

Chapter 11 Epping Planning Review

Discussion Paper

(traffic and land use options)

Draft comments by Matt Mushalik, 12/7/2017, Epping)

EPR paper: <https://www.cityofparramatta.nsw.gov.au/sites/council/files/inline-files/1%20Discussion%20Paper%20-%20for%20exhibition%20purposes.pdf>

Traffic

The 2011 Halcrow study mentions an AADT on Epping Rd (East) of 55,000 (p 32) in 2005 <http://www.hornsby.nsw.gov.au/media/documents/planning-and-building/epping-town-centre/epping-town-centre-study-july-2011/Volume-2-Appendix-A-Traffic-Reports,-Part-1.pdf>

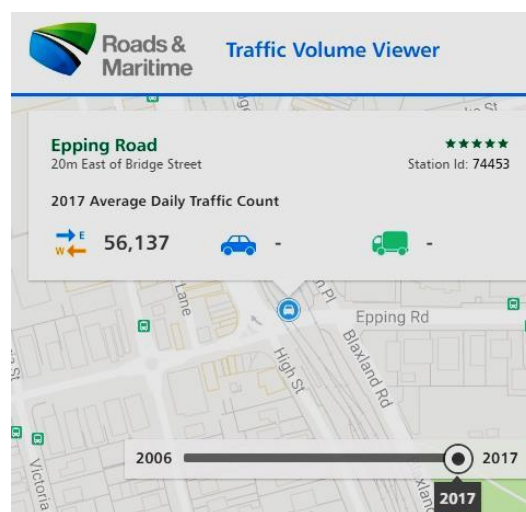


Fig 1

In the meantime, traffic is marginally higher, suggesting that traffic over the rail bridge is at saturation point. This is one statistical evidence that Sydney has reached its infrastructure limits to growth, contrary to what we were told by the Parramatta Administrator in an August 2016 meeting in the West Uniting Church that Sydney is not full.

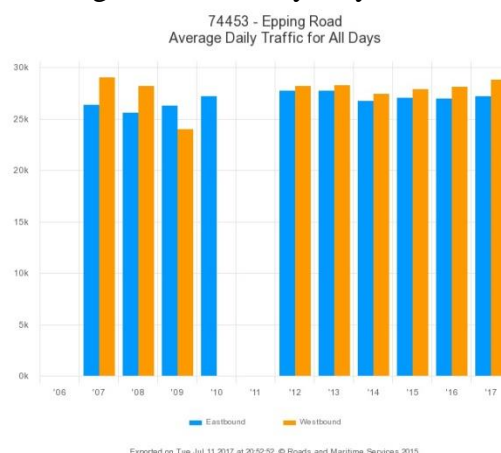


Fig 2 <http://www.rms.nsw.gov.au/about/corporate-publications/statistics/traffic-volumes/aadt-map/index.html>

Traffic went down by 3% when petrol prices were high, but increased again to previous levels with lower petrol prices. This is in line with national petrol consumption which shows a kink in trend lines (green-red) in 2014/15:

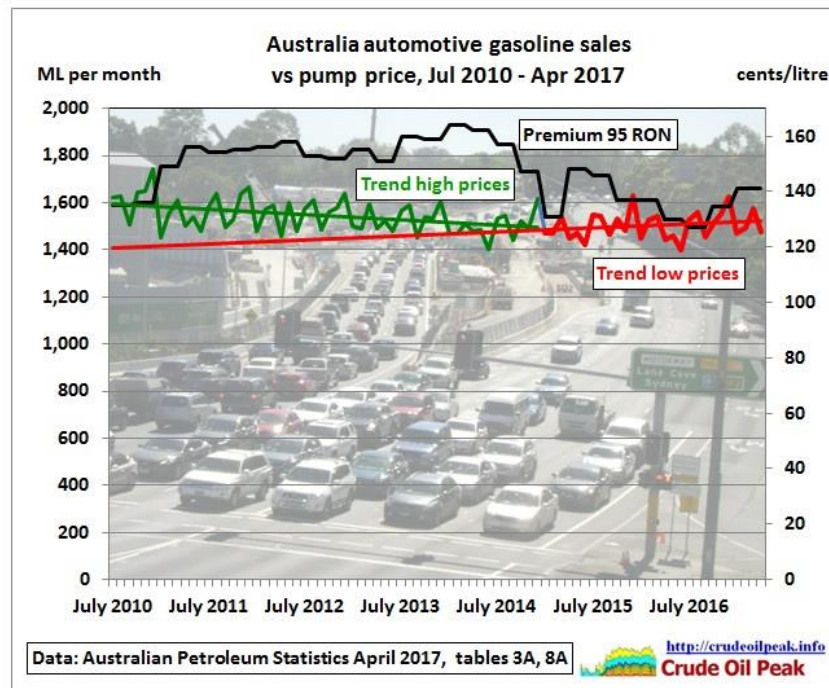


Fig 3

This means something very dramatic must happen to bring traffic down, but that is not the NSW government's objective anyway. It is beholden to Transurban which lives on eternal traffic growth.

On Thursdays in 2016, traffic nudged up to around 60,000 in certain weeks (the gaps are in all likelihood malfunctions of counters)

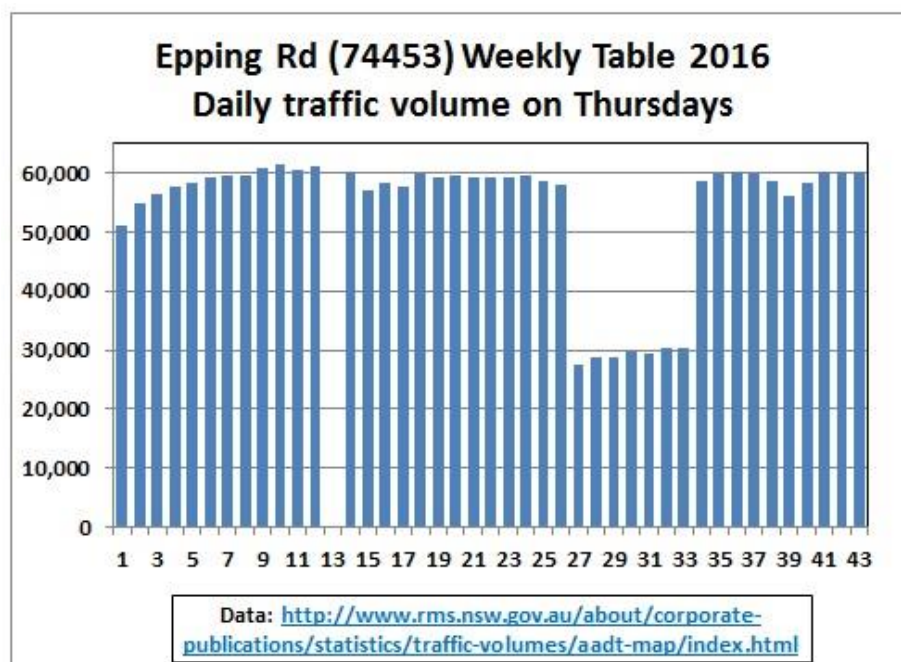


Fig 4: Data are from here:

<http://www.rms.nsw.gov.au/about/corporate-publications/statistics/traffic-volumes/aadt-map/index.html>

Population

The 2011 Halcrow traffic study assumed a population growth of 20% for Epping between 2006 and 2036.

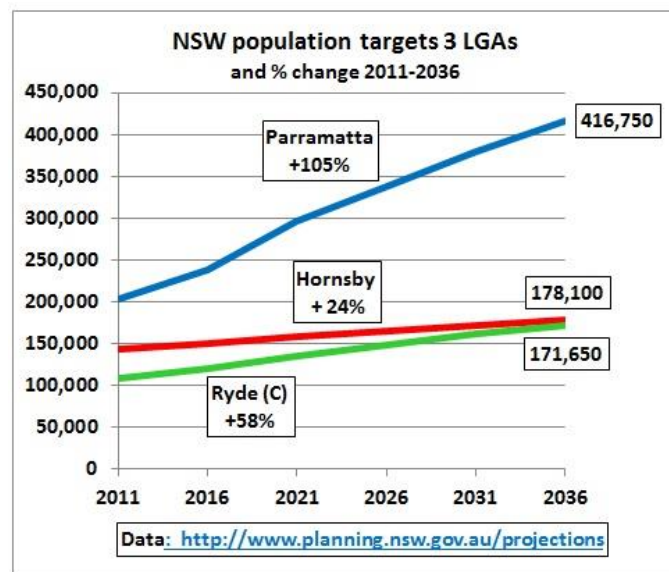


Fig 5

But the population website of the State government has a 105% growth target for Parramatta for the period 2011-2036. At the Parramatta Council workshop on social infrastructure in May 2017 we were shown this slide (note the small letters):

<https://www.cityofparramatta.nsw.gov.au/sites/council/files/inline-files/FINAL%20-%20Social%20Infrastructure%20Workshop.pdf>

Population Forecasts

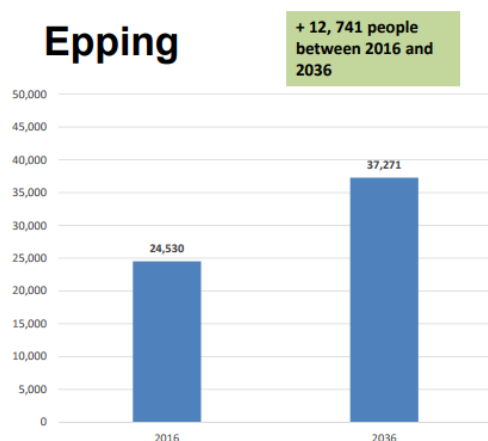


Fig 6

With an increase from 24,530 in 2016 to 37,271 in 2036. Using a household size of 2.3 that would be 5,540 dwelling units. The EPR says on p 103 that current DAs would deliver 5,500 units in already 5 years, not 20 years. Moreover, on page 9 we learn that the total for the town centre is suddenly 10,000 units. Clearly, we are being taken for a ride. Free for all developers, completely out of control.

If these 10,000 units were to materialize (no financial and energy crisis scenario) then in theory traffic (whatever the mode) would practically double.

Where is the capacity number crunching on that? During peak hours? Anyone? Even the pedestrian footpaths would be too narrow.

Department of Infrastructure and Regional Development [AU] | https://bitre.gov.au/publications/2012/files/report_127.pdf

Figure 3.8 Components of predicted levels of Sydney traffic per person

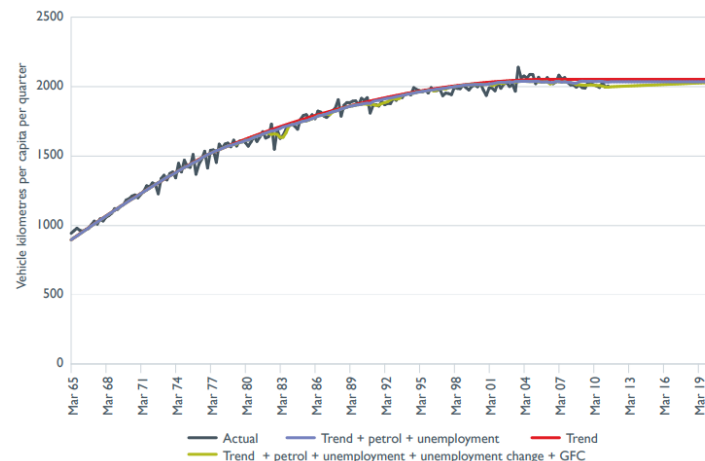


Fig 7 https://bitre.gov.au/publications/2012/files/report_127.pdf

Vehicle kms per person are practically flat so future car traffic would be proportional to population growth. Good luck.

Note that population in Fig 6 is not a forecast, but a population target arbitrarily set in the vain hope to increase “prosperity”. 88% of population growth comes from overseas migration including descendants as shown in the following table and graph:

nsw population projections planning regions scenarios 2016.xlsx

	A	B	C	D	E	F	G	H
1								
2								
3								
4								
5	2016 New South Wales State and Local Government Area Population Projections							
6								
7								
8	TOTAL PROJECT POPULATION - METROPOLITAN SYDNEY REGION SCENARIOS							
9								
10	Scenario	2011	2016	2021	2026	2031	2036	
11	Main Series	4,286,200	4,681,950	5,106,300	5,537,850	5,975,550	6,421,850	 1.5 m immigration
12	Low Fertility	4,286,200	4,662,900	5,065,500	5,474,100	5,887,850	6,308,650	
13	High Fertility	4,286,200	4,707,050	5,158,400	5,619,050	6,087,900	6,568,400	
14	Low Life expectancy	4,286,200	4,677,400	5,100,800	5,526,050	5,950,750	6,377,250	
15	High Life expectancy	4,286,200	4,686,250	5,118,350	5,562,250	6,017,950	6,489,350	
16	Low Net Overseas Migration	4,286,200	4,681,950	5,099,000	5,503,650	5,891,600	6,262,300	 200 K natural population growth
17	High Net Overseas Migration	4,286,200	4,681,950	5,110,450	5,557,350	6,023,500	6,513,050	
18	Low Net Interstate Migration	4,286,200	4,681,650	5,090,750	5,499,950	5,916,650	6,341,100	
19	High Net Interstate Migration	4,286,200	4,681,650	5,112,500	5,559,800	6,017,300	6,484,600	
20	Zero Net Overseas Migration	4,286,200	4,681,950	4,791,650	4,859,150	4,888,050	4,889,200	
21	Zero Net Overseas Migration & Zero Net Interstate Migration	4,286,200	4,681,950	4,839,200	4,969,450	5,067,700	5,141,350	
22								

Fig 8

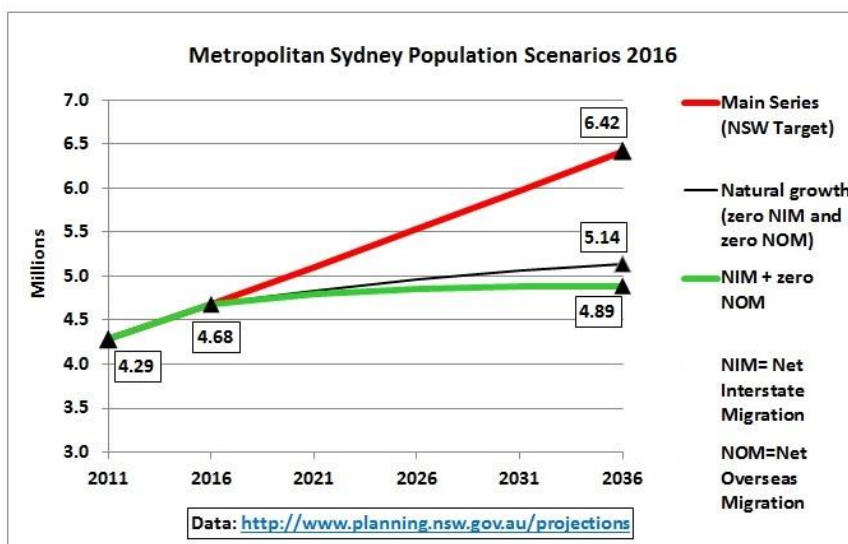


Fig 9

The underlying population growth is 1.9% pa. Let's look at GDP growth from the latest RBA chart set (July 2017):

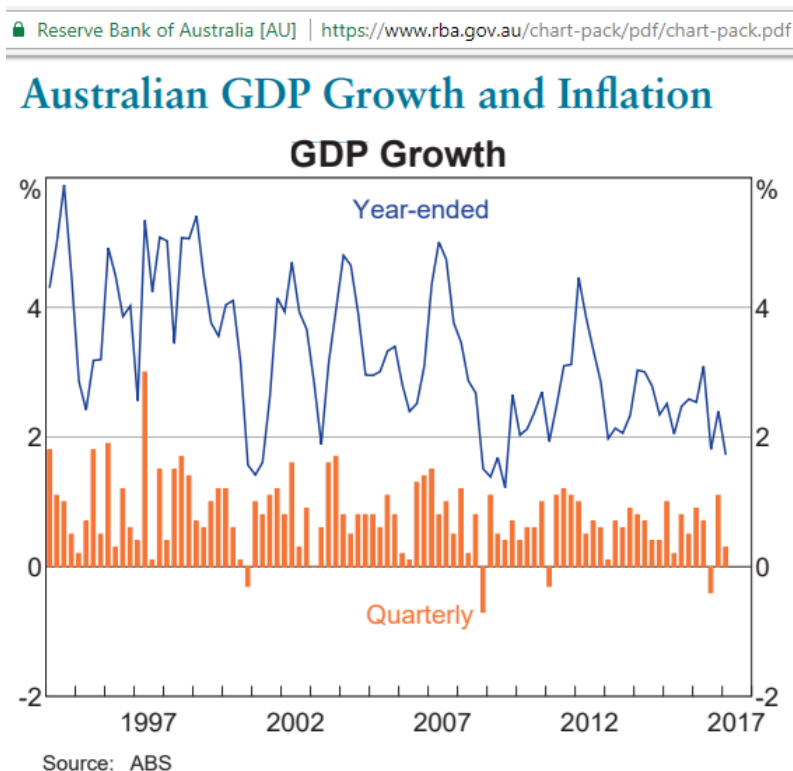


Fig 10

<https://www.rba.gov.au/chart-pack/pdf/chart-pack.pdf>

Oops. GDP growth is in long term decline and around 2% now, compared to 1.9% population growth target. This means that GDP per capita is practically no longer growing. Forget prosperity growth, even before looking at affordable housing.

In other words: 88% of flats you see shooting up around you are not for the existing population but for immigrants yet to arrive with heaps of new traffic problems and all this at

no prosperity gain. What a useless exercise. And it is quite plausible: divide all of Australia's income from commodity exports (which are not a function of population but overseas demand) by a growing population and there is less to distribute per capita.

This is the crux of the matter: unless immigration is fundamentally reduced, our problems are only going to get worse no matter how many traffic studies are done. Dick Smith who recently spoke at an event in a packed Church Hall in Kilara, proposes 70K pa.

Of course this is a federal matter, but the State government happily acquiesces, cashes in the stamp duty and dumps all problems on Councils, who have to make decisions under duress to meet population targets. The underlying constitutional problem is that Councils exist at the pleasure of State governments. So we have here a multitude of intertwined problems. Not a good framework to manage a 5 million city.

Chapter 11 (traffic bankruptcy)

This chapter basically says that from the point of view of the road network the Epping Town Centre is not able to cope with any additional traffic from future development as it is already congested ("densities proposed should never have been permitted" (by Hornsby Council), p 90). As through traffic on the rail bridge is 89% of all peak traffic there is NOTHING land use planning by Parramatta Council can do to accommodate this increase.

Specific questions

11a .Delay DAs

Answer: Yes, the longer the better. We are expecting another financial crisis which will stop all this.

11b. Reduce car space requirements

Answer: Yes, try it. Polyhorizon has 500 car spaces just 400 m from the station. That is not transit oriented development. The problem is of course that the apartments are so expensive that for \$ 1 million buyers expect to get a car space.

11c. Commuter car park near station

Answer: No. Land is already so dear that parking would become prohibitively expensive if all costs were included in daily park fees. One possibility would be above the rail land but there are more important town planning considerations. The current rail concourse and the chicken ladder on the Western side are not suited to connect East and West Epping if really all these residential towers were built.

11d. Resident Parking Scheme

Answer: Yes. Current residents must be protected from the ravages of developers

11e. Car sharing

Answer: Only 6 car share spaces at Epping for 10,000 dwellings ? Give us a break. Totally insignificant.

11f. Crossing attendants in Rawson St

Answer: No. With 1,000s of commuters streaming towards the rail station, to fill the 4 min metros, where is the space for them to wait? A pedestrian bridge would be needed, starting at the Beecroft Rd level. Everything is too narrow there. The whole planning is ad hoc and inconsistent.



Fig 11

If ever the NSW government could calculate the marginal infrastructure cost for 1 additional migrant then and only then would they realize that this is not economic. In fact, without selling their silver (poles and wires, land titles office etc) the NSW budget is already in the red right now. And that just at the beginning of inviting 1.5 million additional population. What will they sell next? Parliament House?

Parramatta – Epping Light Rail

No provisions have been made in the Town Centre Study for continuing the light rail from Carlingford to Epping. The terminus in Epping should be on the Council car park (left, Fig 11). No DA should be approved before this light rail project has been properly planned and included in the budget..

Solutions

Through traffic

Through traffic on Epping Rd/rail bridge will increase proportionally with general population growth in Sydney (1.9 % pa) and population growth in surrounding suburbs in particular e.g Ryde. The rate is 8,000 vehicle kms pa per capita.

Solution: Immigration – responsible for 88% of population growth – must be reduced.

Local traffic

10,000 additional dwelling units mean 2.3 household size x 8,000 vehicle kms = 184 million vehicle kms pa new traffic, both in Epping and mainly the surrounding suburbs.

The Epping commercial area has been in decline for several decades after the car based Carlingford Court and Macquarie shopping centres were developed. Current DAs for residential towers are destroying jobs (example Polyhorizon) and also shops (example Oxford St). These new towers have some fancy boutique shops for its rich residents. The need for shopping in Carlingford Court and Macquarie centre will continue, if not increase.

Solution: Stop new DAs

The coming oil, energy and financial crisis

This will be the ultimate solution as the government's current planning is both oil/energy illiterate and imprudent. As shown in Figs 2 and 3 something physical and financial must happen to stop and reverse unsustainable growth.

In 2005, global crude oil production started to peak and declined somewhat. Oil prices went up and caused the US recession. The oil price shock in 2008, triggered by an extra oil demand in China for the Olympic Games, caused the financial crisis which changed the world for good, right to the present. The response of the system was low interest rates and money printing in the US, Europe and China (creating an asset bubble now responsible for the housing boom in Sydney). Cheap money also financed the US shale oil boom which is a Ponzi scheme:

BHP chairman says \$20 billion investment in shale was a mistake

29/6/2017 <https://www.reuters.com/article/us-bhp-shale-idUSKBN19K1UZ>

Shale oil is a very light and extra light gassy oil (tanker train explosions!) including condensate for the chemical industry. It allowed the US to reduce its imports by 2 mb/d of the same type of oil, mainly from West Africa e.g Nigeria which replaced Libyan oil exports to Europe and Asia in 2011, thereby avoiding an oil crisis. Then US refineries started to use more shale oil but there are technical limitations because many of these refineries were actually designed for cheaper, heavy oil. US inventories were filling up with unsaleable shale oil after 2011, as shown in the following research I did together with an oil geologist from Houston, Texas, Art Berman who is advising oil companies how the extract more oil from their wells.

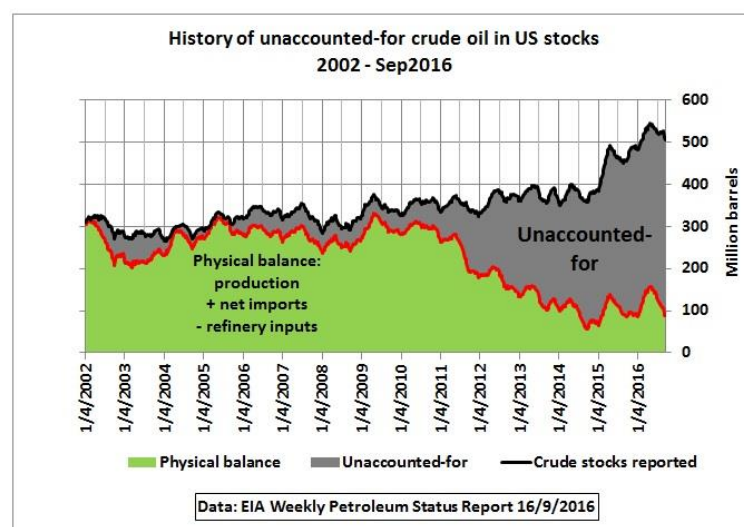


Fig 12

8/10/2016 U.S. Storage Filling Up with Unaccounted-For Oil
<http://crudeoilpeak.info/u-s-storage-filling-up-with-unaccounted-for-oil>

This article prompted a response from the Deputy Administrator of the Energy Information Administration of the US Department of Energy, Howard Gruenspecht, meaning it hit a nerve. There was an exchange of emails but the problem of unaccounted-for shale oil remains a mystery. The difference is huge, 400 million barrels at the time of writing the above article. It keeps oil prices low.

US refineries became saturated with domestic oil as mentioned in this article of the Oil and Gas Journal

1/2/2014

PADD 5 is the last frontier for absorbing additional US domestic crude production. PADD 2 (US Midwest), nearest to the Bakken and Midcontinent, saturated first, PADD 3 is now close to saturation, and PADD 1 will likely be saturated by third-quarter 2015 if oil prices remain high enough to sustain production growth at or near the current rates

<http://www.ogj.com/articles/print/volume-112/issue-12/processing/prospects-for-us-crude-exports-to-asia-are-looking-up.html>

In 2015, oil prices were not high enough and US shale production peaked. But it has rebounded after oil prices went up, albeit moderately.

Shale oil is fundamentally different from conventional oil not just because of its chemical composition of light hydrocarbons but also because of its astronomical decline rates as shown in this graph

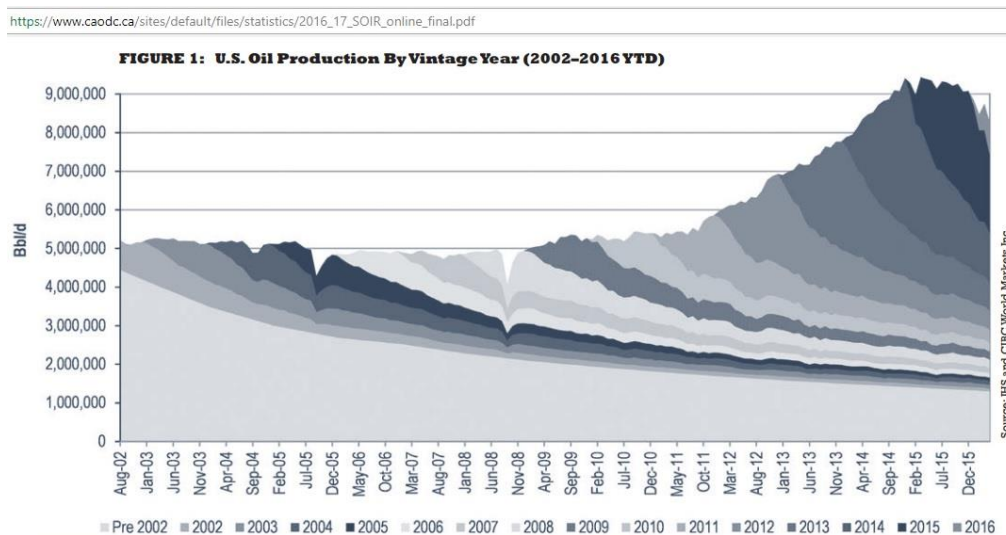


Fig 13

https://www.caodc.ca/sites/default/files/statistics/2016_17_SOIR_online_final.pdf

The bottom part of the above graph shows the slow decline in conventional fields and the upper part the steep declines in shale oil fields. The more wells are added, the steeper the cumulative decline and the more wells must be added in future just to keep production flat. This is not a sustainable business model.

In the meantime, low oil prices are destroying the much larger, conventional oil sector.

For example, Shell's upstream sector earnings went into reverse in the 3rd quarter of 2016 as shown in a graph from this article:

16/10/2016 Royal Dutch Shell's upstream earnings peaked 2008, now in the red
<http://crudeoilpeak.info/royal-dutch-shells-upstream-earnings-peaked-2008-now-in-the-red>

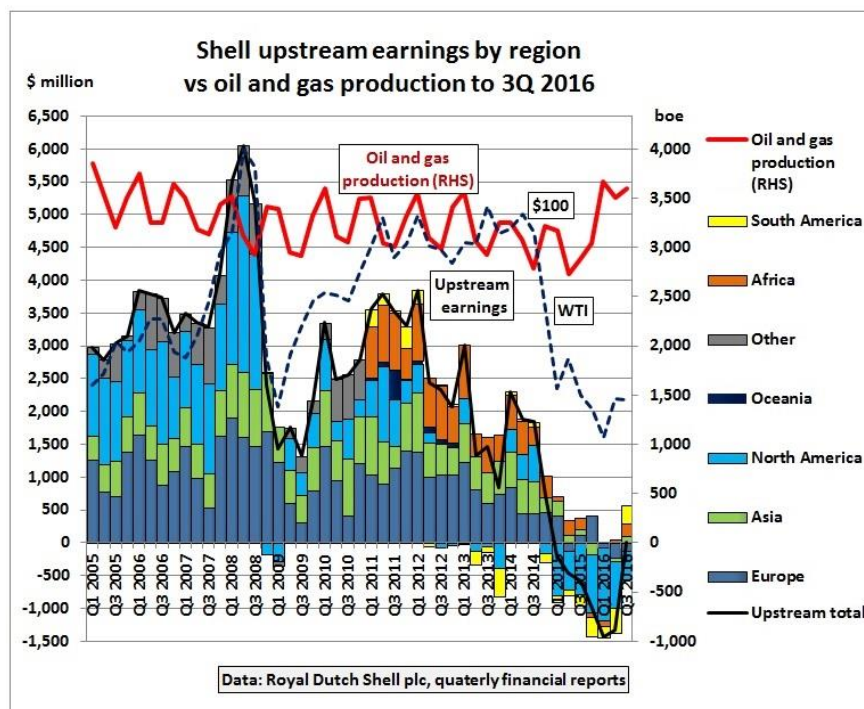


Fig 14

Exxon Mobil had this slide in an investor presentation:

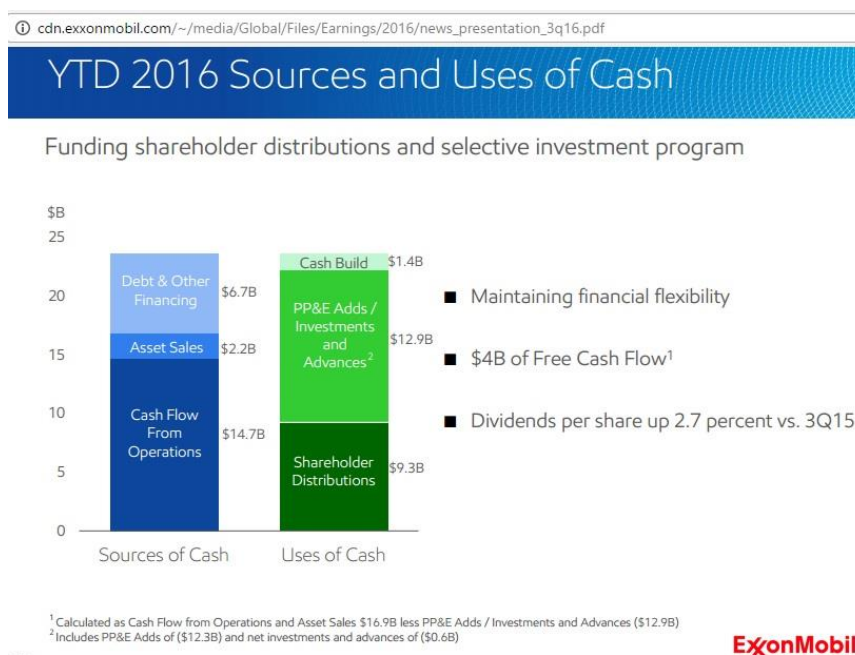


Fig 15

http://cdn.exxonmobil.com/~media/Global/Files/Earnings/2015/news_presentation_3q15v2.pdf

I recommend the reader to restack the columns and find that only 19% of dividends are financed from cash flow, 24% from asset sales and 57% from new debt. How long can that continue? **I hypothesise that one scenario for the next financial crisis is the poor financial performance in the oil and gas industry.** Prof. Garnaut, who did the CO2 modelling for the Rudd government said in a recent seminar that the next financial crisis will come (but year un-known) and will be worse than in 2008/09.

What's worse, revenue for OPEC has dropped dramatically:

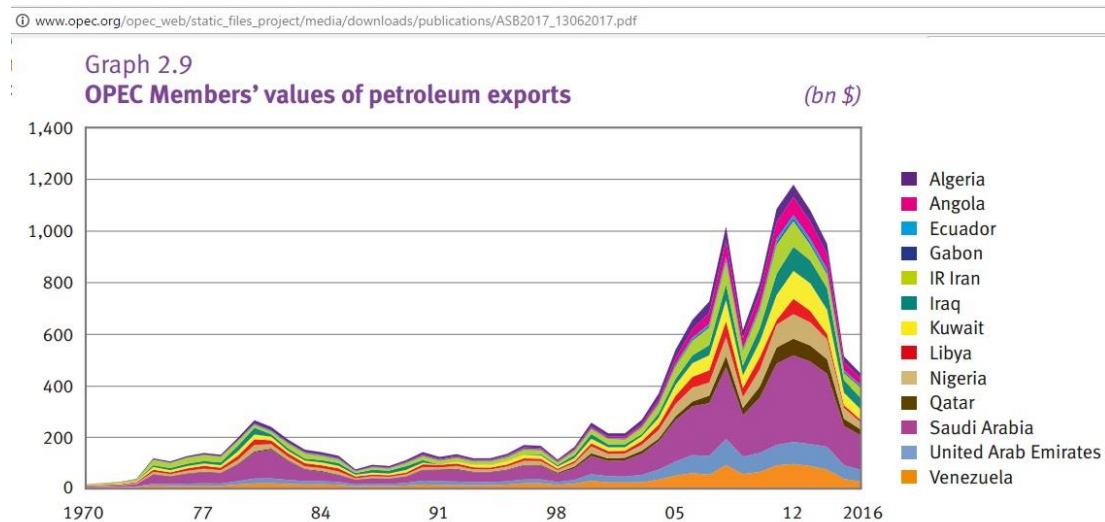


Fig 16

The above graph means social unrest as governments can no longer balance their budgets and have to reduce social spending. The economic and political disintegration of Venezuela is the first example of what will happen in other oil producing countries with State oil companies financing budgets. ABC journo Alan Kohler enjoys what happens to OPEC but he and those unsuspecting viewers who believe in what he says will get a surprise when the consequences arrive at the filling station.

Australia's oil vulnerability

After the closure of 3 refineries, Australia now imports more fuels, from one of the evolving hot spots in Asia: South Korea and Japan, also China. Not to forget the oil trade routes via the South China Sea.

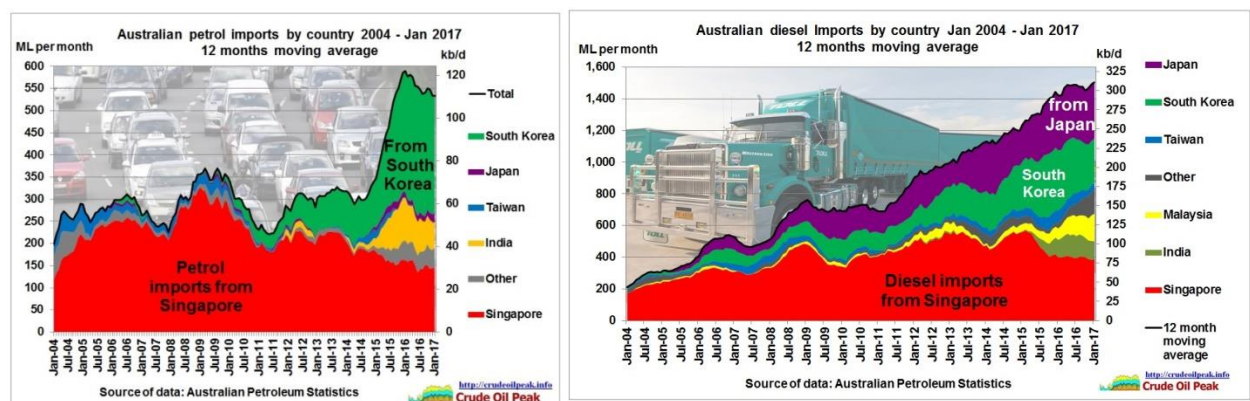
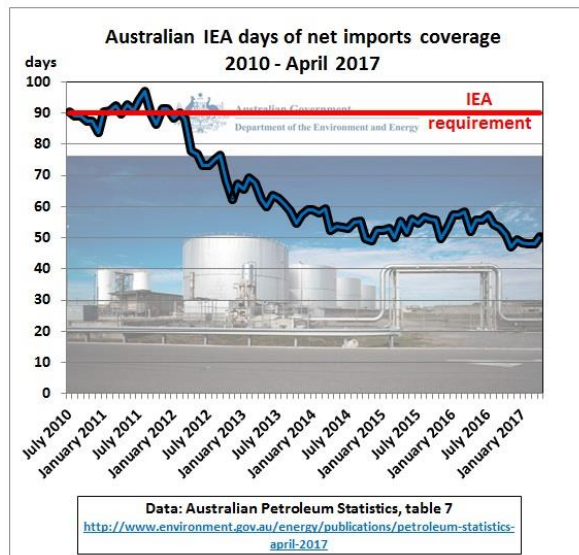


Fig 17 <http://crudeoilpeak.info/australian-graphs>

Kim Jong un keeps his country in a permanent and increasing state of war – a necessity for a dictator. This internal pressure will one day push North Korea over an unknown red line given by the US military - irrespective of who is the President – requiring a military response. Moreover, the chance of an accidental war is very high. One Scud missile on Ulsan (I recommend to look at the google map what gigantic refineries, chemical complexes and oil storage facilities there are) and oil tankers will stop to go there.

29/4/2017 South Korea's oil trade under threat

<http://crudeoilpeak.info/south-koreas-oil-trade-under-threat>



Unless alternative fuel import sources are found immediately, we'll get food shortages and capital cities will get disconnected. Our beloved cars are the least to worry about. Motorists will have to get used to mandatory car pooling and petrol rationing. Transurban will be unable to pay back debt. The NSW government asked for it. Australia's oil inventories are at record lows at present. Governments are sleep-walking.

Fig 18

Power crisis

Next summer there will be again load shedding as Hazelwood in Victoria (1,600 MW nameplate capacity) has closed and NSW is a net-importer of electricity.

Multiple problems found in AEMO report on load shedding in NSW 10th Feb 2017

[https://www.aemo.com.au/-/media/Files/Electricity/NEM/Market Notices and Events/Power System Incident Reports/2017/Incident-report-NSW-10-February-2017.pdf](https://www.aemo.com.au/-/media/Files/Electricity/NEM/Market%20Notices%20and%20Events/Power%20System%20Incident%20Reports/2017/Incident-report-NSW-10-February-2017.pdf)

Liddell coal power plant 2x500 MW under repair

Eraring coal power plant
11:05 Unit 3 output only 549 MW (capacity 720 MW) due to minor boiler tube leak

Vales Point coal power plant
16:09 Within one degree of reaching their absolute outlet temperature limit

Tallawarra gas plant 16:22 trips from 408 MW due to a fault in gas turbine

Colongra gas plant
16:50 All 4 units failed to start. Low gas pressure in fuel supply line as gas was used earlier in the day. 2 unit hrs gas in the pipe. Start with fuel oil also failed. 6-8 hrs of fuel oil available
18:37 Units 3 & 4 finally transitioned to fuel oil but ran out of gas to start units 1 & 2

Interconnectors thermal limits
Victoria-NSW 297 MW over limit
Queensland-NSW QNI 276 MW over limit

Fig 19

10 Feb 2017 NSW running low on contingency reserves during hot days
<http://crudeoilpeak.info/nsw-running-low-on-contingency-reserves-during-hot-days>

South Australia's quick fix batteries will deliver 100 MW for just 1.3 peak hours



Fig 20

The array will be capable of an output of 100 megawatts (MW) of power at a time and the huge battery will be able to store 129 megawatt hours (MWh) of energy so, if used at full capacity, it would be able to provide its maximum output for more than an hour.

<http://www.abc.net.au/news/2017-07-07/what-is-tesla-big-sa-battery-and-how-will-it-work/8688992>

Parramatta's CBD alone will require around 150 MW of peak power, over 6 hours.

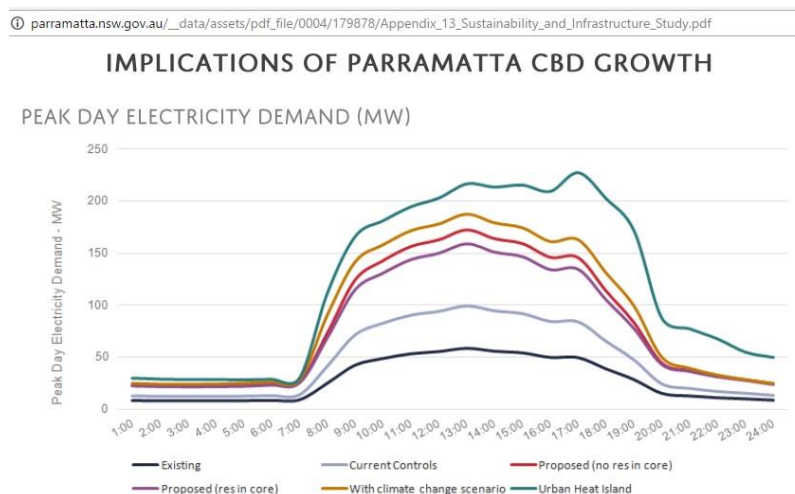


Figure 20: Expected peak day electricity demand profile under each planning scenario as well as under various climate change scenarios.

Fig 21

So where is the battery pack for Parramatta? How much is the additional peak demand for 10,000 new dwellings in lift dependent residential towers in Epping? No one has calculated this. It is just assumed it will be there.

For anyone not convinced that we are heading for a crisis I recommend to complete the future oil and production curves in the following graph, for the next 20 years, the planning horizon for the Epping Town Centre Study.

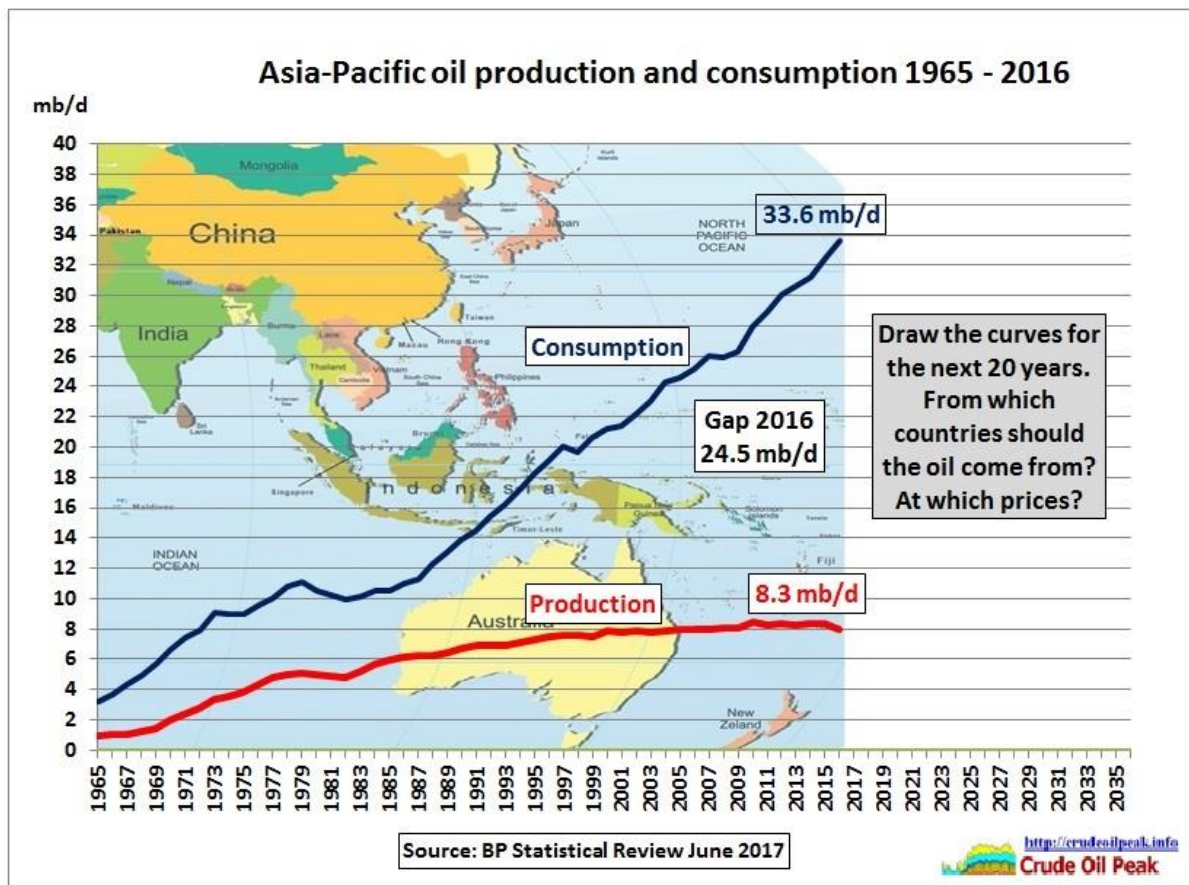


Fig 22

19/6/2017 Asia Pacific oil supply gap widening as China's oil production drops
<http://crudeoilpeak.info/asia-pacific-oil-supply-gap-widening-as-china-production-drops>

Space for Council's calculations:

Global oil supply to lag demand after 2020 unless new investments are approved soon

6 March 2017



Fig 23

<https://www.iea.org/newsroom/news/2017/march/global-oil-supply-to-lag-demand-after-2020-unless-new-investments-are-approved-so.html>

Conclusion: The more people there are the more power shortages, the more competition at the remaining filling stations and the longer the petrol lines. Every litre of cheap petrol now is a nail in the coffin of the international oil companies and Middle East regimes, on whose oil we depend. The sooner immigration is reduced and the more DAs are delayed the better for all of us. The NSW government's perpetual growth policy is a shot in the foot.

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