Submission on Medium Density Housing
By Matt Mushalik

Government forces Sydney to go substandard on miniature lot sizes
Uncontrolled overseas migration and lack of decentralisation

A Explanation of intended effect

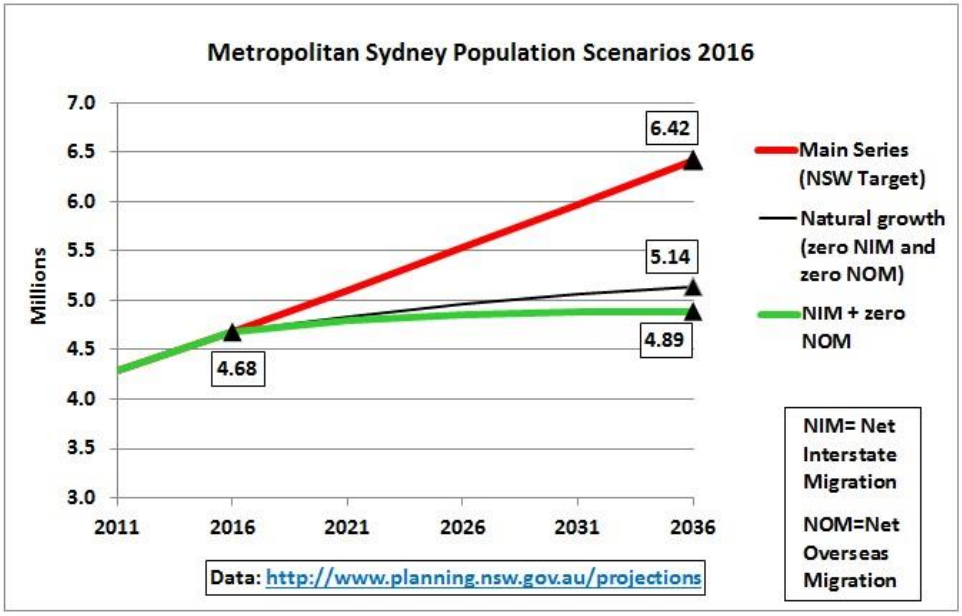
1. The document provided for comment

https://majorprojects.affinitylive.com/public/a72ecb77c703a7454cb11040a3f87022/Explanation%20of%20Intended%20Effect%20for%20the%20proposed%20Medium%20Density%20Housing%20Code.pdf (downloaded 22/12/2016)
is not text searchable. You cannot copy text to use as a quote in one's submission. This is to be seen as a deliberate attempt to make submissions harder. It is not in the spirit of legislation providing for public consultation.

Recommendation: Searchable PDF files should be republished and a fresh submission period should be allowed in 2017. There is no hurry.

2. Objective growing population

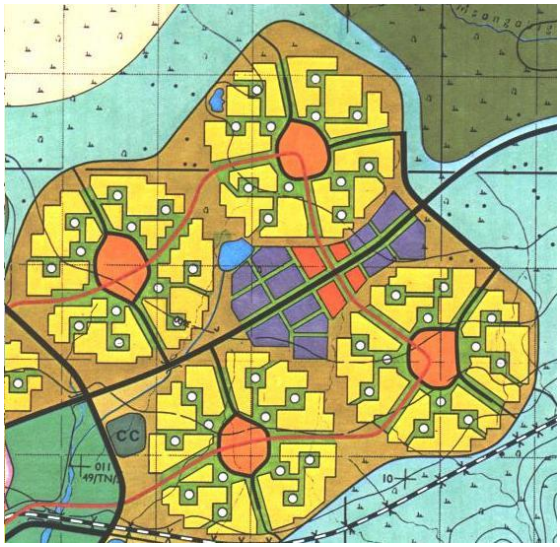
Natural population growth minus NIM (net interstate migration) would lead to an increase of population from 4.68 m to 4.89 m in 2036

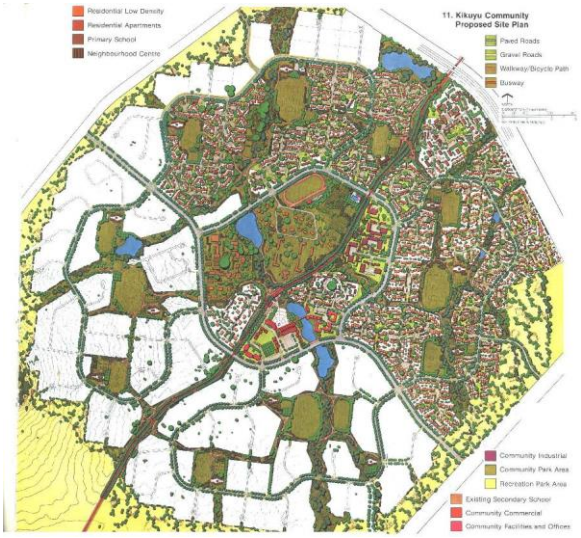


A 220 K growth can be easily accommodated in 2nd floor extensions and granny flats. Therefore, there is no population related need to introduce new planning controls.

The best solution would be of course to a build a sustainable (i.e energy frugal) city outside the commuting distance of Sydney (which can never be made sustainable)

More details are here:
26/8/2009 Sustainable Cities Master Plan
http://crudeoilpeak.info/sustainable-cities-master-plan





Well planned city with 4 communities @ 35,000 population grouped around a common city centre. Transport is minimised. No highrises, no lifts. Business and light industrial included.

Recommendation: Lobby the Federal government to reduce net overseas migration. That will solve all housing problems and many other congestion problems on roads, in public transport, in schools and hospitals.

3. Design quality of residential apartment development

The document is misleading by claiming planning requirements are "clear, effective and evidence based" even now. Look at what current rules produce:

Flats on Carlingford Rd near Carlingford Court shopping centre

Dark grey external colors unnecessarily increase power demand for airconditioning in summer. No cross-ventilation. No solar water heaters, no PV panels (roofs of penthouse not directed towards North). Symbolic landscaping because the distance between buildings is less than the building height. Exit ramps from basement car park go directly onto busy road and just at a traffic light (DA traffic report fraudulently stated that traffic on Carlingford Rd is "free-flowing"). You cannot violate more rules which would make up a sustainable design.

Recommendation: BASIX rules need to be tightened with the objective to reduce energy consumption. If that were stringently thought through it would follow logically that these sorts of flats can never be made sustainable. i.e energy frugal

The above picture also illustrates the problem mentioned under 2

The high number of "for lease" signs show that the housing market is flooded with absentee investors in this Chinese enclave where no Australian would dare to move in. Most of the inhabitants in these flats were not in Australia 5 years ago. Why should we accommodate all these Non-English speaking people right here in crowded Sydney? These sort of structures should be built in Broken Hill, not in Epping.

4. The missing middle

There is no missing middle (except for the manor houses which seems to be a new idea). The other types of housing have been built for many years now. In sofar the decision makers who want to push through the amendments seem to live in detached single dwellings and don't know what is happening.

FIGURE 1: RESIDENTIAL DEVELOPMENT SPECTRUM

It is claimed that these do not pose design challenges. That is wrong. I have myself designed backyard houses (when they were still allowed). You can't fit standard designs on these small blocks of land i.e 400-500 m2. Speeding up approval procedures will not change that. In the contrary, it will very likely result in substandard designs. Objections from neighbours usually result in improvements for all neighbours together, provided of course Councils have qualified staff to solve tricky issues.

5. Opportunities for affordable housing

Affordable housing in Sydney is gone for good. If the government increases densities (i.e , dwelling units per ha) the cost of land will go up accordingly, not down. If you increase the speed of approvals (more DAs per month) you will increase costs because you will run into labour and material supply constraints (as happened during the mining boom). The idea that more supply of housing will drive down construction costs is totally unrealistic and is only conjured up to make the electorate accept higher densities for the benefit of developers.

6. More frequent and accessible transport

This is another myth. If people are supposed to walk why then are double garages approved?

Block of land before “development” with 1 carport

Same block of land with 2 double garages.

Of course, these houses are so expensive that the rich Asians who are likely to move in have 2 cars.

7. Opportunities for landscaping

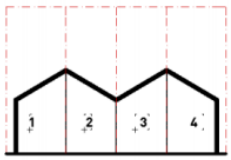
Symbolic landscaping in front of duplex

Half of the space in the front is taken up by a grey double driveway (radiant heat!). Roof tiles are also dark grey. Too many design violations. Council approved vegetation has long been replaced by "low-maintenance" plants. Our environment is systematically destroyed.

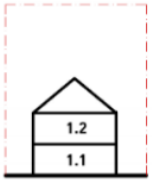
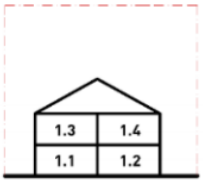
8. Space for a garden and children to play

On page 6, the document praises exactly what the medium density development is destroying – already now.

9. Multi dwelling housing

Development Type	Requirements	Comments
Multi Dwelling housing (terraces) *3 or more dwellings (whether attached or detached)*  *Strata titled*  *Torrens titled*	Minimum strata lot: 200m² Minimum lot width: 6m Maximum Floor Area: Varies based on size of completed lots. Maximum height 9m Maximum number of storeys: 2, excluding basement[2] Each dwelling must have a frontage to a primary road. The development must not result in one dwelling being located over or partly over another dwelling.	This enables terrace houses that may not be able to be carried out as a dwelling house or abutting dwelling (above) and need strata titling as a result of minimum lot size. Torren or Strata subdivision. Provisions for greater lot width where the garage is accessed from a primary road. The restrictions to the configuration ensure that all dwellings are side by side.

200 m2 is too small. 9 metres height means 2 floors with attic with overshading problem. That should not be complying without neighbour's consent.

Dual Occupancy (attached - one above the other) Manor Houses (3-4 dwellings)   	Min lot size – as specified in an LEP, or 600m². Min lot width (at any point): 15m. Maximum Floor Area: Same as dwelling house for same size block of land. Maximum height 8.5m Maximum number of storeys: 2 (excluding basement)	Strata subdivision only. New definition of manor house to be included in Standard Instrument Local Environmental Plan. Class 2 development – BCA requires min 3m boundary setback without fire protection. Additional side setbacks needed to mitigate against privacy impacts. Same bulk and scale as a dwelling house under the Codes SEPP.

4 dwelling units per 600 m2 = 150 m2. That is even less. 8.5 m height also guarantees overshading, for example of solar water heaters and PV panels. What a crazy idea to allow this just for the sake of a basement car park. Aren't we supposed to have EVs charged from solar panels via batteries? The stupidity of this proposal cannot be beaten.

Let us compare densities with a European design (of the 1970s)

In a suburb 6 km South of Frankfurt airport

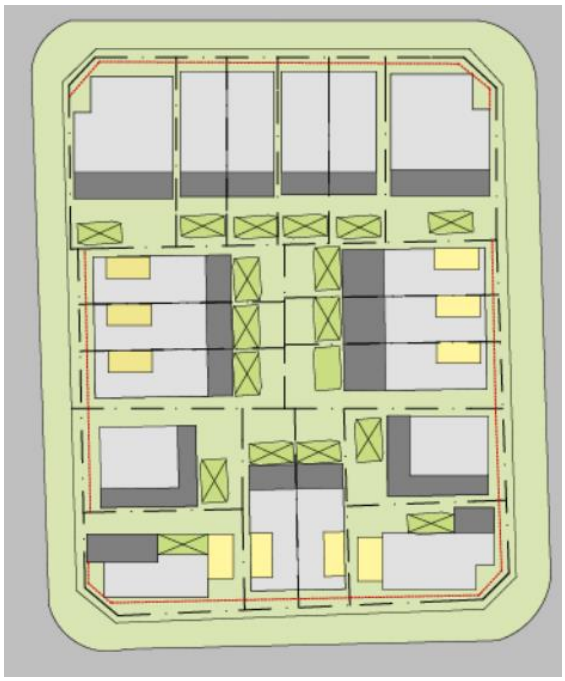
There are 6 dwelling units on 1,900 m2 = 317 m2 per lot incl. common garages (some of which were obviously added later. Lot width over the length of the building is 7 m).

Each dwelling unit has a basement (storage, games, computer room), ground floor with living room and kitchen, 2nd floor with bedrooms and attic (additional storage or bedrooms). This is not to say that such a design should be adopted for warm climates. And the row of garages is also problematic.

But what it means is that the proposed 150-200 m2 per dwelling in Sydney is already smaller than in similar suburbs in Europe. In a country like Australia with virtually unlimited land resources, it is shameless that Sydney's population is made to accept such low standards. We are taken for a ride.

Recommendation: This proposal must be outright rejected.

B Medium Density Design Guide



<< This looks like a high density working class block in Redfern.

Although no dimensions are given, the size must be approximately 50x80 m = 4000 m2 with 18 dwelling units giving an average size of 222 m2 per dwelling.

Measure distance
Click on the map to add to your path

Total area: 4,024.41 m² (43,318.42 ft²)
Total distance: 254.41 m (834.69 ft)

Similarly sized block in Redfern >>

The government wants this for all of Sydney? Yes, let's start with it in the suburb of the Premier Mike Baird, in Manly and then continue with the suburbs of all other decision makers who had the brilliant idea for this design guide.

I have the impression the government has lost its bearing.

"*Natural features of the site, such as trees, rock outcrops, cliffs, ledges, indigenous species and vegetation communities should be identified in the local context plan and incorporated into the local strategy by council."* (p 23)

Comment: look at the above before/after picture. 1 single tree made it, all the others were bulldozed because floor area was maximised.

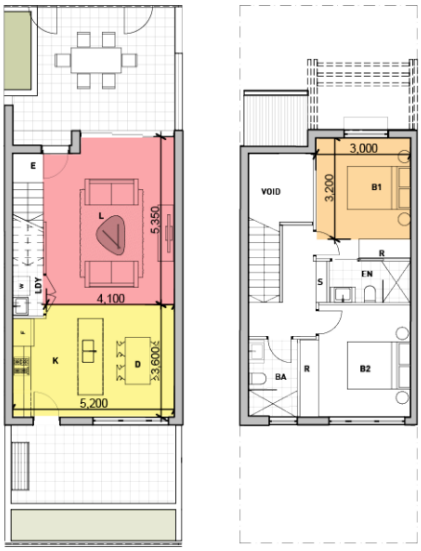
Figure 2-27 Internal pedestrian network

<< this design example is of lower density than shown above. It is misleading.

"Natural ventilation is the movement of sufficient volumes of fresh air through a dwelling to create a comfortable indoor environment" (p 40)

Depending on the main wind direction, row housing will in most cases not result in good cross ventilation. Even a typical semi in the Eastern suburbs lacks good cross ventilation.

Small semi in Waverley

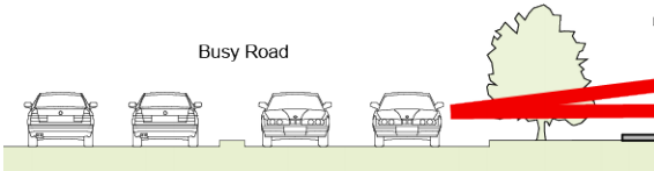


<< This design example on p 44 shows that for a 6 m width only 2 bed room units can be built. This is not the variety announced in part 1 of the documentation.

Walls everywhere and everything is paved. That will be extremely hot in summer. Why is this shown as a good design example?

<<< this architect designed row of houses with cantilevered rooms doesn't look like affordable housing.

And that's why: only BMWs in this suburb



<< Enough room for a small party but unsuitable for children

Here we see the whole intention of the scheme. 8 blocks of land 8 x 15 x 45 = 5,400 m2 divided by 35 units = 154 m2 (or are some of the white boxes garages?) The total number of dwelling units has been increased from 29 to 56, practically a doubling. Although the average household size in these miniature boxes will be lower than in the standard blocks, everything practically doubles: traffic, water and power demand, sewage. The layout of internal roads will make for a noisy environment. Sleep disorders will become the norm for anyone moving there. These will be mostly renters. Given the enormous site cost for the additional infrastructure required, it is doubtful that first home buyers can afford to buy these boxes. In any case, this is not the environment to bring up children

Disputes

No dispute resolution process between a certifier and an aggrieved neighbour has been described in this documentation.

Conclusion

The denser the "development", the more oversight there must be by Councils and the more neighbours' rights must be considered. One of the most critical criteria is overshading. The above medium density examples are all jobs for developers, not individual land owners. We cannot trust developers nor their appointed, self-interested certifiers. It is the function of all levels of government to protect individuals from the excesses of private developers. Therefore, the proposal to define complying development together with the development standards is exactly the opposite of what should be done.

I wonder whether any of the political masters and the architects who prepared this document and received tax-payer funded consultancy fees would be prepared to live in what they have designed.

Prepared by Matt Mushalik 23/12/2016 http://crudeoilpeak.info/

Appendix

Why it is not a good idea to grow Sydney

The coming power shortages

On Friday 9/12/2016 the Chief Scientist warned of power shortages and the failure to reach CO2 targets agreed to in Paris. From the website of the Australian Energy Market Operator which coordinates the grid on the East coast we can see that already in January 2017 NSW peak demand of 14,575 MW slightly exceeds available generating capacity of 14,160 MW. Electricity bills will go sky-high. In November they reached on a hot day $14 per KWh over 1 hr, 50 times higher than on retail bills.

The more power consumers there are, the higher the electricity bills and the higher the probability of blackouts

http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Data-dashboard#medium-term-outlook

The dark blue area is the capacity in MW and the yellow line is the maximum demand.

NSW nameplate capacity of all coal fired power plants is 10,240 MW. This means that without gas, hydro and wind, we would already have regular load shedding in peak demand periods.

Generation_Information_NSW_11082016

Existing & committed scheduled and semi-scheduled generation - NSW coal fired

Power Station	Owner	Unit Number and Nameplate Capacity (MW)	Installed Capacity (MW)	Technology Type	Fuel Type	Dispatch Type	Service Status
Bayswater	AGL Energy	4 x 660	2640	Steam Sub Critical	Black Coal	S	In Service
Eraring	Origin Energy Eraring Pty Ltd	4 x 720	2880	Steam Sub Critical	Black Coal	S	In Service
Liddell	AGL Energy	4 x 500	2000	Steam Sub Critical	Black Coal	S	Announced Withdrawal
Mt Piper	EnergyAustralia	2 x 700	1400	Steam Sub Critical	Black Coal	S	In Service
Vales Point B	Delta Electricity	2 x 660	1320	Steam Sub Critical	Black Coal	S	In Service
Total			10240				

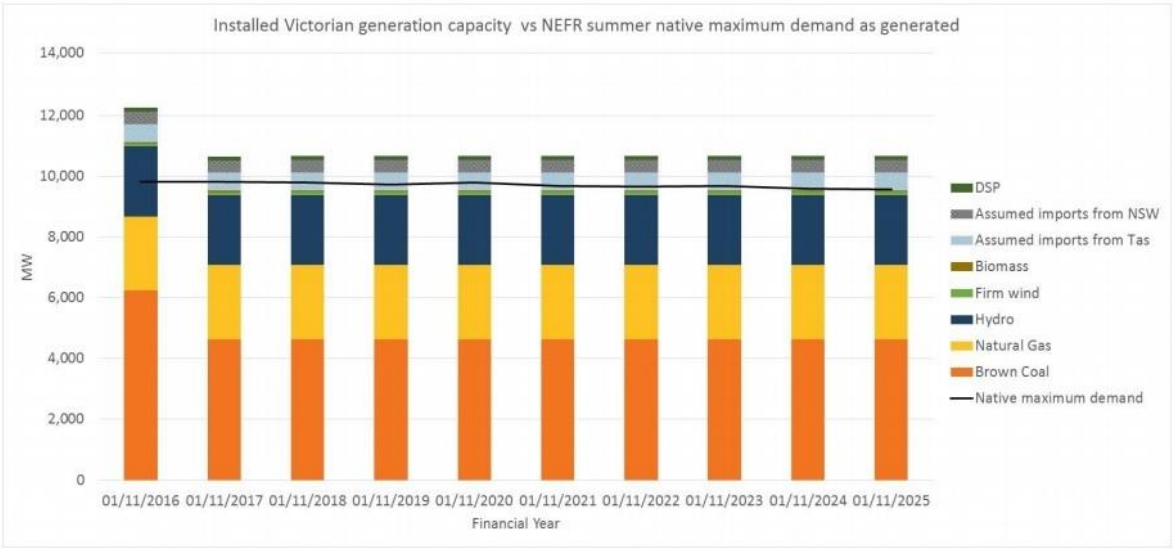
When Hazelwood (1,600 MW) closes end March 2017, AEMO plans that NSW provides 400 MW, making a tight situation even tighter in the next summer 2017/18.

https://www.aemo.com.au/-/media/Files/Media_Centre/Insights/AEMO-Market-Insight-Report-Victorias-supply-outlook031116.pdf

AEMO INSIGHTS

Market insight report – Victoria's supply outlook

The following figure shows AEMO's current Victorian generator capacity forecast (including the withdrawal of Hazelwood) against the Victorian average summer and extreme summer peak demands, and assumes a specified level of imports from Tasmania (590 MW) and New South Wales (400 MW)[3]. Wind generation capacity has been discounted in these estimates of firm capacity.



Power from Tasmania will only come under 3 conditions:

- Enough water in the hydro power dams
- Basslink is working
- The Basslink operator does not go bankrupt

If any of the conditions is not met NSW must export more than 400 MW to Victoria, interconnector capacities permitting (next page)

2.2. Queensland to New South Wales Interconnector (NSW1–QLD1)

The Queensland to New South Wales interconnector (QNI) is a 330 kV AC interconnection between Dumaresq in New South Wales and Bulli Creek in Queensland.

Table 2.2 – QNI nominal capacity

From	To	Nominal Capacity
NSW	Queensland	300-600 MW
Queensland	NSW	1078 MW

Transfer from Queensland to New South Wales is normally limited by the transient stability limits for fault on either a Bulli Creek to Dumaresq or an Armidale to Dumaresq line (approximately 1050 to 1078 MW).

2.3. Victoria to New South Wales (VIC1–NSW1)

The Victoria to New South Wales interconnector consists of the 330 kV lines between Murray and Upper Tumut (65), Murray and Lower Tumut (66), Jindera and Wodonga (060), the 220 kV line between Buronga and Red Cliffs (0X1), and the 132 kV bus tie at Guthega (which is normally open).

Table 2.3 – VIC1-NSW1 nominal capacity

From	To	Nominal Capacity
Victoria	NSW	700 to 1600 MW
NSW	Victoria	400 to 1350 MW

The nominal capacity of VIC1-NSW1 is highly dependent on the output of Murray (for New South Wales to Victoria) and Lower/Upper Tumut (for Victoria to New South Wales) generators.

Transfer from New South Wales to Victoria is mainly limited by voltage collapse for loss of the largest Victorian generator or Basslink or the thermal overload limits on the Murray to Dederang 330 kV lines

2.4. Basslink (T-V-MNSP1)

Basslink is a DC interconnection between George Town in Tasmania and Loy Yang in Victoria. It was commissioned in early 2006 after Tasmania joined the NEM. Unlike the other DC lines in the NEM, Basslink has a frequency controller and is able to transfer FCAS between Victoria and Tasmania.

Table 2.4 – Basslink nominal capacity

From	To	Nominal Capacity
Tasmania	Victoria	594 MW
Victoria	Tasmania	478 MW

Basslink capability for Tasmania to Victoria transfers has a maximum of 594 MW (measured at the Loy Yang end). Transfers are mainly limited by the energy constraint equations for the South Morang F2 transformer overload or the transient over-voltage at George Town

2.5. Heywood interconnector (V-SA)

The Victoria to South Australia interconnector (Heywood interconnector) is an AC interconnector between Heywood substation in Victoria and South East substation in South Australia.

Table 2.5 – V-SA nominal capacity

From	To	Nominal Capacity
Victoria	South Australia	460 MW
South Australia	Victoria	460 MW

The maximum transfer on V-SA from Victoria to South Australia is 460 MW based on the thermal rating on a Heywood 500/275 kV transformer
Transfers can also be limited by thermal overloads on the Snuggery to Keith 132 kV line Flows are occasionally restricted by the voltage collapse limit for loss of the largest South Australian generator

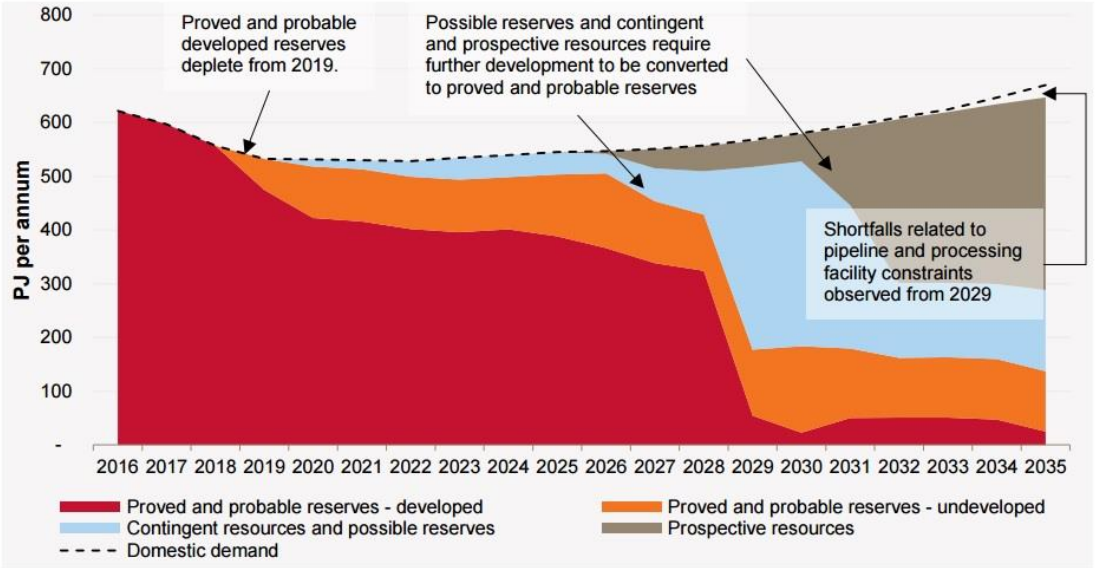
The aging Liddell power plant (4x500 MW) has been announced to close in 2022. When that happens all bets are off. Where will be the electric power for metros, the 2nd Sydney airport?

This situation is the result of 12 years of indecision of governments since Howard (totally flawed energy white paper June 2004). The climate change denial problem has now turned into a physical power shortage problem. Given the party political situation in Canberra it is highly unlikely that any decisions will be taken until physical shortages are there, not just intermittent, but regularly at peak demand times.

Gas is squandered in LNG exports

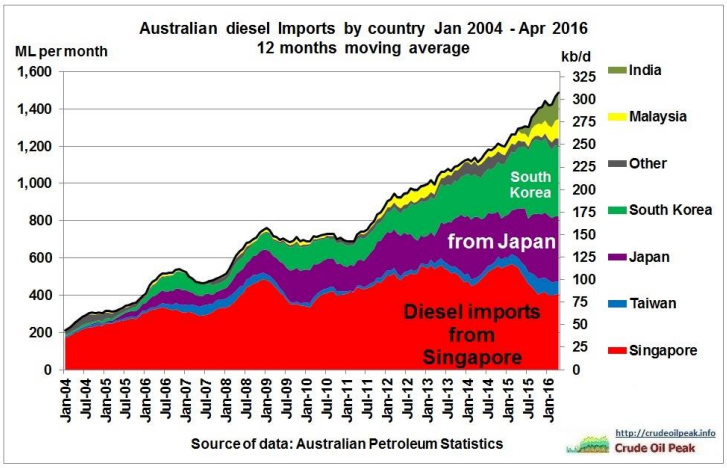
https://www.aemo.com.au/-/media/Files/PDF/2016-Gas-Statement-of-Opportunities.pdf

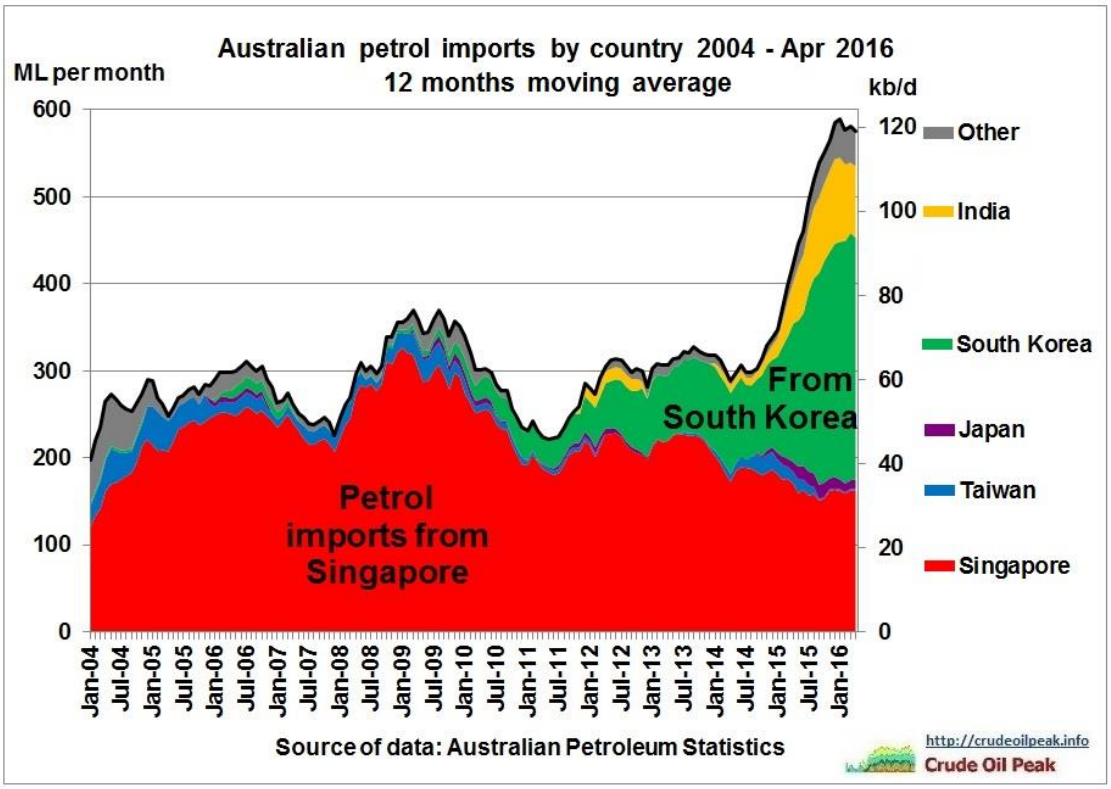
Figure 2 Eastern and south-eastern Australia domestic gas markets (excluding LNG), 2016–35



There will be gas shortages, too, as can be seen on the above graph from AEMO due to lack of a domgas policy.

After the closure of 3 oil refineries in Australia, increasing volumes of fuels are imported via the South China Sea, from countries which mainly depend on crude supplies from the Middle East.




Australian petrol imports by country 2004 - Apr 2016
12 months moving average
ML per month
kb/d
600
500
400
300
200
100
0
120
100
80
60
40
20
0
Other
India
South Korea
Japan
Taiwan
Singapore
From South Korea
Petrol imports from Singapore
Jan-04
Jul-04
Jan-05
Jul-05
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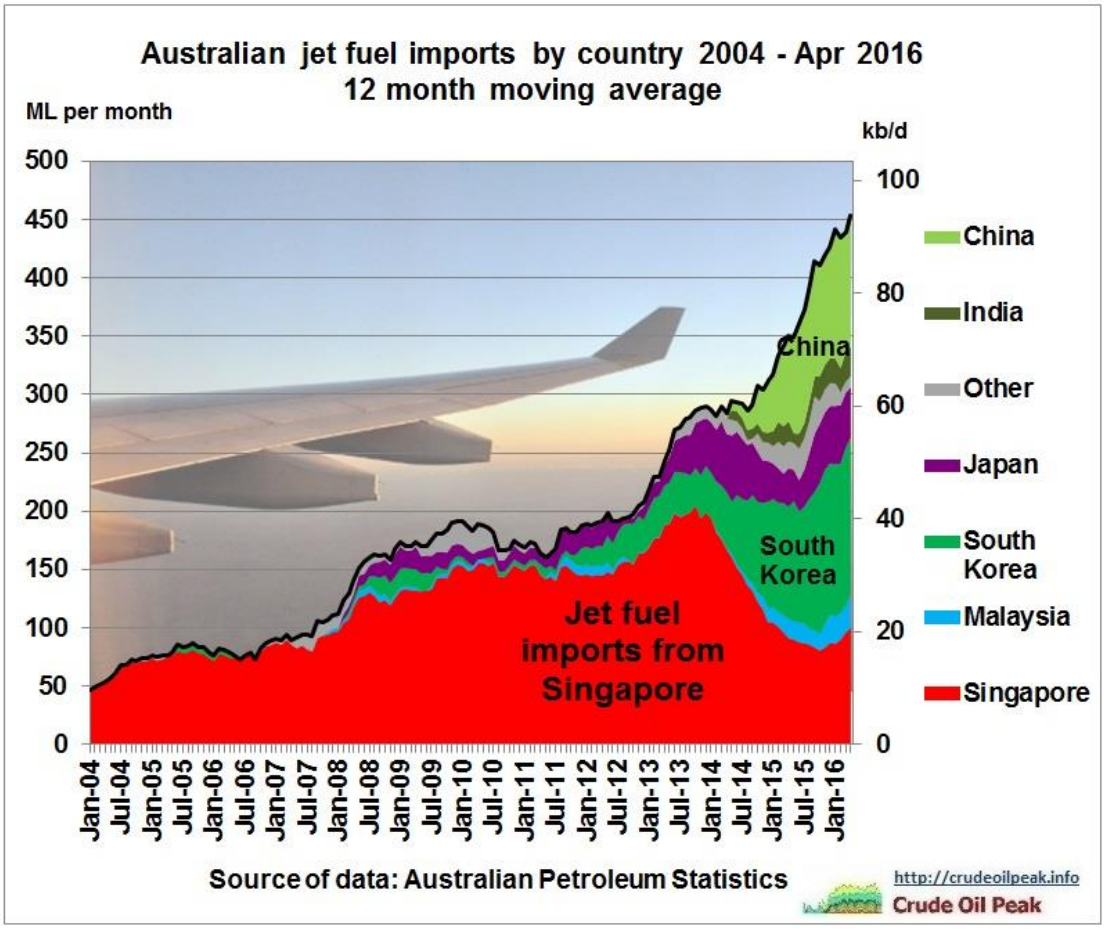
Source of data: Australian Petroleum Statistics
http://crudeoilpeak.info
Crude Oil Peak


Australian jet fuel imports by country 2004 - Apr 2016
12 month moving average
ML per month
kb/d
500
450
400
350
300
250
200
150
100
50
0
100
80
60
40
20
0
China
India
Other
Japan
South Korea
Malaysia
Singapore
China
South Korea
Jet fuel imports from Singapore
Jan-04
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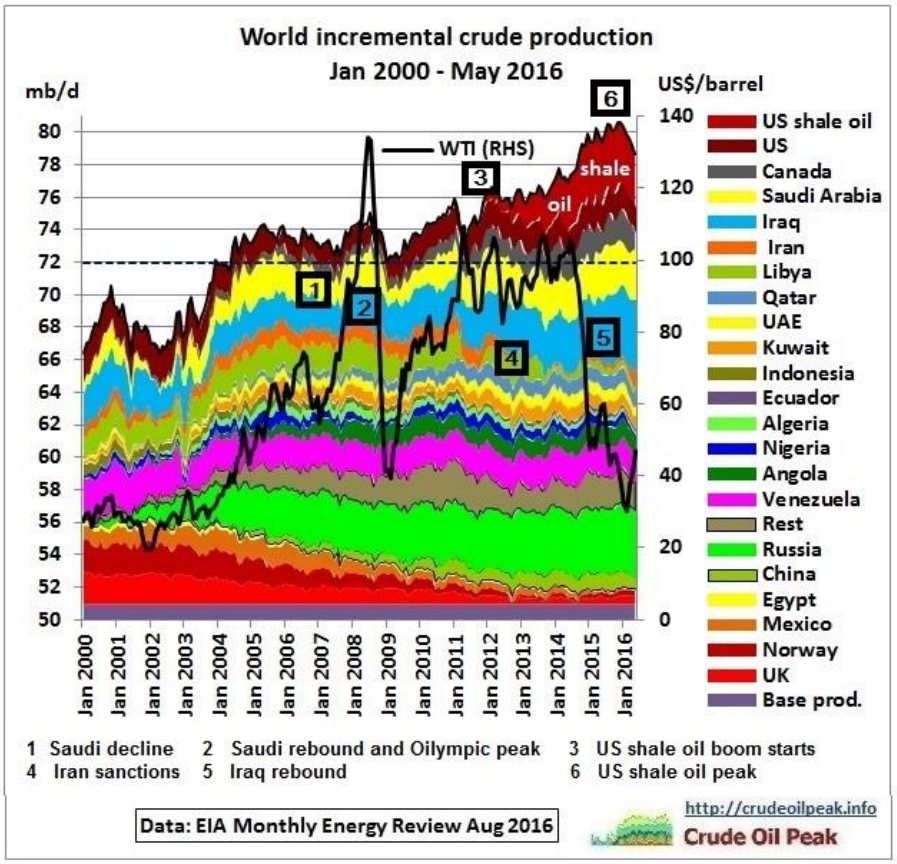
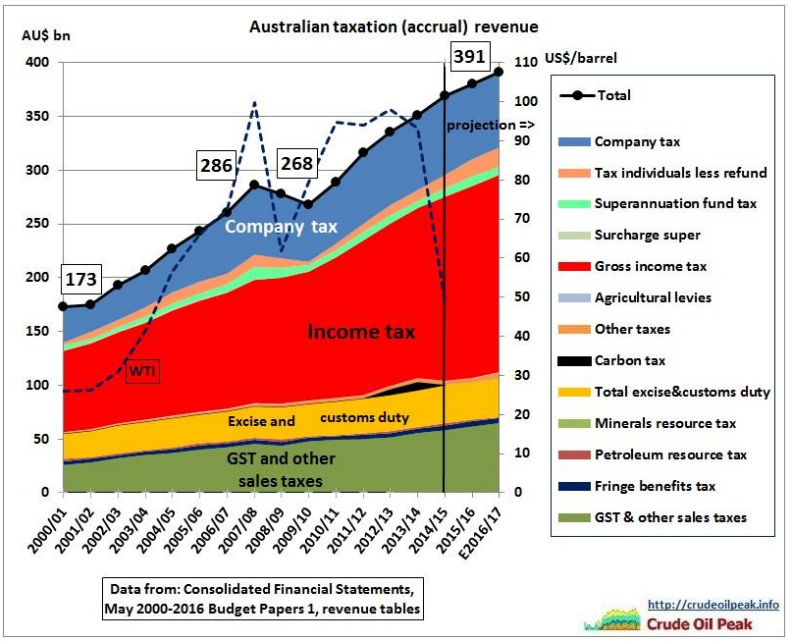
Source of data: Australian Petroleum Statistics
http://crudeoilpeak.info
Crude Oil Peak

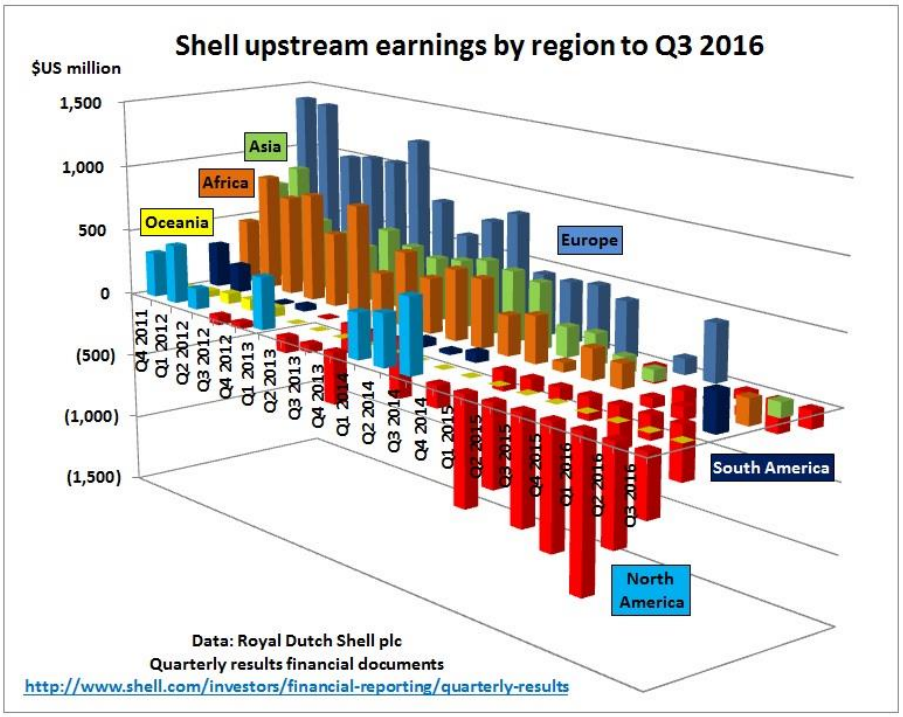
Peak Oil is now in an advanced stage



7 years of high oil prices between 2007 and 2014 have left behind new debt, budget deficits and company closures, resulting in a weak global economy, lower oil demand growth and therefore lower oil prices with which oil companies cannot make money.

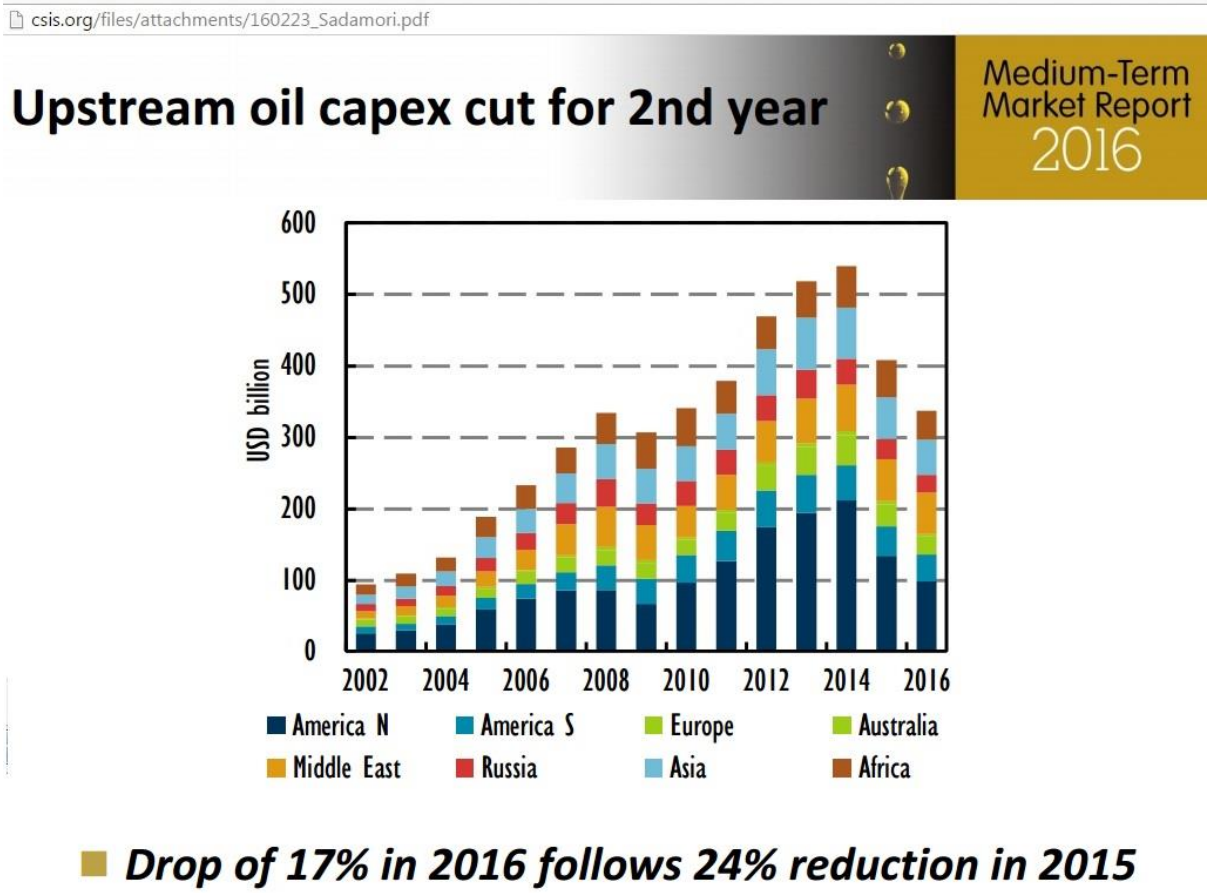


Lower company tax revenue after the GFC which was triggered by the firt phase of peak oil



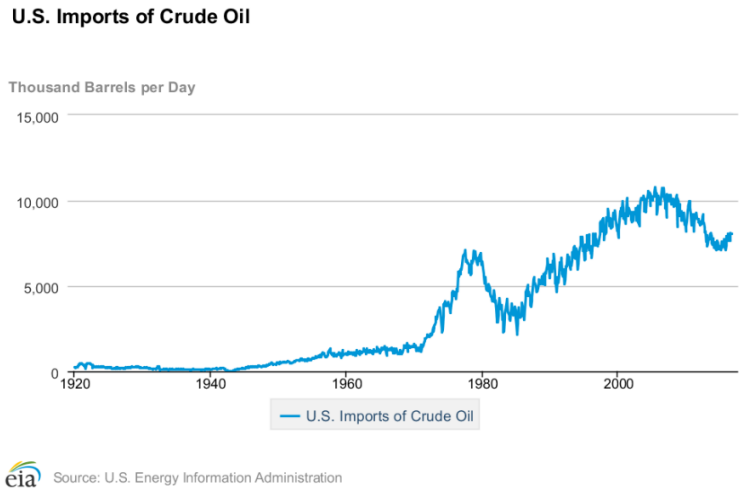
Oil companies are losing money in upstream sector. They are not charity organisations

Investments in new fields necessary to offset decline in legacy fields have been delayed.



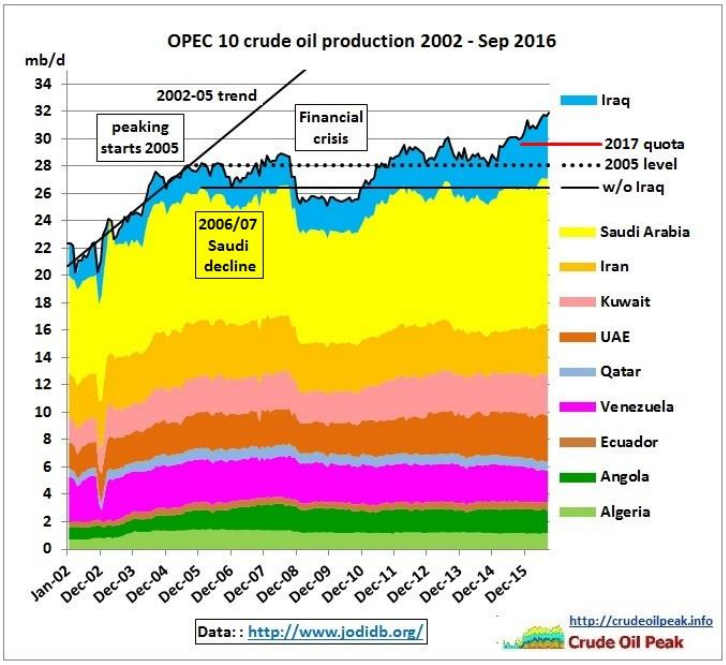
That will have consequences for future oil supplies.

US shale oil initially displaced 2 mb/d imports of similarly light oil in 2011-2013 but since 2015 US crude imports have increased again showing that US shale oil is of limited use, clogging up US inventories.



https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MCRIMUS2&f=M

US shale exports have not been very successful, they are used as blending components in smaller quantities, not as bulk refinery feedstock. It is therefore wrong to assume that shale oil will, for example, replace Arab Light. The recent production cuts announced by OPEC and other countries may well cover up their own peaking production. We'll have another oil crisis by or before 2020.



We are heading for a general energy crisis. The emperor, Howard's "Energy Super Power", will stand without clothes. I wish all those who want to grow Sydney good luck.

Prepared by Matt Mushalik 23/12/2016 http://crudeoilpeak.info/