



ASEAN EU cooperation: sharing best practices to implement regional energy interconnectivity

Fabio Indeo
Nato Defense College Foundation
fabio.indeo@natofoundation.org

Outlines

- 1) To analyse the energy cooperation between ASEAN and EU and their similar attempts to achieve the condition of energy security**
- 2) The role of the Renewable Energy sources in the projects to develop an integrated regional grid**
- 3) Conclusion**

ASEAN and EU: a similar energy landscape

- ◆ Depletion of existing hydrocarbon reserves
- ◆ High energy and electric demand
- ◆ Rising energy imports
- ◆ The need to diversify the energy mix, increasing the role of renewable energy sources (solar, hydro, wind, biomass)

ASEAN energy projections to 2025

- ◆ Increase of population will lead to a 4% annual growth in energy demand by 2025
- ◆ **Energy is key to the realisation of the ASEAN Economic Community (AEC) which calls for a well-connected ASEAN to drive an integrated, competitive and resilient region.**
- ◆ The role of fossil fuels (imported) and the RES as the best option

The Plan of Action for Energy Cooperation (APAEC) 2016-2025



- ◆ *“Enhancing Energy Connectivity and Market Integration in ASEAN to Achieve Energy Security, Accessibility, Affordability and Sustainability for All”*
- ◆ The ambitious goal to achieve 23% renewable energy in total primary energy supply by 2025

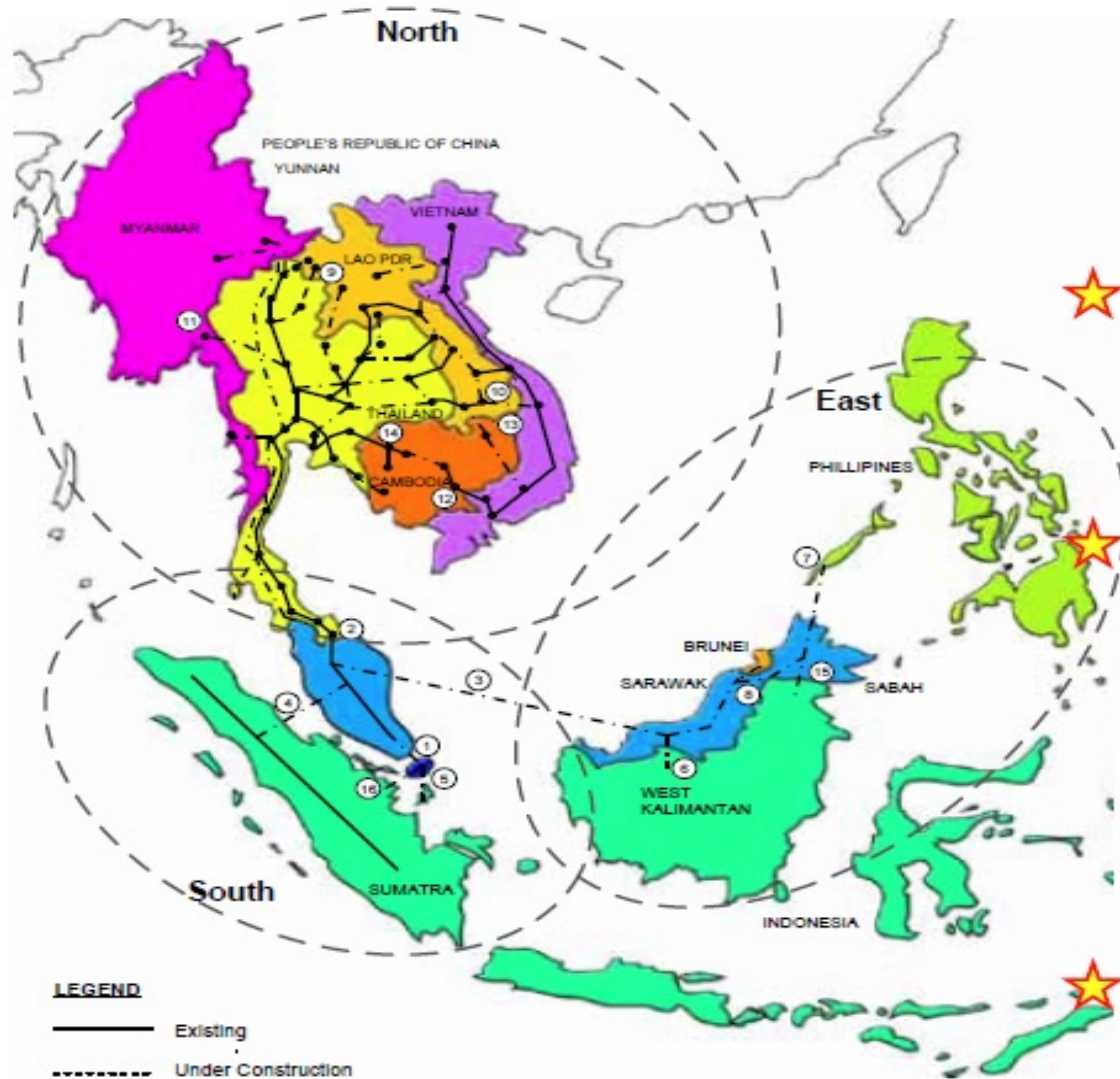
Developing a regional energy power grid: similarities and differences between ASEAN and EU



- ◆ ASEAN and EU share the same approach to enhance their energy security condition, developing a long-term diversification strategy of the energy mix and implementing an ambitious regional energy grid, mainly fuelled with renewable sources
- ◆ RES and common engagement to address climate change: Paris climate deal

The ASEAN Power Grid (APG)

- ◆ From a bilateral to a regional dimension of energy integration
- ◆ To enhance regional electricity trade and to meet growing regional demand through “clean electricity” produced by RES developed in ASEAN region
- ◆ Combination of the ASEAN different RES potential (solar, geothermal, hydro)



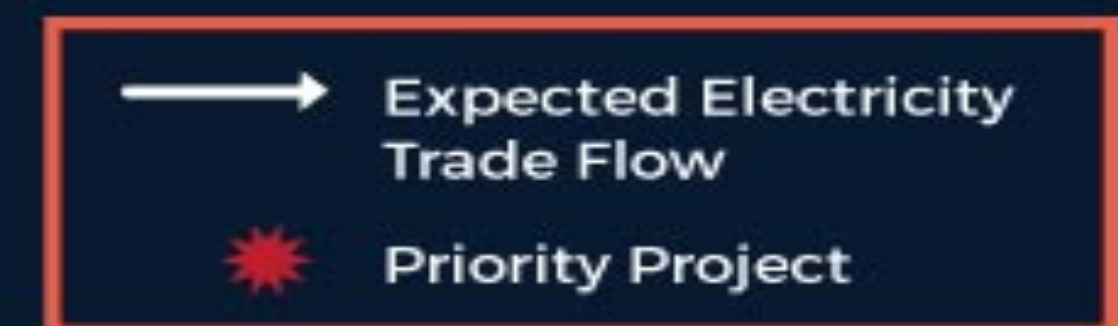
LEGEND

- Existing
- - - Under Construction
- · · Future

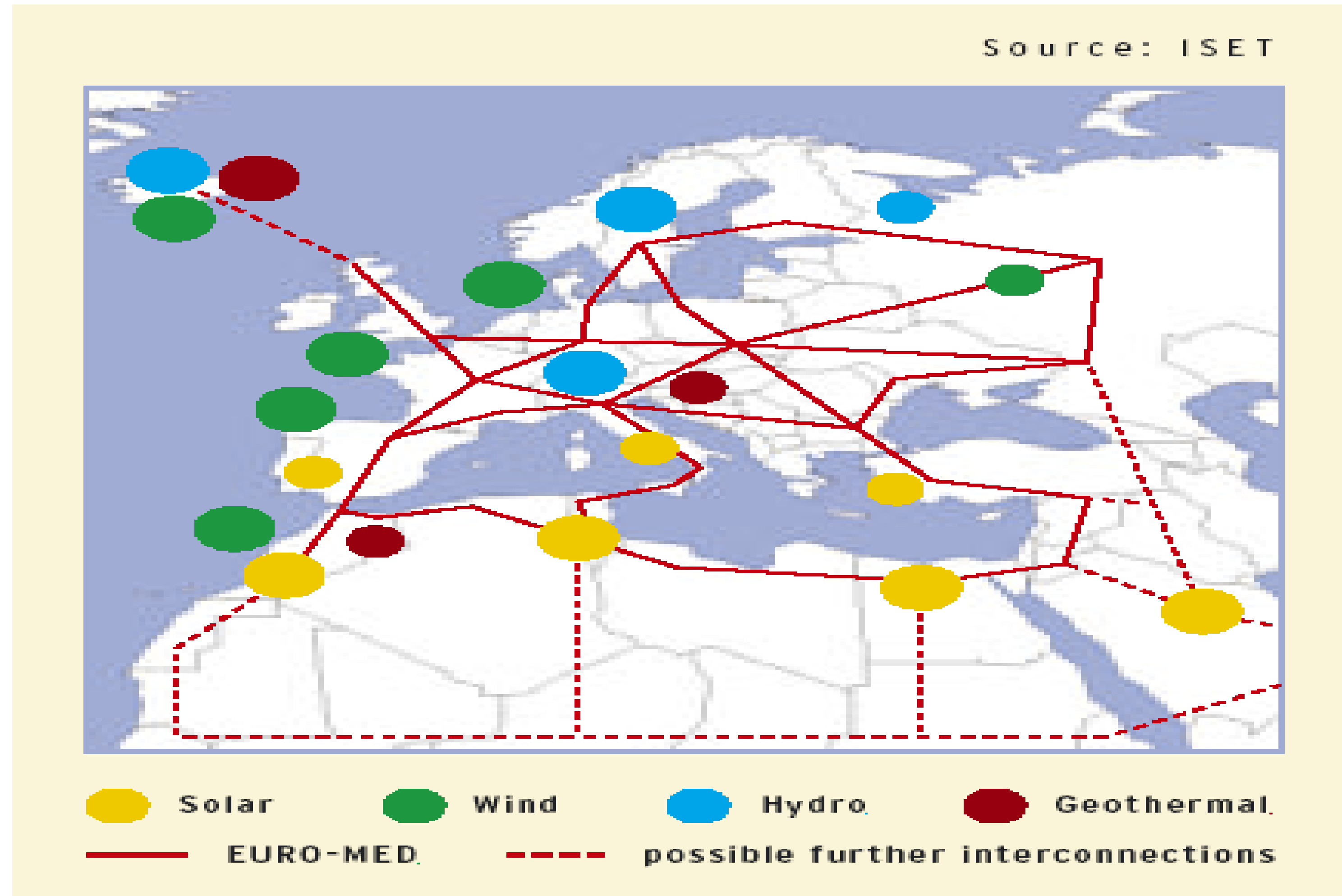
1)	P. Malaysia - Singapore (New)	Earliest COD post 2020
2)	Thailand - P. Malaysia	
	• Sadao - Bukit Keteri	Existing
	• Khlong Ngae - Gurun	Existing
	• Su Ngai Kolok - Rantau Panjang	TBC
	• Khlong Ngae - Gurun (2 nd Phase, 300MW)	TBC
3)	Sarawak - P. Malaysia	2025
4)	P. Malaysia - Sumatra	2020
5)	Batam - Singapore	2020
6)	Sarawak - West Kalimantan	2015
7)	Philippines - Sabah	2020
8)	Sarawak - Sabah - Brunei	
	• Sarawak - Sabah	2020
	• Sabah - Brunei	Not Selected
	• Sarawak - Brunei	2018
9)	Thailand - Lao PDR	
	• Roi Et 2 - Nam Theun 2	Existing
	• Sakon Nakhon 2 - Thakhek - Then Hinboun (Exp.)	Existing
	• Mae Moh 3 - Nan - Hong Sa	2015
	• Udon Thani 3 - Nabong (converted to 500KV)	2019
	• Ubon Ratchathani 3 - Pakse - Xe Pian Xe Namnoy	2019
	• Khon Kaen 4 - Loei 2 - Xayaburi	2019
	• Nakhon Phanom - Thakhek	2015
	• Thailand - Lao PDR (New)	2019-2023
10)	Lao PDR - Vietnam	2016-TBC
11)	Thailand - Myanmar	2018-2026
12)	Vietnam - Cambodia (New)	TBC
13)	Lao PDR - Cambodia	2017
14)	Thailand - Cambodia (New)	post 2020
15)	East Sabah - East Kalimantan	post 2020
16)	Singapore - Sumatra	post 2020
★	Priority Projects	

The ASEAN Power Grid

The ASEAN power grid (APG) is being implemented to feed growing demand for electricity in the region. Its primary aim is to ensure regional energy security and to enhance cross border electricity trade. Eight projects have been implemented and another three priority projects are in the works which aim to more than double the power exchange and purchase in the region from 5,200 MW to 10,800 MW by 2020. A further increase to over 16,000 MW is expected post-2020.



Medring and Mediterranean Solar Plan



The Mediterranean electricity ring: a frozen project



- ◆ Three geographical paths
- ◆ The Morocco-Spain interconnection is the only electricity interconnection between the North and South-West Mediterranean
- ◆ Political instability in North Africa (Arab spring events), reduced cooperation: the impossibility to “close the ring”

The Trans-ASEAN Gas Pipeline

- ◆ Combination between pipelines and Liquefied Natural Gas
- ◆ Interconnection of regional energy infrastructure to enhance energy security
- ◆ Reshaping the ASEAN energy scenario: from global to regional suppliers?

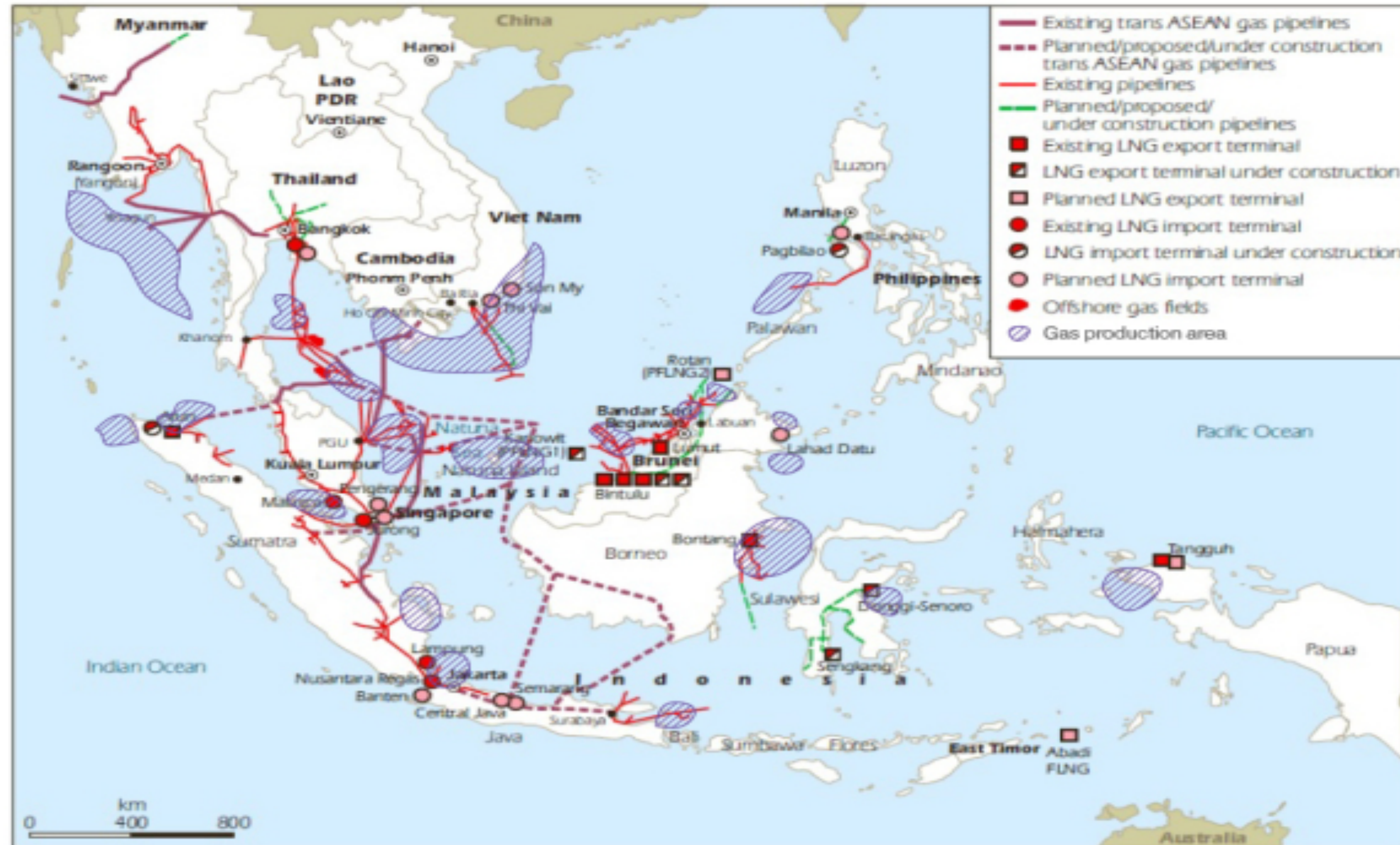


Figure 3. Gas fields and infrastructure in ASEAN region

Source:
 Cory Cox, Rethinking ASEAN
 Gasification, ENERPO Journal,
 January 13,
 2016, <https://enerpojournl.com/2016/01/13/rethinking-asean-gasification/>

Conclusion

- ◆ Stability as the main factor to promote regional cooperation
- ◆ ASEAN and EU have to align their position in the international fora, pursuing a comprehensive approach to tackle the impact of climate change and promoting sustainable development
- ◆ ASEAN and EU projects of energy integration as mutual models of development



THANKS FOR YOUR ATTENTION

For any further information
fabio.indeo@natofoundation.org

