



# **Fifth IEF-IGU Ministerial Gas Forum: Natural Gas Market Development in ASEAN**

**Hidetoshi Nishimura**  
**New Delhi, India**  
**6-Dec-2016**

[www.eria.org](http://www.eria.org)

Economic Research Institute for ASEAN and East Asia

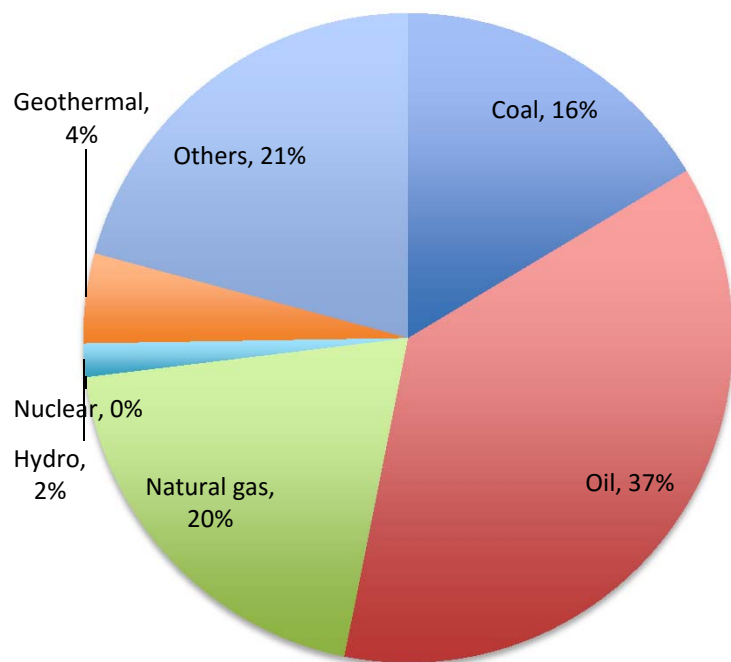


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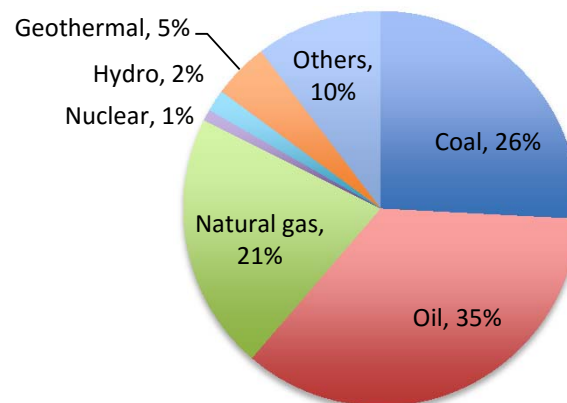
# Energy Mix in the ASEAN Region

**ASEAN Energy Mix in 2012**

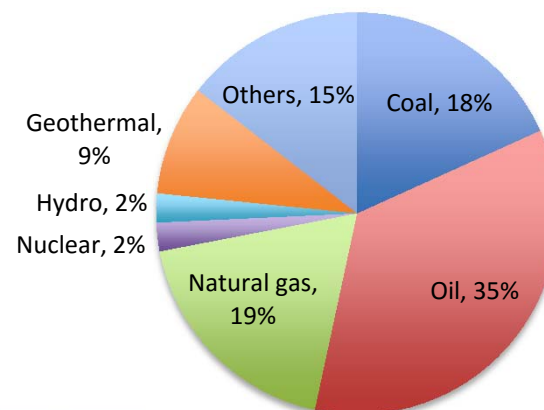


Source: ERIA (2016)

**ASEAN Energy Mix in 2035: BAU**

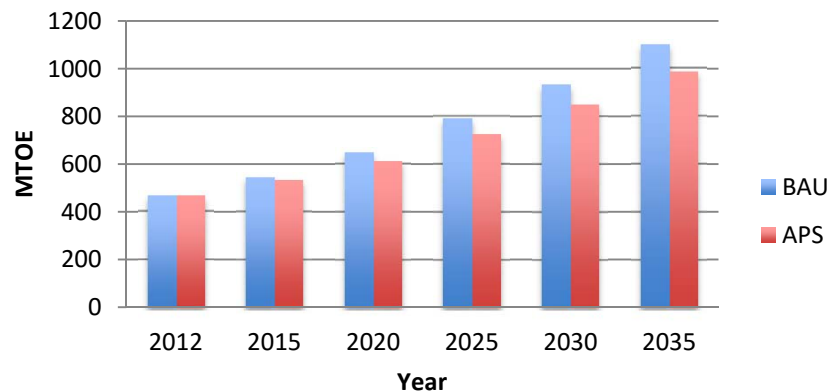


**ASEAN Energy Mix in 2035: APS**

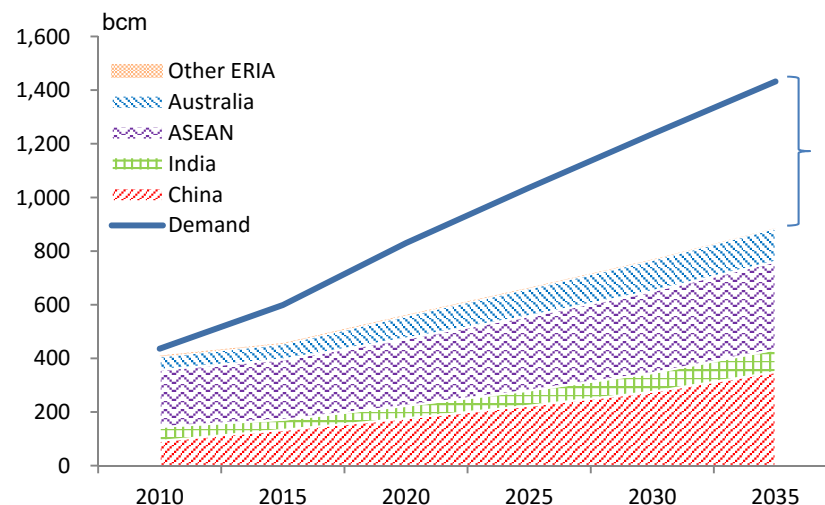
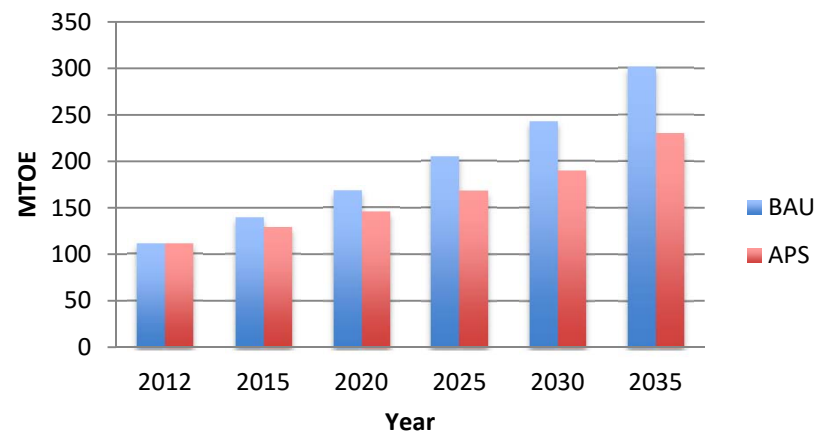


# Natural Gas Demand Outlook in EAS and ASEAN

Natural Gas Consumption of EAS:  
BAU vs. APS

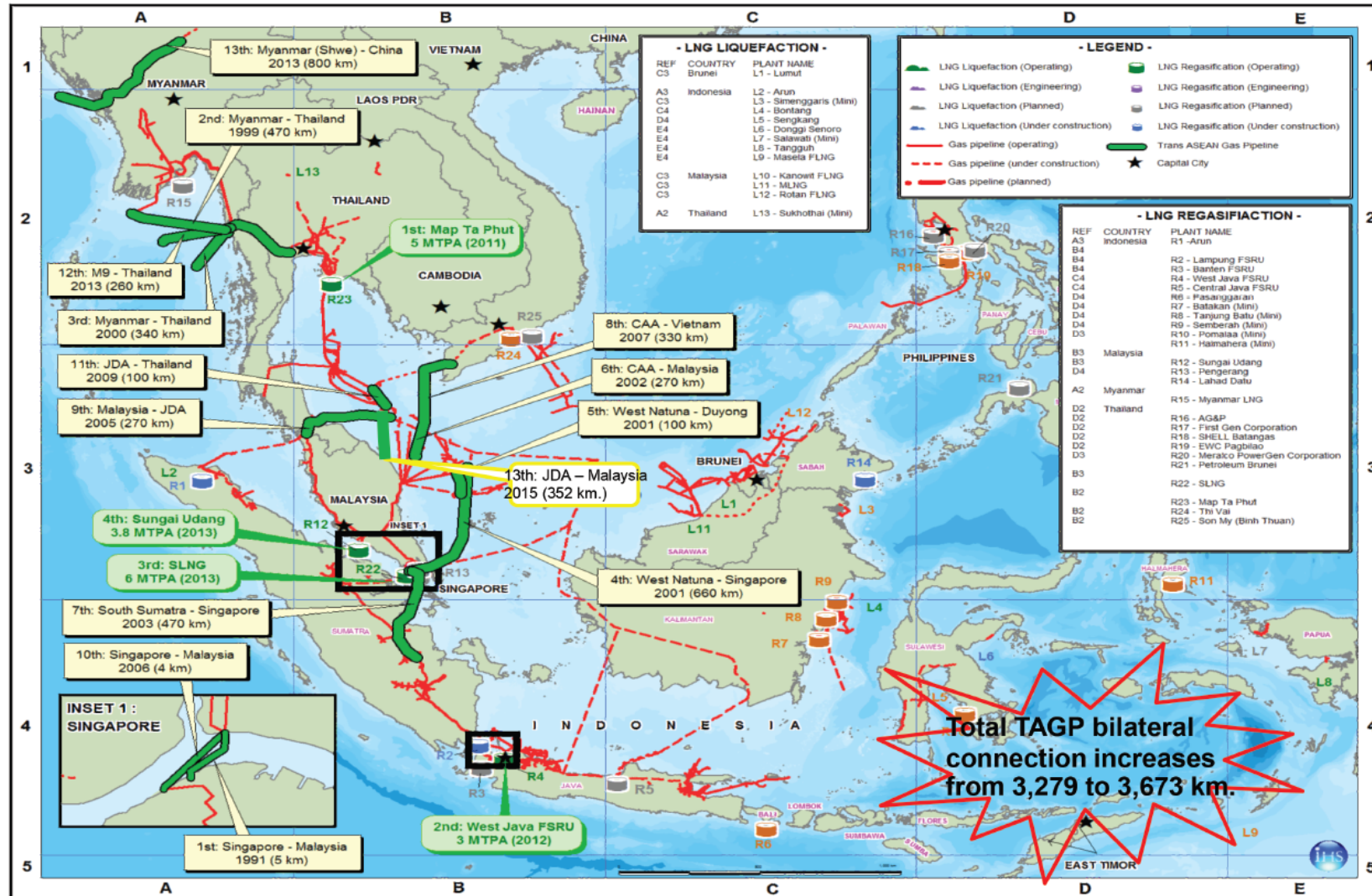


Natural Gas Consumption of ASEAN: BAU vs. APS



The Gap between  
Projected Demand vs.  
Supply from within the  
Region will Reach 546 bcm  
per year by 2035

# Trans-ASEAN Gas Pipeline (TAGP) Updated



Source: APAEC 2016-2025

# ASEAN Policies on Regional Natural Gas Market

Outcome-based Strategy 1: Enhance gas & LNG connectivity via pipeline and regasification terminals.	
Action Plans	<ul style="list-style-type: none"> <li>a. Develop at least one (1) new LNG regasification terminal or a cross border gas pipeline by 2020.</li> <li>b. Implement open access system by at least one (1) AMS by 2020.</li> <li>c. Develop consolidated information (Technical Database) on ASEAN Gas Infrastructure.</li> </ul>
Outcome-based Strategy 2: Enhance gas & LNG accessibility via pipeline and regasification terminals.	
Action Plans	<ul style="list-style-type: none"> <li>a. Establish a standard clause for LNG cargo diversion and destination flexibility for ASEAN LNG Contracts.</li> <li>b. Establish a manual and procedures for the operationalisation of APSA/CERM.</li> </ul>
Outcome-based Strategy 3: Minimise environmental impact of CO <sub>2</sub> and other environmental contaminants on gas field development and utilisation.	
	<ul style="list-style-type: none"> <li>a. Establish research and development in the areas of CO<sub>2</sub> and other environmental contaminants management.</li> <li>b. Establish a regional guideline for emissions.</li> </ul>

*1. Considering the challenges in global gas developments, including in the East Natuna Gas Field, the strategic focus of TAGP will expand from piped gas to LNG as the option for gas supply in the region – the virtual pipeline in ASEAN.*

*2. Securing supply through infrastructure development and the carbon emissions reduction due to use of natural gas have been emphasized in the latest policies in ASEAN.*

Source: APAEC 2016-2025



# Promoting the Role of Natural Gas in East Asia Region

Table 1 Required action to expand LNG market in Asia and its responsibility:

	Industry	Government
Producer	<ul style="list-style-type: none"><li>• Adopting effective cost reduction means</li><li>• Removing or relaxing destination clause</li><li>• Creating a reliable price benchmark</li><li>• Developing well-functioning market</li><li>• Optimizing supply infrastructure</li></ul>	<ul style="list-style-type: none"><li>• Developing well-functioning market</li><li>• Improving investment environment</li><li>• Optimizing supply infrastructure</li><li>• Supporting investment through public finance</li></ul>
Consumer	<ul style="list-style-type: none"><li>• Adopting effective cost reduction means</li><li>• Removing or relaxing destination clause and optimizing logistics</li><li>• Creating a reliable price benchmark</li><li>• Developing well-functioning market</li><li>• Optimizing supply infrastructure</li><li>• Investing upstream by downstream players</li></ul>	<ul style="list-style-type: none"><li>• Creating a reliable price benchmark</li><li>• Liberalizing domestic market</li><li>• Providing a low carbon policy</li><li>• Developing well-functioning market</li><li>• Encouraging natural gas use by government</li><li>• Optimizing supply infrastructure</li><li>• Supporting investment through public finance</li></ul>

The expanded use of LNG in Asia will rely on two conditions:

- LNG's competitiveness against other energy, and
- Sufficient investment in every part of the value chain

## **Dimension 1: Actions to Enhance the Competitiveness of LNG**

- **Adopting effective cost reduction means**
  - Application of floating storage and regasification unit (FSRU)
  - Modularization of liquefaction plant construction
  - Project management skills is a key factor
- **Optimizing logistics**
  - Formation of buyers' alliances to enhance flexibility in operation, especially as a growing number of importers with a variety of demand patterns and trading interests are entering
- **Liberalizing domestic market**
- **Creating a reliable price benchmark**
  - Liquid trading volume as well as participation of an increasing variety of market players
- **Policy framework supportive to low carbon energy**

## **Dimension 2: Actions to Reduce Risks and Ensure Investment**

- **Improving investment environment**
- **Encouraging natural gas use by government support**
- **Supporting upstream investment by public finance**
- **Removing or relaxing destination clause**
- **Investing in upstream equity by downstream players**
- **Developing well-functioning market**



## Key Messages from the LNG Producer-Consumer Conference 2016

- Natural gas will play a key role in the world energy transition towards low carbon technologies - IEA
- Majority of new infrastructure projects are being deferred – Woodside
- New business models, new mechanism and new relationship between upstream and downstream are to be established to mobilize investment in infrastructure – Alaska Office of the Governor, JERA
- The region is moving towards more transparency, more flexibility, and more liquidity. Spot trading and regional price indices would emerge and play a bigger role – JERA, CPC
- Policies are called for to promote the use of natural gas in the East Asia region - IEEJ

# Conclusions

- ASEAN will gradually shift from net exporter of natural gas and LNG toward net importer
  - This does not automatically imply a bigger role/share for natural gas in the region's future energy mix
- Thus, ASEAN countries need to:
  - Actively developing adequate infrastructure including pipeline network and LNG terminals
  - Collaborating in regional institutions, such as destination flexibility to ensure security of supply in the future
- A key question which links up all the above issues, as ERIA studies imply, is:
  - What “price discovery mechanism” could deliver proper price signals to incentivize investment while also ensure affordable supply to this region?