not come through and mature into viable options. The option to develop a new generation of nuclear power stations may raise unacceptable risks of proliferation and terrorism as well as raising again the question of nuclear waste disposal.

But equally there are uncertainties on the positive side. Technology is moving very quickly and will almost certainly offer new opportunities over the next half century - possibilities we can't even envisage now.

The important thing is to recognise the challenge and to make a start.

I'll repeat that because it's really important.

We have to recognise the challenge, and make a start.

I am enormously optimistic about this challenge. If I can use a cricketing analogy, I believe it is equivalent to batting second in a One Day game and needing to get a run rate of between five and six-an-over to win. Challenging, achievable, but not leaving much room for delays or slow starts.

In BP, we are using the wedges model to inform our business decisions, and are developing activities across several of these options.

Across the company, we are investing \$350 million US dollars in energy efficiency, optimising our operations and reducing greenhouse gas emissions per unit of production. This focus on energy efficiency not only delivers a greenhouse benefit, it makes good business sense.

Here in Western Australia, at the LNG plant at Karratha, we drove the decision to invest in new solvent technology that will deliver a 400,000 tonne reduction in greenhouse gas emissions, equivalent to reducing the annual emissions from our refinery at Kwinana by almost 60%.

At both Kwinana and our Bulwer Island Refinery in Queensland, we have invested in natural gas-powered cogeneration facilities providing energy with twice the efficiency of a coal-powered plant, and reducing greenhouse gas emissions by about 100,000 tonnes a year.

But energy efficiency is not our only focus. Across BP, we are shifting the balance of our product portfolio in favour of less carbon-intensive fuels, such as natural gas, which now makes up over 60% of the energy we provide to our customers.

The NWS joint venture facility at Karratha provides natural gas not only to the Perth domestic market, but to other markets such as China that would otherwise be dependent on coal.

We are also pioneering technology that we think holds enormous promise for curbing large amounts of emissions - carbon capture and storage.

At a major gas field in Algeria, we are capturing the CO₂ that is extracted with natural gas and injecting back into the gas field, 1,800 metres below the ground, rather than venting it into the atmosphere, which is normal practice for this type of project. More than 1 million tonnes will be injected every year, reducing greenhouse gas emissions by the equivalent of taking a quarter of a million cars off the road forever.

In Scotland, we are looking at building a power plant that will convert natural gas into CO₂ and hydrogen. The hydrogen will be used to generate electricity, while the CO₂ will be piped offshore and stored underground in a depleted oil field. This has never been done before, and the plant will produce more carbon-free electricity than all of the UK's wind farms combined.

If this technology was to be applied to just 5% of the projected new electricity generating capacity that the world is projected to require by 2050, it would have the potential to reduce global emissions of carbon by 300 million tonnes a year. That's a third of a wedge for starters.

But the focus cannot solely be on cleaner fossil fuels, we must invest in renewable technologies to encourage their greater participation in the global energy mix.

BP's solar business increased its sales by 30% in 2004 and now has a leading share of the global photovoltaic market. BP's solar cell manufacturing plant at Homebush Bay in Sydney's west is the largest facility of its type in the southern hemisphere, and is Australia's biggest exporter of renewable energy.

Here in Perth, BP has invested in the first hydrogen-powered bus fleet in the southern hemisphere. This demonstration project, together with similar BP projects at 9 other cities around the world, is helping to define the basis of the hydrogen economy. Recognising its importance, the project was a worthy winner of a Banksia Award this year, arguably the most prestigious environmental award in Australia.

But we don't have to wait for hydrogen to fuel a cleaner future. Our products, available at forecourts across Australia, are cleaner and greener than ever before.

Our premium fuel, BP Ultimate, delivers not only superior performance, but also less pollution, burning more cleanly and reducing fuel consumption when compared with standard unleaded fuel. Kwinana Refinery here in WA is the home of BP Ultimate, and served as the spring board for roll out of the product around the region.

In Queensland we have been trialling E10 fuels - that is, 10% ethanol in petrol, using ethanol derived from sugar cane waste. E10 is now being marketed at over 30 BP branded service stations in Queensland - both in metro and rural areas. And with the support of the Queensland Government we are now building an ethanol blend plant in Mackay. Overall, we have sold 13 million litres of E10 in Queensland. And we have not received a single technical complaint from consumers.

It is important to realise that cleaner products are, and should be, a key part of our response in reducing greenhouse emissions. The emissions from the products we sell to our customers are estimated to be almost **15 times greater** than those from our operations.

So while BP will continue to look at its own greenhouse footprint, we increasingly recognise that in the medium to long term, the bigger opportunity for us - and the energy industry at large - will lie in the development of new low-carbon products and services for our customers.

This focus on end-user emissions has led to development of our Global Choice programme, which allows customers to offset the greenhouse gases emitted when they use our fuel. Over a million tonnes has already been offset this way, and any company that needs to reduce greenhouse emissions and uses fuel should be looking at BP Global Choice as an extremely cost-effective solution - for an average vehicle, it costs only **\$1 a week** to offset the car's greenhouse emissions **completely**.

All of these initiatives I've described are real. They exist today. They are commercially viable, and they work in a policy framework which still attaches no formal or legal value to carbon. They have shown we can get some runs on the board.

But they are just a start and the scale of the challenge means it's time to pick up the pace and accelerate towards our target. For this, we need more than individual or voluntary action. We will have to work together.

Here, though, we are caught in a Catch-22.

It is only if government establishes a value for carbon emissions reductions and consistently supports and provides incentives for the development and deployment of new technologies that we can move as fast as we would like to in industry.

But, not all of industry is currently aligned on these objectives and governments are conscious of the political and economic risks of delivering real change on greenhouse policy in the absence of consistent signals from the business community.

So to deliver real change on greenhouse policy, we need to target not the Government, but the business community, in order to persuade those who are currently uncertain to unite around a common progressive position on greenhouse.

The last two weeks have seen the terms of debate about Greenhouse in Australia change dramatically. On 26th July, the Federal Government published the recent Allen Consulting Group's report, *Climate Change Risk and Vulnerability - promoting an efficient adaptation response in Australia* which provides a valuable insight into how early planning could help governments, industries and communities plan for the effects of climate change, adapt to the impacts and exploit any opportunities.

Then on 28 July, the Prime Minister announced that Australia was joining a new Asia-Pacific Partnership on Clean Development and Climate, which brings an international context to the technology driven approach adopted in the Government's Energy White Paper.

So the challenge to business has changed. Up until now, as individual businesses and through industry groups such as the Business Council of Australia, we have been focused on what the appropriate policy framework should be. Now, the focus must move to action and delivery within the framework that has been set out.

It is time for business to rally around a new settlement on climate change, to deliver real results and to enable the policy framework to continue to evolve and succeed.

This is the new agenda for greenhouse in Australia for 2006 and beyond. By that time of course there will be a change of leadership at our peak body, the BCA, with Michael Chaney who is so well known to a Western Australian audience taking over as President later this year.

I believe that delivering a positive business response to the Government's framework and uniting the business community around a continued pro-active stance will be the dominant issue for 2006 and beyond. So I will be engaging with our key industry associations to propose that, over the next few years, Australian business adopts a new four point position on Climate Change.

This position states that:

1. The scientific evidence of climate change is sufficient to justify that action be taken now, in a planned way, in order to avoid later, deeper cuts that could seriously damage the economy;
2. We support a long term goal of stabilising global greenhouse gas emissions at today's levels by 2050;

3. We prefer to use a broad-based approach to achieve this goal, including market mechanisms, innovative technology, education and informed and supportive policy development.
4. We support international action, with Australia leading the debate through diplomacy abroad and by example at home.

I believe that this is a modest position and one around which the majority of business can unite. In fact, I can't see how anyone in the business community, setting aside sectional vested interests, can possibly argue against it.

I believe it is also an example of how BP can fulfil its obligation to provide leadership on this issue. Globally, we provided leadership by being the first oil company to advocate precautionary action in 1997. I hope today we can provide more leadership, by helping lead the Australian business community to a new settlement on climate change.

By uniting around this position, we will be able to move the debate forwards into discussing **what** action to take, not whether or not to take it.

Perhaps then we can have a sensible debate about whether tax breaks for travelling extra kilometres in company cars is really the brightest idea! Or how we can use emissions trading to efficiently allocate capital and deliver good greenhouse outcomes at the lowest cost.

Or whether we could levy lower registration charges on cars with small engines or houses with energy efficient design. Or how we can give distributed renewable electricity a fair-go in the electricity grid so its value can be captured.

The list of opportunities is almost endless - and they really are opportunities too.

Opportunities to invest, opportunities to be more efficient, opportunities to manage the risk of future disruptive action by incentivising moderate and timely action now.

Opportunities spread right across the business community to invest in energy efficiency and realise immediate financial returns while reducing greenhouse gas emissions. And opportunities for all businesses to develop and roll out existing and new low carbon technologies, not just in the Australian market but to the rapidly emerging markets in our region.

By including the wider business community in the debate, we can ensure that the chosen solutions to rising greenhouse emissions in Australia are fit-for-purpose and address the needs of our economy.

It is only through real engagement and leadership that we can achieve the outcomes we need to ensure a prosperous and sustainable future for our industries, our communities and our environment.

To conclude, I believe that climate change is real and it is already happening. We cannot turn the clock back, but there is still time to manage and minimise the impacts. We have the solutions already.

The response will differ from site to site, company to company, region to region and nation to nation. But we need to recognise the challenge and take action.

I believe business has nothing to fear from taking a more progressive position on climate change. In fact, I believe there is a lot business can gain.

Those gains will only come when we properly value our environment, and the greenhouse gases we are adding to it every day.

That will provide the signals needed to invest in and deploy low carbon technologies.

And those price signals need to be supported by clear policies that drive the right changes in behaviour.

Making the necessary choices, in policy and investment, will take courage. But the prize - to achieve prosperity and sustainability - could not be greater.

Thank You