

1 Introduction

This submission to the Senate Select Committee on Fuel and Energy is from the Sustainable Transport Coalition of Western Australia.

This submission uses the Committee's terms of reference as headings to simplify the task of relating its content to the objectives of the Committee.

2 The Sustainable Transport Coalition of Western Australia

The **Sustainable Transport Coalition (STC)** is a non-profit community group that lobbies decision-makers and supports community action to make Australia's transport systems more sustainable. We support the following definition of sustainable transport (from Canada's Centre for Sustainable Transport):

"A sustainable transportation system is one that:

- allows the basic access needs of individuals and societies to be met safely and in a manner consistent with human and ecosystem health, and with equity within and between generations.
- is affordable, operates efficiently, offers choice of transport mode, and supports a vibrant economy.
- limits emissions and waste within the planet's ability to absorb them, minimizes consumption of non-renewable resources, limits consumption of renewable resources to the sustainable yield level, reuses and recycles its components, and
- minimizes the use of land and the production of noise."

A comprehensive outline of the STC's policies and activities can be found on the STC website, <http://www.stcwa.org.au>

Two policies of particular relevance to this Inquiry are attached to the submitting e-mail as Appendices to this submission. These are:

- *Oil Living with even less* [this is an update of the previous STC Policy, *Oil: Living with less*]; and
- *Alternative Fuels*

The STC has previously made a submission to the Senate Enquiry into Australia's Future Oil Supply and alternative transport fuels. This submission, which dealt primarily with means to reduce the reliance of the Australian economy and the Australian community on increasingly scarce oil, is also of relevance to the present Inquiry and is also attached to this submission.

3 The Causes of Higher Fuel Prices

The primary cause of higher fuel prices being experienced across Australia is the same as in most of the world: the demand for oil and products derived from oil is outstripping the ability to supply.

We are not running out of oil. Existing reserves will ensure the world has oil for many decades, but it won't be as cheap as we have been used to and may have to be prioritised for more critical tasks, such as growing our food.

A recent Australian Senate Inquiry found that Australia's own domestic oil production peaked in 2000 (see the figure below) and is already declining (see http://www.aph.gov.au/Senate/committee/rrat_ctte/oil_supply/int_report/index.htm).

Dubbed 'peak oil', the forecast switch to an economy in which demand for oil outstrips supply is well documented and is becoming widely accepted, by oil companies, geologists and government advisors around the world. In a similar fashion, US production of oil peaked in 1970. Thirty years later the US is still producing about 60% of its peak production output, but has never returned to an output of 10 million barrels a day, despite large discoveries in Alaska and the Gulf of Mexico.

While Australia's oil production peaked in 2000, our situation is made worse because more than 60% of the petrol and diesel refined in Australia comes from oil we import from other countries, leaving Australia reliant on these imports for our fuel security.

The price of oil has risen dramatically in the past 4 years, but there has been little response in Australia in terms of additional drilling for new oil reserves (as economists have predicted), because geologists know that most of Australia's future hydrocarbon reserves will be for gas production, not oil.

4 The STC Submission

The STC has for some time drawn attention to the impending Peak Oil phenomenon, which is one key cause of the increasing price of oil and oil-based fuels for transport. The other key cause is the rapidly increasing demand for energy in the developing economies of China and, to a lesser extent, India.

In simple terms, global demand for oil is continuing to increase rapidly, while supply is on the verge of declining.

In this context, the challenges facing Australia from global oil prices are far more important, strategically, than matters relating to the domestic oil industry and the pricing of transport fuels.

The STC's position on oil has recently been reviewed and updated in its policy, *Oil: Living with even less*, a copy of which forms part of this submission. The key elements of this Policy are:

- *Charge the real costs of transport and oil*, both in terms of the currently unpriced impacts of transport fuel use (eg pollution, greenhouse emissions, congestion, road trauma) and the impact on future generations of using fuel now rather than conserving it for the future.
- *Reduce car use and freight transport to conserve petroleum*, through removal of subsidies to motor vehicle use, an integrated approach to transport policy and corresponding land use and development policies and practices.
- *Making vehicle more efficient*, including fuel-efficiency requirements and proactive adoption of fuel-efficient vehicles by governments as an act of leadership.
- *Develop and use alternative fuels*, subject to such fuels whole-of-lifecycle assessment to demonstrate that such fuels provide real energy gains rather than illusory benefits simply by transforming one form of energy to another.
- *Reform transport and energy policy*. The very need for this present Senate Inquiry illustrates the lack of a coherent and effective approach to transport energy.

Substantial alternatives to our current cheap and abundant petrol and diesel transport fuels are unlikely. It is NOT possible for Australia to produce biofuels in sufficient quantity to replace petroleum as the prime transport fuel. If all of Australia's current wheat production were converted to ethanol, it would provide less than 10% of our fuel needs. Most biofuels still require a lot of petroleum for their production, refining and distribution as well as the diversion of land from food production. Hydrogen is an energy carrier, not an energy source.

The best way for us to survive is to change, now, our expectations, infrastructure and transport habits to encourage less oil-hungry modes. This approach has been also argued in the STC's Alternative Fuels policy launched in February 2007 (see <http://www.stcwa.org.au/images/altfuelpolicy.pdf>). This reduction in use of fossil fuels will also reduce Australia's CO₂ emissions, and help with our fight to reduce the impacts of climate change.

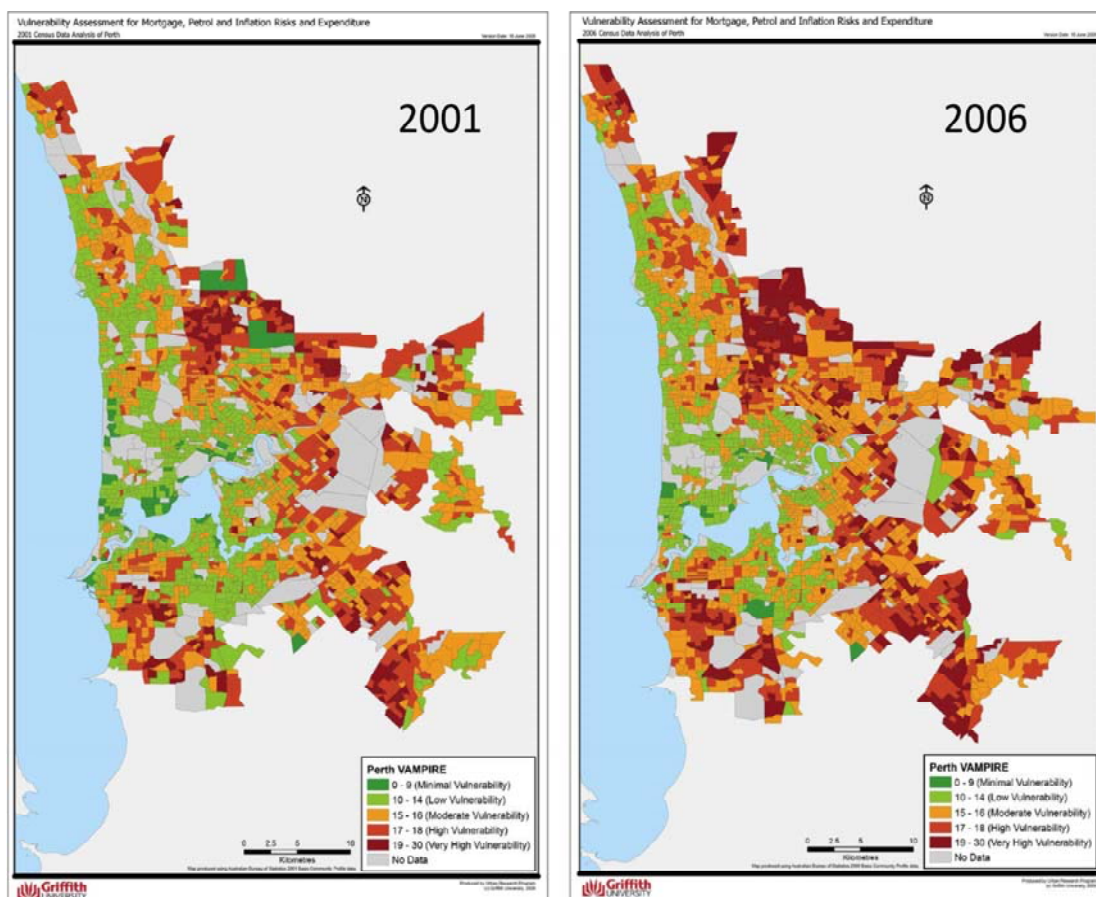
4.1 The impact of higher petroleum, diesel and gas prices

4.1.1 Families

Around half of the average household's expenditure is on three items: housing, transport and food. Costs for each of these have been increasing in real terms in recent years, putting substantial pressure on 'discretionary' areas of spending.

Analysis for Perth suggests that, even after making feasible modal changes for travel, \$2/litre petrol (in 2007 prices) would increase average household expenditure on transport by \$25 a week. This is equivalent to about 4-years growth in the discretionary economy.

The impact of higher fuel prices will be felt disproportionately by those families that have little option but to use their cars, especially for travel to and from work and to access basic and essential goods and services. Furthermore, the situation in some outer suburban areas appears to be getting worse. Using the example of Perth (maps below), most inner and middle suburbs show a mix of improvement and deterioration, as would be expected with a fairly mobile population. In outer areas, however, there are concentrations of deterioration, in areas that already had a high level of vulnerability.



Source: Jago Dodson and Neil Sipe (2008). *Unsettling Suburbia: The New Landscape of Oil and Mortgage Vulnerability in Australia Cities*. Urban Research Paper 17, Griffith University, Queensland.

The STC does not regard this as justification for a policy of artificially keeping petrol prices low, however, as such a policy would keep the cost of car use below its true cost for all users, including those who have alternatives available or who have the ability to pay the increased cost.

The preferable approach is a combination of measures that would reduce the need for people living in oil-vulnerable areas to have to rely on their cars. In the short term, this may take the form of improved public transport, particularly local links to existing regional services. In the longer term, proactive strategies to influence the location of employment and other activities.

Despite powers for zoning land for specified purposes, State and local governments have largely proved ineffective in influencing the location of employment in support of strategic planning and sustainability objectives. This will need to be addressed if large parts of the outer suburbs of Australian cities are not to become employment disadvantaged areas as petrol prices increase.

4.1.2 Small business

The STC does not have particular expertise in the area of small business.

We note, however, that one impact of higher fuel costs for personal travel will be to reduce trip lengths and, hence, to increase the extent to which people will seek to access goods and services locally rather than regionally. The smaller scale of localised activities has the potential to benefit small businesses.

4.1.3 Rural and regional Australia

Rural and regional Australia suffers a double disadvantage from increasing transport fuel prices. In addition to the cost of fuel itself and the direct impact on the prices of goods and services, rural and regional communities must bear the additional cost that higher fuel prices impose on the transport of fuel.

However, it is in regional areas that biodiesel and biofuels are most likely to be able to be locally produced, increasing energy self-sufficiency and reducing the impact of high transport cost from elsewhere.

4.1.4 Grocery prices

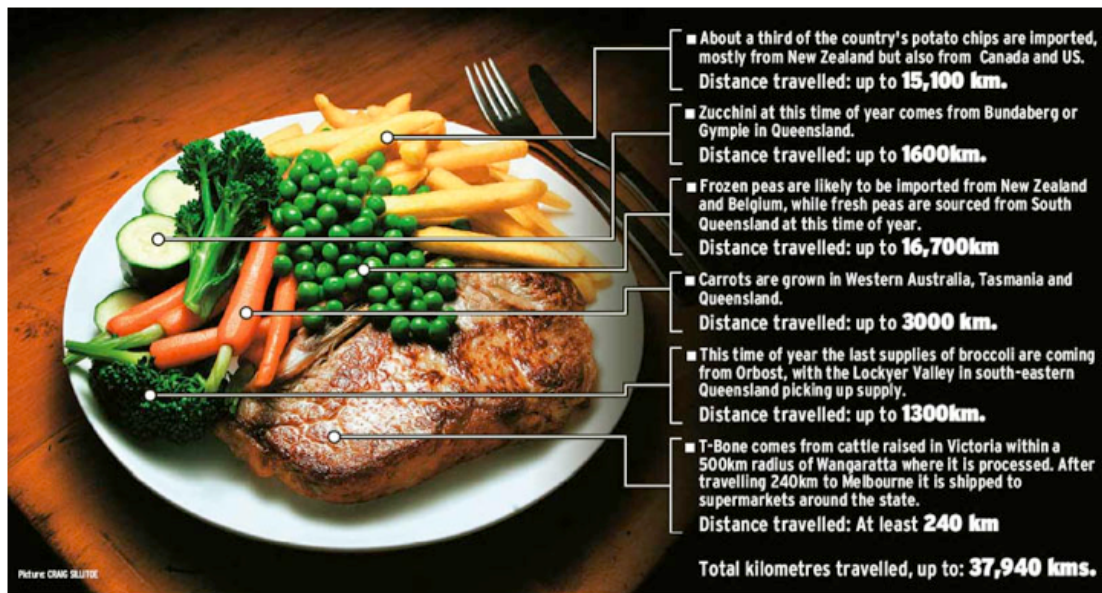
Higher oil prices will affect grocery price through the impacts on the cost of production (oil-based fertilisers, in particular) and transport, but the impact does not need to be proportionate to the increase in the cost of oil.

There are many aspects of the food distribution system that could be improved, to reduce the transport intensiveness of what we buy. The illustration below is from the Melbourne Sunday Age, 7 May, 2006. It demonstrates the extent to which transport and oil can be embodied in the food we eat.

As transport costs increase, transporting food long distances may become a luxury rather than an everyday occurrence.

We note also that some of the land most suited to food production has been taken over by our cities, for residential and commercial development. Food production has been pushed further away from where people live, increasing the transport costs and, because the new land may be less suitable for food production, the costs of production.

The planning and development of our cities should pay greater attention to protection of food-producing areas.



Source: Melbourne Sunday Age, 7 May, 2006

4.1.5 Key industries, including but not limited to tourism and transport

Tourism is a transport-intensive industry and is therefore affected directly by increases in transport costs. The transport in tourism is of three main kinds:

- Transport to and from a place of interest;
- Travel between places of interest; and
- Travel while at the place of interest.

A large amount of Australian tourism is dependent on air travel, particularly for tourists from overseas. For domestic tourism, however, rail can be a viable alternative, but long-distance passenger trains are often infrequent and slow.

Rail can also be an alternative for international tourists to travel between places of interest, but, with the exception of those trains where the journey itself is part of the tourist experience (eg the Ghan and the Indian-Pacific), is not promoted to the same extent that air travel is.

To improve the ability of longer-distance passenger rail to compete in the tourist markets, substantial investment in track and rolling stock will be necessary.

4.2 *The role and activities of the Petrol Commissioner, including whether the Petrol Commissioner reduces the price of petroleum*

The STC does not have sufficient knowledge of the operation of local petroleum market to comment specifically on this. However, it is clear that the primary driver of petrol prices is the global market for energy rather than the characteristics of the local market.

Any impact the Petrol commissioner might have on petrol prices will be small relative to the changes resulting from global oil prices.

4.3 *The operation of the domestic petroleum, diesel and gas markets, including the fostering of maximum competition and provision of consumer information*

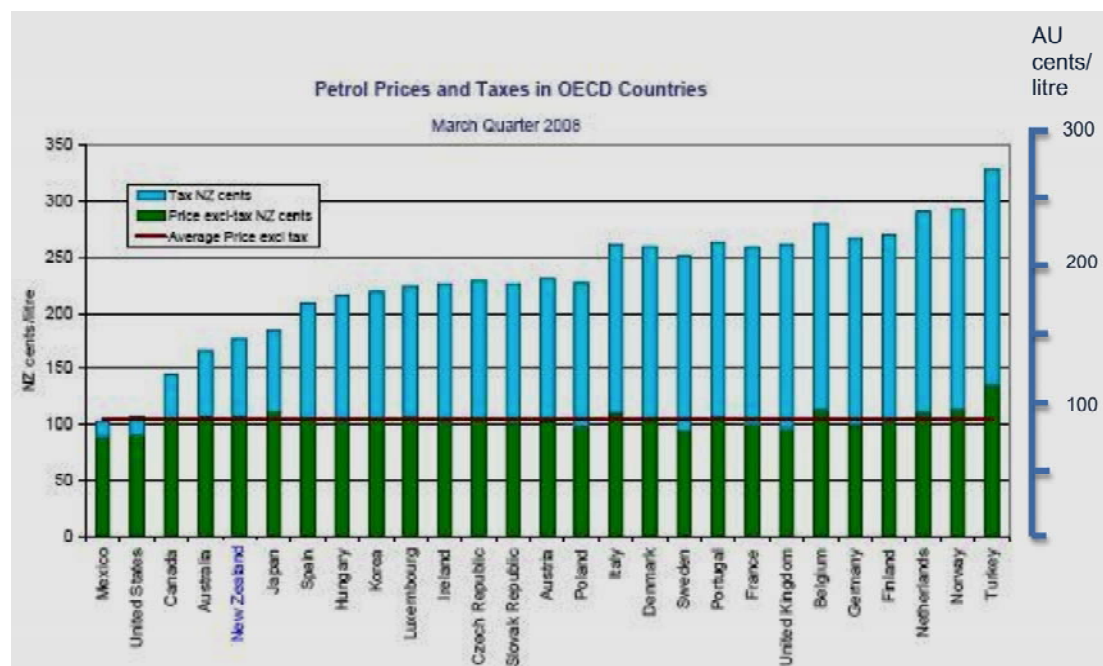
The STC does not have sufficient knowledge of the operation of local petroleum market to comment specifically on this.

Whilst it is important that the market operates efficiently and that the interests of consumers are protected, any impact on petrol prices will be small relative to the changes resulting from global oil prices.

4.4 *The impact of an emissions trading scheme on the fuel and energy industry, including but not limited to:*

- **Prices,**
- **Employment in the fuel and energy industries, and any related adverse impacts on regional centres reliant on these industries,**
- **Domestic energy supply, and**
- **Future investment in fuel and energy infrastructure**

Emissions trading schemes would, inevitably, increase the price of fossil fuels to which they are applied. Estimates of the impact of such schemes (for example, the Garnaut Report estimated that a tax of \$30/tonne on carbon emissions would add about 7cents/litre to the price of petrol) indicate that the price increase would be less than the current tax differential between Australia and most industrial developed economies.



Source: NZ Ministry of Economic Development (MED, 2008a) – available online at http://www.med.govt.nz/templates/ContentTopicSummary_20094.aspx#g3

Since most developed economies already operate with transport fuel prices in excess of those that would apply with an emissions trading scheme, there is no reason to expect that the Australian economy would be unable to adapt to the effects of such a scheme.

In a world of depleting fossil fuel resources, in which alternative energy sources and the infrastructure to utilize them have not been developed to the stage of being mainstream, there will be no shortage of buyers for oil and gas, although an emissions trading scheme might delay the realisation of some returns.

4.5 The existing set of state government regulatory powers as they relate to petroleum, diesel and gas products

The STC does not have sufficient knowledge of the regulatory system relating to petroleum, diesel and gas products to comment specifically on this.

4.6 Taxation arrangements on petroleum, diesel and gas products including Commonwealth excise, the goods and services tax, and new state and federal taxes

Taxes on transport fuels are much lower in Australia than in most developed economies. Accordingly, the price of transport fuel is significantly lower than in many countries with which Australia competes.

The low-tax regime, however, creates a vulnerability, as the cost of the oil itself represents a larger proportion of the price to the user. A given increase in the price of oil will have a larger proportionate impact on transport costs in Australia than in, say, European countries that have a higher tax regime on fuel.

In this respect, we reiterate the recommendations the STC made to the Senate Inquiry into Future Oil Supplies:

- Incrementally increase excise on petrol and diesel to moderate demand and provide funds for sustainable transport programs. Australia has one of the lowest fuel excise rates in the OECD. At a minimum, reinstate automatic indexation linked to the consumer price index and hypothecate a significant share of revenue to a sustainable transport fund.
- Support changes at State level to motor vehicle registration charges and third party vehicle insurance from fixed payments to payment based on kilometres travelled and vehicle type, to better capture real costs and provide funds for transport infrastructure and demand management.
- Remove taxation measures that encourage motor vehicle use and the purchase of four wheel drives and six cylinder vehicles over more efficient vehicles. This should include reform of fringe benefits tax and removal of the import duty concession on four wheel drives.
- Inquire into the potential for road user charges as an effective user-pays regime.

We add that the opportunity should be taken to review other taxes that might have the effect of encouraging the use of cars and hence of oil-based fuels. Specifically, the Fringe Benefits Tax concession on cars should be removed. If this cannot be achieved:

- The rate of FBT should not reduce with higher annual travel; and
- Similar concessions should be available for employer-provided benefits relating to public transport, cycling or other sustainable forms of travel.

4.7 The role of alternative fuels to petroleum and diesel, including but not limited to: LPG, LNG, CNG, gas to liquids, coal to liquids, electricity and bio-fuels such as, but not limited to, ethanol

Alternative fuels will become more economically viable as the price of fuels derived from conventional oil increases. However, the time required for these to become more than minor parts of the transport energy picture means that, at best, there would be a lengthy transitional period in which transport energy costs would be very high.

This transition will require vehicle adaptation or replacement and the development of appropriate distribution systems. The greater the number of alternative fuels, the more complex and costly the overall distribution task will be.

People will only convert to more fuel-efficient or alternative-fuel vehicles slowly, as their existing vehicles approach the end of their (subjectively determined) useful life, and as attractive alternatives become available.

For Australia, natural gas is the most obvious alternative fuel for transport purposes. Already a proportion of the urban bus fleet runs on natural gas. However, Australia only has some 1.4% of the world's known reserves of natural gas, and our gas extraction rate is growing rapidly. Our natural gas reserves will be depleted relatively quickly, leaving very little for future generations.

Australia's natural gas reserves are not sufficient to cater for all of the likely demands such as

- electricity generation
- large-scale LNG export
- replacing oil as a transport fuel,
- manufacture of urea fertiliser and
- other industrial and domestic uses

The large-scale export of natural gas at very low prices is a critical constraint. The gas could be used for our transport needs for the next 50 years (at current usage rates), but only if we halted exports and stopped generating electricity from natural gas.

The STC has recently developed a policy on alternative fuels, which is attached to this submission.

Most biofuels still require a lot of petroleum for their production, refining and distribution as well as the diversion of land from food production. Hydrogen is an energy carrier, not an energy source. It requires large amounts of energy for its manufacture and distribution. For the foreseeable future, the vast bulk of the world's hydrogen will continue to be made from petroleum sources. The 'Hydrogen Economy' may well turn out to be just a pipe-dream like fusion power. Concentration on hydrogen diverts attention and resources from practical and immediate fuel conservation options.

Governments should foster the use of "true" wastes to produce alternative fuels and other products where these have net environmental benefits. Alternative fuel production from "wastes" (waste starch, C-grade molasses, used cooking oil and tallow) appears to be relatively benign and profitable⁶, but the supply of these is restricted. The potential for biofuels to contribute to our national transport fuel energy supply is estimated to be very low. For example, CSIRO calculations indicate that using all of Australia's crop and biological waste resources would satisfy only 63% of Australia's transport energy use.

The STC considers that non-conventional alternative fuels, especially biodiesel biofuels, are likely to have the greatest potential when they can be used in the locality where they are produced. This has potentially substantial benefit for regional areas which could benefit from a local source of biomass without the need to incur high transport costs from elsewhere.

To ensure efficiency the government should encourage the local use of biofuels around places of production and processing, rather than mandating fuel ratios across states and nations.

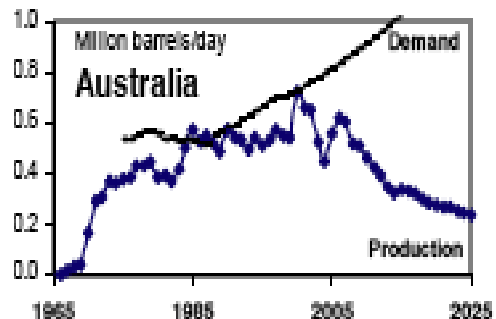
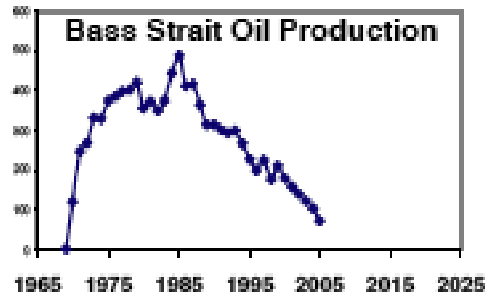
4.8 The domestic oil/gas exploration and refinement industry, with particular reference to: the impact of Commonwealth, state and local government regulations on this industry, increasing domestic oil/gas exploration and refinement activities, with a view to reducing Australia's reliance on imported oil, and other tax incentives

Whilst it is tempting to look to increased Australian, or even global, production of oil as a means of curbing increases in fuel prices, there is no evidence that there are undiscovered oil deposits large enough to have more than a minor effect on the long-term prospects for oil supply and hence prices for oil-based fuels.

According to the Association for the Study of Peak Oil (ASPO), Australia:

Australia's Bass Strait province started production in 1970, reached its peak in 1985 and has declined steadily ever since. This is typical of trends in all oilfields, and eventually of global oil production.

Australia's overall oil production peaked in 2000 and is declining. Geoscience Australia's 50% probability forecasts (in the graph in the right) show a continual steep decline, while our consumption trend is steeply upwards. The probability of new Australian discoveries even meeting our past peak production is very low indeed.¹



The most feasible means of increasing the effective supply of oil is through behavioural measures to reduce energy use in transport. The WA-developed TravelSmart household program has demonstrated reductions of between 5% and 15% in car driver trips and, in some cases, larger reductions in car-travel (and hence fuel use).

Longer-term, Australia's cities need to enhance greater localization of activities, to reduce the need to travel long distances. In the older parts of cities, in particular, much of the infrastructure needed for this already exists, but needs revitalization to meet this new opportunity.

Where longer distances must still be traveled (eg to concentrations of employment), public transport systems will need to provide an effective alternative for many more people than they currently do.

¹ Submission to the Senate Inquiry into Australia's Future Oil Supply. Australian Association for the Study of Peak Oil, 2006.

4.9 The impact of higher petroleum, diesel and gas prices on public transport systems, including the adequacy of public transport infrastructure and record of public transport investment by state governments.

In Australia, there have been already been substantial behavioural shifts in response to higher petrol prices, including increased use of public transport in urban areas, a noticeable decline in 'driving holidays' and, some decline in the popularity of six-cylinder cars and SUVs among new and used buyers.

In the case of public transport, this has been achieved without additional investment in capacity, using previously unused capacity where this existed, but resulting in high and sustained levels of congestion during peak periods over large parts of the public transport systems in mainland capital cities.

Very substantial increases in investment in public transport are needed now to relieve the system pressures already created (eg buses may already be full when they get to inner suburbs, resulting in a lower level of service to those areas) and to accommodate any further sustained switch away from commuting to work by car.

The investment is required now because there is a lead time of 2-3 years for acquiring buses and 3-4 years for rail rolling stock. These lead times will increase as cities around Australia and worldwide face the same situation of rapidly increasing demand for public transport driven by the price of fuel for private cars and continued population growth.

Western Australian governments since the 1980s have invested substantially in passenger rail infrastructure in Perth and in the renewal of the train and bus fleets to make public transport an attractive alternative to the private car, particularly for travel into the Perth CBD. Nevertheless, there are still areas of Perth that do not have the benefit of rail or other dedicated public transport infrastructure, and the needs of people living in these areas must be given priority.

There is pressure in some cities to invest very substantial amounts in additional road infrastructure. This is based on a false premise of continued cheap transport energy.

Just one year ago, the Bureau of Transport and Regional Economics forecast a 32% increase in motor vehicle traffic in Australian capital cities by 2020, and an increase of \$10 billion a year in the cost of congestion. However, one of the BTRE's key assumptions was that the long-term price of oil would be a little over US\$50 a barrel, down from the then price of around US\$65 a barrel. The price of oil is now around US\$120 a barrel, having been as high as over US\$150, and few expect the price to drop below US\$100 a barrel.²

In reality, the rate of traffic growth will be substantially lower and governments will need to make investments to facilitate travel by means other than the motor vehicle.

Urban transport has not been seen by recent Federal governments as a priority – or even as an issue that they should have an interest in. This situation has to change if cities are to continue to function efficiently as economic hubs. Congested roads, resulting from poor alternatives for passenger travel, will directly and severely impact on business, commercial and industrial activity and costs as well as on personal mobility and access.

The fact that WA governments have made these major public transport investments over the past 15-20 years, should not in any way jeopardize WA access to any Federal programs for public transport improvement.

² *Estimating Urban Traffic and Congestion Cost Trends for Australian Cities*. Working Paper No71. Bureau of Transport and regional Economics, Canberra, ACT. 2007.



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22 February 2006

Ms Roxane le Guen
Committee Secretary
SENATE RURAL & REGIONAL AFFAIRS & TRANSPORT
Parliament House
Canberra ACT 2600

Dear Roxane,

**SENATE INQUIRY INTO AUSTRALIA'S FUTURE OIL SUPPLY AND
ALTERNATIVE TRANSPORT FUELS**

The Sustainable Transport Coalition of WA (STCWA) welcomes the Senate's inquiry into Australia's future oil supply and alternative transport fuels and makes the following comments in regard to Inquiry reference D: "**options for reducing Australia's transport fuel demands**".

Most Australians live in urban areas and cities that are the location for the major use of oil products and associated negative environmental impacts. More than 95% of Australia's transport fuel is directly derived from crude oil. Improving the sustainability of Australia's cities and their transport systems should be a priority and a national approach is needed. The Commonwealth Government should play a greater role rather than leaving it to 'market forces'. Unfortunately positive initiatives to do this did not continue after the change of government in 1996. The recommendations of the Sustainable Cities Inquiry, Australian Urban and Regional Development Review (particularly the Green Cities report) and the National Housing Strategy would have lowered oil use in Australia and should be considered in the inquiry.

The **STC** is a non-profit community group that lobbies decision-makers and supports community action to make Australia's transport systems more sustainable. We support the following definition of sustainable transport (from Canada's Centre for Sustainable Transport):

"A sustainable transportation system is one that:

- allows the basic access needs of individuals and societies to be met safely and in a manner consistent with human and ecosystem health, and with equity within and between generations.
- is affordable, operates efficiently, offers choice of transport mode, and supports a vibrant economy.
- limits emissions and waste within the planet's ability to absorb them, minimizes consumption of non-renewable resources, limits consumption of renewable resources to

the sustainable yield level, reuses and recycles its components, and minimizes the use of land and the production of noise.”⁽⁵⁾

The STC advocates five priorities for change to lower the consumption of oil for transport in Australia:

(1) Make the costs of transport more explicit

Transport users do not pay the real cost of travel. Many costs are paid by the community (e.g. health effects of air pollution and costs of road maintenance), are fixed (e.g. vehicle registration and insurance) or, arguably, too low (e.g. fuel prices compared with many other nations) and so distort the market resulting in social and environmental costs for the community and increased costs for Government. Responsible public policy needs to more fully incorporate the real cost of transport in what transport users pay, (e.g. through energy prices, road user charges or other means, to send a stronger signal to influence travel behaviour). It will also provide funds that can be invested in repairing damage and improving system efficiency.

Recommended actions:

- **Incrementally increase excise on petrol and diesel to moderate demand and provide funds for sustainable transport programs. Australia has one of the lowest fuel excise rates in the OECD (see Appendix 1). At a minimum, reinstate automatic indexation linked to the consumer price index and hypothecate a significant share of revenue to a sustainable transport fund.**
- **Support changes at State level to motor vehicle registration charges and third party vehicle insurance from fixed payments to payment based on kilometres travelled and vehicle type, to better capture real costs and provide funds for transport infrastructure and demand management.**
- **Remove taxation measures that encourage motor vehicle use and the purchase of four wheel drives and six cylinder vehicles over more efficient vehicles. This should include reform of fringe benefits tax and removal of the import duty concession on four wheel drives.**
- **Inquire into the potential for road user charges as an effective user-pays regime.**

(2) Moderate energy demand by changing transport patterns

Many urban passenger trips made by car could be travelled using modes that generate fewer costs and more benefits (i.e. more urban passenger trips on foot, bicycle and public transport) resulting in more physical activity, lower energy use (renewable at that) and fewer emissions. Changes can also be made in freight transport, by changing mode split (e.g. more freight on rail), logistics (e.g. using available container and truck capacity better) and location (e.g. localising production and consumption and eliminating attenuated trips when alternatives are available). Integrating land use and transport will be an important strategy to manage travel demand, including mixed used urban villages on public transport networks, enhancing pedestrian and cycle access within neighbourhoods and across cities and locating commercial and industrial activities according to accessibility requirements.

Recommended actions:

- **Broaden the scope of AusLink, the Federal Government's national land transport plan, to include urban passenger public transport, bicycle transport and travel demand management in the scope of AusLink and consider transport energy, especially the implications of oil decline, in setting priorities and assessing funding bids.**

- **Require integrated transport and land use plans at regional or corridor level as a prerequisite for AusLink project funding.**
- **Develop a national response to Australian and global oil decline, emphasising demand management initiatives like *TravelSmart* and alternative fuels for passenger and freight transport. A significant shift to walking, cycling, public transport and rail freight is needed to cut energy consumption and atmospheric emissions. These modes can play a greater role in meeting travel needs at less impact than cars and road freight for many trips.**
- **Broaden the scope of benefit cost analysis of projects in Federal planning. For alternative modes include savings in health spending, environmental damage and road maintenance; for motor vehicle include the costs of reduced community health, environmental damage and road maintenance.**
- **Include support for an urban growth boundary around major capital cities, development a location policy and targets for residential density increases to halt urban sprawl and better integrate land use and transport.**
- **Establish an integrated transport funding mechanisms. This should ensure transport funding advances strategic aims and is allocated on the basis of regional transport plans and intermodal, triple bottom line project appraisal.**
- **Review and act to address taxation measures that bias modal preferences towards car commuting. This should include reforms to fringe benefits tax to encourage employer provision of public transport fares and bicycles and cashing out of car and parking options.**

(3) Make Australian vehicles more efficient

The energy efficiency of the Australian car fleet has changed little over the last three decades. The increase in four wheel drive vehicles in the passenger fleet - larger and with less stringent efficiency requirements - has contributed as has increased 'road load' due to auxiliary power requirements. More efficient vehicles means reducing weight, improving engine technology to enhance fuel economy and encouraging use of more appropriate urban passenger vehicles.

Recommended actions:

- **Make energy efficiency requirements, including fuel economy and 'road load' measures, more stringent in the Australian Design Rules for all classes of motor vehicle.**
- **Tie government assistance to the domestic automotive manufacturing industry to achieving greater energy efficiency and environmental performance in the motor vehicle made here.**
- **Governments should lead by example by developing and implementing fleet purchasing and management policy that requires the use of energy efficient vehicles and alternative fuels as the first preference. This should favour four rather than six cylinder cars and LPG or CNG rather than petrol or diesel.**
- **Ensure all registered vehicles pass a roadworthy test to ensure all vehicles conform to minimum environmental and safety standards.**

(4) Develop and use alternative fuels

Many alternative transport energy sources have been suggested. In the short term LPG and CNG can be substituted for petrol and diesel, and Australia's natural gas reserves gives it a competitive advantage in starting the transition away from oil. Biofuels (especially biodiesel) generated from renewable energy sources should be considered as potential transport fuels, particularly for regional areas. A mix of energy sources will be needed to replace oil as a transport fuel.

Recommended actions:

- **Encourage the use of LPG and CNG in the motor vehicle fleet by preferencing its use in government fleets, providing financial incentives for vehicle conversions or purchase of dedicated gas vehicles and financial support for provision or conversion of fuel storage and distribution infrastructure.**
- **Review domestic requirements for gas for stationary and transport energy and ensure government-industry agreements for resource projects favour hypothecation for domestic supply and support development of downstream processing in environmentally appropriate locations.**
- **Provide research and development support for innovation in alternative transport energy technologies, electricity and biofuels based on renewable sources.**
- **Develop a transport energy research framework that sets out an assessment process for allocation of funding support and accreditation of green transport energy sources.**

(5) Policy framework for transport energy reform

Seek a national energy policy that commits to measures to start the move to a more energy efficient, less oil dependent transport system. It should recognise the consequences of oil vulnerability and effects of current transport energy use. The Federal Government has a significant influence on transport energy use through taxation and regulatory powers. Leadership is also needed from State Government and local councils.

Recommended actions:

- **Initiate an inquiry into the implications of declining domestic oil production and peaking global oil production for Australia, and the priorities for reform that will promote sustainability in the transport sector. This should include scenarios modelling to assess the consequences of higher oil prices and transport energy alternatives.**
- **Develop a national transport energy policy to guide action including taxation and industry assistance reforms, vehicle design standards and transport planning.**
- **Implement a Transport Energy Strategy for Australia. Priorities for action should include the government fleet and travel, community awareness and behaviour change, green transport investment and land use planning.**
- **Encourage local government participation in the Cities for Climate Protection Program and support reforms in vehicle fleet management to favour alternative fuels and energy efficiency.**

Oil is a finite and valuable global resource. Predictions from a range of authoritative sources indicates that the peak in global oil production could occur between now and 2015. The precise timing of peak oil production and its rate of decline is impossible to predict. However, the cost to the Australian community of being caught unprepared by an oil shortage, especially for our transport fuels, means that we cannot risk doing nothing.

Over the next decade Australia's security of supply of oil is expected to deteriorate as we becomes less self-sufficient (see Appendix 2) and as the proportion of global oil supplied by the Middle East increases. Geopolitical forces and physical supply chain problems may lead to times where supply cannot meet demand, especially if the global consumption of oil continues unabated. Along with the capacity and security of supply issues, a significant and growing constraint on conventional fuel use and the development of alternate sources such as

a hydrogen economy or tar sands are the associated emissions of the greenhouse gas carbon dioxide (CO₂) leading to rapid climate change.

The STC welcomes the chance to provide further information to the Committee via a verbal presentation. We also attach our *Oil: Living with Less* policy that provides additional policy ideas that will assist your Inquiry's deliberations.

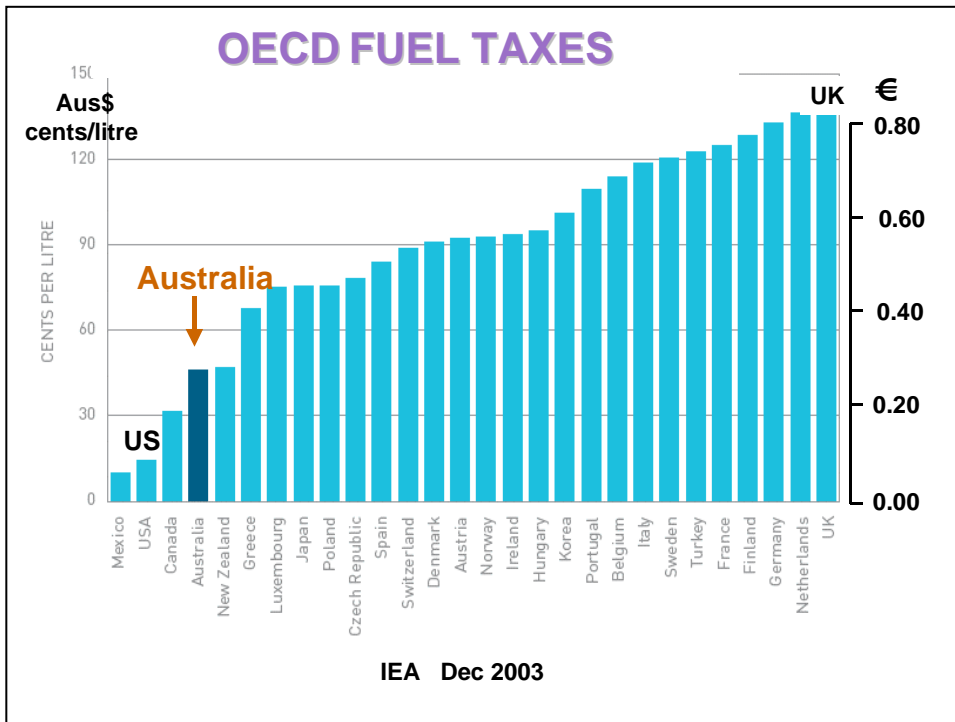
Sincerely,

A handwritten signature in black ink, appearing to read 'D. Worth', with a long horizontal stroke extending to the right.

Dr David Worth

STCWA Convenor

Appendix 1.



Appendix 2.

