

## **Sustainable Transport Speech**

(Moving ‘beyond oil’)

Friday 21<sup>st</sup> February 2003

**Greg Bourne – Regional President BP Australasia**

Thank you very much. It is a pleasure to be here in Perth to talk about the challenges involved in moving ‘beyond oil’. My own company is focussed on just that question – this may be a surprise given we are one of the world’s largest oil companies. . But, recognising the need to move to more sustainable energy sources, BP started in the solar photovoltaic business nearly 30 years ago and has been working on “beyond petroleum’ for some considerable time.

I want to talk about the reasons for that shift and I want to focus here on the need to move the transport sector – the sector that consumes much of that oil – on to a sustainable pathway.

Any discussion about transport needs to recognise one important thing: Australians love their cars. Indeed, the partners of some avid car enthusiasts would describe that love as bordering on the unhealthy. In thinking about why the car is held in such high regard, I came across a quotation from the political satirist P.J. O’Rourke, who said:

*“Automobiles are free of egotism, passion, prejudice and stupid ideas about where to have dinner. They are, literally selfless. A world designed for automobiles instead of people would have wider streets, larger dining rooms, fewer stairs to climb and no smelly, dangerous subway stations.”*

The truth is that our world is already largely designed for the automobile and Australian’s dependency is well established. We use cars for more than 90% of our urban transport needs, according to the CSIRO<sup>1</sup>.

The Bureau of Statistics tells us there are about 10 million cars on Australia’s roads, about 1 for every 2 people and that ratio is up there with the US, Canada and Germany as the highest in the developed world.

Cars are relatively affordable and very convenient. We take the car for granted – when most of us think about getting to the shops, schools and workplaces, visiting friends in distant places, we think about using the car.

So the marketing of cars rarely needs to emphasise their utility, and instead cars become symbols of affluence and lifestyle, and instruments of freedom.

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<sup>1</sup> CSIRO Sustainable Ecosystems, 2002. Future Dilemmas. Options to 2050 for Australia’s population, technology, resources and environment. Report to the Department of Immigration and Multicultural and Indigenous Affairs. Working Paper Series 02/01.

For those of us looking to shift our transport culture, we need to recognise that our task is made harder by the high level of inertia in the system. New cars bought today, for instance, were probably designed in the early 1990s. And it takes over 10 years to turn over the parking lot.

But Australia's system of transport needs to change and – recognising the inertia in the system – we must begin that change now.

The premise of this conference is that the driver for change is the forecast shortage of oil as reserves run out. I believe the need for change is driven primarily by more short-term needs.

If you ask me when will oil run out I have to say, “that depends”. I'd like to quickly explain the projections of oil demand and supply that it depends on, and in doing so I should let you know that this speech will be available on our website to save anyone wanting the figures.

If we simply consider the currently proven world oil reserve and if we consider the current rate of production, BP's data for 2002 suggest that we have about 40 more years of oil supply, globally.

We know demand is rising, not static.

The International Energy Agency publishes a world energy outlook each year. In 2002 the IEA forecast a 1.6% annual increase in global oil demand from 2000 to 2030.

According to the IEA, almost three-quarters of that increase in demand will come from the transport sector, and most of that is expected to come from developing countries.

Oil will remain the fuel of choice in road, sea and particularly air transportation.

During the 2020s, the IEA forecasts that transport will overtake industry as the largest user of energy.

Economic theory tells us that as demand outstrips supply the price of oil will increase, and increased price will drive enhanced recovery volumes and new discoveries.

But economic theory only paints part of the picture of the behaviour of Governments. For example we know there are vast oil reserves in OPEC countries, but considerable investment in infrastructure will be required to access them. We are not sure of the rate at which that investment will take

place, and nor can we be sure about how those OPEC Governments will use their geopolitical power.

We also know that technologies are being developed to make liquid fuels from non-oil energy sources – for example gas-to-liquids and coal-to-liquids. But we don't know when those technologies will break through and become competitive.

So to complete this sketch of the global demand and supply of oil, we don't know whether the increased demand for oil will be matched by increased availability of oil resources. But we can probably assume that in the short-term it will.

The picture for Australia is somewhat starker. BP's statistical review of world energy puts Australia's currently proven oil reserves at being sufficient to meet only 14 years of production at current volumes. Clearly an oil security and balance of trade issue is looming.

It isn't my intention to confuse you with this commentary, but I want to emphasise that the picture is far from clear. The things that I take away from considering the supply and demand picture in Australia are:

- There is little doubt we are close to the peak in Australia's domestic oil production, although CSIRO Sustainable Ecosystems, in their recent work on "Future Dilemmas", found that supplies of domestic oil and gas may become constrained around 2020 to 2030.
- From 2010 onwards we should anticipate a growing need to import oil resources. This will make us more exposed to world oil markets and more vulnerable to world oil shocks.
- It's still not entirely clear when oil availability will be a constraint on Australia's transport system. But best estimates say we have around 40 years supply available on a global basis. So for decision-makers, for policy-makers and planners, for the community and for business, oil availability is not yet a strong driver for action towards more sustainable transport

Having said that I don't believe oil depletion is currently driving the need for more sustainable transport, let me say that I believe we must address the sustainability of Australia's transport system, and we must address it now.

In terms of importance I place five other drivers of action towards sustainable transport above oil depletion.

Firstly, motor vehicles are the main source of air pollution in Australia's cities<sup>2</sup> – especially for NO<sub>x</sub>, SO<sub>x</sub>, VOCs, CO and particulates. Policy-makers are aware that increased vehicle numbers are set to overwhelm the recent improvements in urban air quality. They know more action is needed. What is not widely known and has recently caught my eye are reports from the US<sup>3</sup> and Europe<sup>4</sup> suggesting urban air pollution now causes between 2 and 10 times more deaths than road accidents.

The quality of urban life in Australia is decreasing – through congestion, noise, communities being sliced in two by major transport routes, and the urban heat island effect – and transport is the main cause.

Road trauma is the third driver. There were over 1,700 deaths from road accidents in 2002 and more than 20,000 injuries<sup>5</sup>. Australian governments have worked very hard to reduce these statistics, yet many of us still find this very sobering.

Equity in access to and affordability of transport services must be improved. In lower income households more than 20% of disposable income can be

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<sup>2</sup> See for example: *Lowering emissions from urban traffic. An integrated national action plan* - [www.nts.gov.au/environment/](http://www.nts.gov.au/environment/). *Action for air. The NSW Government's 25-Year Air Quality Management Plan, 1998* - [www.epa.gov.au/air/](http://www.epa.gov.au/air/). *South-east Queensland regional air quality strategy, 1999* - [www.dep.qld.gov.au](http://www.dep.qld.gov.au). Information from [www.epa.gov.vic.au](http://www.epa.gov.vic.au).

<sup>3</sup> Earth Policy Institute Eco-Economy Update 2002-13 - Air pollution fatalities now exceed traffic fatalities by 3 to 1. <http://www.earth-policy.org/Updates/Update17.htm>.

<sup>4</sup> National Society for Clean Air, 2002. *The clean air revolution: 1952-2052*. [www.nasca.org.uk](http://www.nasca.org.uk)

<sup>5</sup> Australian Transport Safety Bureau. <http://www.atsb.gov.au/road/stats/current.cfm>

spent on private travel<sup>6</sup>. These households, typically in outer metropolitan areas, tend to have poor access to transport alternatives and consequently they spend about twice that of the highest income households.

Lastly and most importantly, we must move towards sustainable transport because of the looming **carbon shock**.

Transport accounts for 14% of Australia's greenhouse gas emissions<sup>7</sup>, and by 2010, transport emissions are estimated to be 47% above 1990 levels under a BAU scenario<sup>8</sup>. When the effects of measures already put in place by the Government are taken into account emissions are expected to be 43% above 1990 levels in 2010.

In a carbon-constrained world, this emissions growth is quite simply unacceptable. To maintain the competitiveness of our economy in a world that is increasingly placing a price on carbon, we must strive to decouple emissions growth from economic growth.

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<sup>6</sup> Patrick Moriarty, Monash University, Dec 2000. *Transport and the environment*. ACF TELA paper no. 6 (jointly sponsored by the Australian Institute of Traffic Planning and Management Inc)

<sup>7</sup> AGO. National Greenhouse Gas Inventory. <http://www.greenhouse.gov.au/inventory/index.html>

<sup>8</sup> Bureau of Transport and Regional Economics, 2003. Greenhouse gas emissions from transport - Australian trends to 2020. BTRE Report 107. <http://www.btre.gov.au>

And this demands that we start taking action to deliver a more sustainable transport system right now, because I believe the longer we give ourselves in the transition, the greater the opportunity to create more winners than losers.

What would that system look like?

I think of sustainable transport in four parts – energy, infrastructure, technology and people.

The interplay between these parts can create transport systems with both positive and negative effects. I like the way the World Business Council on Sustainable Development's Sustainable Mobility project has characterised this. It talks of what we want to increase and what we want to reduce as we move to a more sustainable transport system.

We want to increase access to the means of personal mobility – because mobility is not something anyone wants to give up – and we want to increase equity in that access.

Most importantly we want to decrease congestion and disruption to communities while we increase the live-ability of our cities.

We need to improve air quality while reducing greenhouse gas emissions, road trauma and noise.

How do we do it?

Broadly, there are two paths that can be followed. The first is an 'incremental' approach where we seek to do the things we are doing now, but to do them better. This approach sees us reacting to externalities rather than anticipating them

The second is an approach I'll characterise as 'step change' – where we seek to bring about overnight changes in systems, technologies and regulatory behaviour.

Both approaches have advantages but both also have major risks. The incremental approach brings about change too slowly.

Step change runs the risk of jumping too early in ways that economies, transport systems and people cannot handle or afford.

Let me tell you how BP is facing this dilemma.

We are working along both pathways and trying to manage the risks. We are improving the fuels that drive transport now, and are working – often in partnership with others – to bring forward the step-changes of the future. Forced evolution if you like.

BP produces the cleanest fuels on today's market – as part of our global “Clean Cities” program. This includes:

- BP Ultimate, the cleanest unleaded petrol on the Australian market, and Global Choice, our program that offsets all greenhouse gas emissions associated with fuel manufacture and use (and I should add that this program has been certified by the Australian Greenhouse Office)
- Ultra Low Sulphur Diesel, which contains only 50ppm sulphur, a factor of 10 below the Australian standard
- And along with others here in Perth, we have also taken a firm stand against the fuel additive MTBE – a notorious water contaminant

Our cleaner fuels allow people to take action, today, to reduce the adverse effects of driving, like air pollution and greenhouse emissions. Cleaner fuels deliver wins to everyone:

- The community wins because cleaner fuels improve air quality and reduce health impacts
- Motorists win with improved fuel efficiency and reduced vehicle maintenance

- There are wins for Government GHG emissions targets
- Industry wins because cleaner fuels facilitate the introduction of new engine technologies, which in turn lead to cleaner driving and further wins all round
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These represent things we have been able to do to improve the fuels that power Australia's current road transport fleet. Even though our suite of initiatives has not yet been matched by our competitors, these actions represent a positive and incremental approach. . BP taking the lead in cleaner fuels however has been forcing evolution within the oil industry in Australia.

To go beyond and increase the pace, BP is also partnering the automotive industry in research into hydrogen as a fuel source in vehicles, either through the development of fuel cell technology or the direct internal combustion of hydrogen.

You may be aware that in one trial, we will be supplying hydrogen from our Kwinana Refinery here to a trial of Daimler Chrysler buses in Perth.

BP is also supporting the development of fuel cell vehicles by working with General Motors and others to learn how to make this fuel both available and affordable. Hydrogen may be produced in many ways and BP is involved in

projects around the world evaluating different technologies especially for delivery of the fuel.

In Australia hydrogen is already produced from natural gas every day in BP Australia's refineries for use in fuels processing. In fact, enough hydrogen is produced from our Kwinana refinery every day to power 800,000 cars. The problem with making hydrogen this way – from gas - is that CO<sub>2</sub> is generated in the process, so CO<sub>2</sub> must be captured and stored to maintain the integrity of hydrogen as a fuel source.

We are exploring a range of other sourcing technologies that do not generate the same problem and we are investigating delivery technologies including on board vehicle generation of hydrogen.

There's lots to be done and lots being done. And we need as many as possible to be engaged and supportive. So I would like to congratulate the West Australian Government for being just that. In establishing the WA Sustainable Transport Energy Program, the government is also treading both pathways. It is supporting the fuel cell bus trial, changing the Government fleet to cleaner fuels and more fuel efficient vehicles, and addressing the longer term challenges.

Ladies and gentlemen, BP had a lot to say about energy policy in Australia last year – and the need to create a sustainable energy future for Australia.

We called for a new debate about the Australia we want in the future. And we argued that this debate should not be based, as so often in the past, on the power and polarisation of interests, or on bitterness and a lack of imagination in seeking win/win solutions. We thought it should involve all parts of the community and that we needed to listen hard for the soft voices as well as the loud.

We argued that the national interest required a re-examination of all aspects of energy policy. We said this should focus on creating a vision for a sustainable energy future that recognised the interdependency of economic growth, environmental protection and social equity.

We talked about the “carbon shock” that Australia is facing and the need to prepare, by defining what a sustainable energy future would look like in 2050 and beyond, and then cast back to establish a transition path and milestones to meet in 2010, 2020 and so on.

I’m pleased with the higher level attention this is now receiving – not only by governments, but also by business. That is not to say that the debate is over and a sustainable energy future assured. It’s not and we are in the midst of a

stormy debate over how quickly we should change and in which direction we should head. But the need for change is increasingly accepted.

One thing that reinforced itself to us last year, was the importance of acting in partnership with others – particularly with some of our key NGO stakeholders. We learnt that many of our concerns were their concerns and we found it valuable not only to swap notes, but also to argue in concert.

I believe that such partnerships will be even more important in arguing for change in the way we think of and use transportation. Most urgently, we need to combine forces to provide a better context for the community on why change is necessary, the benefits of the shift, and what can be done right now to begin the transition.

Governments are unlikely to move unless they believe the electorate is prepared and willing to also move. And while I believe that there is a latent concern shared by most in the community about our transportation direction – other more immediate issues easily derail this concern.

In an ongoing study examining the challenges of transitioning to a new and global transport architecture, the OECD has concluded that raising public awareness about current transport problems, the need for action, and the possible solutions were necessary precursors to nations shifting.

It concluded that three ingredients were essential in doing that. One was a better understanding of how to make future distress relevant to the community's present circumstances.

Another was a more appealing vision of what sustainable transportation actually means and would look like.

The third, following on from the first two, was greater interest among the public generally, and transport industries in particular, in moving towards sustainable transportation.

I think we should take note of what the OECD has found and act on its advice. And this is better done together than separately.

But I also think we need to do more. We need to be looking now for the "early wins" and encouraging their take-up. And we need to be working with governments to design the options for an appropriate regulatory framework.

BP intends to continue this year to argue about the need for a national and truly sustainable energy future for Australia. Our message goes further than many others, who would play out the energy debate solely on stationary energy.

In summary, I know that the sheer enormity of the energy and transport challenge can be quite paralysing. In this sense defending the status quo can seem a safer, more appealing option than embracing a challenging future.

BP has made its choice and I am sure many of you have made your choices. As far as BP is concerned, we want to help create a sustainable transport system in partnership with others who share our concerns.

In doing so, we believe that pro-actively meeting inevitable change is preferable to waiting for it to hit.

It's better to aggressively manage a major transition, to meet the storm head on, than to be a passive victim.