Asia and the Global Energy Economy

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A more comfortable market ahead?

Spare capacity increase, but geopolitical risk remain high.

- Lower demand growth and more robust supply picture make for more comfortable balance.
- Economic outlook remains uncertain.
- OPEC spare capacity rebuilds after years of low levels.
- Increased above-ground risks.
- Technological advances are far reaching.
Changing oil trade patterns

A new global crude trade map

Crude Exports in 2017 and Growth in 2011-17 for Key Trade Routes*
(million barrels per day)

* Excludes Intra-Regional Trade

- North American crude import requirements plummet as regional supply rises
- Rising Middle East demand curtails export availability
- 'East of Suez' accounts for an ever growing share of global crude trade
Increasing need for cooperation during oil supply disruptions

Growing share of non-OECD oil demand results in declining global demand cover from IEA emergency oil stocks

IEA – Thailand Regional Energy Security and Oil Stock-Building Workshop 2012
Global LNG trade will increase by one third over 2011-17
Many ASEAN countries are turning to LNG imports

Note: LNG capacity based on FID taken as of end-September 2012.
Developing a natural gas trading hub in Asia

- Asia is the second largest gas consuming region
- But there is no trading hub providing an alternative to oil-linked imports
- Establishing wholesale natural gas markets with functioning spot markets is a lengthy process
- Singapore is looking at developing a gas trading hub
  - Will it be a bridge towards the creation of a bigger hub
  - And will it remain as an alternative regional pricing point?
Gas and renewables need to dominate ASEAN electricity

Fuel mix in ASEAN electricity in the *ETP 2012 2DS*

TWh

- **Other**
- **Coal**
- **Gas**
- **Renewables**

*2009* | *2030* | *2050*
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Natural gas and renewables need to be the primary fuels to meet growth in electricity demand in the ASEAN region.
The ASEAN power sector is key to climate goals
Multiple outcome benefits of Energy Efficiency

- Energy savings
- Energy security
- Energy affordability & access
- Energy prices
- Climate change mitigation
- Enterprise productivity
- Development goals
- Resource management
- Public budgets
- Macro impacts
- Energy provider benefits
- Health and social benefits
- Job creation
- Asset values
- Consumer surplus
- Energy efficiency improvement

Sector-wide
- International
- National

Individual
As a portfolio of renewable technologies matures, global renewable power generation is forecast to rise 40% over 2011-2017.

This projected growth is an acceleration versus the previous period.

Renewable power deployment spreads out geographically, with increased activity in emerging Asia – China accounts for 40% of global generation growth.
Smart grid benefits exceed costs by a factor of between 1.5 and 4.5.

... but direct benefits of investment in one sector may be found in other sectors.
Conclusions

• Slowing economic growth and geopolitical uncertainties create a “new reality of risk”.

• But there are bright spots for oil production, as well as for gas supply and clean power generation.

• Asian gas prices are largely due to the absence of a functioning and efficient regional gas market. Singapore has a key role to play in that.

• Renewable energy technologies are progressing well and costs are falling. But policy lags must be overcome to integrate them at scale, and to promote energy efficiency.

The global oil map, and wider energy map, is changing