

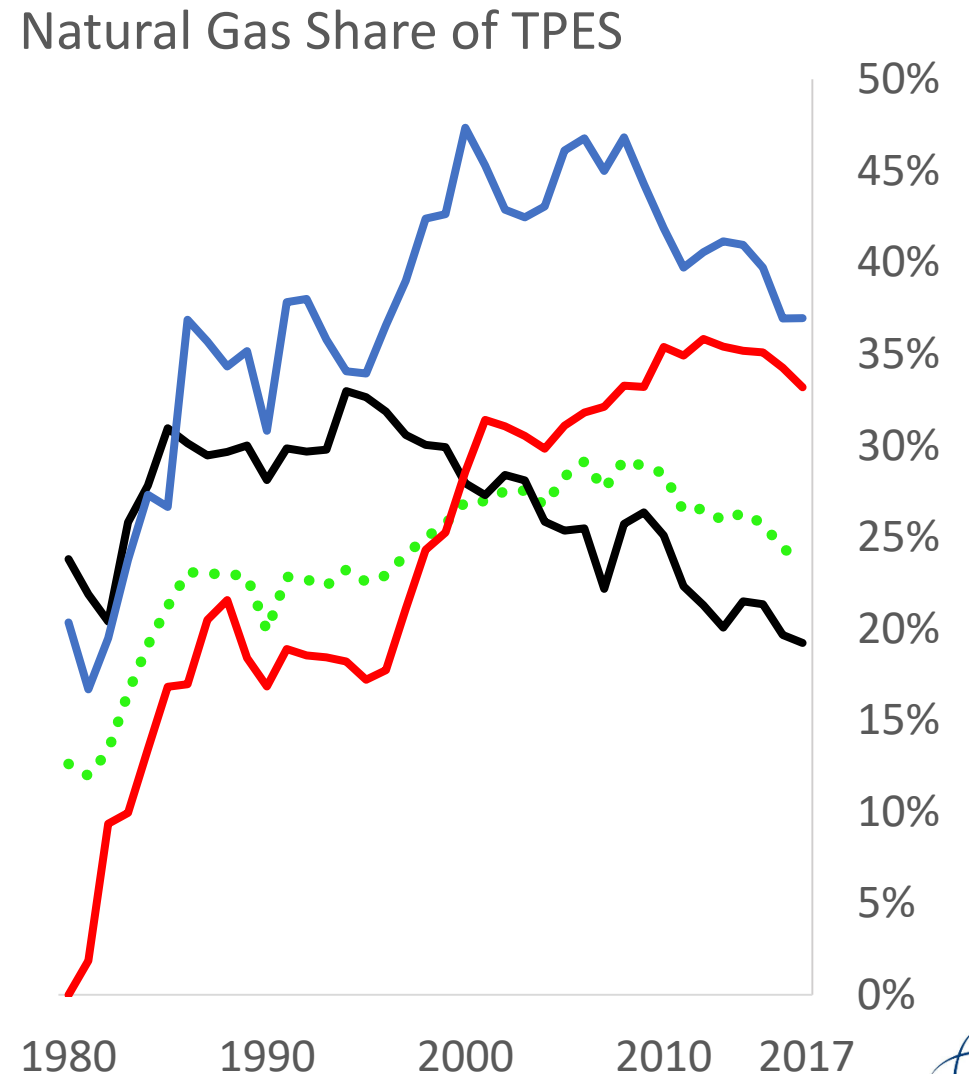
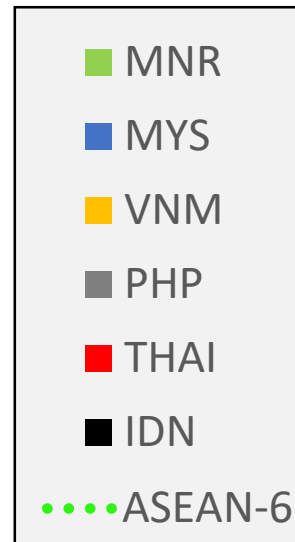
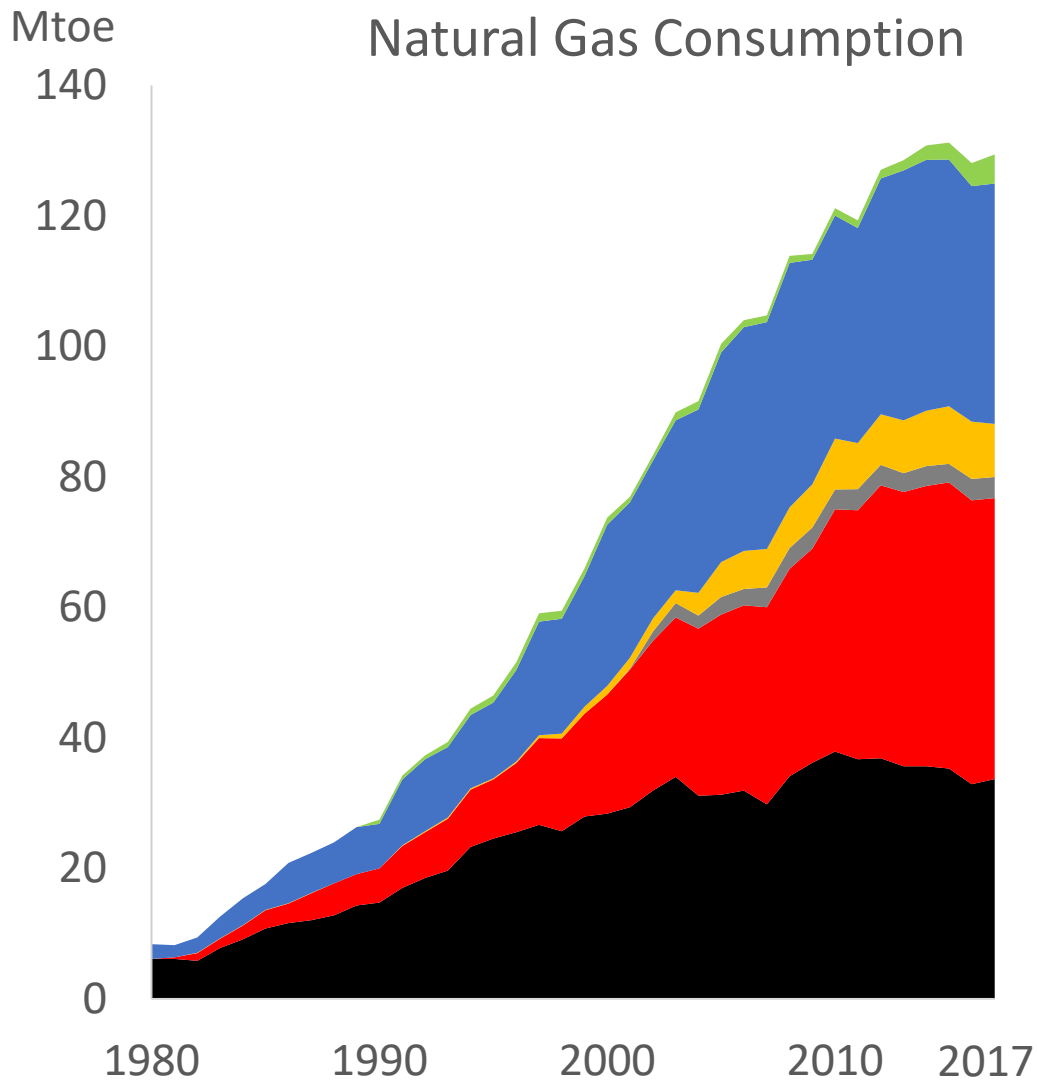


Greening Southeast Asia : Enablers and Barriers

Pierre Noel & Antoine Guardiola

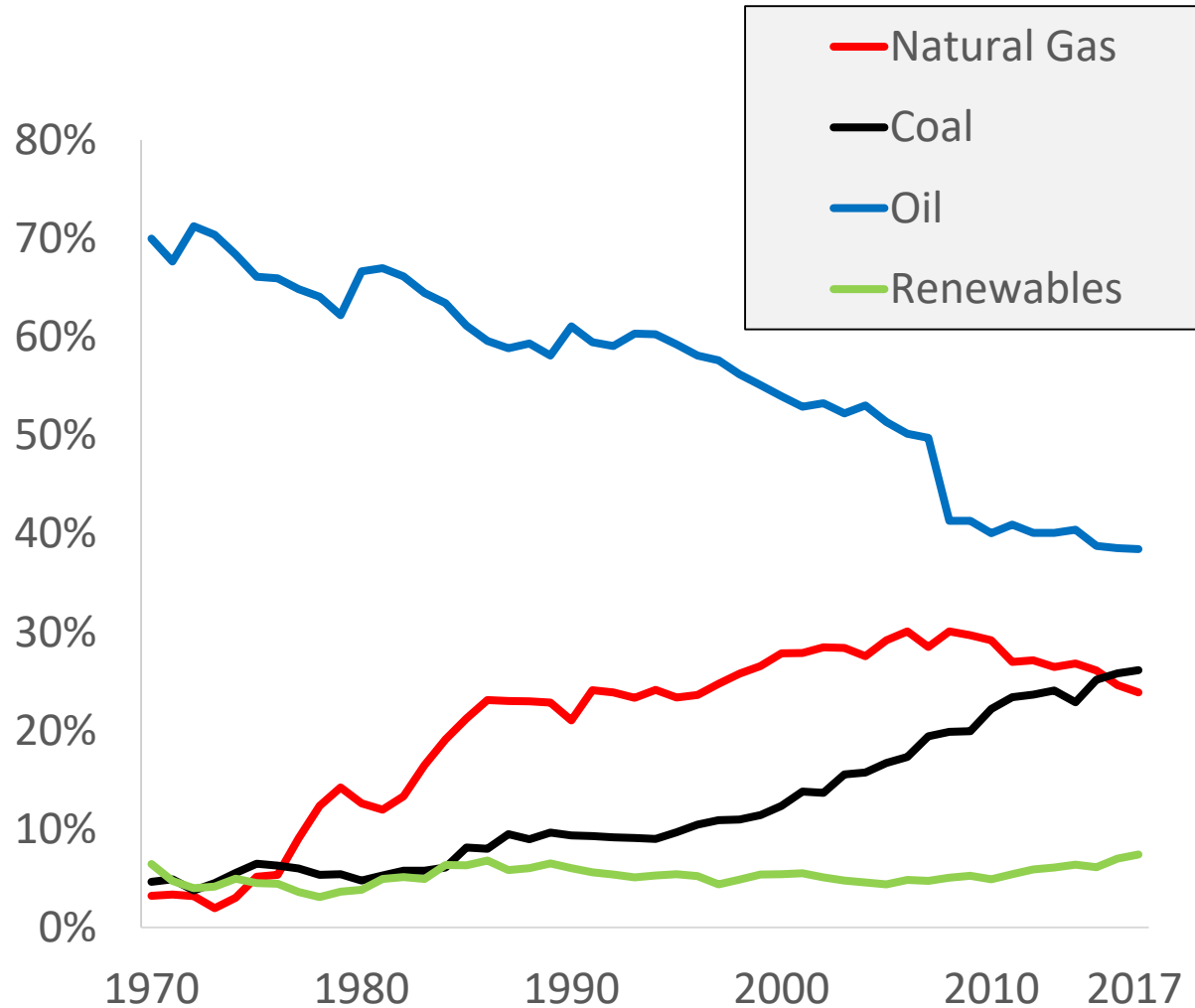
SIEW Think Tank Roundtable
Singapore, 1 November 2018

A gas-intensive region, but 'golden age of gas' is behind us ...



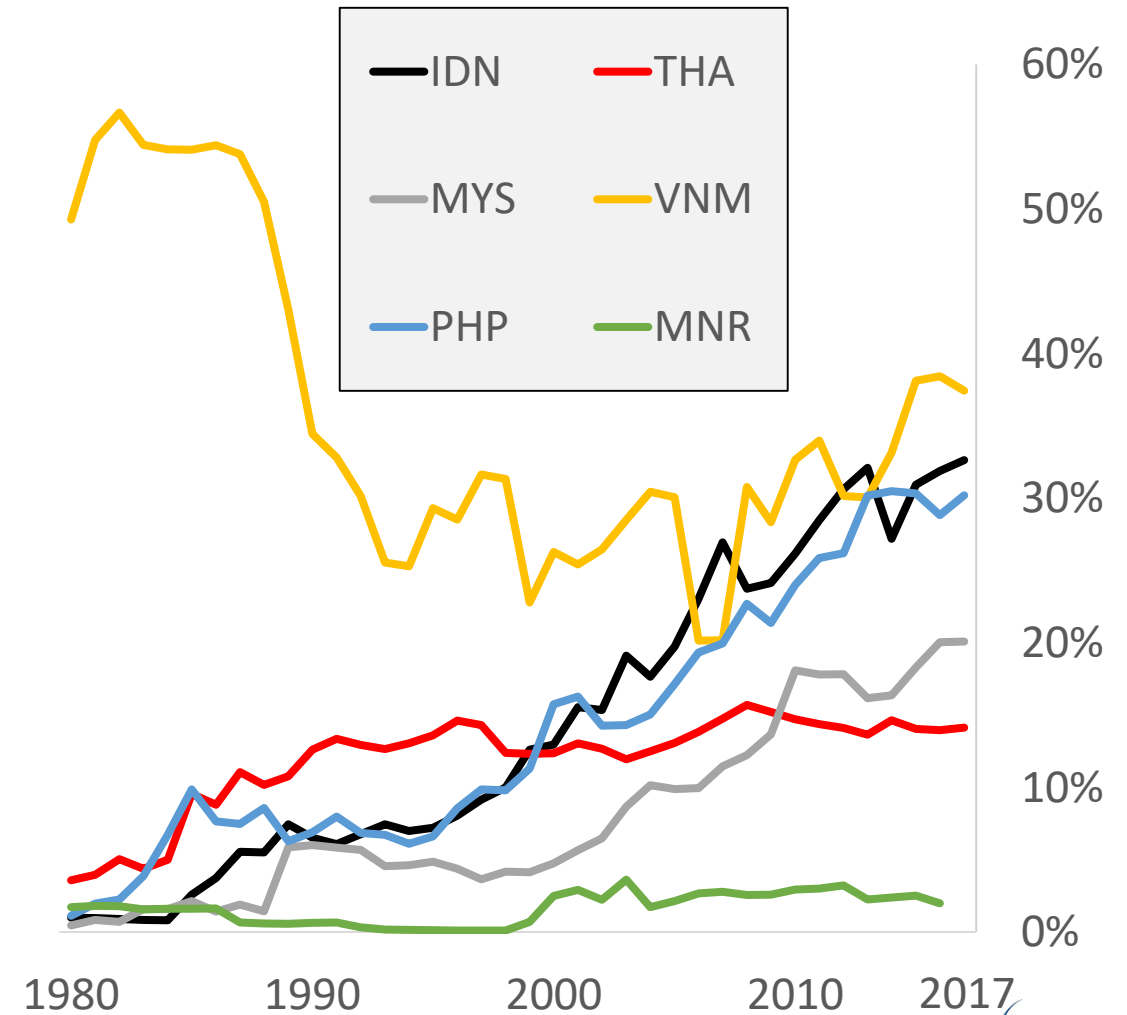
...while coal is on the rise...

Primary Fuel Mix (ASEAN-5)



Source: BP

Coal share (ASEAN-5)



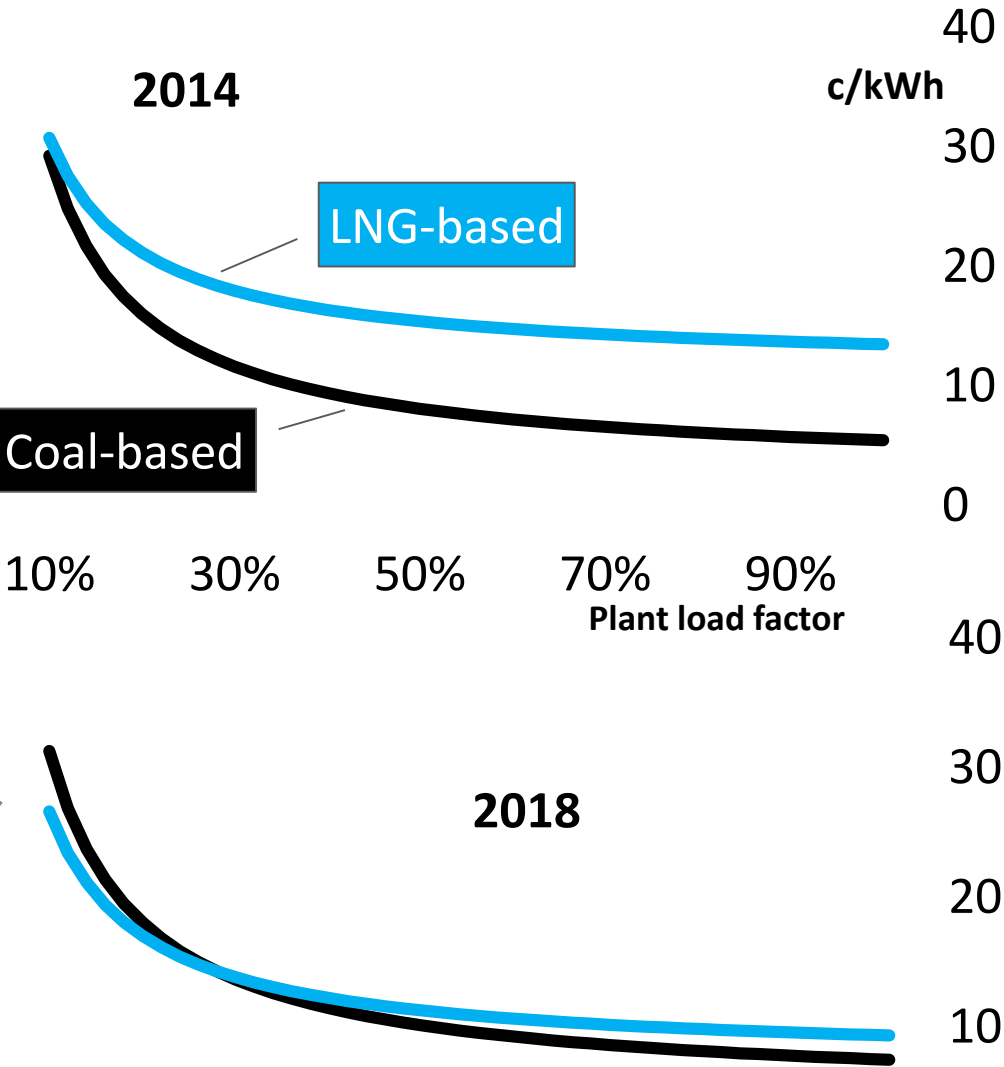
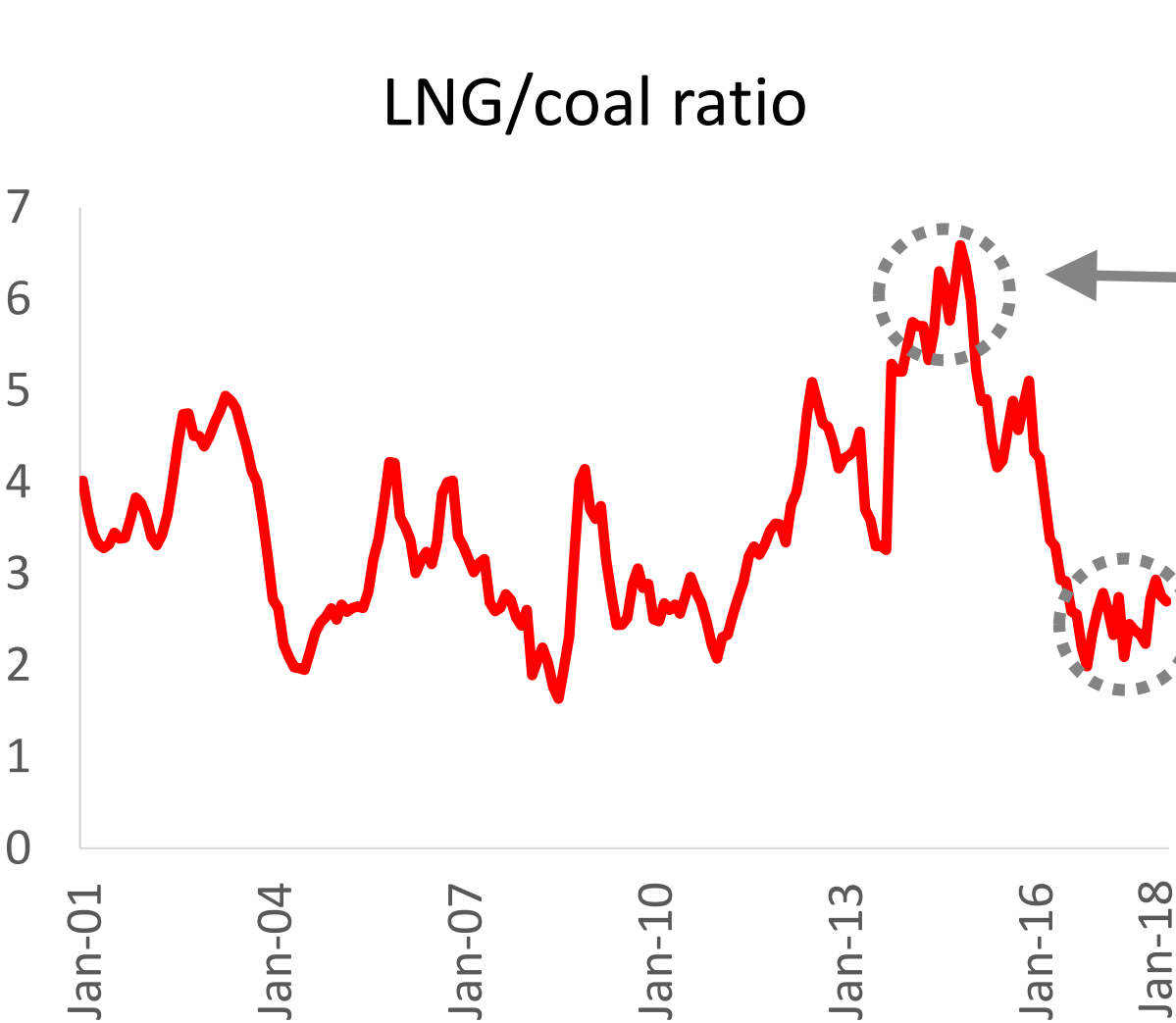


Natural gas versus coal

Enabler: much cheaper LNG

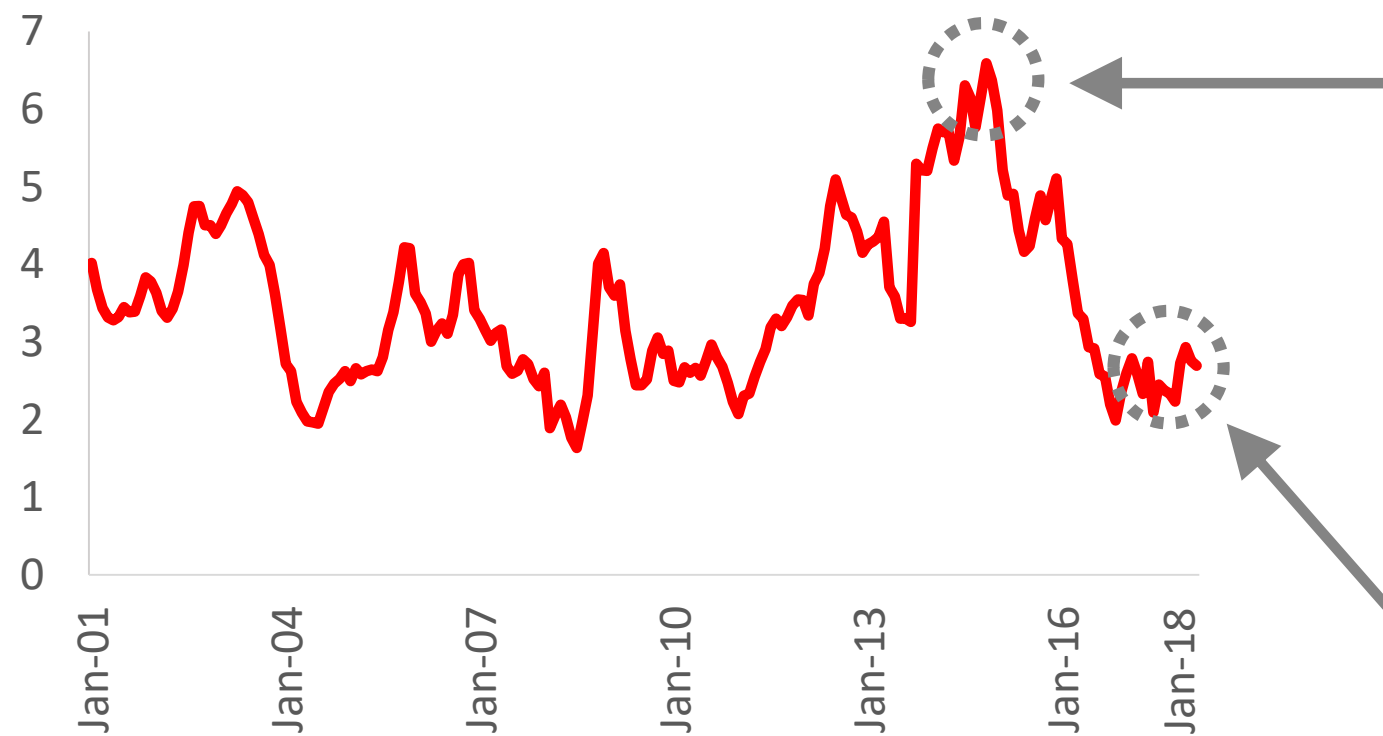
Cost of electricity generation (LCoE)

LNG/coal ratio

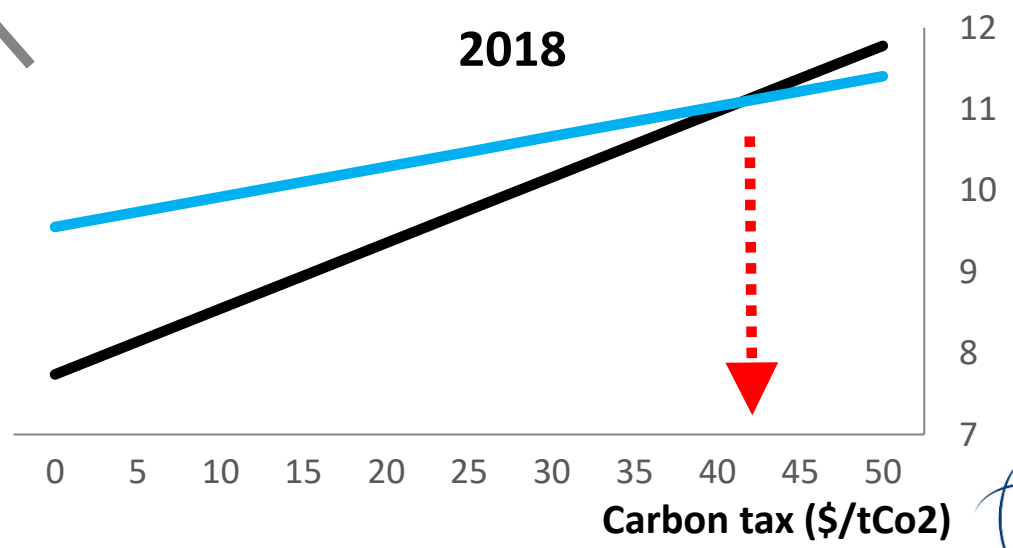
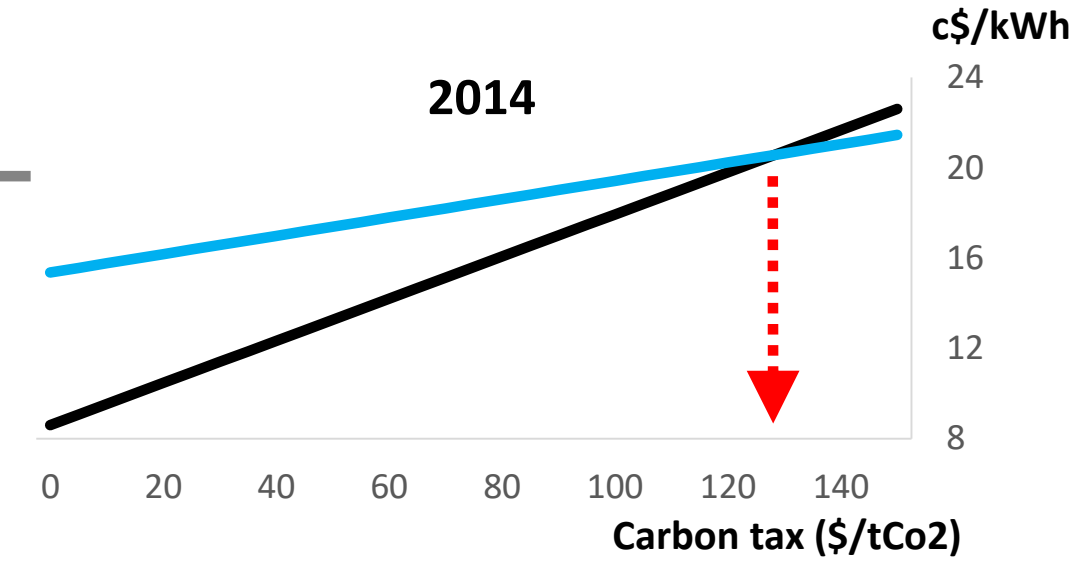


Barrier: no carbon tax

LNG/coal ratio

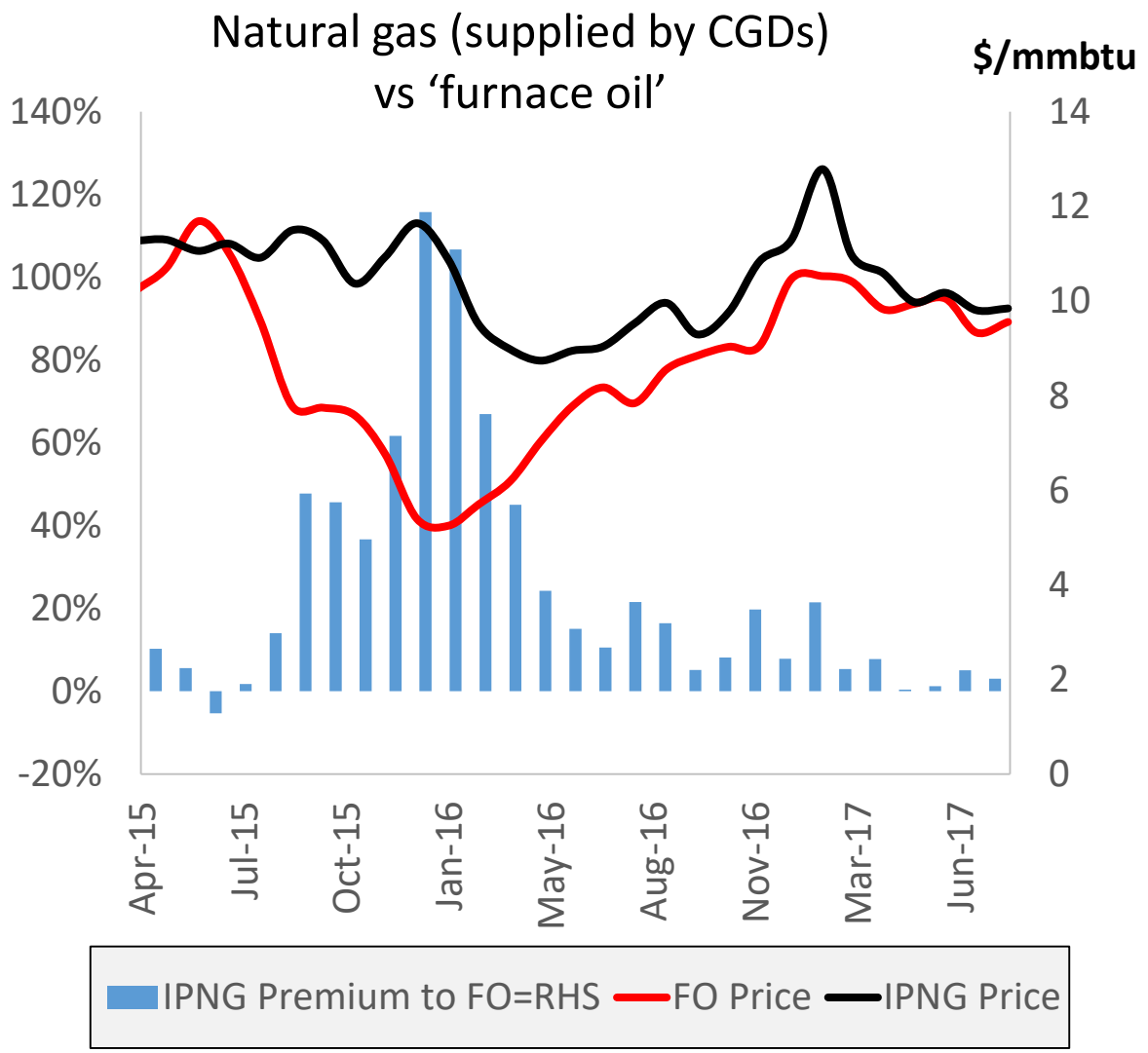


LCoE and Carbon tax in Malaysia



“Minister Yeo Bee Yin today confirmed there are no plans to introduce a "carbon tax" in the upcoming Budget 2019.”
malaysiakini.com, 20 Oct 2018

Barrier: competition with China in manufacturing



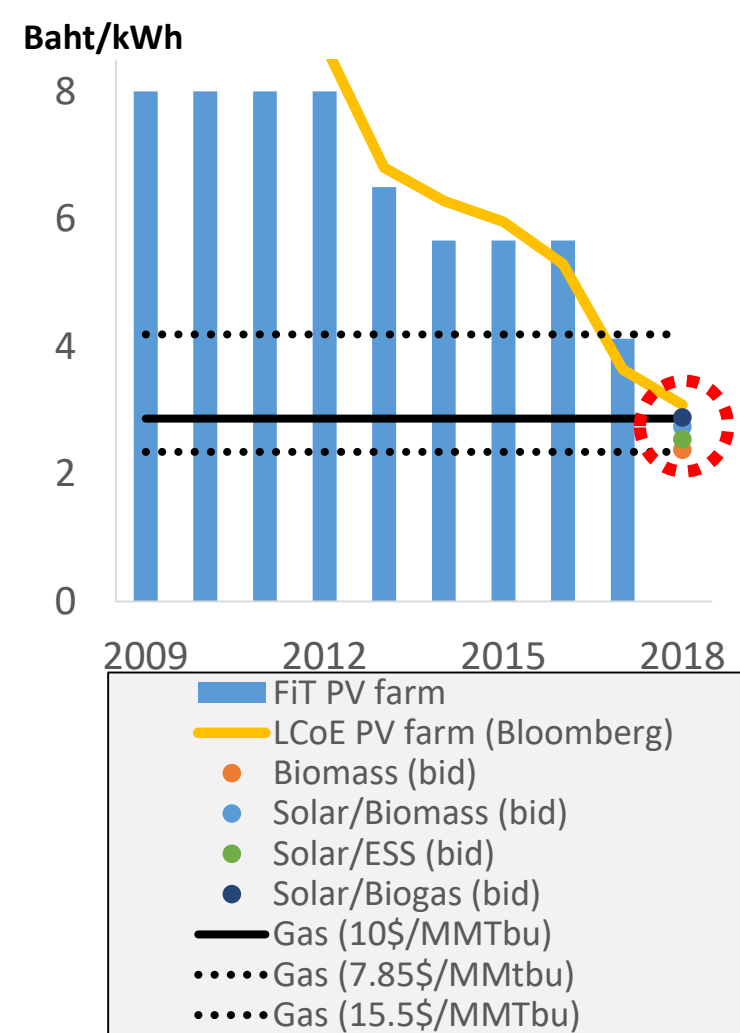
Source: IISS based on data courtesy of Philip Capital



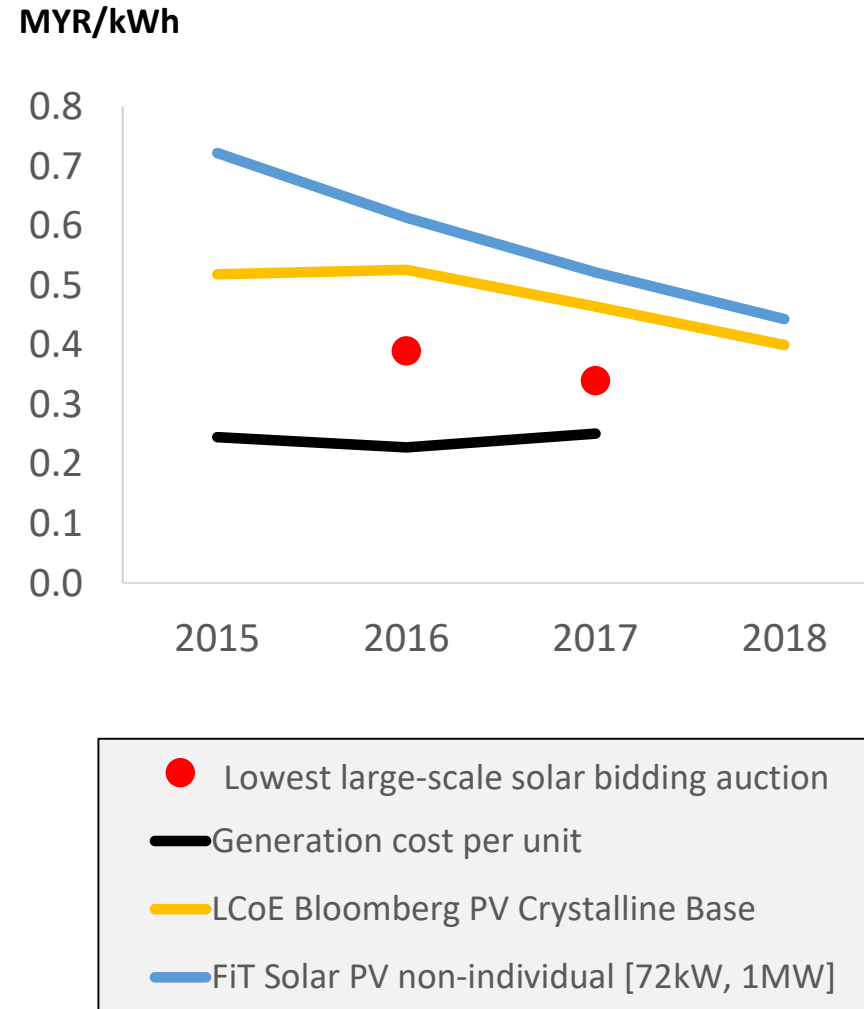
Deployment of renewables

Enabler: cheap renewables

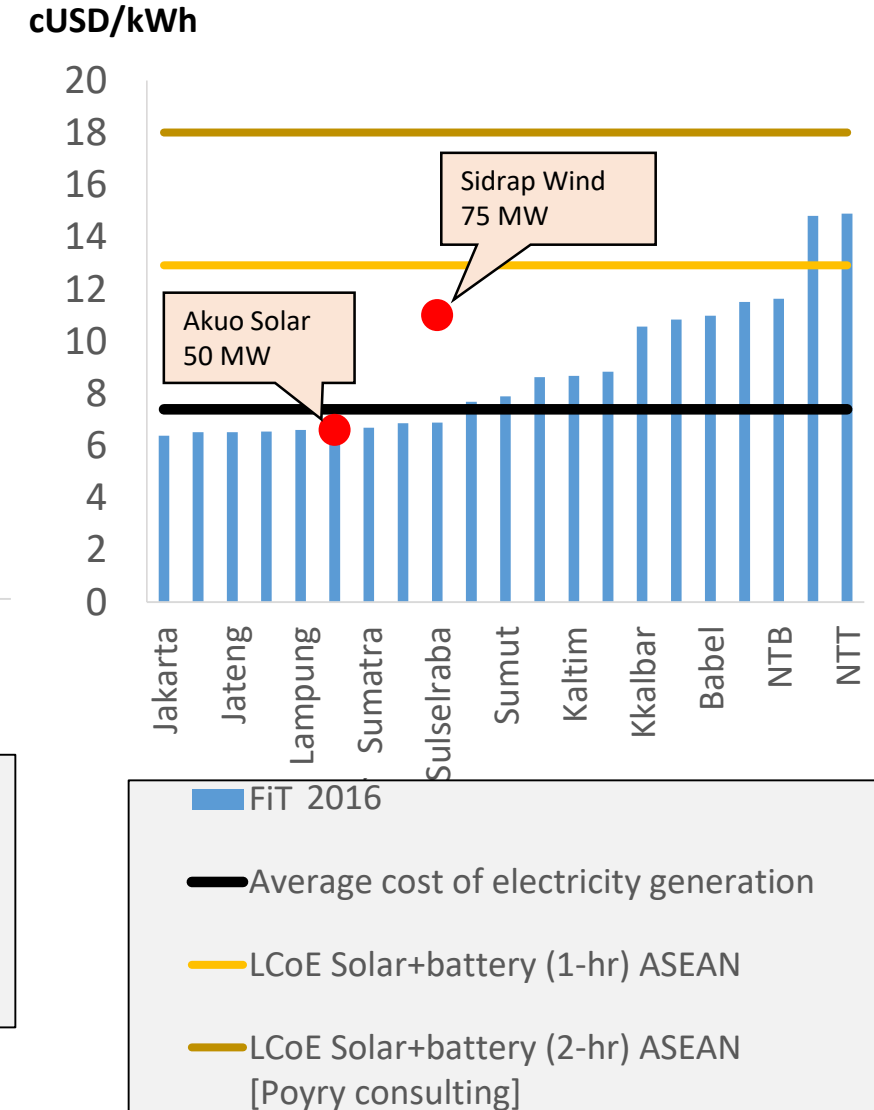
Thailand



Malaysia



Indonesia



Barrier: electricity subsidies



COMMODITIES MARCH 9, 2018 / 11:49 AM / 8 MONTHS AGO

Indonesia caps domestic coal price for power stations, could hit miners

Wilda Asmarini, Fergus Jensen

4 MIN READ



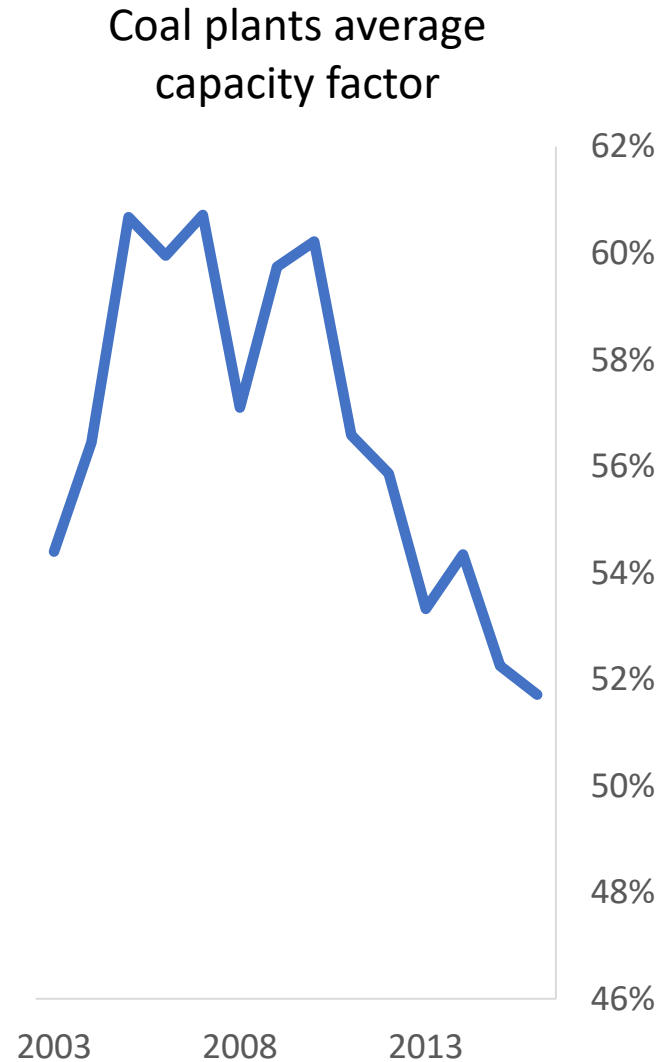
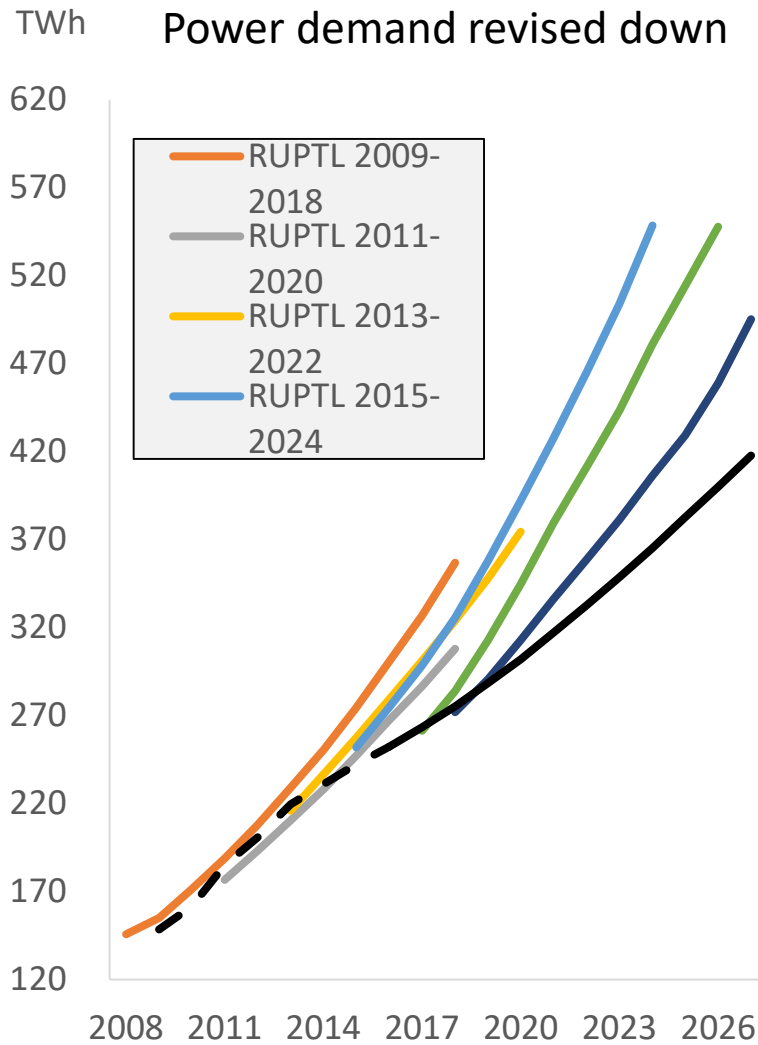
JAKARTA (Reuters) - Indonesia has capped the price of domestic coal for power stations at \$70 per ton for two years, in new rules issued this week, a government spokesman said on Friday.

“we will not deprive the people just because we want to drive the green agenda.”

Minister Yeo Bee Yin, 20 Oct 2018

malaysiakini.com

Barrier : overcapacity



- Overcapacity aggravates the threat from renewables
- Stranded assets and contracts
- Power monopolies block (or delay) renewables
- Governments face dilemma

2017

Conclusion: three key issues

1. Tax carbon, or coal

- Lest renewables displace gas, with little impact on emissions

2. Phase-out subsidies

- Reduce direct barrier to 'greening'
- ...and pressure to keep cost down

3. Address stranded assets

- One-off cost to unlock the transition