



# **Sustainable Natural Gas Market for Growing Demand of Clean Energy in East Asia**

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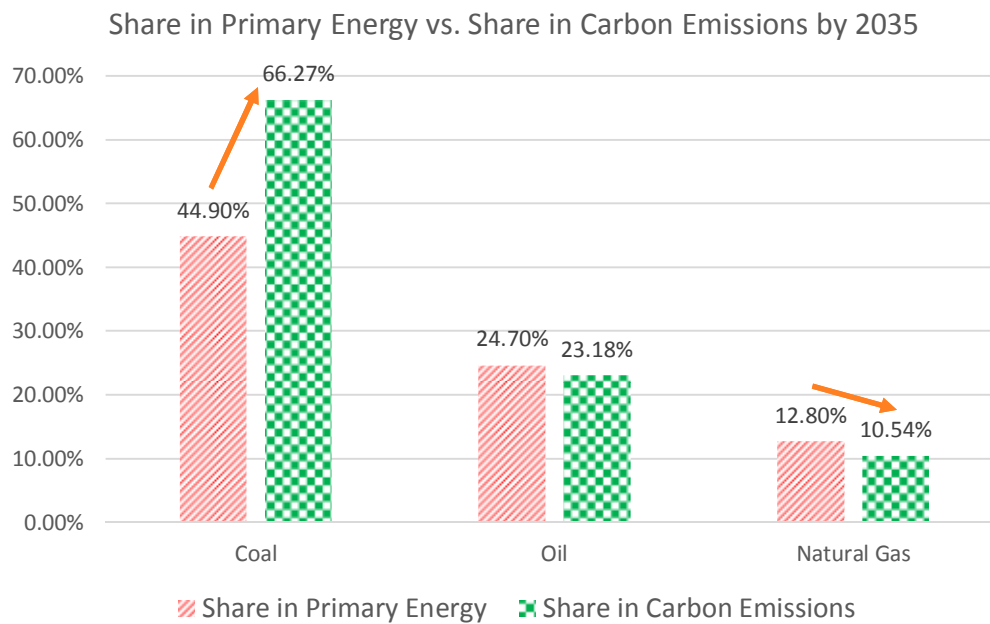
# Outline

1. Outlook of clean energy and the role of natural gas in the EAS region
2. Security and Affordability of Natural Gas Supply Calls for Flexibility in the EAS Market
3. Issues and challenges of establishing a sustainable regional natural gas market
4. Conclusions and policy implications

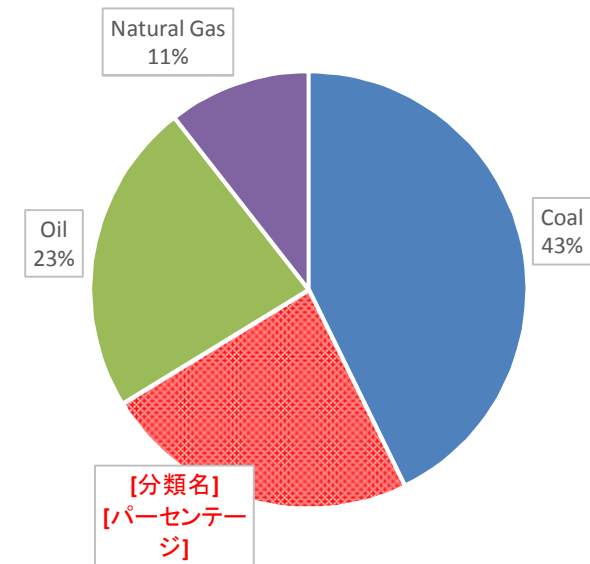
# Outlook of clean energy and the role of natural gas in the EAS region (I)

- The ERIA “Energy Outlook and Analysis of Energy Saving Potential in East Asia” is a “*policy-driven*” outlook for the EAS region.
  - Future scenarios are built on assumptions about different energy and environment policies.
  - It thus presents a feasible maximum potential for policies to deliver cleaner energy consumption.
- Natural gas is projected to play an important but limited role in supplying clean energy to the region, despite fast growth in absolute volume of consumption
  - Prices of natural gas is projected based on exogenously specified oil price assumptions, reflecting the features of the natural gas market in the region
  - No major policy initiatives to enhance the role of natural gas

# Outlook of clean energy and the role of natural gas in the EAS region (II)



Regional Carbon Emissions Cut by 23% if All Coal-fired Power Generation is Replaced by Natural Gas



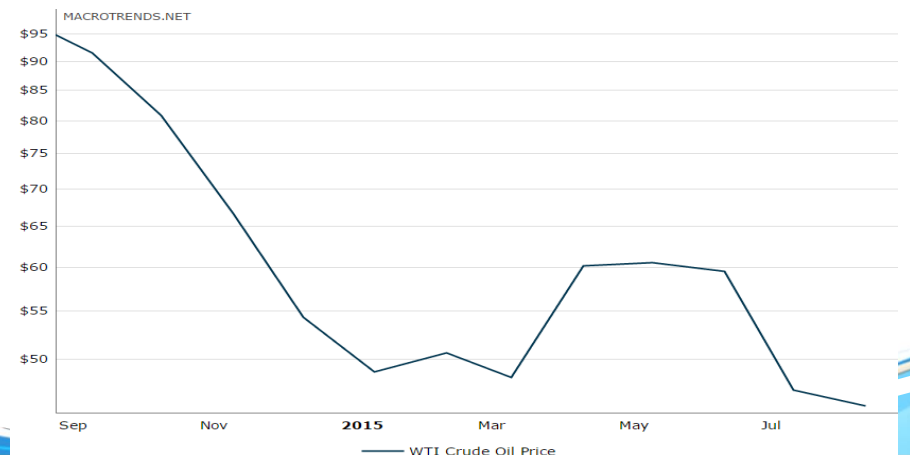
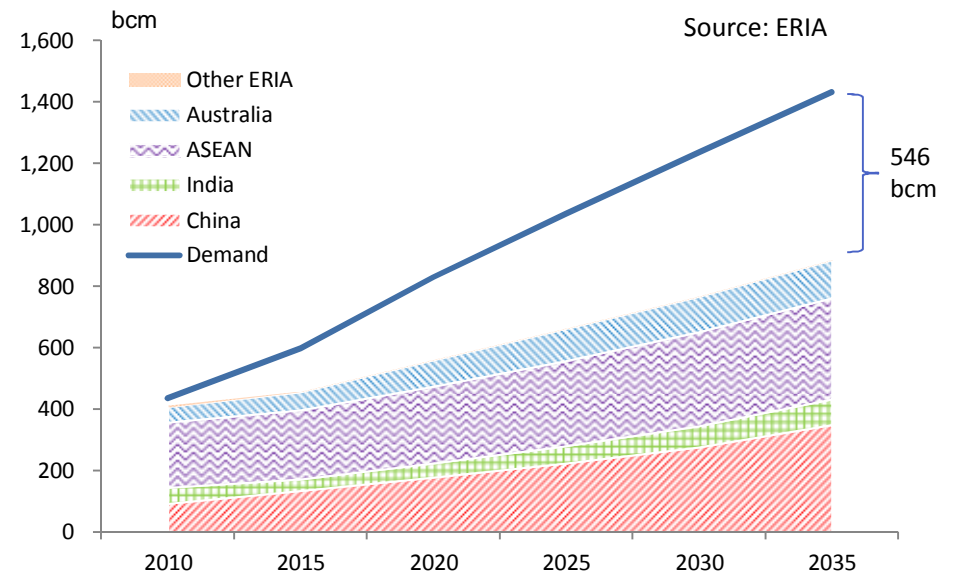
Source: ERIA



# Security and Affordability of Natural Gas Supply Calls for Flexibility in the EAS Market

- The EAS region needs to source 546 bcm of natural gas from outside the region in 2035.
- A majority of the imports from the outside of EAS will be in the form of LNG.
- How to secure the supply through sufficient infrastructure investment?
- What “price discovery mechanism” could deliver proper price signals to incentivize investment and ensure affordable supply to this region?

The Gap between Projected Demand vs. Supply from within the Region



# Issues and challenges of establishing a sustainable regional natural gas market

- A more flexible regional market will be the key to achieve both secured and affordable supply, leading to a sustainable market in the region
- The following issues should be emphasized and addressed
  - The quasi-vertical integration of the supply chain
  - The dominance of long-term contracts in trading
  - The oil indexation in the pricing formula
  - The destination clause

# Conclusions and policy implications

- A sustainable regional natural gas market is featured by secured and affordable supply, enabled by enhanced flexibility
  - It leads to a win-win situation for both producers and consumers
- The following policy recommendations are drawn:
  - Towards abolition of investment barriers
  - Towards domestic market liberalization
  - Towards intra-regional agreement on natural gas trade, especially regarding flexibility and pricing mechanism
  - Towards intra-regional agreement on market monitoring



Thank you for your kind attention!

Q & A

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