

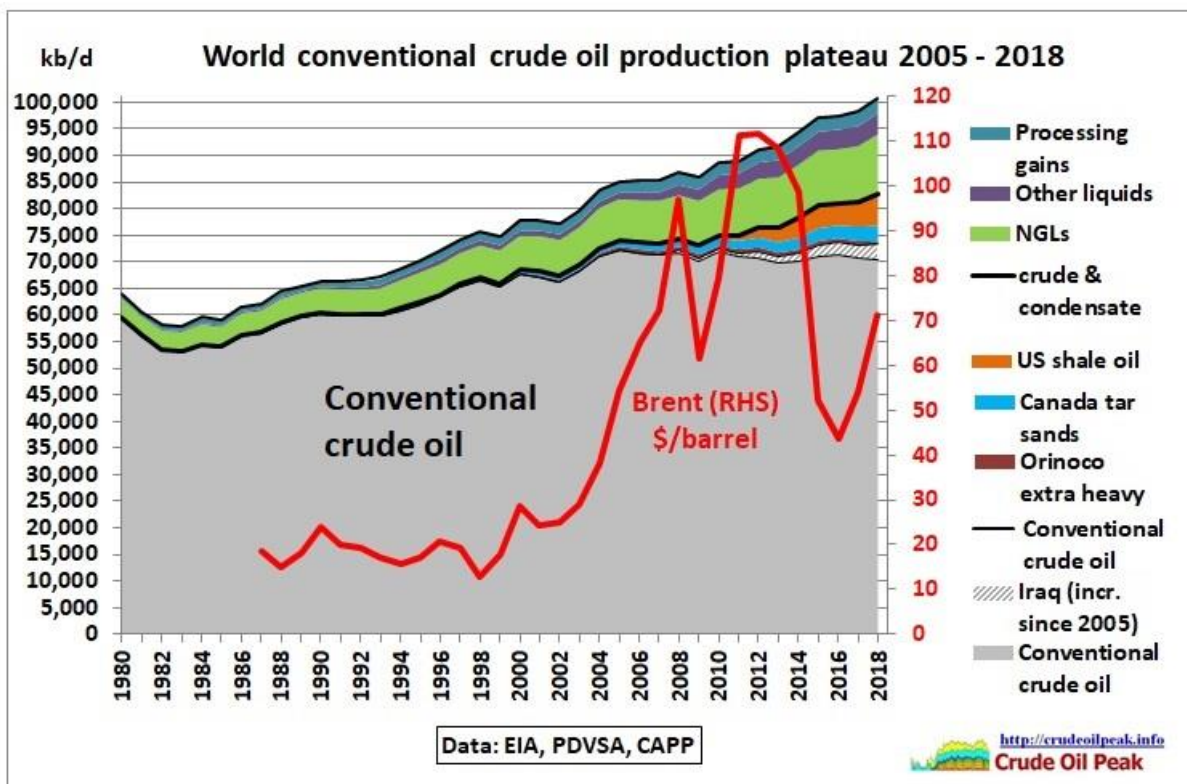
Submission Aerotropolis

28/2/2020

By Matt Mushalik (MEng)

Introduction

Global crude oil production started to peak in 2005. It caused the 2008 oil price shock which triggered the financial crisis emanating from the oil and car dependent US suburbia (subprime mortgage crisis, see Hamilton paper – Causes and consequences of the oil shock of 2007-2008)



The response to the 2008 oil shock was money printing (QE1-QE3) which both supported oil prices above \$100 and financed the US shale oil boom. The end result was an asset bubble and a mountain of debt. Conventional oil production remained more or less on 2005 levels

26/8/2019

2005-2018 Conventional crude production on a bumpy plateau – with a little help from Iraq

<http://crudeoilpeak.info/2005-2018-conventional-crude-production-on-a-bumpy-plateau-with-a-little-help-from-iraq>

The debt incurred during the high oil price period has PERMANENTLY damaged the financial system, the corporate sector and the economy in general (low wages). To even think of building a new airport and city around it shows that the government is unable or unwilling to do research on system dynamics.

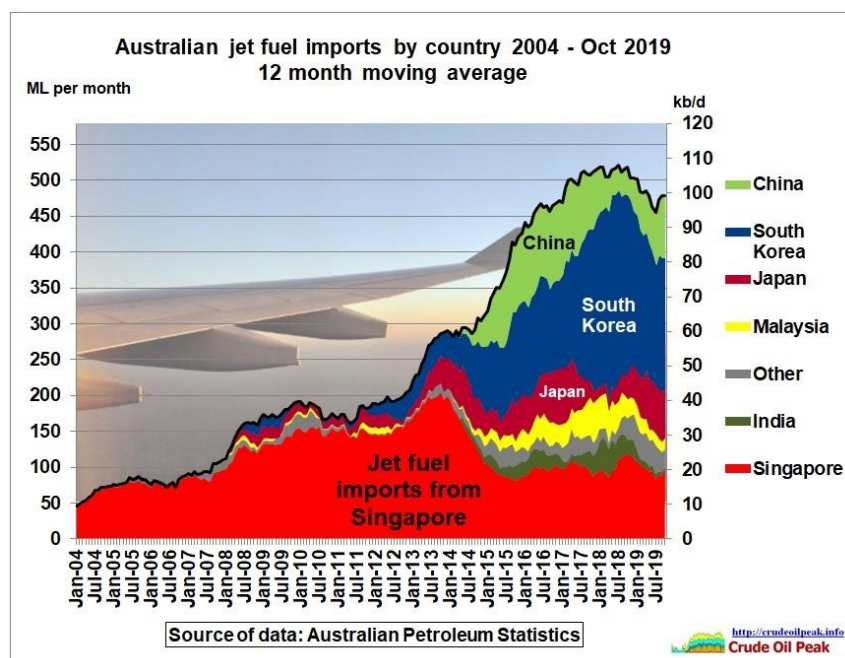
When shale oil peaks the world will be back to square one

Government Agency Warns Global Oil Industry Is on the Brink of a Meltdown

5 Feb 2020

https://www.vice.com/en_us/article/8848g5/government-agency-warns-global-oil-industry-is-on-the-brink-of-a-meltdown

After the closure of 3 refineries Australia is highly vulnerable to disruption in the South China Sea (and the Middle East)



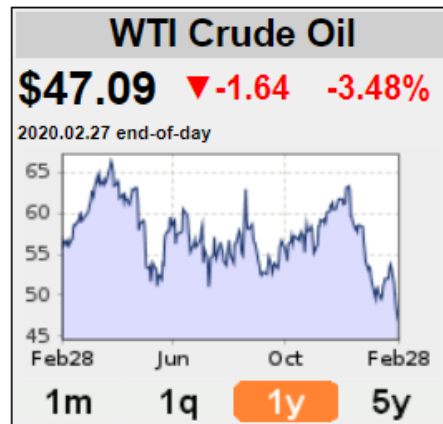
Corona virus impact

Airlines with debt incurred between 2011-2014 have a pre-condition from the 2008 oil price shock as revenue is likely to go down.

In a certain sense this is similar to a peak oil event where movements and activities are restricted. If market sentiment is negative and depresses oil prices for prolonged periods of time this will reduce

cash flow in the US shale oil industry, weaken budgets in Middle East countries already having to spend more on defending their oil facilities and - in general - endanger the profitability of the oil industry. There is also the problem that investments in new fields needed to offset decline in existing fields are delayed or shelved altogether, leading to shortages further down the track. A recent example is Equinor not drilling in the Australian Bight because it is too expensive. The global oil supply system has a pre-condition of having run out of cheap oil which reduces flexibility in economic down-turns.

February, Thursday 27 2020 - 23:26:03



Coronavirus may be the straw that breaks the back of oil fracking

16 Feb 2020

<https://fortune.com/2020/02/15/coronavirus-oil-prices-fracking/>

Comments on Documents

Quote: *"Planning for the Western Sydney Aerotropolis acknowledges more than 60,000 years of continuous Aboriginal connection to the land that makes up NSW."*

Comment: Absolute government spin. Aboriginal culture has nothing to do with an airport and the proposed surrounding urban sprawl.

No energy calculations

Quote: *"The Aerotropolis will be powered through sustainable, next-generation energy infrastructure consistent with the NSW Government's 2050 Net Zero Emissions commitment"*

Comment: This is politically motivated wishful thinking. There are no concrete projects under design – let alone construction - which would REPLACE existing coal fired power plants (base power) and WHEN by renewable energies PLUS hydropower storage PLUS transmissions lines and WHO will FINANCE this. Snowy 2 is meant to provide for peak power demand which increases due to global warming and the proliferation of high rises.

Energy requirements for the Aerotropolis (in MWh pa and in MW peak demand by year of development phasing) have not been estimated.

Quote: *“Locally produced clean energy, energy storage solutions, smart grid and real time usage optimisation technology and innovative power purchasing options will be a focus for energy providers”*

Comment: The structure plan (p2 discussion paper SEPP) does not show any areas (in ha) set aside for a solar power plant. PV panels on medium to high density will NOT be sufficient to power office and residential space. Again, no calculations have been done.

Quote: *“considering electric vehicle charging stations during precinct planning”*

Comment: Electric vehicles will only be affordable if there is a global uptake of this technology so that mass production can become commercial. The additional power demand for EVs (not trucks) in Australia is around 3,000 MW running 24/7

Global warming

Latest Court decision in UK:

Heathrow expansion faces threat from climate case

27 Feb 2020 <https://www.bbc.com/news/business-51649096>

Quote: *“Western Sydney is hotter and drier than other parts of Greater Sydney”*



Figure 27: Hot days (over 35 degrees Celsius) in Greater Sydney in 2018-19
Source: Greater Sydney Commission

Comment: It is therefore unwise to build a city there, including the airport itself. The Aerotropolis faces higher energy consumption and smoke pollution during bush fires in nearby forest areas which will also impact on flight operations. From my website:

4/2/2020

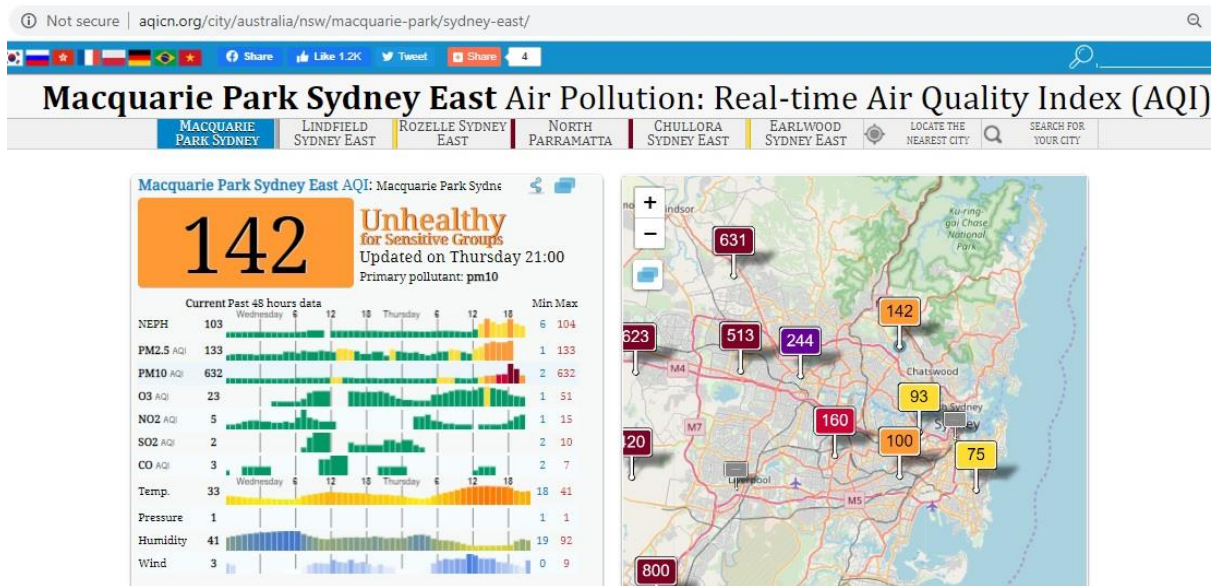
Bush fires cause load shedding in NSW January 2020



Tumut 3 rescued by volunteers – but just

<http://crudeoilpeak.info/bush-fires-cause-load-shedding-in-new-south-wales-january-2020>

We are now aware that smoke can lead to arcing in switch yards.



AQI readings on 23 Jan 2020 were hazardous in Sydney's West

NSW
Government

Enabling the Greater Sydney metropolis of three cities

30 mins to your nearest...

- Metropolitan Centre
- Strategic Centre

transport, active transport -- these are the key to 30 minute cities. That is how we will measure our success.
For a 30 minute city

The Greater Sydney Commission – an artificial new planning layer to fast-track any development – is both climate and energy illiterate as I had to witness in two GSC panel meetings I attended. The chairwoman looked away when I showed pictures of a burnt-out substation in Hornsby. The objective of an 8 million population (driven by an unsustainable immigration program) is a dangerous proposition and will fail due to insufficient energy supplies and high temperatures in summer.

Population changes in Australia's capital cities in 2016-17



Summary

Energy, CO2 emissions and pollution objectives have not been quantified. No objectively verifiable indicators (OVIs) have been defined to measure the success or otherwise of the Aerotropolis.

The Aerotropolis will fail just like the airport it is proposed for. Permanently growing air traffic assumes a continuing carbon based consumer society generating global traveling demand. However, dramatic climate change events like the bushfires Australia just experienced will not allow this to happen. Not only have these events impacted tourism negatively but they will force governments, the corporate sector and financing institutions to change their policy of business as usual and start seriously reducing emissions. No matter what alternative jet fuels may be developed, growing air traffic is incompatible with the objective of reducing emissions.

Prepared by Matt Mushalik (MEng)

28/2/2020