

# Peak Oil Briefing Paper

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# Executive Summary

## The Problem of Peak Oil

As a non-renewable resource, there are geological constraints on the quantity of oil. In the past 150 years, we (globally) have used up one third to one half of all supplies. We are now using four times more oil than we are finding.

It is increasingly appreciated that the peak of extraction may have occurred already, in 2008. So as each year goes by into the future, there will be less oil available.

Naturally oil in the cheapest, most accessible reserves was extracted first. So the reserves we are left with are more difficult and expensive to access and extract.

Oil dependency/depletion and climate change need to be considered in tandem.

## Implications

Peak oil presents a real challenge to us as a society – oil has become such an integral part of our society and the end of its abundant and cheap supply is bound to create serious disruption around the world and not least in the west of Melbourne. Most importantly, our agricultural/food system relies on unsustainable fossil fuel inputs.

Personally, as an economist, I hadn't realised how fundamentally energy availability and economic development are linked. It was not discussed in my Commerce degree.

## More Resources for Understanding the Problem

Many resources for researching peak oil have been suggested by the Transition Hobsons Bay Initiating Group. These resources cover much detail about supply side factors, such as discoveries, reserves, recovery rates, role of technology, Energy Return On Energy Invested, and the alternatives to liquid fossil fuels.

## Solutions for State and Local Governments

I am aware of few Australian governments that have given Peak Oil the attention it deserves (at least in the public arena). The City of Maribyrnong paved the way in 2009 with its Contingency Plan and the Sunshine Coast Council has developed a Peak Oil Strategy. The Tasmanian Government has announced a study into Peak Oil and two other local councils in Victoria have promised to acknowledge it in their planning.

A checklist of (initial) ideas within the role of governments has been composed. This checklist generally relates to Raising community awareness of oil dependency/oil depletion; Enabling community responses to climate change and peak oil; Supporting initiatives that increase community resilience. Ending biodiversity loss is also critical.

## About Transition Hobsons Bay

I am a member of Transition Hobsons Bay, a residents group aiming to bring about a sustainable future in our local area. The group devises initiatives to build community resilience in the face of oil dependency and climate change. We trust these initiatives will make our local neighbourhoods more vibrant, interesting and liveable. I hope they will increase trust and interconnectedness among us. They include a fruit and veggie swap, community bring-a-plate dinners and home energy use workshops, to name just a few.

Transition Towns is a growing international grassroots movement with a positive vision for the future. Everyone is encouraged to get involved with Transition.

# Problem

By definition non-renewable resources like oil (liquid energy) will run out one day. Fossil fuels represent millions of years of sunlight tightly condensed.

*“We need to leave oil before oil leaves us.”  
Fatih Birol, the International Energy Agency’s chief economist<sup>1</sup>*

However, it is increasingly understood that the time that supply of crude (or the amount of oil we are able to extract from the ground per day) peaks is more important. Demand for energy is continuously rising from developed and developing economies. While supply is able to keep up with demand, prices stay relatively cheap. However when supply levels off, and then starts reducing, the unmet demand means there is scarcity and oil will become more and more expensive.

It turns out that this point (peak oil) is when amount of oil or the reserves in a particular oil field is half used. Many countries of the world have experienced this phenomena, including Australia in 2000. Importantly the most accessible and therefore cheapest oil was extracted first. The remaining oil becomes more difficult and expensive to access. Then Energy Return On Energy Invested (EROEI) becomes relevant. That is, how much energy does it take to produce the energy?<sup>2</sup>

There has been a lot said and written about supply side factors, such as the declining rate of new discoveries, reserves, recovery rates, role of technology and ERORI. Much of the recommended reading below falls into this category.

Other topics on the recommended reading list are the alternatives to liquid fossil fuels. However the upshot seems to be nothing will match the energy return of liquid fuels. This era of cheap oil was a bonanza. Just 40 litres of petrol in the tank of your car is estimated to be equivalent to 4 years of human manual labour<sup>3</sup>!

Of course any proposed alternative that exacerbates climate change (usually involving other fossil fuels) is no alternative at all. Peak oil must be considered in parallel with climate change/climate chaos.

Appendix 1 shows a sample of governments, organisations and institutions who have recognised the reality of peak oil.

## ***When will peak oil occur?***

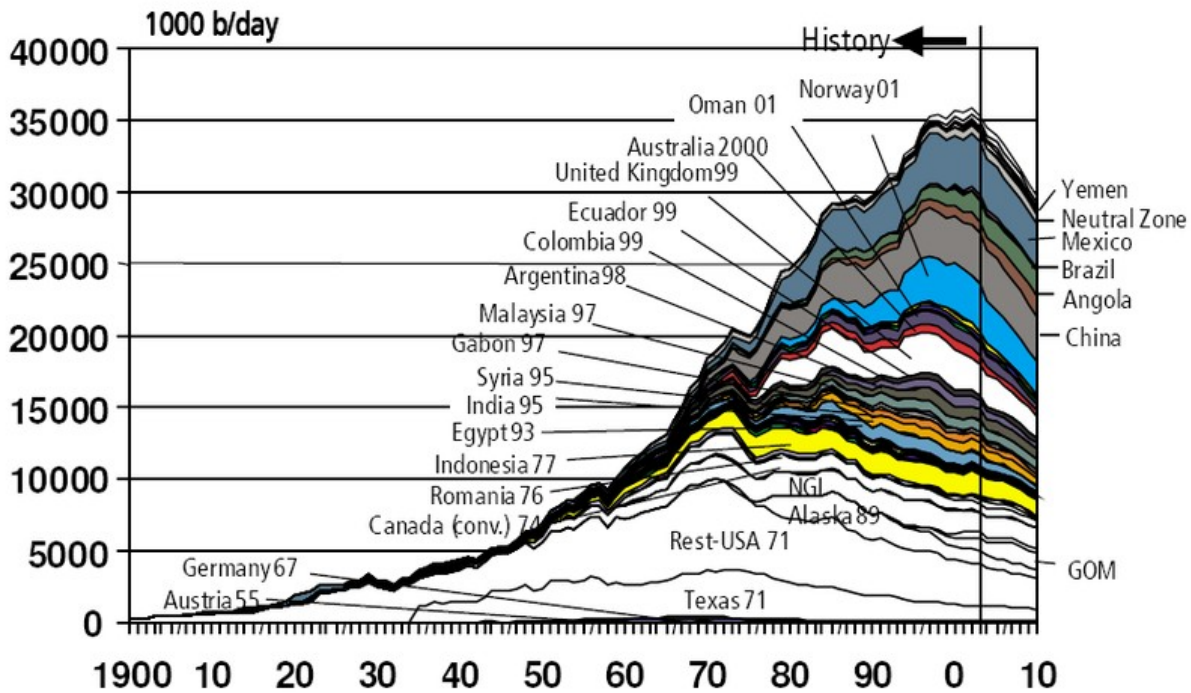
The global peak of oil production will only be recognised in hindsight, but as the graph below shows, production in fields outside of Russia and the Middle East started to decline as early as 1955. Global production continued to increase as new discoveries came on line but production has been outstripping new discoveries at a ratio of about four to one for some time now.

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1 <http://www.independent.co.uk/news/science/warning-oil-supplies-are-running-out-fast-1766585.html>

2 When first discovered in US in the 1930s the estimated EROEI of oil finds was in excess of 100. Now the global average is about 20, with new oil fields considerably lower. Source: Rob Hopkins, 'The Transition Handbook' Finch Publishing p.45

3 Rob Hopkins, The Transition Handbook, Finch Publishing, p.9



Source: Industry database, 2003 (IHS 2003)  
OGJ, 9 Feb 2004 (Jan-Nov 2003)

The realisation is growing that global peak production of oil may have already occurred. Certainly there has been no growth in oil production in recent years.

The International Energy Agency's forecasts in their *2010 World Energy Outlook*<sup>4</sup> are "Crude oil output reaches an undulating plateau... but never regains its all-time peak of 70mb/d reached in 2006." Their chief economist says more candidly

*"It is definitely depressing, more than depressing, I would say alarming, which is what we try to do, to alarm the governments."*  
And *"just to stay where we are in 20 years (we need) to find and develop 4 new Saudi Arabias, and this is a major challenge."*<sup>5</sup>  
*Fatih Birol, the International Energy Agency's chief economist*

Professor Kjell Alekett, the president of ASPO International, the Association for the Study of Peak Oil said in an interview on ABC's Radio National<sup>6</sup>

*"The oil that is left, we should use it in a smart way."*

4 [http://www.worldenergyoutlook.org/docs/weo2010/WEO2010\\_ES\\_English.pdf](http://www.worldenergyoutlook.org/docs/weo2010/WEO2010_ES_English.pdf)

5 <http://odac-info.org/peak-oil-quotes> in September 2010 interviewed on BBC One Planet

6 <http://www.abc.net.au/rn/scienceshow/stories/2010/3061272.htm>

# Implications

The impact of peak oil will be felt throughout our economy and society, including the most critical area of food production and distribution.

*"Now, almost all aspects of our economy are dependent on a constant and growing supply of cheap oil, from transport to farming, to manufacturing and trade."*

*New Economics Foundation, "Growth Isn't Possible", January 2010<sup>7</sup>.*

Most alarmingly, the existing pattern of food production is energy intensive. It has been estimated that 1 kilojoule of food is currently produced from 10 kilojoules of inputs (supplied by fossil fuels)<sup>8</sup>. This model is unsustainable (and crazy). It is critically vulnerable to increased energy prices.

The US Department of Energy commissioned the seminal report on peak oil<sup>9</sup> in 2005 . Here is an excerpt from its executive summary -

*"The peaking of world oil production presents the US and the world with an unprecedented risk management problem. As peaking is approached, liquid fuel prices will increase dramatically, and without timely mitigation, the economic, social and political costs will be unprecedented. Viable mitigation options exist on both the supply and demand sides, but to have a substantial impact, they must be initiated more than a decade in advance of peaking."*

The report says industrialized nations will experience increased costs for the production of goods and services, inflation, unemployment, reduced demand for products other than oil and lower capital investment.

This report, commonly referred to as the Hirsch report, has been criticised for not taking into account climate change in its "mitigation options".

So as the Club of Rome report found in 1972 and the CSIRO confirmed in 2008<sup>10</sup>, there are limits to growth. These limits arise not just from liquid fuels, but also food production, industrial production, pollution, and consumption of other non-renewable natural resources.

One of the key messages from this is about timing. Given time markets may be able to react but it is clear from the analysis of the CSIRO, the IEA, The US Department of Energy and many others that we don't have time to wait for markets.

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7 [http://www.neweconomics.org/sites/neweconomics.org/files/Growth\\_Isnt\\_Possible.pdf](http://www.neweconomics.org/sites/neweconomics.org/files/Growth_Isnt_Possible.pdf)

8 David Strahan, 'The Last Oil Shock', John Murray Publishers, 2008, p129

9 RL Hirsch, R Bezdek, R Wendling, 'Peaking Of World Oil Production: Impacts, Mitigation, & Risk Management', National Energy Technology Laboratory, US Department of Energy, 2005

10 Graham Turner, "A comparison of the limits to growth with Thirty Years of Reality", 2008, <http://www.csiro.au/files/files/plje.pdf>

# More Resources

I recommend following –

David Strahan, 2007, 'The Last Oil Shock', John Murray (Publishing)

Chris Martenson's dispassionate take on Peak Oil:  
<http://www.chrismartenson.com/crashcourse/chapter-17a-peak-oil>

ABC's Catalyst program in April 2011 titled "The Oil Crunch"  
<http://www.youtube.com/watch?v=RaNz3qS5WAo>

I asked others in the Transition Hobsons Bay Initiating Group what resources resonate with them on this subject. Their responses follow:

Wayne Bowers, Williamstown -  
SMH article on Peak Oil:

<http://www.smh.com.au/news/environment/energy-smart/peak-oil-petrol-to-reach-8-a-litre/2008/07/10/1215658037458.html>

CSIRO's Fuel for Thought report of which the above article was based:

<http://www.csiro.au/resources/Fuel-For-Thought-Report.html>

Although a few years old now this Four Corners report was quite good:

<http://www.abc.net.au/4corners/content/2006/s1680717.htm>

And here are the graphs that show the current status of countries that are (now) net importers of oil:

[http://www.crudeoilpeak.com/?page\\_id=1571](http://www.crudeoilpeak.com/?page_id=1571)

Colin Cockroft, Altona -

An excellent resource to gain an understanding of this issue is "Crude: the incredible journey of oil"<sup>11</sup>. The quote that I really liked from that film was a potential question from future generations that went something like "you had this wonderful and plentiful resource that could be used for all sorts of high value products like long lasting materials and pharmaceuticals and you burnt it?"

Wendy Clarke, Newport -

I like Georgie Monbiot on the subject, will just have to chase up which book<sup>12</sup>. And of course there is the movie, End of Suburbia!

Tiki Swain, Altona North -

I don't have any favourite reading on peak oil, as such - more some specific comments about oil and resources in Australia. I look at things like the ABARE data to see what their data is on our usage patterns and what their projections are for oil and other energy forms in our country. (ABARE is the Australian Bureau of Agricultural and Resource Economics, though they've been merged and renamed this year to ABARES to include rural statistics. Their data is what drives a lot of Federal government stuff.)

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<sup>11</sup> <http://www.abc.net.au/science/crude/>

<sup>12</sup> See his blog at <http://www.monbiot.com/archives/category/oil/>

Here's the March 2010 report on Australian energy production and use projections to 2029-30:

[http://www.abare.gov.au/publications\\_html/energy/energy\\_10/energy\\_proj.pdf](http://www.abare.gov.au/publications_html/energy/energy_10/energy_proj.pdf)

in which I draw your attention to the following quote from the summary:

"With declining oil production and limited prospects for an expansion of refinery capacity, Australia's net trade position for crude oil and refined petroleum products is expected to weaken over the outlook period. Australia's net imports of liquid fuels are projected to increase by 3.3 per cent a year on average."

ABARE (now ABARES) will not always have the most accurate projections, (like any modelling/predictive group they are limited by the ability to know which part of our own future we're in!) but it's their job to have good ones based on stuff we're sure about. The main point from the quote above is that we'll want more oil if things continue the way they are, but our ability to get it is going to decrease and we can't just make more of our own. Australia's in an interesting position regards oil - we are a net energy exporter, which will most likely continue, but that's due to black coal and uranium. Our own energy usage is heavily oil-based, primarily in the transport/vehicular sector, and we can't produce anywhere near enough of that to meet our current needs let alone increasing needs. So it's possible that our country's future includes the situation where our industries make vast amount of money off energy exports while our citizens are effectively energy-broke.

Regardless of any position someone takes on "peak oil" and whether it has or hasn't happened, we should always remember that Australia is not the USA (where much of the peak oil information comes from). We have a much different population and resource map, and we will suffer some fairly hefty effects from any decline in world oil production or increased competition for that resource unless we make ourselves more resilient to it.

## Solutions

The 'trail blazing' authorities in Victoria are local governments -

**Maribyrnong City Council** addressed the subject first with its Peak Oil Contingency Plan (June 2009)<sup>13</sup>

**Darebin City Council** has an Adaption Plan (November 2009)<sup>14</sup>.

At a forum hosted by the Municipal Association of Victoria in November 2010, **Baw Baw Shire Council** and **Macedon Shire Council** stated their intentions to incorporate peak oil into their next Council plans (2013-2017).

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<sup>13</sup> Institute for Sensible Transport, Peak Oil Contingency Plan – Maribyrnong Council, June 2009.

<sup>14</sup> [http://www.darebin.vic.gov.au/Page/page.asp?Page\\_Id=7004&h=1](http://www.darebin.vic.gov.au/Page/page.asp?Page_Id=7004&h=1)



Many governments world-wide are responding to peak oil<sup>15</sup>. Focusing on Australian governments outside Victoria -

A **Federal Government Senate Committee** in 2007 published 'Inquiry into Australia's Future Oil Supply and Alternative Transport Fuels'.<sup>16</sup> It found Australia should be planning now for the enormous changes that will be needed to move to a less oil dependent future.

In March 2007, **Brisbane City Council's** Climate Change and Energy Taskforce released their final report 'A Call For Action'<sup>17</sup>. Brisbane Council adopted some of its recommendations, stating "peak oil is a more recent consideration".<sup>18</sup>

**Marrickville Council** (in Sydney) became the first local Council in Australia to sign the Oil Depletion Protocol<sup>19</sup> in August 2007, and reports annually on its oil consumption as part of its Peak Oil Action Plan<sup>20</sup>.

A select committee from **South Australia's** Legislative Council inquired into the impacts of peak oil. Its 2008 report<sup>21</sup> reflects its limited terms of reference.

The **Queensland Government's** 'Oil Vulnerability Mitigation' task-force reported in September 2007. It has since issued an information paper for householders and received a report outlining risks and opportunities<sup>22</sup>.

The **Lord Mayor of Sydney**, Clover Moore, addressed the NSW Parliament about peak oil in September 2008<sup>23</sup>.

**Coffs Harbour City Council** (NSW) adopted a 'Peak Oil Report and Action Plan'<sup>24</sup> in November 2008.

**Sunshine Coast Council** adopted the [Sunshine Coast Climate Change and Peak Oil Strategy 2010-2020](#) in June 2010<sup>25</sup>.

The **Tasmanian Government** announced<sup>26</sup> in June 2010 a \$250,000 study into "Study for Prosperity Beyond Peak Oil". The final report is expected in late 2011.

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15 See <http://postcarboncities.net/resources>. It appears to have stopped being updated in 2009, but there's still plenty of responses there.

16 [http://www.aph.gov.au/senate/committee/rrat\\_ctte/completed\\_inquiries/2004-07/oil\\_supply/index.htm](http://www.aph.gov.au/senate/committee/rrat_ctte/completed_inquiries/2004-07/oil_supply/index.htm)

17 <http://www.brisbane.qld.gov.au/about-council/council-vision-strategies/brisbanes-plan-for-action/taskforce-report/index.htm>

18 <http://www.brisbane.qld.gov.au/about-council/council-vision-strategies/brisbanes-plan-for-action/index.htm>

19 <http://oildepletionprotocol.com>

20 [http://www.marrickville.nsw.gov.au/environment/sustainable\\_council/climate\\_change\\_action.html?s=2108708371](http://www.marrickville.nsw.gov.au/environment/sustainable_council/climate_change_action.html?s=2108708371)

21 <http://www.parliament.sa.gov.au/Committees/Pages/Committees.aspx?CId=156&DUId=137cce93-7a0e-4bb3-85ec-791cb53ea517>

22 <http://www.tmr.qld.gov.au/Projects/Name/O/Oil-vulnerability-mitigation.aspx>

23 <http://www.parliament.nsw.gov.au/prod/parliament/hansart.nsf/V3Key/LA20080925068>

24 [http://www.coffsharbour.nsw.gov.au/resources/documents/CHCC\\_Peak\\_Oil\\_Report1.pdf](http://www.coffsharbour.nsw.gov.au/resources/documents/CHCC_Peak_Oil_Report1.pdf)

25 <http://www.sunshinecoast.qld.gov.au/sitePage.cfm?code=cc-strategy>

26 [http://www.google.com/url?sa=t&source=web&cd=4&ved=0CC8QFjAD&url=http%3A%2F%2Fwww.budget.tas.gov.au%2Fmedia%2Fpdf%2Freleases%2Fnick\\_mckim%2FOil\\_price\\_vulnerability\\_study\\_2010\\_budget.pdf&ei=38IKTeyJLIHYrQe5pemNDA&usq=AFQjCNEI10kxalh81tSQPZzyD0OUvE\\_U8g&sig2=Yt1-DiZul4rYI\\_DCdNSwrg](http://www.google.com/url?sa=t&source=web&cd=4&ved=0CC8QFjAD&url=http%3A%2F%2Fwww.budget.tas.gov.au%2Fmedia%2Fpdf%2Freleases%2Fnick_mckim%2FOil_price_vulnerability_study_2010_budget.pdf&ei=38IKTeyJLIHYrQe5pemNDA&usq=AFQjCNEI10kxalh81tSQPZzyD0OUvE_U8g&sig2=Yt1-DiZul4rYI_DCdNSwrg)

## **'Oil price vulnerability' or 'Peak oil'?**

Governments seem to too often respond to peak oil in terms of oil price vulnerability, but this approach is missing the main point. This table outlines why.

<b>Oil price vulnerability</b>	<b>Oil production peak</b> -relative where demand outstrips supply capacity or absolute where global reserves reach a peak
It's an economic issue (we simply model different economic outcomes to guide our actions)	It's a resource availability issue (we need to include a scenario where there is an interruption in supply e.g. rationing to preserve essential services such as ambulance and fire services)
We don't need to rethink our economic system	We must change our economic system
We have years up our sleeve to work on oil substitutes and mitigation and adaptation efforts	An immediate response is necessary
Transport is the biggest user of oil and where we focus our mitigation efforts	The challenge is much deeper, having more immediate and likely impacts across many sectors
Our problem is insufficient energy to undertake the activities we want to do	Peak oil is actually a symptom of our current ecological overshoot. Oil substitution or finding new energy sources won't actually address the challenges we face (refer to peak minerals)
The responsibility for action rests with those who understand and respond to economic modelling	A whole of society response is necessary and urgent. Public education and engagement is a high priority.

## **Solutions 'Checklist' for Federal Government**

Association for the Study of Peak Oil (ASPO) – Australia has the following recommendations

1. “Talk about it, Talk about it.”
2. Engage people. “Participatory democracy”
3. Dismantle the perverse policies that encourage heavy car use and excessive freight transport.
4. Encourage frugal use of fuel and disadvantage profligate users. Fuel taxes should be incrementally raised to reduce usage.
5. Smart card personal fuel allocation system. A flexible mechanism for short-term oil shocks, as well for encouraging people to reduce their fuel usage.
6. Concentrate on the psychological and social dimensions of automobile dependence, not just “technological fixes”
7. Implement nationwide “individualised marketing” travel demand management
8. Railways, cyclepaths and public transition are better investments than more roads
9. Give priority for remaining oil and gas supplies to food production, essential services and indigenous communities, using the Smart-Card system.
10. Review the oil vulnerability of every industry and community sector and how each may reduce their risks
11. Promote through the United Nations an Intergovernmental Panel on Oil Depletion, and a Kyoto-like protocol to allocate equitably the declining oil among nations. An international tradable sliding scale allocation mechanism is one hypothetical option.

My additional initial ideas that address peak oil, in the context of climate change, are-

### **Energy – other**

Implement policy environment to enable renewable energy alternatives as spelt out by Beyond Zero Emissions Stationery Energy report

### **Food**

Look to permaculture for some answers

Establish a National Food Security Agency on Food Security<sup>27</sup>

### **Other**

Change insurance laws to enable community groups to be able to respond to climate change and peak oil without public liability insurance.

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27 [http://www.chiefscientist.gov.au/wp-content/uploads/FoodSecurity\\_web.pdf](http://www.chiefscientist.gov.au/wp-content/uploads/FoodSecurity_web.pdf)

## **Solutions 'Checklist' for State Government**

My initial ideas that address peak oil specifically, in the context of climate change, are-

### **Education**

Mount a community information campaign explaining peak oil and its implications.

Become a signatory to Oil Depletion Protocol

Introduce peak oil preparedness programs into every school

### **Energy**

Conduct an energy resilience assessment and implement findings

Energy efficiency to include programs to manage demand

Facilitate planning decisions for community energy projects (e.g. wind)

### **Transport**

Expand bicycle network and invest in upgrading existing paths

Link annual vehicle registration fees to scheduled vehicle weight

### **Environment/ Biodiversity**

Continue and expand funding of climate communities and explore other initiatives to prepare the community for the changes ahead

Conserve remaining biodiversity to end genetic erosion, including bringing an immediate end to the logging of old growth forests

Bring an immediate end to GM/GE crops

### **Health/Community**

Undertake a Food Security Strategy

Encourage any program that supports nutrient dense, (chemical) spray-free Victorian food.

Food labelling laws, to include labelling of hybrids on fresh fruit & vegetables shelves.

Focus health spending on wellness promotion (i.e prevention) rather than illness-management. Refer to The Gawler Foundation.

Stop programs to spray pests (e.g. locusts) – the sprays causes illness to humans and other species, and 'pests' are an essential response in a biodiverse eco-system.

Support community responses to climate change and peak oil

## ***Solutions 'Checklist' for Local Government***

Initial ideas that address peak oil specifically, in the context of climate change, are -

### **Education**

Strategic Planning and a municipal strategic statement that reflects the certainty of peak oil and the necessity of built in local resilience and food security.

Follow the lead of Marrickville City Council, become a signatory to Oil Depletion Protocol

### **Energy**

Conduct an Energy Resilience Assessment

Establish a risk management task-force on managing effects of energy insecurity

Find ways to actively facilitate community energy projects (e.g. Westgate Wind)

Zero interest loans (grants) given to a set number of households in the community for substantial energy efficiency measures in the home.

### **Council**

A planning framework that protects historical significance without compromising on the sustainable use of a building.

Nominate sustainability champions in each and every council department

Join the MAV's Councils and Communities In Transition program (CACIT)

Set up an Interdepartmental Red Tape Reduction Committee (as per Whitehorse CC)

Funding from petrochemical rates redirected to local sustainable investment in renewable energy and capital investment in bicycle infrastructure, food waste re-direction etc

Parking lots planning for dual uses, including sporting facilities in low peak periods

### **Transport**

Expand bicycle network and invest in upgrading existing paths

A cyclist safety plan for the municipality, with risky areas improved where necessary

Improve on the pedestrian permeability of all listed activity centres

Lobby State Government for light rail in the municipality down key arterial roads including Kororit Creek Road and Millers Road

### **Waste**

Go plastic bag free

Close the loop - convert 'waste' into valuable products (e.g. establish a tip shop, encourage gardeners to harvest seaweed, establish community composting programs)

A fourth bin for all householders to capture food waste for redirection.

Recycling bins comparable in frequency to rubbish bins to be installed over four years.

Advertising campaign to educate citizens of what goes in what bin.

### **Community**

Identify and fund community orchards and gardens in every neighbourhood (as per City of Sydney)

A community greenhouse action plan

Encourage residents to grow edibles on their nature-strip, notably fruit & nut trees

Set up & maintain working gardens showcasing fruit & veggies adapted to local conditions.

Promote seed saving and biodiversity.

Support community responses to climate change and peak oil

Promote reskilling workshops

Introduce "buy local, not just locally" campaign to support the local economy

Enable the community to develop an "Energy Descent Action Plan"

## About Transition

I'm a member of Transition Hobsons Bay. Transition Hobsons Bay is a new local group that is part of the grassroots Transition Towns movement. The movement started in 2006 and now has thousands of local groups around the world.

Transition groups tackle the issue of how our community can respond to the challenges of peak oil and climate change in positive way to help to create a future that we can all look forward to. Transition seeks a more resilient future (defined as the ability to withstand shocks). So initiatives encourage relocalisation of food, energy and transport systems.

*"If we don't change direction, we'll end up where we're going."* Chinese Proverb

Transition comes with a cheerful disclaimer *"we truly don't know if this will work. Transition is a social experiment on a massive scale."* Community-led change might be just enough, just in time.

*"The Transition Community approach is an empowering local response to crisis situations and offers the hope of achieving an improved local economy and improved social cohesion."* Municipal Association of Victoria (MAV), 2009

Transition Hobsons Bay is seeing some appetite for change from the Hobsons Bay community and since February 2010 we have attracted about 60 members.

What we've initiated -

- A monthly backyard fruit and veggie swap - started in October
- A sustainable food guide, including eating out options
- 'Fermenting Fridays' to encourage and share knowledge about fermenting. All traditional cultures associated a ferment with good health.
- Household energy reduction workshops for the community
- Community bring-a-plate dinners

What we're working on -

- A community composting program, setting up partnerships with food premises to provide compostable waste to the community saving landfill and benefitting gardens.
- 'Glut and glean' - a community fruit and nut harvest. Fruit will be harvested from trees in Hobsons Bay which would otherwise go to waste. Groups of volunteers will visit willing householders when their fruit is ripe to harvest their fruit trees.
- Reskilling workshops - fruit preserving, sewing, bicycle maintenance.

Our groupsite is at [www.transitionhb.groupsites.com](http://www.transitionhb.groupsites.com)

Find below some local newspaper articles about the group and more information can be found on -

[About Transition Hobsons Bay](#)

[Sustainable food brochure](#)

[Newport Fruit and Veggie Swap](#) and see photos at the facebook page

## Appendix 1

A one page sample of governments or institutions who have recognised peak oil as a significant problem. There was an explosion of concern in 2010.

The **UK Secretary for Energy and Climate Change** committed in 2011 to establish an "[Oil Shock Response Plan](#)"<sup>28</sup>. Reputedly it will address how to protect the economy "if we knew that the oil price would soar to \$250 in 2014."

The **US Military** issued a report<sup>29</sup> in 2010 warning that "by 2012, surplus oil production capacity could entirely disappear, and as early as 2015, the shortfall in output could reach nearly 10 million barrels per day."

The **German Military** think tank tasked with fixing a direction for the German military analysed the implications of peak oil in 2010. The report was leaked. It reportedly warns of "shifts in the global balance of power, of the formation of new relationships based on interdependency, of a decline in importance of the western industrial nations, of the "total collapse of the markets" and of serious political and economic crises."<sup>30</sup>

**New Zealand Parliament Research Paper**<sup>31</sup> in 2010 called 'The next oil shock?' is unequivocal in its warnings, despite the question mark in its title. It quotes the US Department of Energy that oil is "the lifeblood of modern civilisation".

**Lloyds of London** and **Chatham House** are among London's most respected institutions. Apparently motivated by insurance concerns, they issued a report in 2010<sup>32</sup> warning against "business underestimating catastrophic consequences of declining oil."

**Macquarie Bank's** Commodities Research department published a paper<sup>33</sup> in 2009. In an interview the senior executive said "This is our view -- capacity has pretty much peaked in the sense that declines equal new resources."<sup>34</sup>

A coalition of **UK business leaders** (including Sir Richard Branson) formed the UK Industry Task Force on Peak Oil and Energy Security which issued a report in 2010 called "The Oil Crunch: A wake-up call for the UK economy." This report argues policies to address Peak Oil must be a priority.<sup>35</sup>

The French newspaper *Le Monde* published an article in 2010 about the **U.S. Department of Energy (DoE)** concerns<sup>36</sup>. "Once maximum world oil production is reached, that level will be approximately maintained for several years thereafter, creating an undulating plateau. After this plateau period, production will experience a decline." Peak oil.

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28 <http://blogs.forbes.com/energysource/2011/05/23/british-government-faces-up-to-peak-oil/>

29 [http://www.google.com.au/url?sa=t&source=web&cd=1&ved=0CB0QFjAA&url=http%3A%2F%2Fwww.jfcom.mil%2Fnewslink%2Fstoryarchive%2F2010%2FJOE\\_2010\\_o.pdf&rct=j&q=joint%20operating%20environment%202010&ei=GO00TY2kA4HvcMSW6aEK&usg=AFQjCNHryjt4R6VLb8qRWLeiiAY5\\_ZOu6g&cad=rja](http://www.google.com.au/url?sa=t&source=web&cd=1&ved=0CB0QFjAA&url=http%3A%2F%2Fwww.jfcom.mil%2Fnewslink%2Fstoryarchive%2F2010%2FJOE_2010_o.pdf&rct=j&q=joint%20operating%20environment%202010&ei=GO00TY2kA4HvcMSW6aEK&usg=AFQjCNHryjt4R6VLb8qRWLeiiAY5_ZOu6g&cad=rja)

30 The report is in German but reported on and available from here: <http://www.peakoil.net/peak-oil-an-analysis-by-german-military>

31 <http://www.parliament.nz/en-NZ/ParlSupport/ResearchPapers/4/6/a/00PLEco10041-The-next-oil-shock.htm>

32 <http://www.chathamhouse.org.uk/publications/papers/view/-/id/891/>

33 [http://www.google.com.au/url?sa=t&source=web&cd=2&sqi=2&ved=0CB0QFjAB&url=http%3A%2F%2Fwww.aspo-australia.org.au%2FReferences%2FBruce%2FMacq7-Oil-Sept-09-Iain-Reid-NY.pdf&rct=j&q=macquarie%20bank%20The%20Big%20Oil%20Picture&ei=QboKTf\\_VL4zWvQOOhvnbBQ&usg=AFQjCNF8\\_6Bkr\\_bLWChP7VYqIR6JNsc1XA&sig2=oBuFqdV0Hw1TSC5p-4z2PA&cad=rja](http://www.google.com.au/url?sa=t&source=web&cd=2&sqi=2&ved=0CB0QFjAB&url=http%3A%2F%2Fwww.aspo-australia.org.au%2FReferences%2FBruce%2FMacq7-Oil-Sept-09-Iain-Reid-NY.pdf&rct=j&q=macquarie%20bank%20The%20Big%20Oil%20Picture&ei=QboKTf_VL4zWvQOOhvnbBQ&usg=AFQjCNF8_6Bkr_bLWChP7VYqIR6JNsc1XA&sig2=oBuFqdV0Hw1TSC5p-4z2PA&cad=rja)

34 <http://www.futurespros.com/news/commodities---futures-news/interview-when-will-we-hit-peak-oil%20-try-2009---macquarie-84926>

35 <http://peakoiltaskforce.net/download-the-report/2010-peak-oil-report/>

36 <http://petrole.blog.lemonde.fr/2010/03/25/washington-considers-a-decline-of-world-oil-production-as-of-2011/>

## Appendix 2

Following a meeting with Wade Noonan MP, we provided the following:

For a limited assessment of **local impacts**, some academics (Dodson and Sipe's) have mapped their Vulnerability Assessment for Mortgage, Petrol and Inflation Risks and Expenses. They have written a number of papers referencing this assessment, all with a slightly different focus. I draw your attention to the statement in their 2009 that there are "increasingly pessimistic assessments emerging about the future security of conventional oil supplies."

2009 publication by implication. Quotes oil prices in mid 2008. No census date referenced. No Melbourne map

[http://www.griffith.edu.au/\\_data/assets/pdf\\_file/0014/208220/ANZAPS09-Securing-suburbia-buy-Dodson-and-Sipe.pdf](http://www.griffith.edu.au/_data/assets/pdf_file/0014/208220/ANZAPS09-Securing-suburbia-buy-Dodson-and-Sipe.pdf)

2008 publication. Has Melbourne map on p7. Based on 2001 Census data [http://www.aspo-australia.org.au/References/Bruce/Dodson2008PlannedHouseholdRisk\\_AustPlanner.pdf](http://www.aspo-australia.org.au/References/Bruce/Dodson2008PlannedHouseholdRisk_AustPlanner.pdf)

2006 publication. Based on 2001 Census data.

<http://www98.griffith.edu.au/dspace/bitstream/10072/12665/1/41353.pdf>