



Submission to
Inquiry into Australia's Oil Refinery Industry

Summary

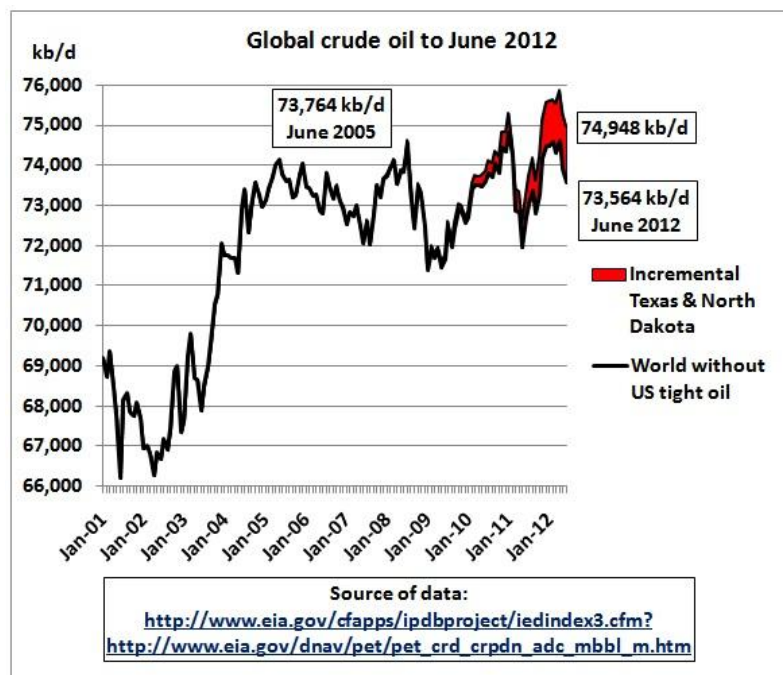
The closing of Australian refineries is i.a. caused by peak oil and will increase Australia's liquid fuel vulnerability for following reasons

- (a) Refineries can procure crude oil from many more different sources than a direct fuel import supply chain can achieve from a few Asian refineries which are highly dependent on crude inputs from the Middle East
- (b) Chevron experienced declining petroleum sales
- (c) The competition in Asian refineries will be fierce as China is manufacturing 14 million new cars every year.

The Federal government's energy security assessment (ACIL Tasman's oil vulnerability report and the NESR report) are completely peak oil ignorant and therefore fundamentally flawed. They need to be re-written from scratch immediately.

(1) Global context of crude oil supplies

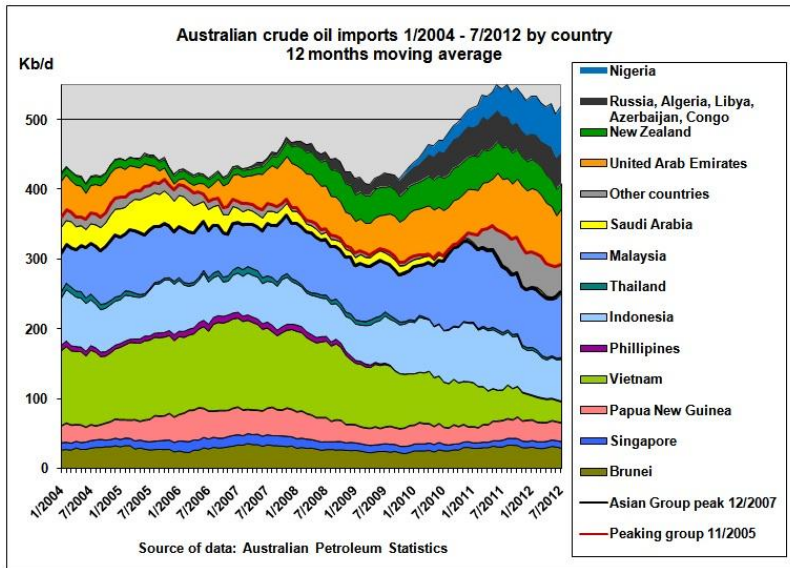
From my menu "latest graphs" <http://crudeoilpeak.info/latest-graphs>



We can clearly see that the recent 2011/12 uptick in oil production was mainly caused by US shale oil (tight oil). The rest of the world continues on a bumpy production "plateau" since 2005.

(2) Australian crude oil imports

On this graph we see:



(a) crude imports from South East Asia peaked because crude oil production in these countries peaked

(b) crude imports from Saudi Arabia have been replaced by oil from the United Arab Emirates

(c) declining imports under (a) have been offset by imports from New Zealand

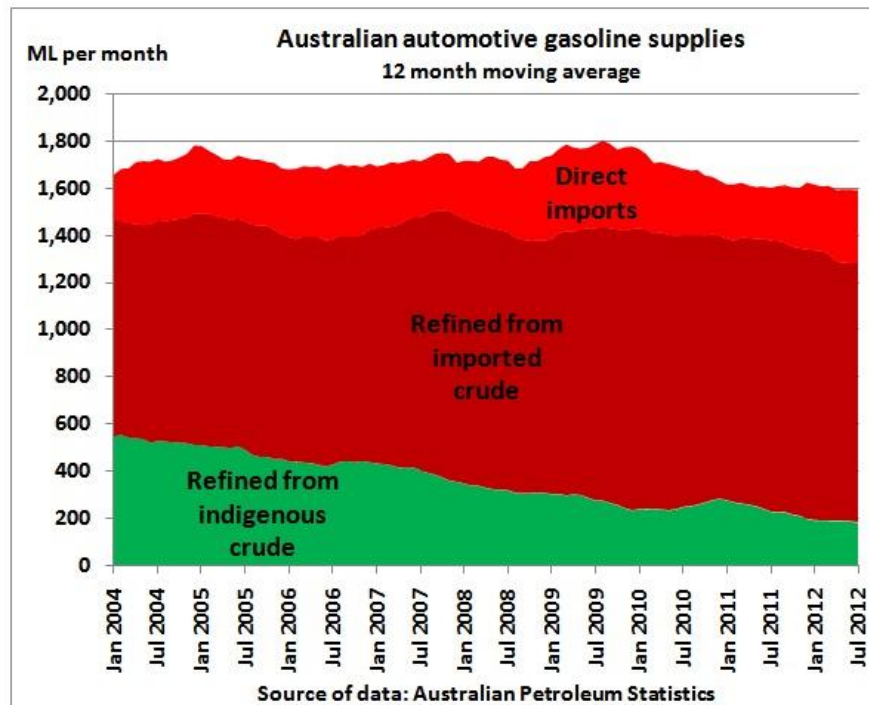
(d) growth in 2009/10 came from far afield: Nigeria, Russia, Azerbaijan, Algeria, Libya, Congo and Gabon

(e) there was an import

peak in early 2011. Decline since then was mitigated by many smaller suppliers and growth from Nigeria

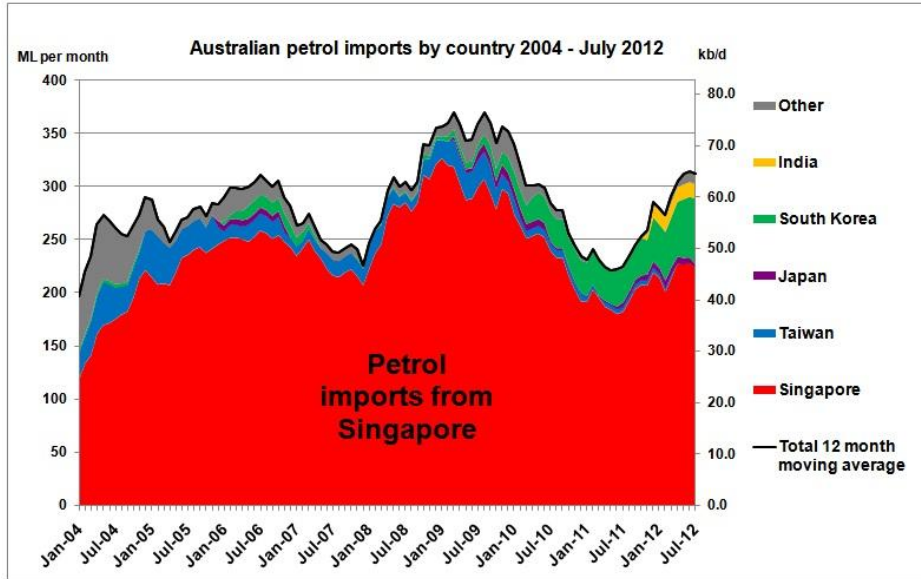
The decline after the peak happened well before the Clyde refinery shut down in Sept. 2012, suggesting it was getting harder and harder to import crude.

(3) Australian automotive gasoline supplies



Automotive gasoline supplies refined in Australian refineries using Australian crude has been steadily declining from 33% in 2004 to just 12% in 2012 of total supplies.

Let's have a look at where the petrol imports come from



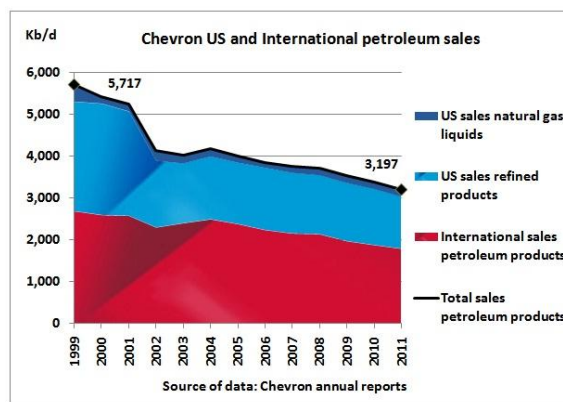
Singapore gets most of its crude from the Middle East – which is a tinderbox. As armed conflicts and social unrest are spreading fast, in the not too distant future the Australian government will be taught a lesson what oil dependency means. The recently published Energy White Paper did not include any of the graphs shown in this submission.

(4) Closure of Caltex refinery

Caltex CEO Julian Segal: “To ensure we continue to reliably supply our customer’s growing fuel demands beyond the Kurnell transition period, we have recently entered into a long-term agreement with Chevron for the procurement and supply of imported transport fuels (petrol, diesel and jet fuel). Under the arm’s length arrangement, Chevron will procure and supply to Caltex imported product at market based prices.”

<http://www.acapma.com.au/articles/caltex-announces-supply-chain-restructuring.html>

He did not tell the public that Chevron’s petroleum sales are in long term decline:



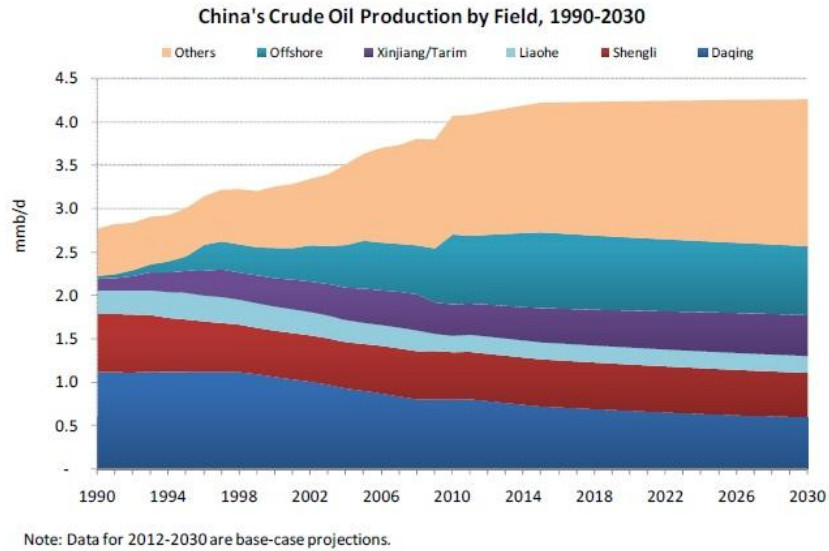
27/7/2012 After Sydney's refinery closure: Caltex to import fuel from Chevron's shrinking sales
<http://crudeoilpeak.info/after-sydney-refinery-closure-caltex-to-import-fuel-from-chevrons-shrinking-sales>

(5) China peak oil and skyrocketing oil demand

www.esi.nus.edu.sg/docs/event/wu-kang.pdf

Stagnation of China's Crude Oil Production Growth

- China's crude oil production may reach its plateau by 2020.

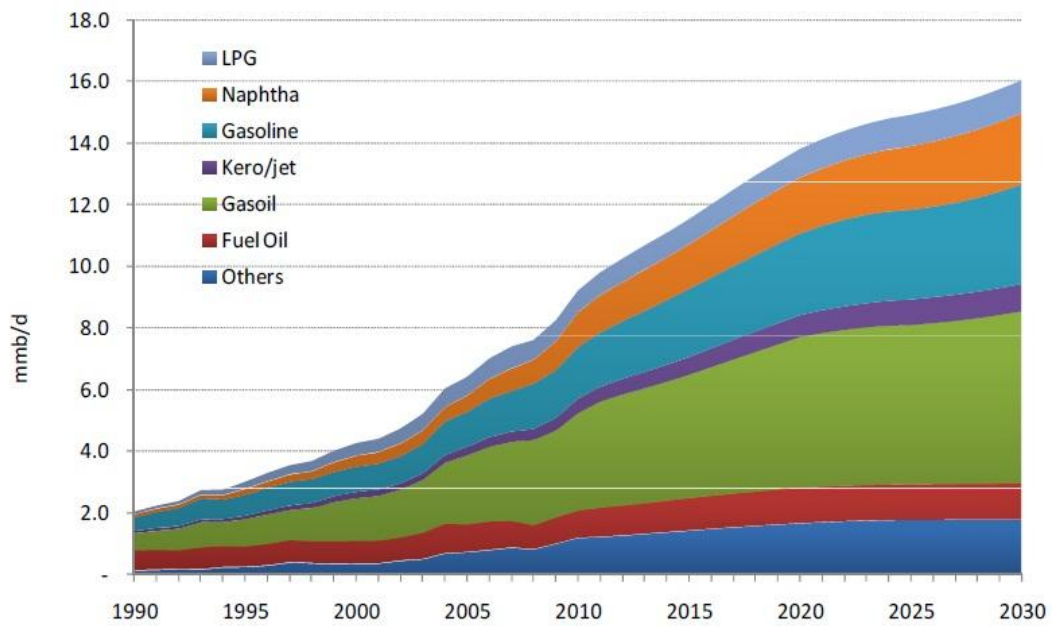


China manufactures 14 million passenger cars EVERY YEAR. 12 million Australian motorists will have to compete.

31/8/2011 1 billion vehicles in year #7 of peak oil
<http://crudeoilpeak.info/1-billion-vehicles-in-year-7-of-peak-oil>

www.esi.nus.edu.sg/docs/event/wu-kang.pdf

China's Petroleum Product Demand, 1990-2030

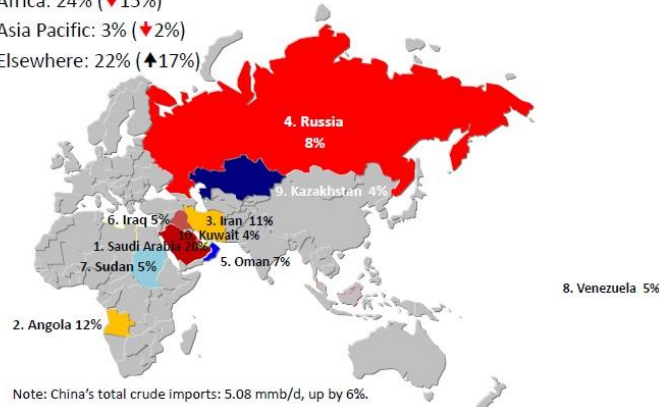


Note: 2011 data are estimates and 2012-2030 data are projections.

<http://www.esi.nus.edu.sg/docs/event/wu-kang.pdf>

China's Crude Imports, 2011

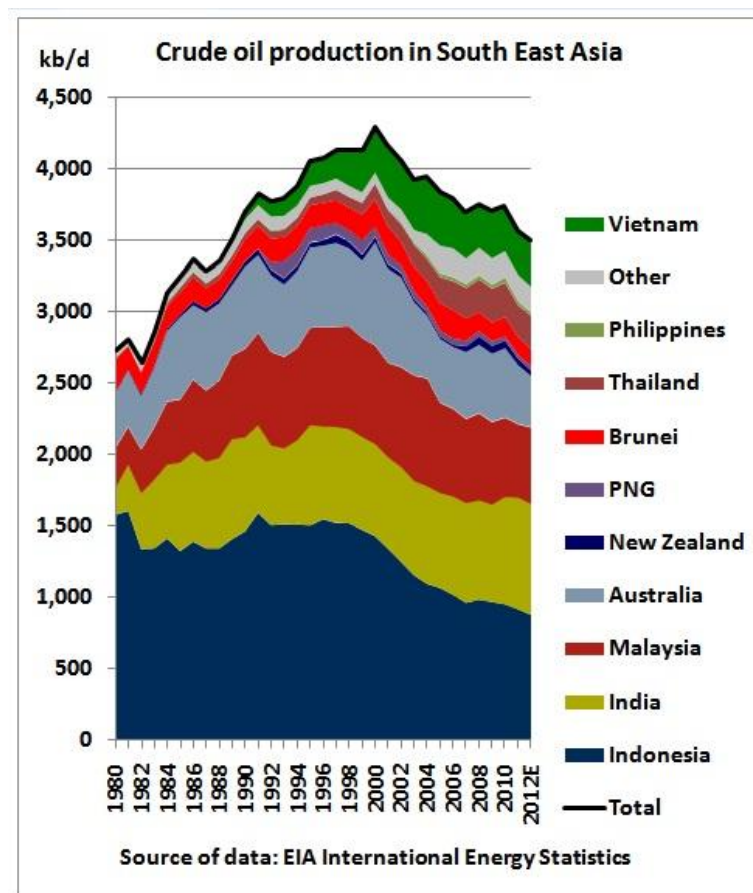
- During 2011:
 - Middle East: 51% (▲15%)
 - Africa: 24% (▼15%)
 - Asia Pacific: 3% (▼2%)
 - Elsewhere: 22% (▲17%)



<http://www.esi.nus.edu.sg/docs/event/wu-kang.pdf>

The combination of oil peaking and increasing imports means worsening fights over oil in Asia.

(6) South East Asia oil peak

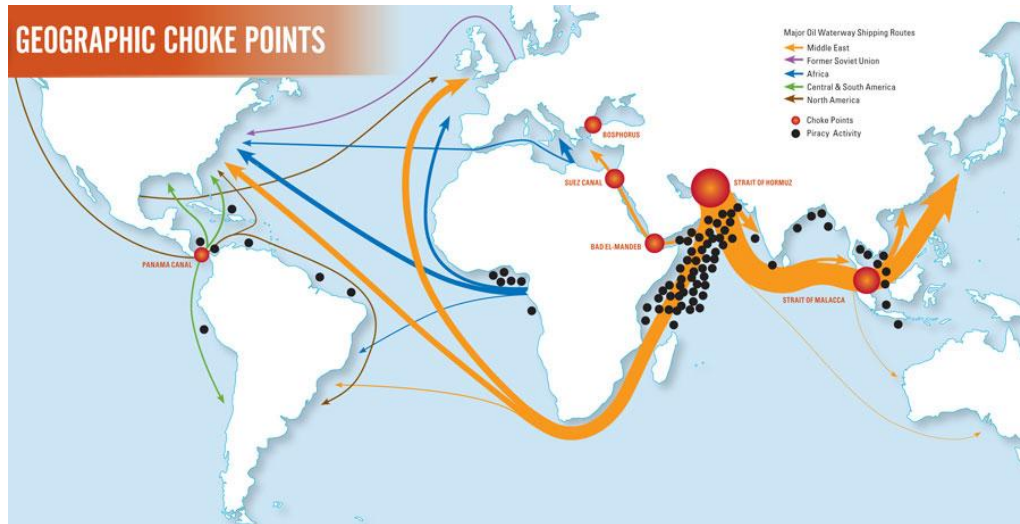
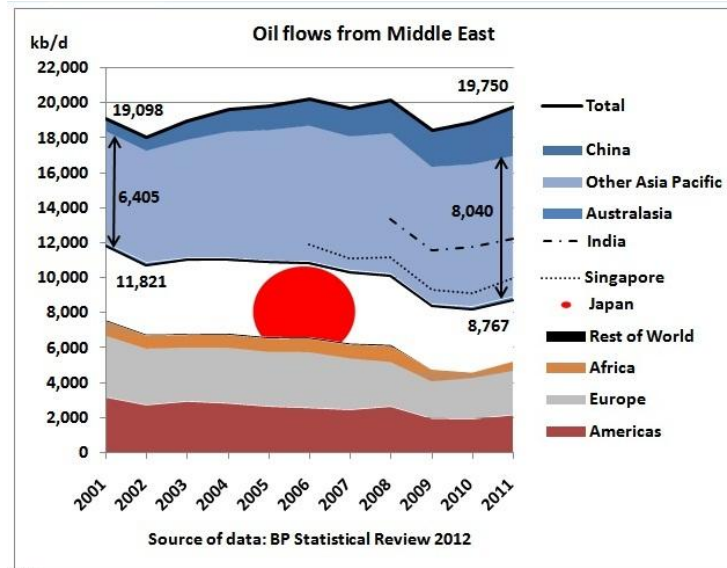


The so-called Asian Century will last as long as oil imports can be increased.

10/9/2012 South East Asian oil peak in the rear view mirror

<http://crudeoilpeak.info/south-east-asian-oil-peak-in-the-rear-view-mirror-part-1>

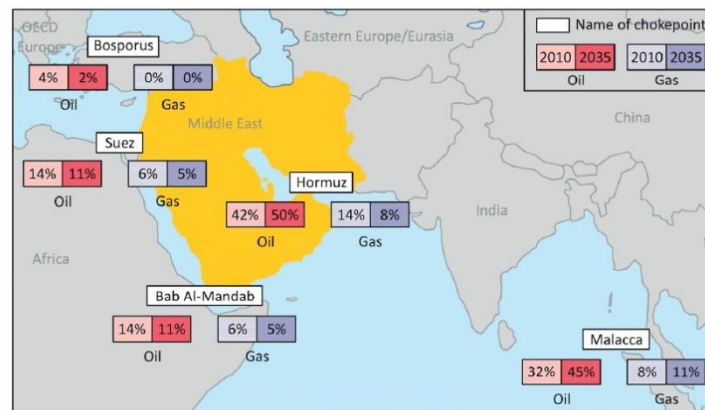
(7) Oil trade



<http://americansecurityproject.org/issues/climate-energy-and-security/blueprint/todays-supply/geographic-choke-points/>

Vulnerability of oil trade to Asia will increase to 2035

Figure 2.18 ▶ Share of inter-regional oil and gas trade through key choke points in the New Policies Scenario



This graph is from the IEA WEO 2012

(8) Australian liquid fuel vulnerability reports – a history of peak oil denial

The first report was published in 2008

An Assessment of Australia's Liquid Fuel Vulnerability
Prepared for Department of Resources, Energy and Tourism
November 2008

<http://www.ret.gov.au/energy/Documents/Energy-Security/Liquid%20Fuel%20Vulnerability%20Assessment.pdf>

My critique is here:

29/5/2009 Critique ACIL Tasman liquid fuel vulnerability
<http://www.crudeoilpeak.com/?p=793>

The November 2011 draft energy white paper which has now been archived here:

http://www.ret.gov.au/energy/facts/white_paper/draft-ewp-2011/Pages/draft-ewp.aspx

contained chapter 4 on "Australia's Energy Security"

<http://www.ret.gov.au/energy/Documents/ewp/draft-ewp-2011/Draft-EWP-chap4.pdf>

It was peak oil ignorant and therefore completely flawed. My critique was published here:

http://www.ret.gov.au/energy/Documents/ewp/Matt%20Mushalik/Chapter4_Critique_ACIL_Tasman.pdf

It was disregarded.

The 2011 draft energy white paper came along with a National Energy Security Assessment
http://www.ret.gov.au/energy/energy_security/national_energy_security_assessment/Pages/NationalEnergySecurityAssessment.aspx

with a 2nd ACIL Tasman report

Liquid fuels vulnerability assessment
A review of liquid fuels vulnerability
Department of Resources Energy and Tourism
October 2011

<http://www.ret.gov.au/energy/Documents/Energy-Security/nesa/LiquidFuelsVulnerabilityAssessmentReport2011.pdf>

This document did not really change or update its 2008 version and is therefore equally flawed

The NESAs 2011 document

<http://www.ret.gov.au/energy/Documents/Energy-Security/nesa/National-Energy-Security-Assessment-2011.pdf>

is also a laissez faire paper.

Flawed assessments continue in the final version of the 2012 EWP (p 50)

"Liquid fuel energy security is assessed as high, trending to moderate in the long term, as Australia has continued access to adequate and reliable supplies of liquid fuels at prices that are manageable within the broader economy."

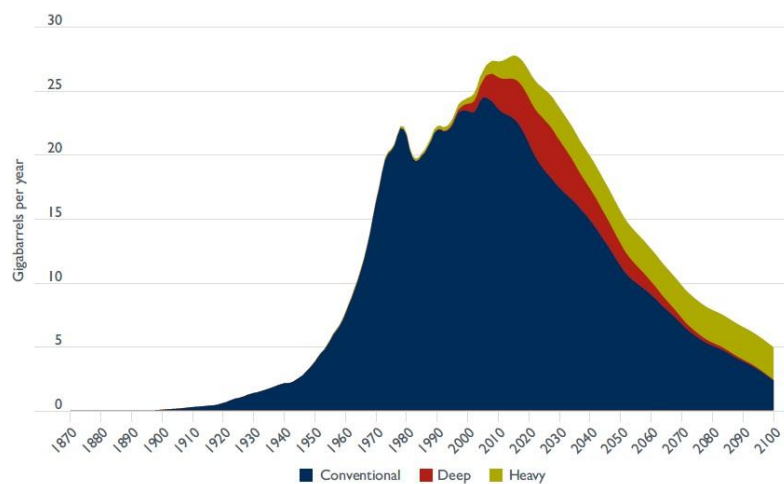
http://www.bree.gov.au/documents/ewp/Energy_%20White_Paper_2012.pdf

(9) Peaky leaks

The peak oil ignorance of the above documents is incomprehensible as BITRE did its own internal research.

In 2011 a leaked report 117 on peak oil, completed by BITRE already in March 2009 appeared on a French website.

Figure 13.12 Components of total world crude oil production



More details can be found in these links from my website:

20/1/2012 Australian Peaky Leaks goes mainstream

<http://crudeoilpeak.info/australian-peaky-leaks-goes-mainstream>

5/2/2012

Australian peak oil report ignored for urgent Sydney Canberra rail upgrade (Peaky Leaks Part 2)

<http://crudeoilpeak.info/australian-peak-oil-report-ignored-for-urgent-sydney-canberra-rail-upgrade-peaky-leaks-part2>

In the Senate, Minister Kim Carr refused to table the report

24/2/2012

Australian Government kicks own goals in Senate peak oil debate (peaky leaks part 3)

<http://crudeoilpeak.info/australian-government-kicks-own-goals-in-senate-peak-oil-debate-peaky-leaks-part-3>

The result of all this reticence and secrecy will be that no one will be prepared for what is ahead.

(10) Australian gas as transport fuel

9/5/2012 Queensland plans to export more than 10 times the gas NSW needs (part 3)
<http://crudeoilpeak.info/queensland-plans-to-export-more-than-10-times-the-gas-nsw-needs-part-3>

13/10/2011 NSW gas as transport fuel. Where are the plans?
<http://crudeoilpeak.info/nsw-gas-as-transport-fuel-where-are-the-plans>

11/10/2011 Australia's natural gas squandered in LNG exports
<http://crudeoilpeak.info/australias-natural-gas-squandered-in-lng-exports>

(11) Darwin Clean Fuels



“Darwin Clean Fuels is proposing to design, build and operate a 60 000 bpd condensate processing facility to produce high quality transport fuels that will meet the new Australian Standards for clean fuels.”

<http://www.darwincleanfuels.com.au/>

I have no commercial interest in this company but this proposal is a good idea. Australia’s condensate is exported into the bottomless pit of global oil markets.

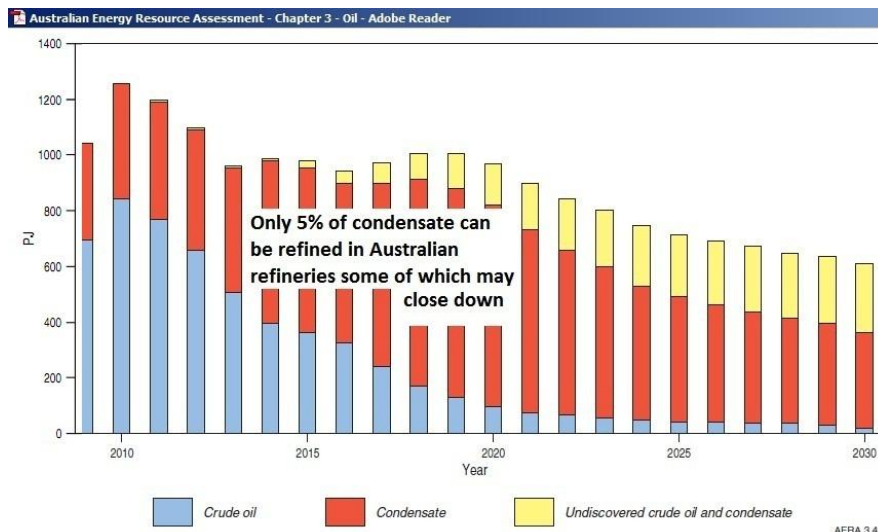


Figure 3.43 Australian oil production outlook from proven hydrocarbon basins

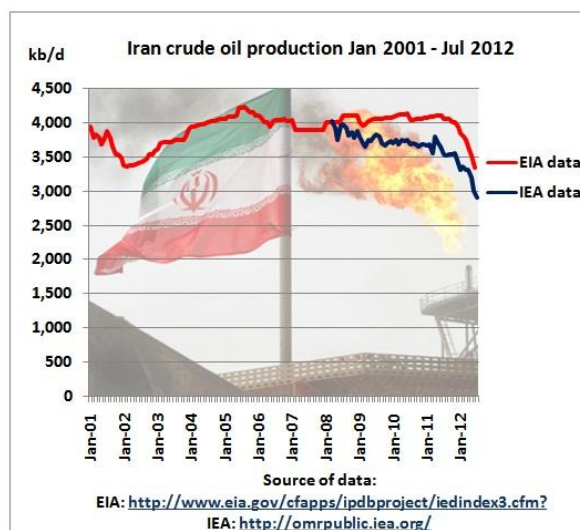
http://ga.gov.au/image_cache/GA16759.pdf

Recommendations

- (1) All liquid fuel vulnerability reports need to be immediately re-written from scratch
- (2) The Federal government should use the funds wasted on highways to establish a condensate splitter for the condensate from oil and wet gas fields
- (3) All biofuels should be used in the agricultural sector itself and for the transport of food to the cities
- (4) Australia needs to stop new LNG export contracts. A domestic gas supply system for the transport sector must be built up (CNG/LNG trucks and locos)
- (5) All Parliamentarians (House of Reps and Senators) and top civil servants need to attend a training course on peak oil. Dr. Bakhtiari's 2006 presentation

http://www.aph.gov.au/Parliamentary_Business/Committees/Senate_Committees?url=@Hansard/S9515.pdf

was apparently not sufficient. He warned of peak oil in Iran, but no one wanted to listen



<http://crudeoilpeak.info/iran-peak>

7/8/2012 Iran's 2nd and last oil peak

<http://crudeoilpeak.info/irans-2nd-and-last-oil-peak>

24/9/2012 Minesweeping exercise near Saudi oil hub

<http://crudeoilpeak.info/minesweeping-exercise-near-saudi-oil-hub>

Iran ready to double uranium enrichment at Fordo - IAEA

<http://www.bbc.co.uk/news/world-middle-east-20368030>

When will the government develop a sense of urgency? And prepare for the coming emergency?

View the “solutions” menu on my website

Prepared by Matt Mushalik