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Crude Oil Peak

#1 in Monitoring the Global Crude Oil Peak

Comments on Airports Amendment Bill 2010

The Bill is based on the 2009 Aviation Policy White Paper which is totally ignorant of peak oil and therefore fundamentally flawed. There is now sufficient statistical evidence to show that crude oil started to peak in 2005. This turning point in the history of human mankind triggered the global financial crisis (convergence of accumulated debt and limited crude oil supplies). As the US can no longer import oil in any desired quantity and at an affordable price the States are practically bankrupt. Their airline industry lost \$ 58 billion since 2001, \$ 23.7 billion alone in the oil price shock year 2008. High oil prices, the GFC, recession and sovereign debt problems have resulted in an OECD oil demand destruction of around 5 mb/d, oil which is now being consumed by OPEC, India and China, countries which are expected to grow further (mining boom Mk2). Increasing demand for oil on one hand and stagnating or even declining oil production on the other hand will result in another oil price shock, most likely by 2012. More airlines will hit the wall.

Recommendation 1:

The Aviation White Paper of December 2009

http://www.infrastructure.gov.au/aviation/nap/files_white_paper/091215_Full.pdf

and all airport plans based on this paper should be immediately withdrawn and re-written by incorporating the impact of declining oil production on aviation in order to stop misinvestments.

Recommendation 2:

The proposed Airports Bill should contain a clause which obliges proponents of airport expansions to submit oil-geological, statistical and audited evidence (using SEC standards) that there will be sufficient crude oil for the production of aviation fuels – or any other alternative fuels - for the lifetime of the project. In the case of alternative aviation fuels it should NOT be sufficient to describe a technological potential, but there must be a list of committed and fully funded projects to supply these fuels in a timely manner and in adequate quantities to underpin the assumed air traffic growth.

Details

I wrote the following submission on the Aviation Green Paper in February 2009, titled “Reserve Oil for International Flights for leaders, managers, scientists, engineers” and the subtitle “Replace domestic flights by night trains. Since then we have come 44 Gb closer to the moment of the truth when the Parliament will hopefully understand these titles.

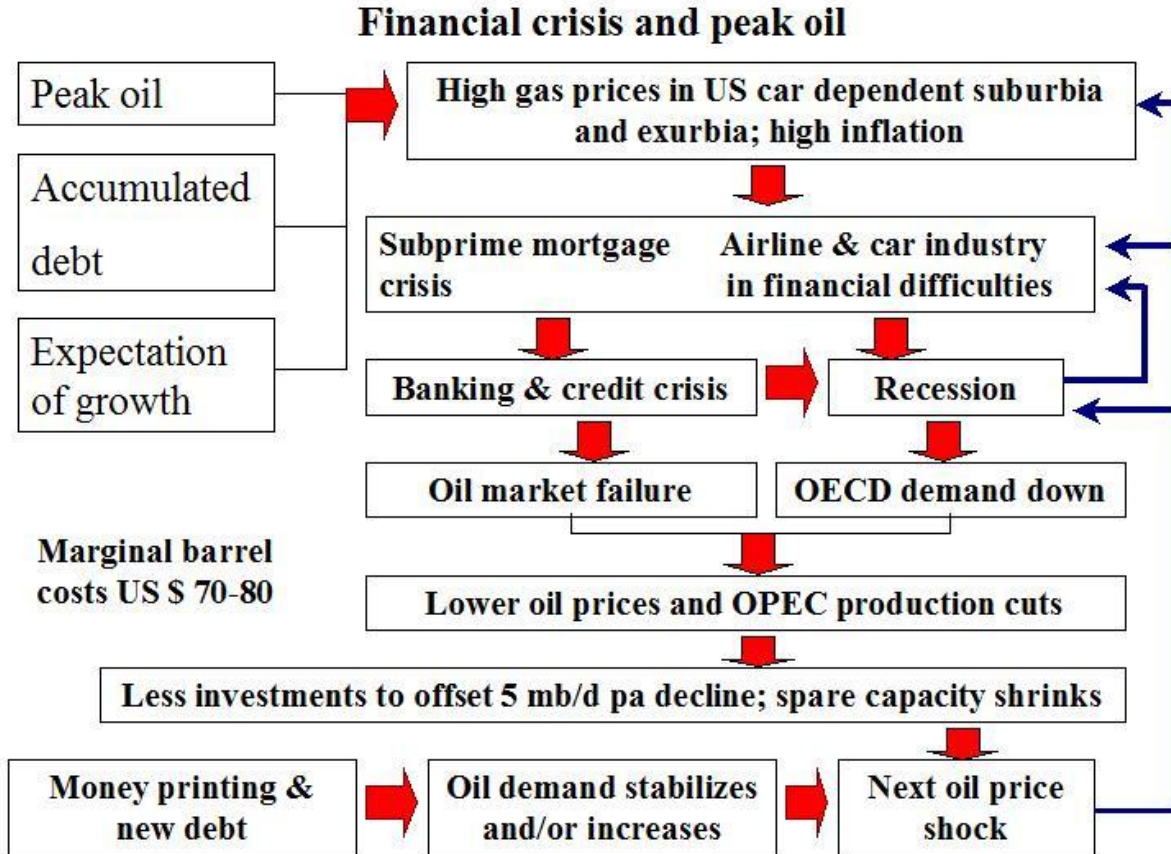
http://www.infrastructure.gov.au/aviation/nap/files_green_paper/MUSHALIK_Matt.pdf

The Aviation White Paper completely ignored the problem of peak oil. A search for the word “oil” yields:

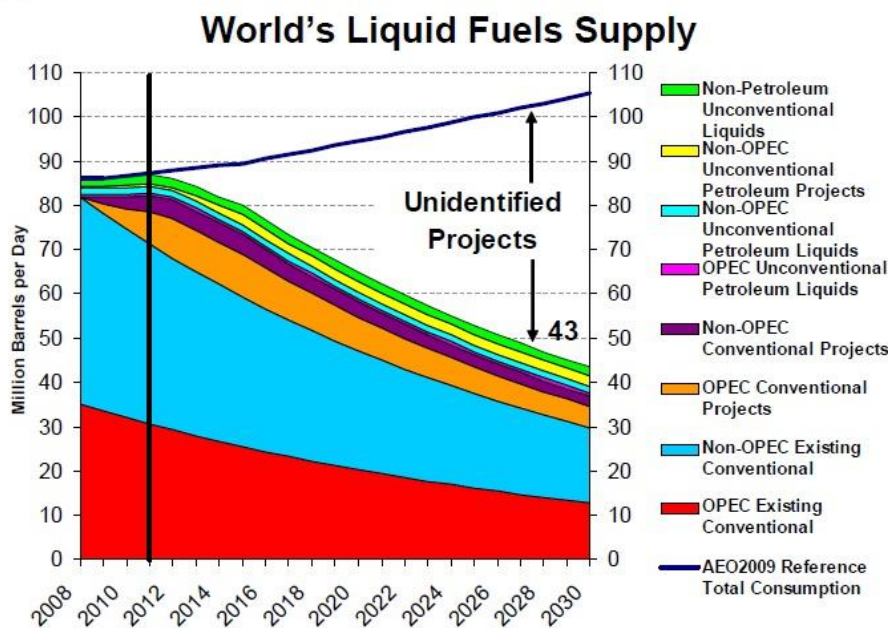
“The worst of the world recession may be over, but the industry will remain subject to economic cycles and volatile oil prices”. (page ii)

“The aviation industry is highly cyclical and also vulnerable to shocks such as war and terrorist incidents, disease outbreaks like SARS and volatile oil prices.” (page 42)

These 2 sentences show that the authors of the aviation white paper have no idea where we are in the following graph, namely between “oil demand stabilizes and/or increases” and “next oil price shock”. We no longer have those classical economic cycles nor are volatile oil prices isolated incidents but they in turn may become cyclical in a new meaning of this word.



<http://www.eia.doe.gov/conference/2009/session3/Sweetnam.pdf>



Source: EIA, AEO2009

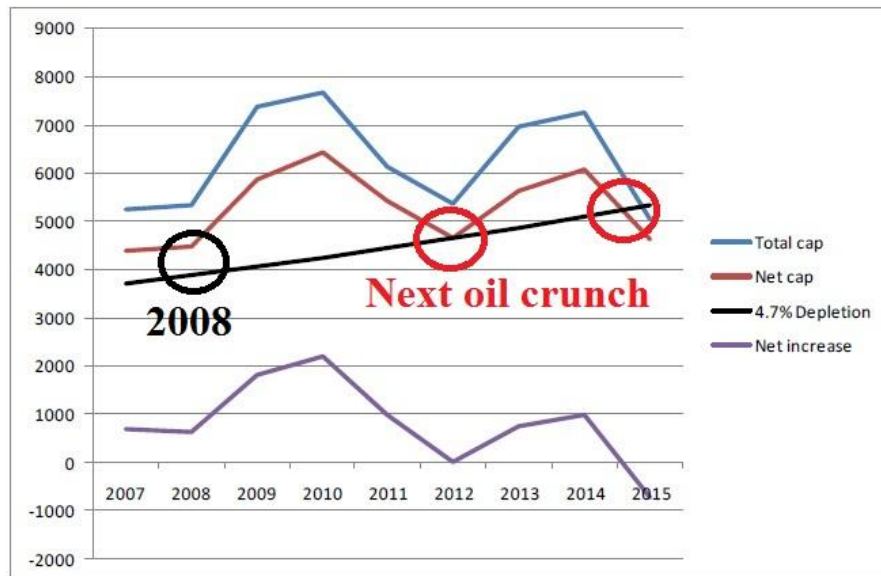
<<< Production profile from the Energy Information Administration showing declines beyond 2012.

Assumed air traffic growth is based on unidentified oil projects.

Billions of dollars invested in airport and associated infrastructure will not yield the expected returns.

These are some detailed calculations of Chris Skrebowski on the next oil crunch in 2012:

The Megaprojects database – projects starting up from 2007 and showing potential capacity gains

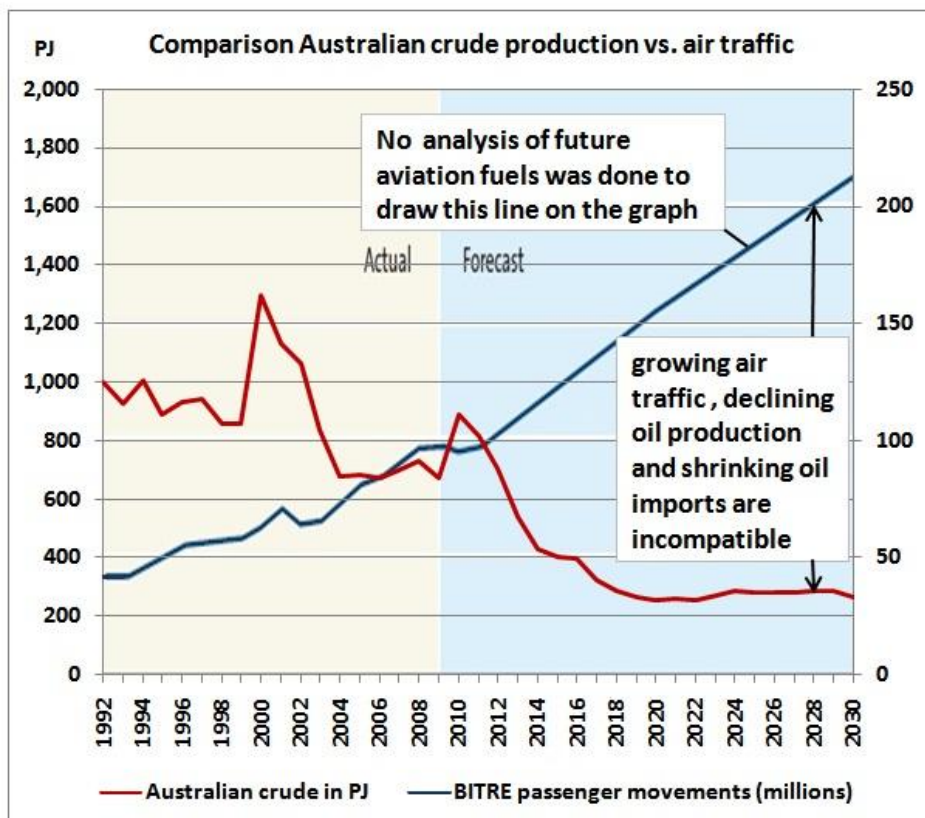


ASPO-USA Washington

7-9 October 2010

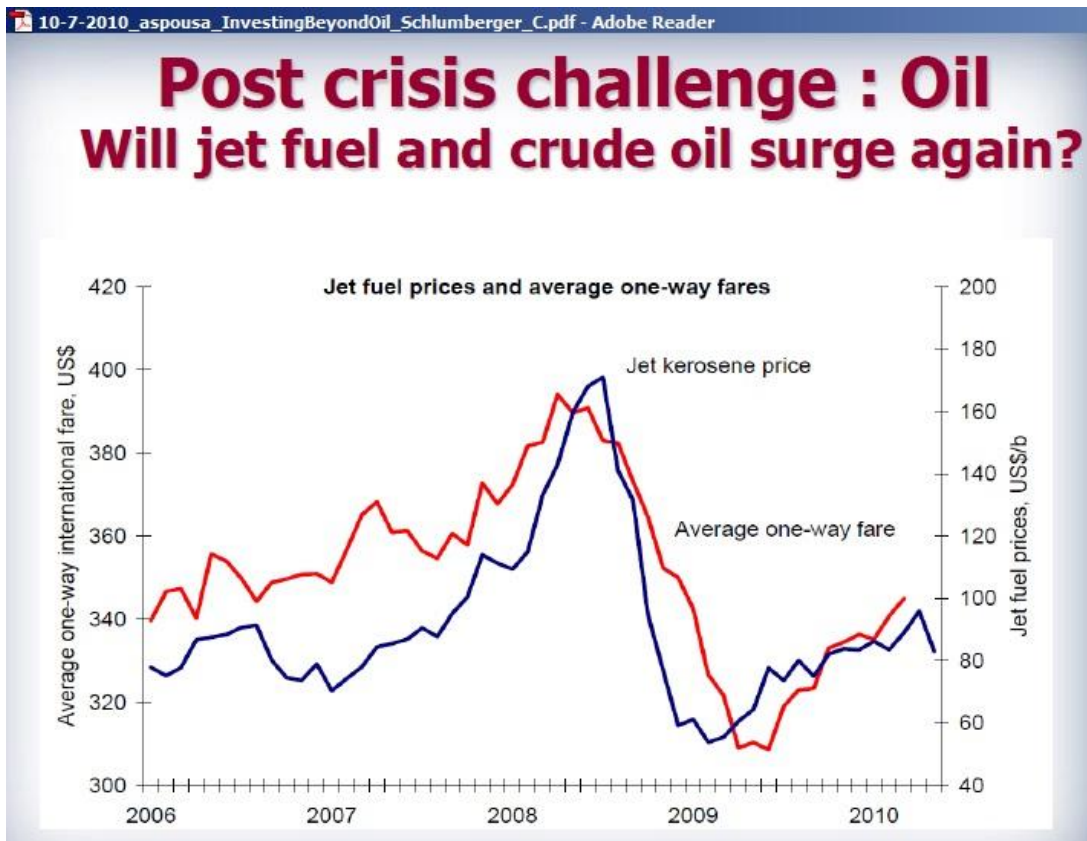
More details here: <http://www.crudeoilpeak.com/?p=1971>

Let's superimpose Australian crude oil production on that air passenger movement graph on page 32 of the aviation white paper:

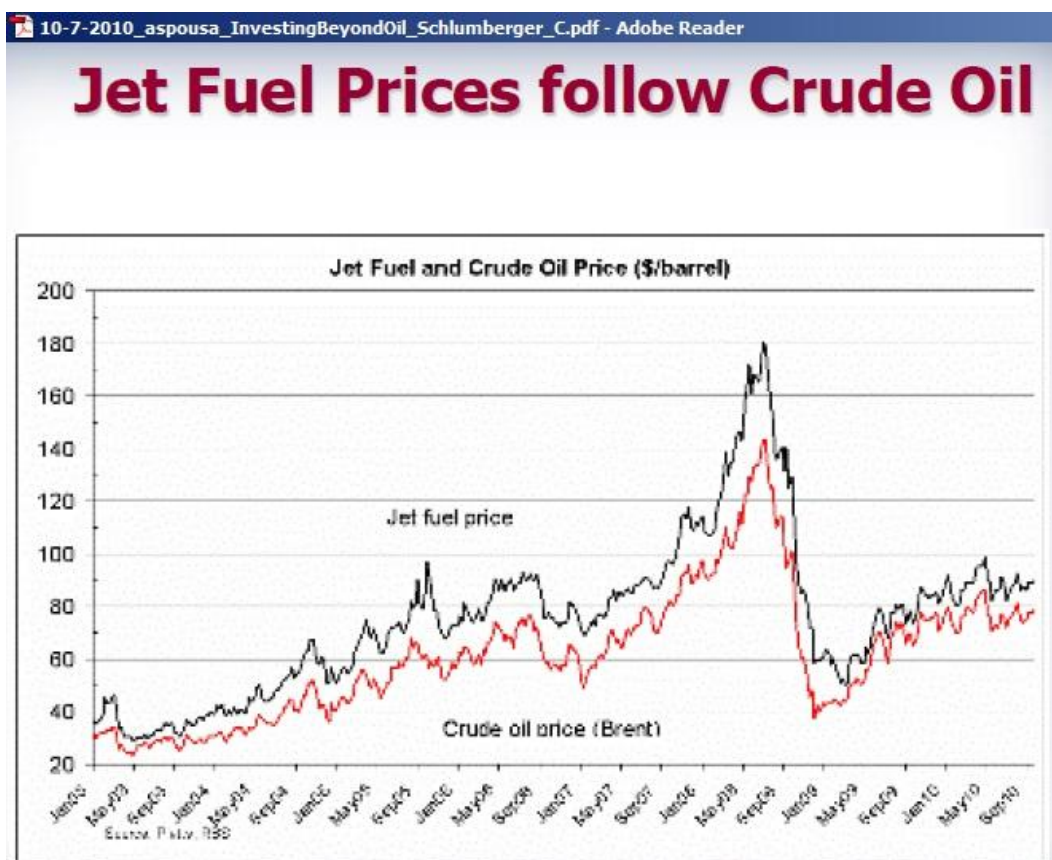


See also: Report card 2009 (part 2): Aviation and airport plans – pies in the skies
<http://www.crudeoilpeak.com/?p=1125>

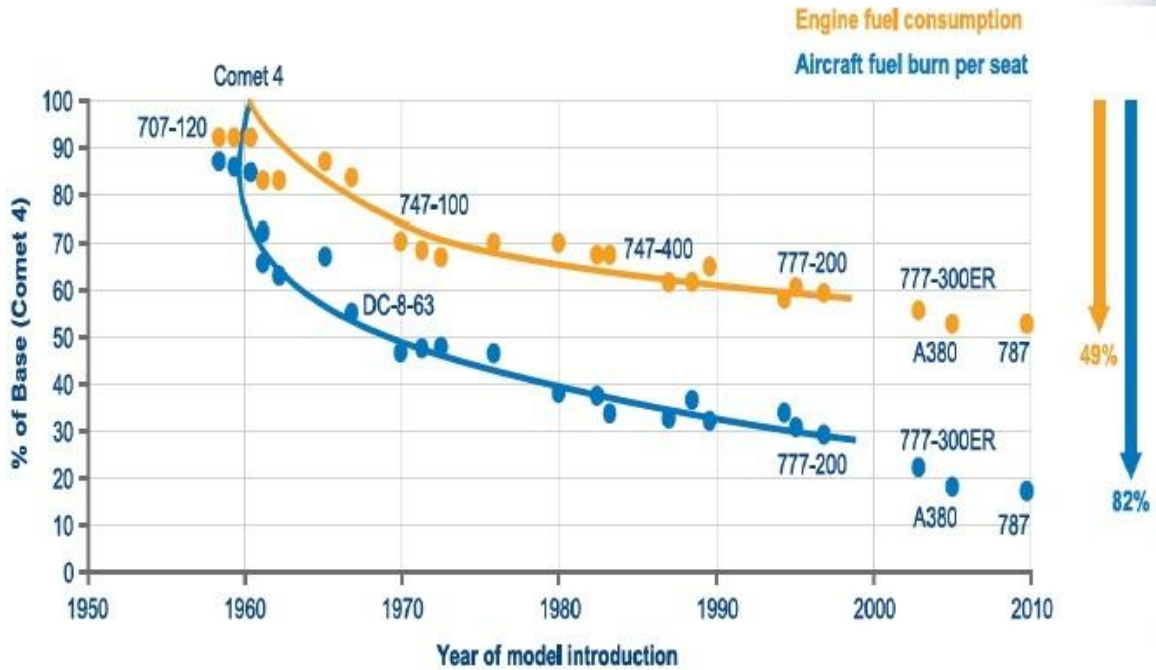
Excerpts from “The Future of Air Transportation”



Answer: yes, of course. Next stop 2012

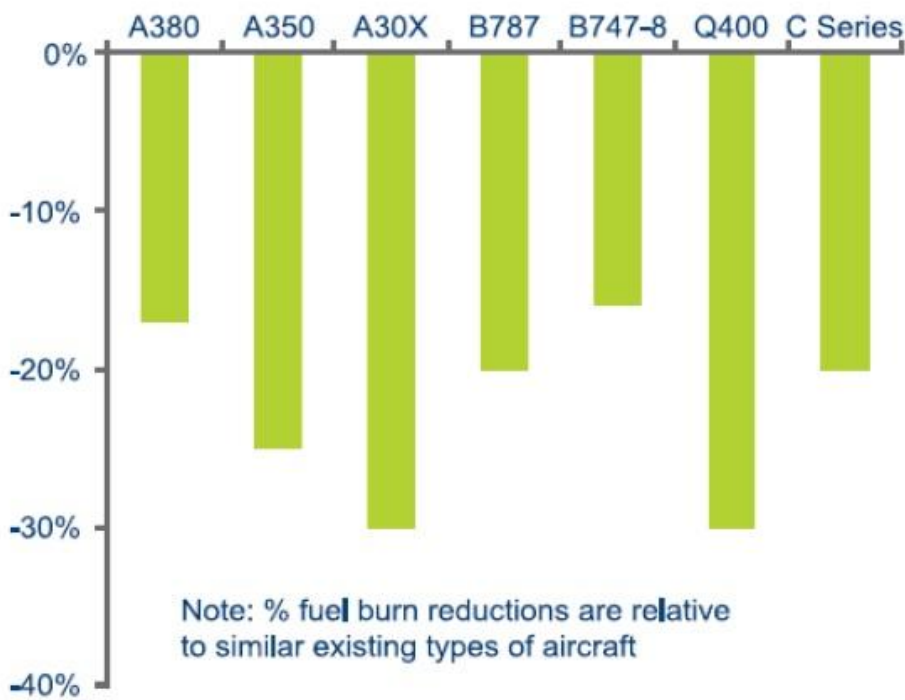


Fuel Efficiency during the Jet Age



Fuel efficiency gains are petering out

Fuel Efficiency by Aircraft Model



Performance Improvements: sometimes they come in Smaller Increments...

Aerodynamic and engine improvements will be phased into production mid-2011 through early 2012



Target is to reduce fuel consumption by ~2%

Biofuel: Challenge to scale-up of Production

The entire world production of jet fuel by biofuels would require large surfaces:

- Jatropha - 2,700,000 square kilometers (sq km) or the size of Argentina,
- Camelina - 2,000,000 sq km or the size of Mexico
- Algae - 68,000 sq km or about the size of Ireland.

http://www.aspousa.org/2010presentationfiles/10-9-2010_aspousa_CanWeFillGap_Schlumberger_C.pdf

How far will you go? 150,000 coconuts for 20% of one jet on a 747 short hopper Amsterdam – London. <http://news.bbc.co.uk/2/hi/7261214.stm>

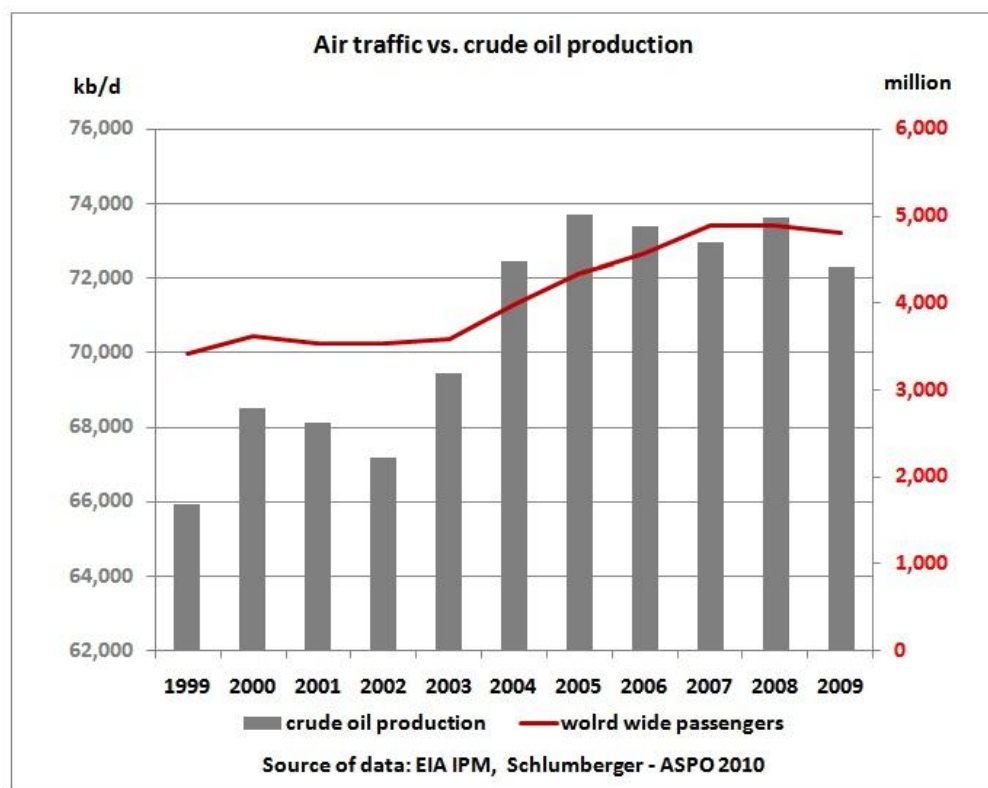


http://www.aspousa.org/2010presentationfiles/10-9-2010_aspousa_CanWeFillGap_Perl_A.pdf

Further reading:

Flight disruptions in Europe a Foretaste for Period of Oil Decline

<http://www.crudeoilpeak.com/?p=1372>



Relationship between crude oil production and number of air passengers.

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