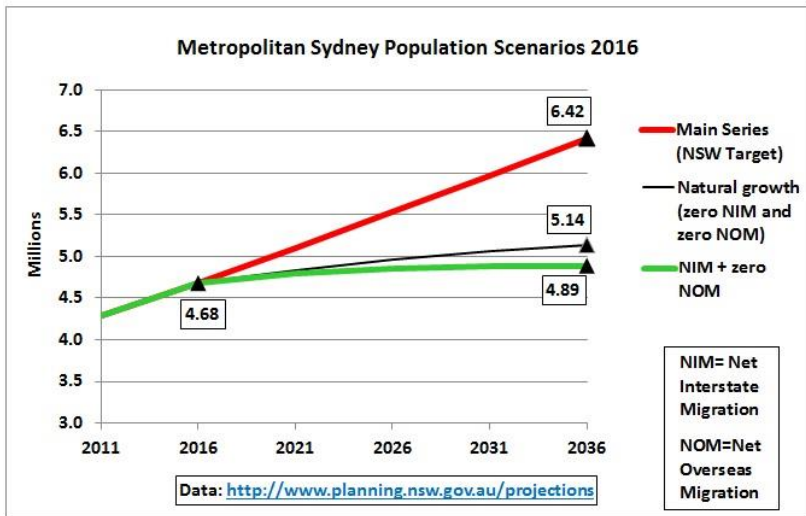


Population growth debate is very urgent before more residential high rises are planned and built as Sydney bumps into limits to energy supplies

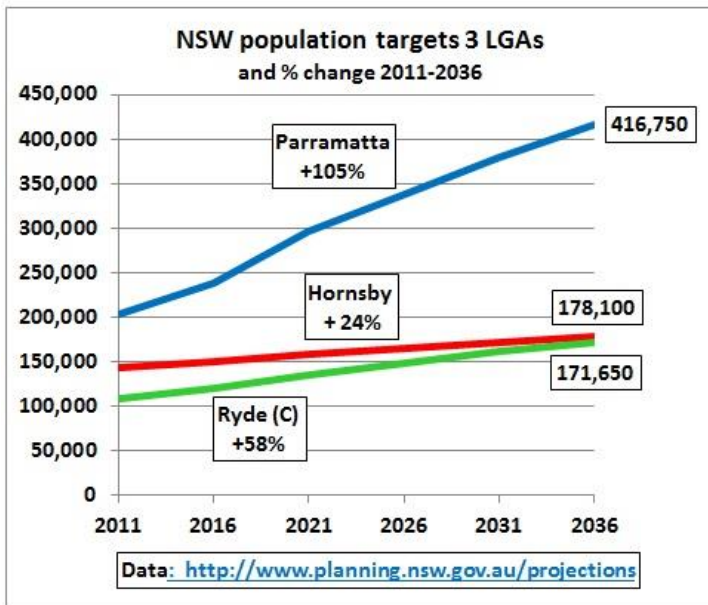


Population growth consists of
 (a) Natural growth which increases to 5.14 million by 2036 and peaks thereafter (fertility around 2 = replacement level)
 (b) Net interstate migration NIM for NSW is -10K to -17K pa resulting in a 2036 population of 4.89 million (less than natural growth), a very modest increase of 210K over 20 years. Even that is a town in itself which should be built outside the commuting

distance of Sydney (smaller towns have higher energy efficiency)

(c) Net overseas migration NOM in NSW is arbitrarily set between 65K and 74K pa resulting in a population of 6.42m in 2036, a whopping increase of 1.53 million or 88% of the total increase. Governments have no control over (a) and only indirect influence over (b). For example, unaffordable housing means that people will leave Sydney – to make room for rich speculators. The Federal government has control over (c). The NSW government is acquiescing.

The decision over such a huge NOM contribution should not be left to bureaucrats but discussed and decided upon by the voters who have to suffer from it. Every day – whether it's about new road tunnels, toll-ways, a 2nd airport or high rises all over the place - we hear Sydney will grow to 6m, 8m or even 10m by year xyz with the objective to condition the population to accept it as a given and that it is good. Even the media are part of this game. This should stop.



What's worse, the engineered NOM is then again arbitrarily distributed to different LGAs. Parramatta's population is planned to more than double while Hornsby and Ryde growth rates are much lower. Who has made these decisions and has the electorate been asked what they want?

Epping is not part of Parramatta which will stop its light rail in Carlingford. The pecking order of suburbs tells us to look East, not West. For families with children, their life centres around the schools along the rail line Meadowbank – Hornsby, not Parramatta. Shopping and Uni are in Macquarie Park. Epping

gets nothing from Parramatta than residential highrises and skyscrapers – a sleep city! 2 business parks (=jobs) have already been destroyed! How will that continue? Enough is enough.

THE HIGHER THE POPULATION, THE MORE PROBLEMS WE ARE GOING TO HAVE: POWER, OIL, GAS AND WATER SHORTAGES, POLLUTION, URBAN HEAT, INSUFFICIENT FUNDING FOR SCHOOLS, HOSPITALS AND PUBLIC TRANSPORT. NO ONE HAS CALCULATED THE TRUE MARGINAL COST OF 1 ADDITIONAL MIGRANT.

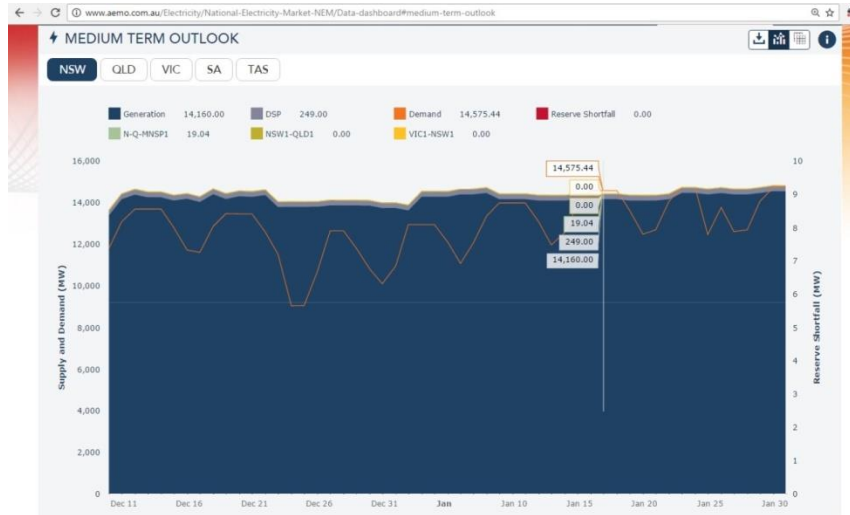
The coming power shortages



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. **New high rises**

with full airconditioning and lifts will increase the costly peak demand. Consumers will pay.



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

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.

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. 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? Forget even 1 more high rise or skyscraper.

This situation is the result of 10 years of indecision of governments since Howard. The climate change denial problem has now turned into a physical power shortage problem. Gas is squandered in exports. We are heading for a general energy crisis. Life in high rises will become uncomfortable and later impractical.

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

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. 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. I wish all those who want to grow Sydney good luck.

Prepared by Matt Mushalik 14/12/2016 <http://crudeoilpeak.info/>