

Peak Oil Around 2017

Australian Government Report on Long-Term Oil Supply Trends and Projections

By [Matt Mushalik](#)

Global Research, January 23, 2012

[Crude Oil Peak and CounterCurrents.org](#) 23
January 2012

Region: [Oceania](#)

Theme: [Oil and Energy](#), [Science and Medicine](#)

[Crude Oil Peak](#)

The Australian Daily Telegraph published today [a story on a leaked government report \(BITRE 117\)](#) which (optimistically) calculated peak oil around 2017, followed by permanent decline

The report can be downloaded here:

http://ianmcpherson.com/blog/audio/Australian_Govt_Oil_supply_trends.pdf

Thanks to the watchful eye of ASPO Australia:



Transport Energy Futures: Long-term oil supply trends and projections

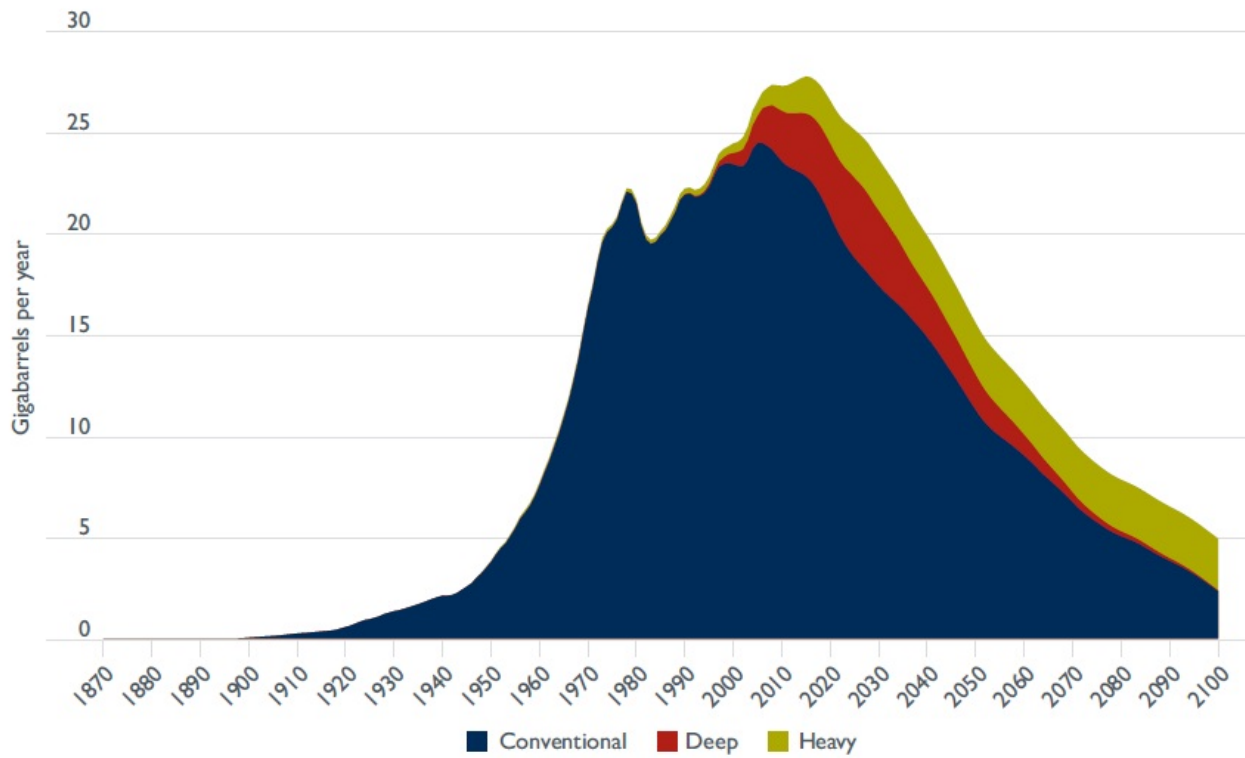
Report 117 BITRE 2009 Dr David Gargett

"The modelling is forecasting what can be termed 'the 2017 drop-off'. The outlook under a base case scenario is for a long decline in oil production to begin in 2017, which will stretch to the end of the century and beyond".

This report is no longer available from BITRE, but no reason has been given for its withdrawal. ASPO-Australia was asked to take it off our website. However, the report is available at the Australian Institute of Energy, [here](#), from Ian McPherson of SydneyPeakOil ([here](#)) and on a [French website](#)

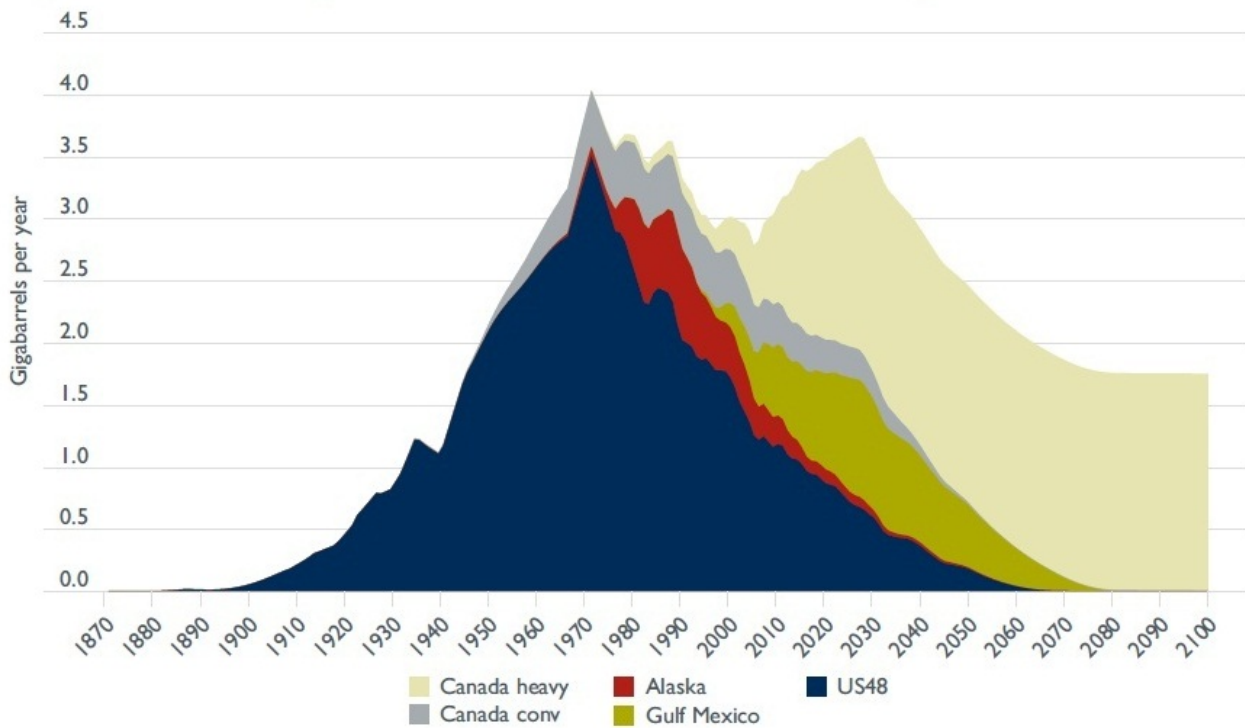
The all important graphs are extracted here:

Figure 13.12 Components of total world crude oil production



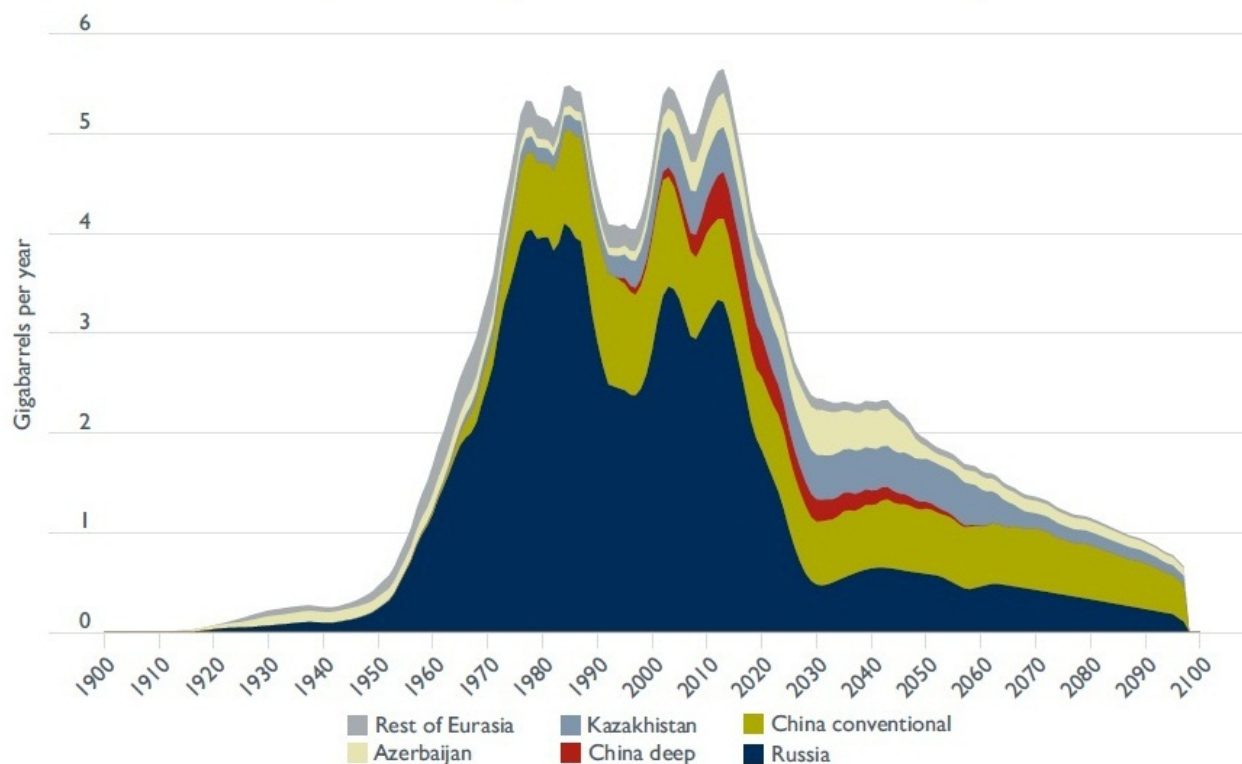
The global peak

Figure 3.19 Components of North American crude oil production



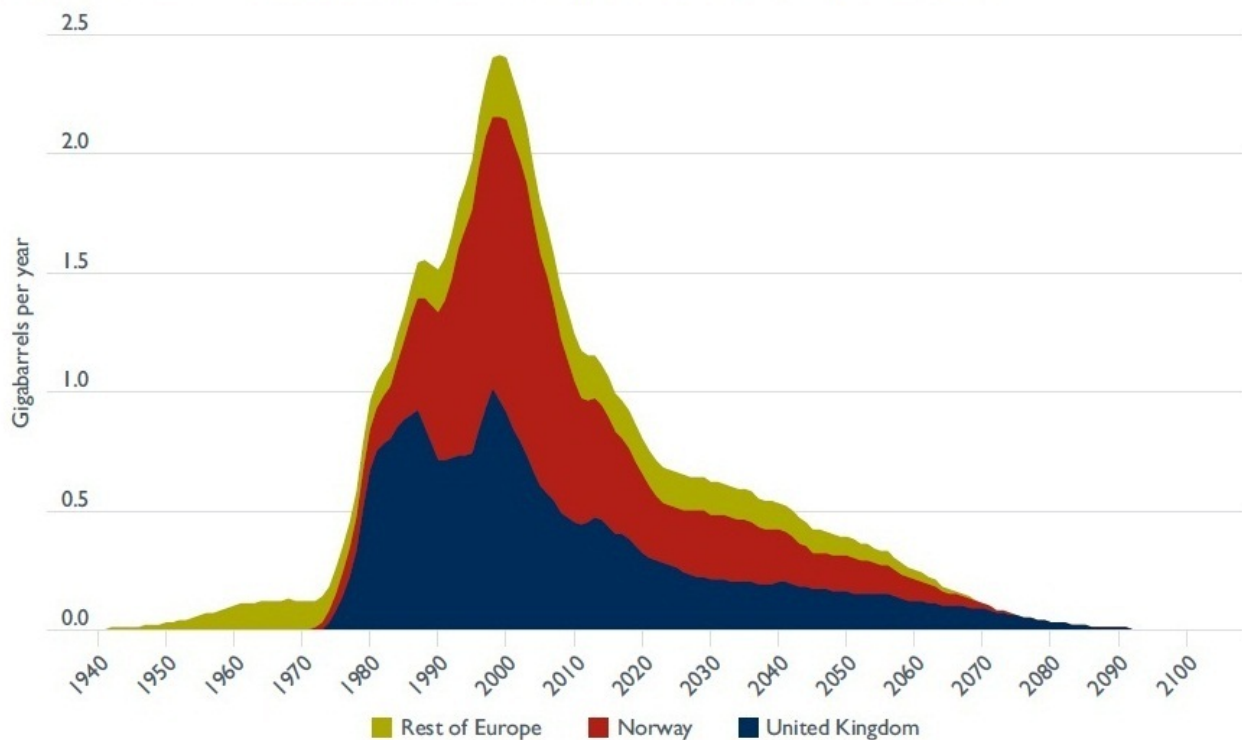
North America

Figure 7.33 Components of predicted Eurasian crude oil production



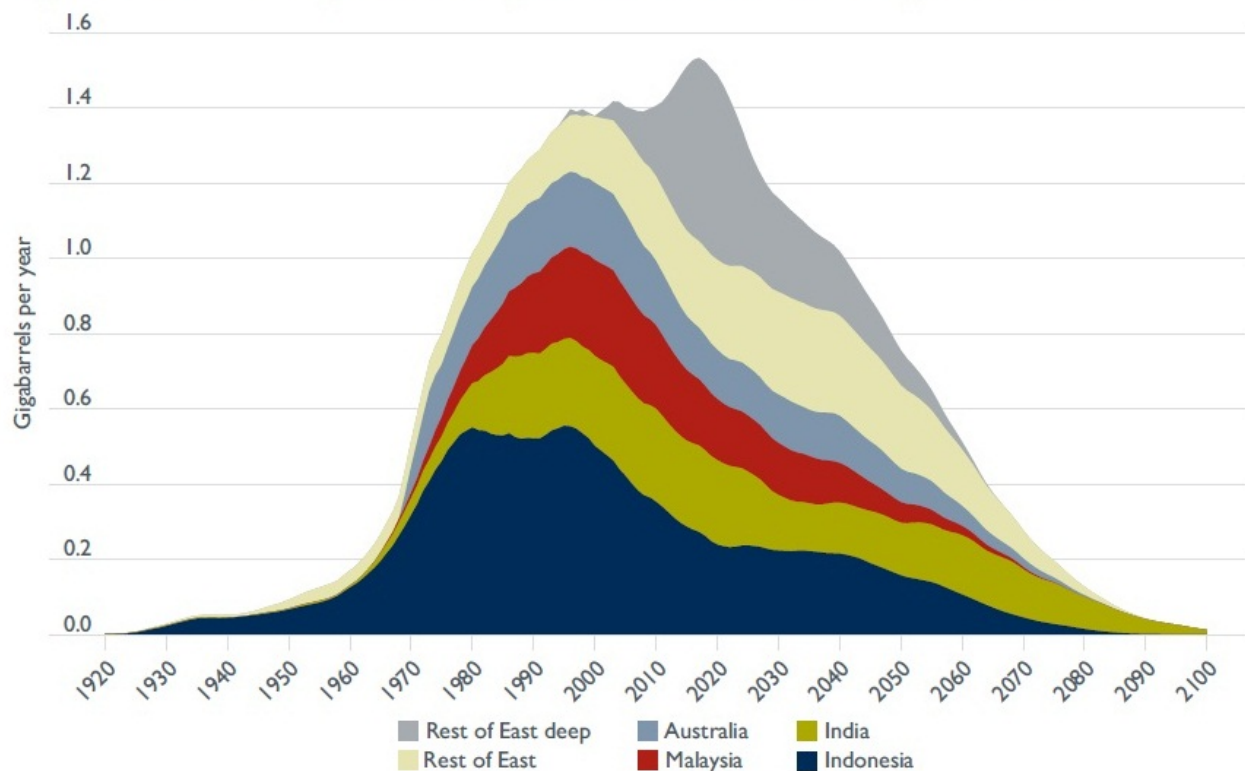
Eurasia

Figure 6.25 Components of European crude oil production



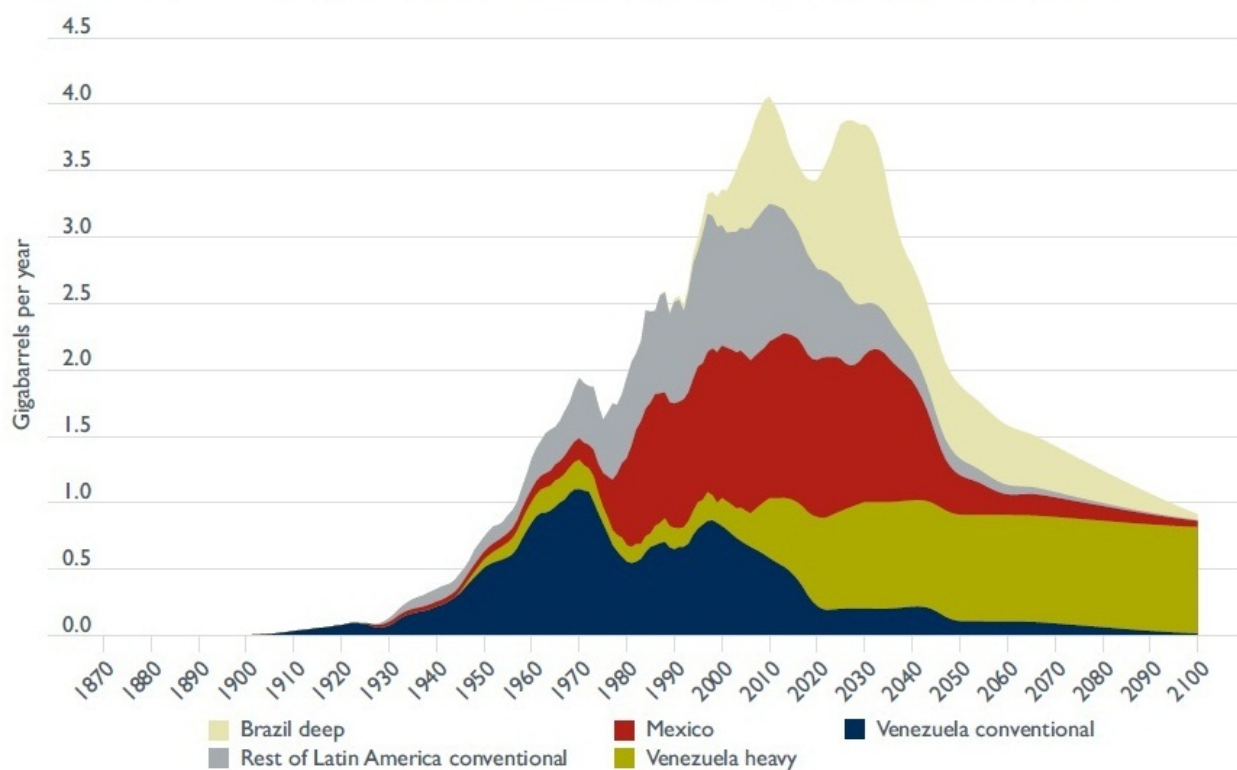
Europe

Figure 8.32 Components of predicted East crude oil production



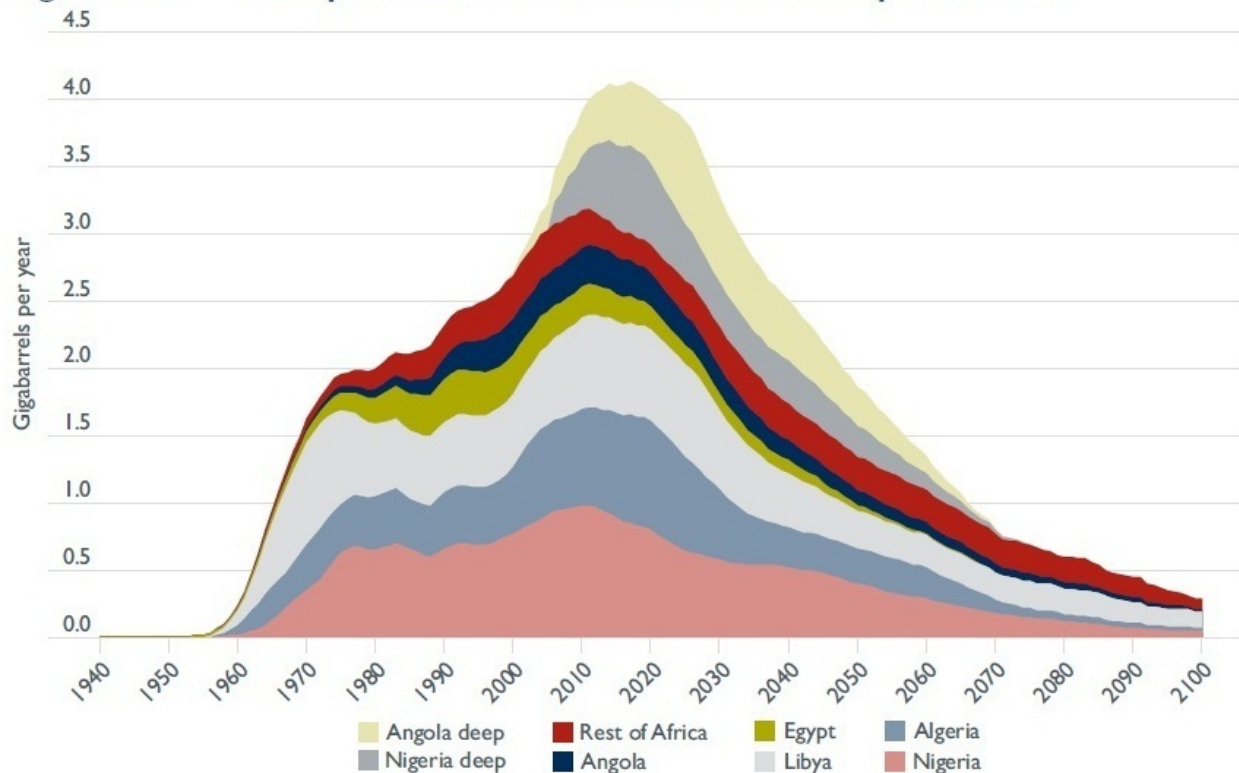
East and Pacific

Figure 4.22 Components of Latin American crude oil production



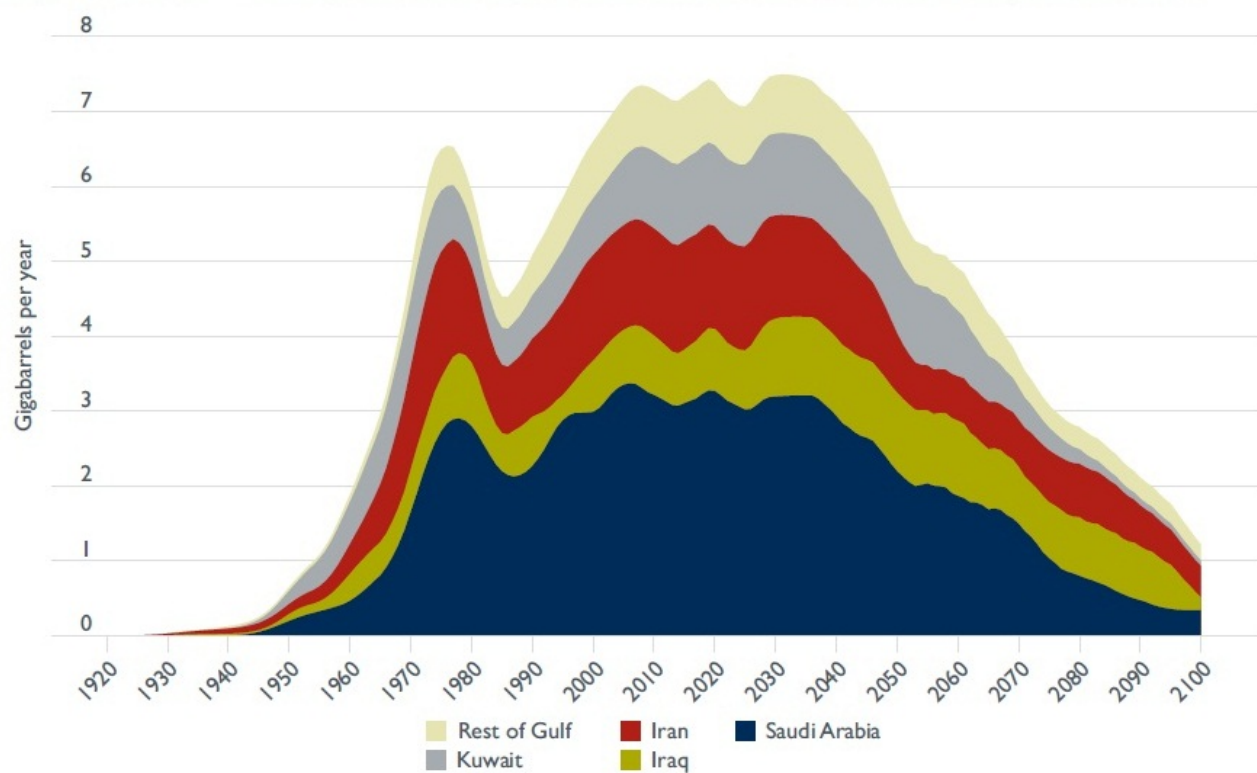
Latin America

Figure 5.40 Components of African total crude oil production



Africa

Figure 10.32 Components of predicted Middle East Gulf oil production



Middle East

Questions to be answered by the Australian Federal Government

(1) Why was no reference to this report 117 made in the draft of the Energy White Paper

(EWP) which was released shortly before X'mas 2011?

Link to the EWP:

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

(2) Why did the EWP not compare BITRE 117 with the decline rate analysis of the International Energy Agency's World Energy Outlook 2008 and following WEOs?

<http://www.iea.org/weo/2008.asp>

And why was the peak oil result not fine tuned by using Chris Skrebowski's oil megaprojects database in which new oil field projects are added on top of decline curves?

http://en.wikipedia.org/wiki/Oil_megaprojects

Next oil crunch 2012

<http://peakoil.com/forums/post1018032.html>

(3) Why was the Parliament not properly informed about the progress of work on the 117 report which was known in early 2009 as research project R22?

Here is the list of the BITRE research projects as of January 2009

http://www.aph.gov.au/senate/committee/rrat_ctte/estimates/add_0809/infra/taled_docs/td03.pdf

This is the Hansard of a Senate hearing (24/2/2009) in which BITRE research projects were discussed (starting at page 114)

<http://www.aph.gov.au/hansard/senate/commttee/S11638.pdf>

(4) Why was BITRE's research work not included in a slide show presented by the Executive Director of the BITRE at an ITLs seminar of the University of Sydney, 6 months after work on the report 117 was concluded?

Transport and the carbon pollution reduction scheme

http://sydney.edu.au/business/_data/assets/pdf_file/0003/39873/phil_potterton_presentation.pdf

in this series:

http://sydney.edu.au/business/itls/research/past_seminars/2009

(5) BITRE's history of writing peak oil related documents started with this paper in February 2005:

Working paper 61: Is the world running out of oil? A review of the debate

<http://www.btre.gov.au/info.aspx?ResourceId=96&NodeId=16>

Why was that work discontinued by not publishing report 117? As some parts of 117 do not seem to have been completed who ordered work on this report be stopped?

(6) As the report 117 came to a calculated 2017 peak and given that the government must have known (or reasonably expected to have known) the Hirsch report of the US Department of Energy

http://www.netl.doe.gov/energy-analyses/pubs/Oil_Peaking_NETL.pdf

which came to the conclusion that 10-20 years are needed to prepare for peak oil, i.e 1997 – 2007 as start year, why was no action taken in 2009, 8 years before the peak?

(7) In the EWP, why was the warning of the IEA's Chief Economist Fatih Birol in ABC TV's oil crunch show in April 2011 ignored in which he said that conventional oil production has already peaked in 2006?

<http://www.abc.net.au/catalyst/stories/3201781.htm>

and that governments should have started to get away from oil already 10 years ago, that is in 2000?

(8) Why did the oil vulnerability assessment of ACIL Tasman and the National Energy Security Assessment (NESA) not deal with BITRE 117 and peak oil in general?

Link to oil vulnerability assessment:

http://www.ret.gov.au/energy/energy_security/emergency_response/liquid_fuel_emergency/lfe_vulnerability/Pages/lfe_vulnerability.aspx

Link to NESA

http://www.ret.gov.au/energy/energy_security/national_energy_security_assessment/Pages/NationalEnergySecurityAssessment.aspx

(8) There is now another BITRE report 117 "Aircraft movements through capital city airports 2029-30".

<http://www.bitre.gov.au/publications/55/Files/Report%20117.pdf>

Of course such a report makes no sense if peak oil is in 2017. So was this report used to cover up the original report 117 on peak oil?

Problems with coal-to-liquids

Piers proposes coal to liquids (CTL) as a solution to replace declining oil production. Unfortunately, CO2 emissions are much higher for fuels from CTL as shown in this table:

Table 3: Comparison of three studies for CTL production (FT-diesel shown). Units in gCO₂e/MJ finished fuel product, well-to-tank (WTT), tank-to-wheel (TTW), and well-to-wheel (WTW).

Study	Type	WTT	TTW	WTW
U.S. 2005 Avg (EPA)	Ultra Low Sulfur Diesel	17	75	92
GREET	CTL	148	75	223
GREET	CTL w/ 85% CCS	42	75	116
RAND (2008)	CTL	135	75	210
RAND (2008)	CTL w/ 85% CCS and electricity cogen credit	19	75	94
Brandt and Farrell	CTL (average value)	181	75	256

http://docs.nrdc.org/energy/files/ene_10070101a.pdf

Whether carbon capture and sequestration makes fuels commercially viable is more than doubtful.

NASA climatologist James Hansen has calculated that we have to reduce CO₂ concentration in the atmosphere to 350 ppm.

Target atmospheric CO₂: Where should humanity aim?

Paleoclimate data show that climate sensitivity is ~3°C for doubled CO₂, including only fast feedback processes. Equilibrium sensitivity, including slower surface albedo feedbacks, is ~6°C for doubled CO₂ for the range of climate states between glacial conditions and ice-free Antarctica. Decreasing CO₂ was the main cause of a cooling trend that began 50 million years ago, the planet being nearly ice-free until CO₂ fell to 450±100 ppm; barring prompt policy changes, that critical level will be passed, in the opposite direction, within decades. If humanity wishes to preserve a planet similar to that on which civilization developed and to which life on Earth is adapted, paleoclimate evidence and ongoing climate change suggest that CO₂ will need to be reduced from its current 385 ppm to at most 350 ppm, but likely less than that. The largest uncertainty in the target arises from possible changes of non-CO₂ forcings. An initial 350 ppm CO₂ target may be achievable by phasing out coal use except where CO₂ is captured and adopting agricultural and forestry practices that sequester carbon. If the present overshoot of this target CO₂ is not brief, there is a possibility of seeding irreversible catastrophic effects.

<http://pubs.giss.nasa.gov/abs/ha00410c.html>

8/3/2010

NASA climatologist James Hansen at Sydney Uni: "Australia doesn't agree now that they got to stop their coal, but they are going to agree. I can guarantee you that within a decade or so because the climate change will become so strongly apparent that's going to become imperative"

http://www.usyd.edu.au/sydney_ideas/lectures/2010/professor_james_hansen.shtml

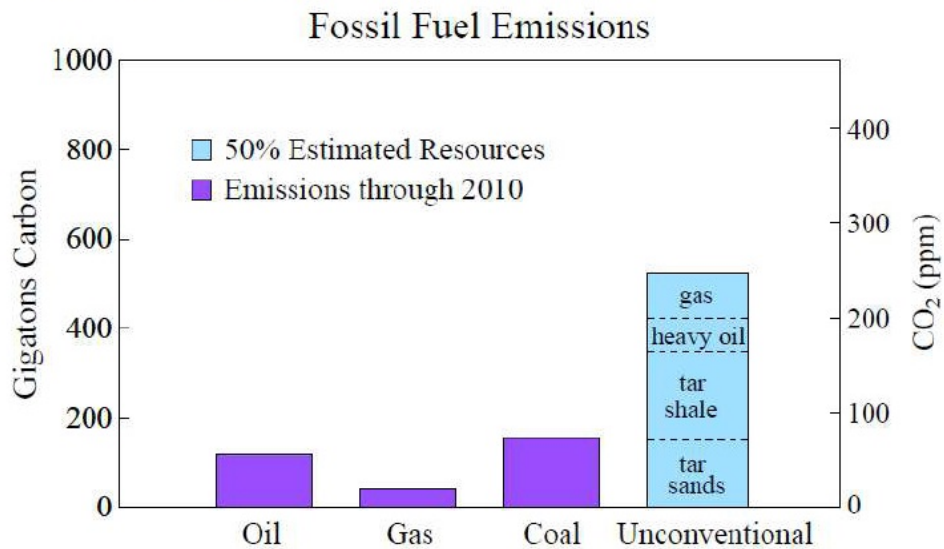
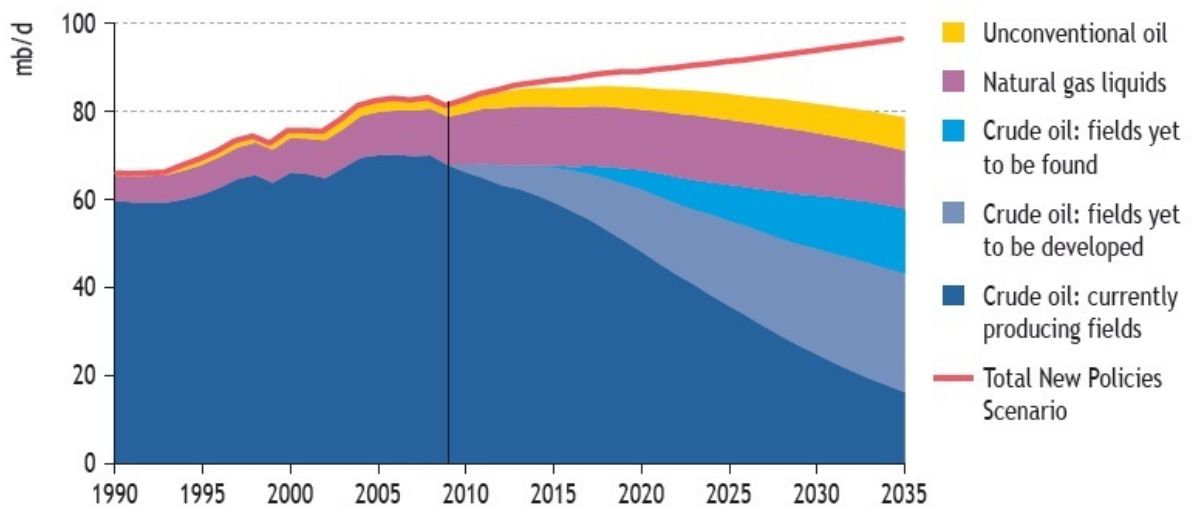


Figure 1. Total conventional fossil fuel emissions (purple) and 50% of unconventional resources (blue)

http://www.columbia.edu/~jeh1/mailings/2011/20110902_WhiteHouseAndTarSands.pdf

Incidentally, the peak oil scenario is hidden in the International Energy Agency's 450 ppm scenario in the WEO 2010

Figure 15.7 • World oil production by type in the 450 Scenario



Chapter 15 - Implications for oil markets

<http://www.iea.org/weo/2010.asp>

Energy returned on energy invested

PROCESS	EROI
Nonrenewable	
Oil and gas (domestic wellhead)	
1940's	Discoveries > 100.0
1970's	Production 23.0, discoveries 8.0
Coal (mine mouth)	
1950's	80.0
1970's	30.0
Oil shale	0.7 to 13.3
Coal liquefaction	0.5 to 8.2
Geopressured gas	1.0 to 5.0
Renewable	
Ethanol (sugercane)	0.8 to 1.7
Ethanol (corn)	1.3
Ethanol (corn residues)	0.7 to 1.8
Methanol (wood)	2.6
Solar space heat (fossil backup)	
Flat-plate collector	1.9
Concentrating collector	1.6

From the above table we can see that coal-to-liquids has a much lower EROI than oil. This is what a study came up with:

Economic feasibility of coal-to-liquids development in Alaska's interior

Thus, an estimate of energy used per ton (excluding construction and transportation) is approximately 10,818,336 BTUs/ton. Dividing the energy content of F-T liquids per ton by this amount yields an approximate EROI of 3.95. This is almost exactly the 4.0 EROI figure for coal liquefaction reported by Wilshire et al. (2008), and so is probably a reasonable estimate.

An average EROI for crude oil currently stands at about 20:1. Thus, using CTL liquids rather than crude is far more inefficient, implying a faster drawdown of scarce energy supplies relative to what we can achieve by greatly improving the energy efficiency of transport, power production, and heating and thereby extending the life of crude oil supplies until we can develop long term renewable solutions. One such solution -hydropower provided by the Susitna dam - is the kind of alternative that should receive careful consideration as an alternative use of public funds for energy infrastructure.

<http://www.sustainable-economy.org/main/news/1>

The above EROI for CTL is barely above the minimum for a sustainable society to survive.

Our educated guess is that the minimum EROI for an oil-based fuel that will deliver a given service (i.e. miles driven, house heated) to the consumer will be something more than 3:1 when all of the additional energy required to deliver and use that fuel are properly accounted for.

<http://energybulletin.net/node/52341>

One alternative transport fuel is natural gas (as CNG for short distance and LNG for long-distance), but:

11/10/2011

Australia's natural gas squandered in LNG exports

<http://crudeoilpeak.info/australias-natural-gas-squandered-in-lng-exports>

The Telegraph's revelation comes as Transport Minister Albanese announces that yet more funds are spent on highway duplication:

Pacific Highway

CONSTRUCTION work will start in early 2013 to duplicate the stretch of the Pacific Highway at Urunga that was the scene of a double fatality this month.

<http://smh.drive.com.au/roads-and-traffic/work-approved-for-highway-black-spot-20120119-1q8cy.html>

Is that the proper response to peak oil? While the rail line between Maitland and Brisbane is still single tracked?



Hard to believe: this is the main railway line between Sydney and Brisbane

That is the solution for trucks:



<http://www.nationalcorridors.org/df/df12112006b.jpg>

Drivers of these trucks sleep in the 1st car behind the loco, not at the wheel and then crashing into homes at 5 am

Let's hope other newspapers pick up the story and bring about the long over-due change in energy and transport policies

Related posts:

19/12/2011

Australian Energy White (Wash) Paper 2011: peak oil denial not yet peaked

<http://crudeoilpeak.info/australian-energy-white-wash-paper-2011-peak-oil-denial-not-yet-peaked>

20/11/2011

APEC energy intensity reductions: what it means for Australian oil consumption

<http://crudeoilpeak.info/apec-energy-intensity-reductions-what-it-means-for-australian-oil-consumption>

9/11/2011

System Dynamics peak oil, financial and CO2 debt, ME geopolitics

<http://crudeoilpeak.info/system-dynamics-peak-oil-financial-and-co2-debt-me-geopolitics>

7/9/2011

NSW budget 2011/12 does not increase oil use productivity

http://crudeoilpeak.info/nsw-budget-2011_12-does-not-increase-oil-use-productivity

31/8/2011

1 billion vehicles in year #7 of peak oil

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

8/7/2011

"Yes, Prime Minister", peak oil 2006 under your watch

<http://crudeoilpeak.info/yes-prime-minister-peak-oil-2006-under-your-watch>

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