



ACT Peak Oil

**Submission by ACT Peak Oil
to the inquiry into
Australia's Future Tax System**

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Executive Summary

ACT Peak Oil calls on the Review to adopt a number of *guiding principles* including:

- An energy carrying substance is only worth producing if the energy obtained is greater than the energy to collect it for use, that is, has positive EROIE
- Petroleum is of very high quality and difficult to substitute
- The Laws of Thermodynamics say that energy is neither created nor destroyed, but can only be changed to another form of energy but, in the process, some energy is lost as unusable heat energy (entropy)
- Science is a process of inquiry, not a set of laws or absolute truths thus government must reject acceptance of beliefs that contradict observational evidence
- There are limits to growth in a finite system
- Economics can provide insights but is subordinate to ecology
- Shared resources can be depleted or polluted by people who do not feel the full cost of their actions thus the Polluter Pays Principle must apply
- Policy must not advantage the old at the expense of the young nor those yet to come
- As the wealthy can shield themselves from the effects of their behaviour and thus have little incentive to conserve resources, extreme wealth disparity must be avoided
- Preventative action should be taken even when there is not 100 per cent proof that something will happen (Precautionary Principle)

ACT Peak Oil makes the following *recommendations*:

- The removal of distortions in energy consumption due to the tax system, while retaining fuel taxation as oil is massively underpriced due to insufficient information about the true state of world oil reserves.
 - Including the abolition of FBT concession for motor vehicles and 4WD import duty concessions.
- The elimination of the business fuel tax credits introduced from July 1 2008.
- Reduction of tax incentives for biofuel production, so that its price reflects environmental damage and its net energy benefits or losses.

- The Government remove tax barriers to the development of electrified mass transit powered from renewable sources.
- A revenue neutral scheme involving a dramatic reduction vehicle registration fees, but added tax on petrol, LPG and diesel fuel to compensate.
- All 'mileage' allowances or reimbursements to be abolished or be based on a modest 4-cylinder 1500cc car.
- **The imminent and profoundly disruptive impacts of Peak Oil should be explicitly acknowledged in preparing Australian Government tax policy.**

Background

'Peak Oil' is the imminent global peak and irreversible decline of world oil production. Some commentators such as retired petroleum engineer Kenneth Deffeyes believe the peak has already passed (Deffeyes 2005) while others believe it has only just passed. Many economists, as against petroleum engineers, believe the peak may not be for another two or more decades though they do concede it will happen sometime given oil is a finite resource. The price surge of 2008 has ensured a vicious spiral of debt-deflation, so that economic activity is falling as fast or faster than oil production, leading to a moderation in its price.

Peak Oil is a phenomena too long ignored by government. The price surge brought Peak Oil to the fore but the urgency to tackle it has diminished with the price. We hope it does not take too many more volatile oil price cycles, as the oil price fuels, and then chokes off the economy, before it is acknowledged that action must be taken.

The group ACT Peak Oil was formed in early 2005 by Canberrans concerned about its implications. ACT Peak Oil has made a number of submissions, in particular to the Senate inquiry into Australia's future oil supply (Pollard, 2006). We subsequently also appeared before the committee.

We believe the Australian Government's historical legacy may well come to be defined by how it handles, or ignores, Peak Oil.

The tax review consultation paper makes certain assumptions; that Globalisation will increase inexorably; that the Australian economy will yield sufficient tax revenue to fund government at its present size; and that there will not be too much difficulty collecting taxes. These assumptions need to be questioned in light of Peak Oil and the long-running economic downturn it has already triggered.

The ramifications of Peak Oil will include rising transport fuel prices; international discord; the inability of the US and other powers to enforce the rules of Globalised commerce; and more localised forms of commerce such as barter, outside the tax system. Peak Oil will become increasingly apparent as an underlying cause of many of Government's biggest problems. Rather than making changes at the margins, the

Government must embrace Peak Oil adaptation as a strategic goal. Tax policy can help guide Australians towards this goal by influencing the economic decisions they make.

Future scenario

ACT Peak Oil submitted the following future economic scenario as part of its submission to the 2008 Federal Budget process, in January 2008. Our predictions have been born out; the Australian Dollar has fallen; oil prices increased and remain historically high; the housing market has fallen; consumers are burdened by excessive debt levels; and superannuation is a debacle. With the exception of high interest rates and large CPI increases, indicators are heading in the direction outlined below. But only in the last few days long-term interest rates in the US show signs of breaking upward with inflation from trillion-dollar bailouts already in the pipeline.

High international oil prices drive up the cost of living for Australians, as they pay more and more for private transport. Prices paid by producers also increase, with costs passed on to consumers. As people divert their incomes increasingly to pay for everyday expenses, housing investment declines, leading to a stagnant market. As capital gains dry up, investors force rents up. Unable to afford interest rate burdens, property investors sell, bringing inflated asset values down, and forcing others to sell. The property market enters a long decline.

The risk of bad debts and the lack of new borrowing forces banks to increase the profitability of their existing mortgage portfolios. They lift their interest rates – whether the Reserve Bank officially sponsors the increase or not.

Those unable to afford high rent are forced to the urban fringe. Without adequate public transport and poor urban planning, they must endure hours of traffic congestion each working day to reach well-paid employment. The increasing price of petrol forces many out of the workforce, especially as some cannot even afford to drive their children to childcare.

Australia's consumer-led economy falls into recession. Past borrowing had not been for investment in infrastructure and capacity to cope with Peak Oil – productive infrastructure which would earn income to pay down the debt. Instead the “prosperity”, or rather, consumption, had been funded by an unprecedented debt binge, which must

now be repaid out of current and future income. What investment there had been is largely “invested” in non-productive property speculation. And what new buildings that had been added to the housing stock are energy-inefficient, and are far-flung, requiring expensive car trips for daily needs.

Biofuels offer little relief, as its production is energy intensive (probably a net energy loss) and even with tax subsidies is poor value for money. Additionally it takes up an increasing proportion of international food supply, forcing up the price of daily essentials.

The drought, driven by Climate Change, compounds the crisis. Agriculture is hard-hit by ballooning fertiliser prices, as natural gas feed-stock is diverted as a substitute for petroleum. Diesel for running farm equipment surges in price. The trade deficit rises as the oil imports increase and food exports decrease. Lower domestic consumption does little to improve the trade deficit as oil is an essential for daily living.

An oil export crisis develops as oil producing nations retain their production for domestic consumption. International oil exports decline faster than the rate of world production. Australia, being a net oil importer, is hard-hit. International aviation shrinks and Australia’s tourism industry is decimated, leading to a further worsening of the trade deficit.

Tax revenues shrink as unemployment and social security payments rise. The equity markets perform poorly as investors chase the few assets with a positive outlook (such as oil producers and bullion). The Consumer Price Index surges, rendering retirement savings inadequate. Superannuation fails to deliver the expected retirement incomes, causing many to fall back on the pension. The Future Fund also fails to anticipate the future and makes lower-than-expected returns.

The trade deficit can no longer be funded by investment flows. Australian banks are now borrowing much less from overseas to loan domestically. This demand for the Australian dollar falls while the international supply of the \$A is plentiful from our oil imports. The Reserve Bank cannot prop up \$A demand any further by running down its foreign reserves. The Australian dollar falls. The risk of currency losses from \$A-denominated investments climbs. Domestic interest rates rise further. The structural demand for

expensive imported oil is high per capita compared to most other developed nations. With no prospect of the trade deficit improving, foreign investors see no end to \$A weakness.

But this is not just a future scenario, some of it is already happening.

Peak Oil Outlook

The world is experiencing a confluence of two major challenges: Peak Oil and Climate Change. Many of the policy imperatives for climate change such as a fuel excise or the wholly inadequate Carbon Pollution Reduction Scheme, however, are inadequate to deal with the externality of oil scarcity. Currently, those nations with energy resources are advantaged but this will change in favour of nations who have the technology to utilise free resources such as the Sun.

Principles

Before dealing with specific policy proposals, we would like to emphasise the following guiding principles for government decision-making.

Physical constraints

- Energy return on energy invested (EROEI)

An energy carrying substance is generally only worth producing if the energy obtained from it is greater than the energy required to collect, extract and ready it for use. Presently there is doubt that ethanol is worth producing as a fuel for this reason since it currently requires diesel and oil-derived fertilisers to farm and transport the feedstock (Pimentel et al, 2005). Note that the EROEI of ethanol produced from sugar cane in Brazil is improved by use of the cane trash or stubble as a fuel during processing and distillation. Taxation should avoid making an energy investment with a negative return appear worthwhile because it is financially advantageous.

- Energy quality

Fuel quality is a rough measure of how easy it is to transform the fuel into usable energy. Petroleum in particular has a very high quality, due to its high energy density and being a

liquid. A negative EROEI may be worthwhile if it creates a fuel with a higher quality – e.g. turning coal into oil.

- The Laws of Thermodynamics

In essence that energy is neither created nor destroyed, but is transformed into other forms of energy, and inexorably, tends to be dissipated as unusable heat energy. Usable energy is known as exergy. Unusable energy is entropy. No thermodynamic system can operate at 100 per cent efficiency, and is almost always at a fraction of that. More energy is lost with each additional step in a process. Taxes should not subsidise round-about methods means for achieving policy goals.

Broader principles

- Scientific approach

Science is a process of inquiry, not a set of laws or absolute truths. As such, government should avoid slipping into complacent acceptance of beliefs (popular, institutional or otherwise) in contradiction of observational evidence. An inquisitive, open-minded approach is required for finding the best options. Tax policy needs to be similarly-minded.

- The Limits to Growth

There are limits to exponential growth in a finite system. Growth tends to overshoot if there is inadequate knowledge of available resource supplies and pollution sinks, or a lack of foresight. In the worst case there is the possibility of die-off. So if we have little idea how much oil is left, yet continue to grow the economy or population as fast as we can, disaster awaits us. There is an inexorable tendency for new and insurmountable limits to emerge as a result of attempting to evade other limits. This was the crucial but usually forgotten insight of *Limits to Growth: Beyond the Limits* (Meadows et al, 2004). Techno-fixes cannot solve all of our biggest problems. Taxation can be a tool for re-pricing a commodity which the market, for whatever reason, underprices.

- Appropriate use of economics

Economics offers insights into how to achieve ends in the most efficient way and how rational people are likely to behave. For instance, if oil producers in the Middle East fear their reserves will be taken unlawfully, they may sell the oil at fire-sale prices, giving the false impression that oil is plentiful. It seems their fears were justified. Respect for property rights is a basic principle of economics. Nonetheless economics is subordinate to ecology and needs to be seen in that context. There is no economy without the environment.

- Avoiding the tragedy of the commons

Shared resources can be depleted or polluted by people who do not feel the full costs of their own actions, but when everyone does the same thing, everyone suffers – costs are externalised. Economic systems need to take account of this by internalising externalities e.g. by taxing or banning. This is the basis for the Polluter Pays Principle.

- Intergenerational equity

Governments need to make human development sustainable so that older people do not advantage themselves at the expense of the young and those yet to come.

- Wealth equality

The wealthy usually have a greater say as to how society works, but if they can shield themselves from the consequences of their behaviour (i.e. externalise them) then they have little incentive to conserve resources and reduce pollution – unless they are particularly conscientious. Extreme wealth disparity is a threat to a society's survival.

- The Precautionary Principle - the problem of insufficient information

In assessing the cost and benefits of action, government must assess the risk of worst-case scenarios eventuating and account for this. For instance, even if there is only a 10 per cent probability of disastrous climate change, prudent insurance risk management would recommend taking preventative action. Similarly, this is the case for Peak Oil. As the

former WA transport minister said (MacTiernan 2004) “It is also certain that the cost of preparing too early is nowhere near the cost of not being ready on time.”

Recommendation: That Review adopt the above principles in assessing proposals for taxation policy.

Specific Proposals

Fringe Benefits Tax Concessions

Changes to the tax system, such as Fringe Benefits Tax concessions for vehicles, would give people greater incentive to make the switch away from cars sooner (Denniss, 2003). Presently these concessions cost the budget approximately \$2 billion annually.

An example of perverse policy outcomes can be seen in Sydney CBD. Car parks charge extraordinary fees knowing that the cost is heavily tax-subsidised. Drivers then commute in salary-packaged cars (which are also subsidised) through congested roads, forcing the NSW Government to waste money on roadworks instead of improving public transport.

Buyers of 4WD vehicles pay only a 5 per cent import duty compared with the 10 per cent rate for cars. This amounts to a subsidy of over \$100 million annually (Denniss, 2003) for vehicles which use considerably more petrol than an average sedan.

Recommendation: The removal of distortions in energy consumption due to the tax system, while retaining fuel taxation as oil is massively underpriced due to insufficient information about the true state of world oil reserves.

Recommendation: The FBT concession for motor vehicles and the 4WD import duty concession should be abolished.

Business fuel tax credits

The ATO website states:

<http://www.ato.gov.au/corporate/content.asp?doc=/Content/00147125.htm>

From 1 July 2008 fuel tax credits will be expanding which means more businesses than ever will be able to reduce their business fuel costs.

Many businesses will be able to claim fuel tax credits for the first time, and many others will be able to claim additional fuel tax credits.

Tax Commissioner Michael D'Ascenzo said until now businesses have only been able to claim fuel tax credits for fuel used in heavy vehicles, such as trucks, and specific activities, such as primary production.

"Businesses should check now if they are eligible from 1 July 2008 to claim fuel tax credits for the majority of fuel used in their business – whether it's used in blower vacuums and backhoes, or chainsaws and concrete mixers," Mr D'Ascenzo said.

"Many businesses may not know they could be eligible to claim fuel tax credits, so we're hoping to spread the word and provide those businesses with the support and information they need."

The only fuels that are not eligible are fuels used in cars or other light weight vehicles travelling on public roads, alternative fuels and aviation fuels.

This change further increases business dependency on cheap plentiful fuel and exposes the Government to pressure to maintain or increase unsustainable concessions. It is also naïve to assume the petrol purchased for a private vehicle will not be dishonestly attributed to overzealous use of a whipper-snipper, for instance.

Recommendation: The elimination of the business fuel tax credits introduced from July 1 2008.

Biofuels

Biofuels such as ethanol grown from palm oil are often not the salvation they have been touted to be. Palm oil has caused drastic loss of habitat in many tropical countries, putting at risk such species as the Orangutan. There are some exceptions, such as ethanol made from switch grass that is said to have an EROEI of five, but all biofuels must be rigorously assessed for net energy benefits.

Recommendation: Reduction of tax incentives for biofuel production, so that its price reflects environmental damage and its net energy benefits or losses.

Mass transit

Electrified mass transit can be powered from renewable sources such as electricity produced from wind. Perth Metro is a great example of a current modern infrastructure project. Presently public transport is discriminated against. For example, it does not benefit from fringe benefits tax concessions.

The proposed Carbon Pollution Reduction Scheme is quite inadequate in changing transport patterns, particularly as it exempts petrol, and in any case, oil scarcity is not accounted for.

Recommendation: The Government remove tax barriers and distortions preventing the development of electrified mass transit powered from renewable sources.

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With this legislation abolish vehicle registration fees (except for a nominal amount of, say, \$25.00 to cover the administrative costs of administering vehicle registration) and add a tax on petrol, LPG and diesel fuel to compensate. That is, the change should be revenue neutral.

Recommendation: A revenue neutral scheme involving a dramatic reduction vehicle registration fees, but added tax on petrol, LPG and diesel fuel to compensate.

'Mileage' allowances

All business tax concessions should be based on a modest 4-cylinder 1500cc vehicle. If anyone, be they tradesman or hire car owner, needs a bigger car they should be free to buy one, but for taxation/mileage/reimbursement purposes, it should be a 4-cylinder 1500cc.

Recommendation: All 'mileage' allowances or reimbursements must be based on a modest 4-cylinder 1500cc car.

Chief Recommendation:

The imminent and profoundly disruptive impacts of Peak Oil should be explicitly acknowledged in preparing Australian Government tax policy.

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