



Scaling-up Electricity Trade in the GMS Power Market

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Agenda

1. Context:

- a. Demand, resources and power supply in the GMS
- b. Why the regional power market?
- c. Regional collaboration

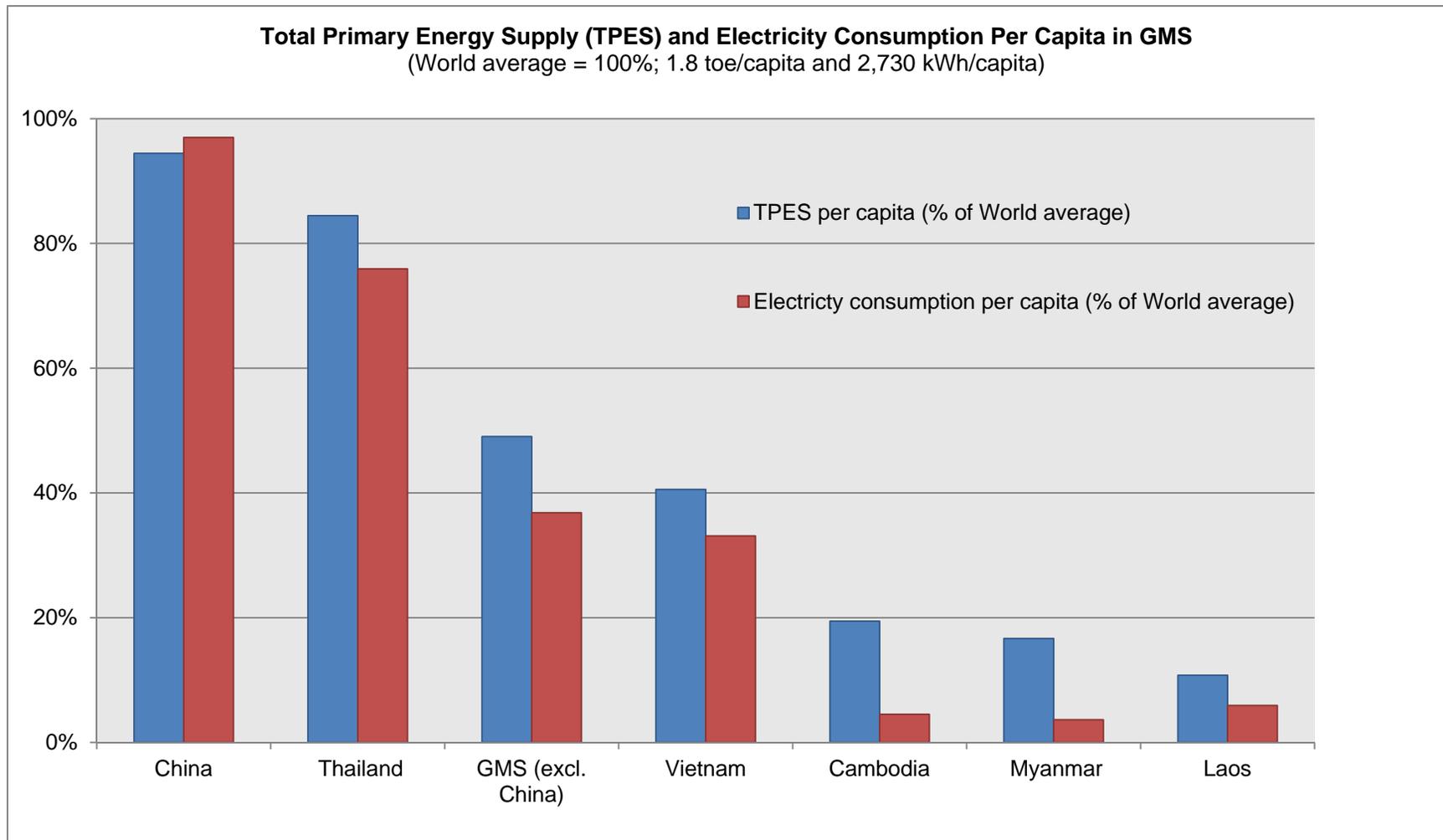
2. Objectives of WBG Support

3. Challenges:

- a. Institutional
- b. Regulatory
- c. Financing

4. Questions for discussion

Context: Diversity of Demand



Context: Diversity of Resources

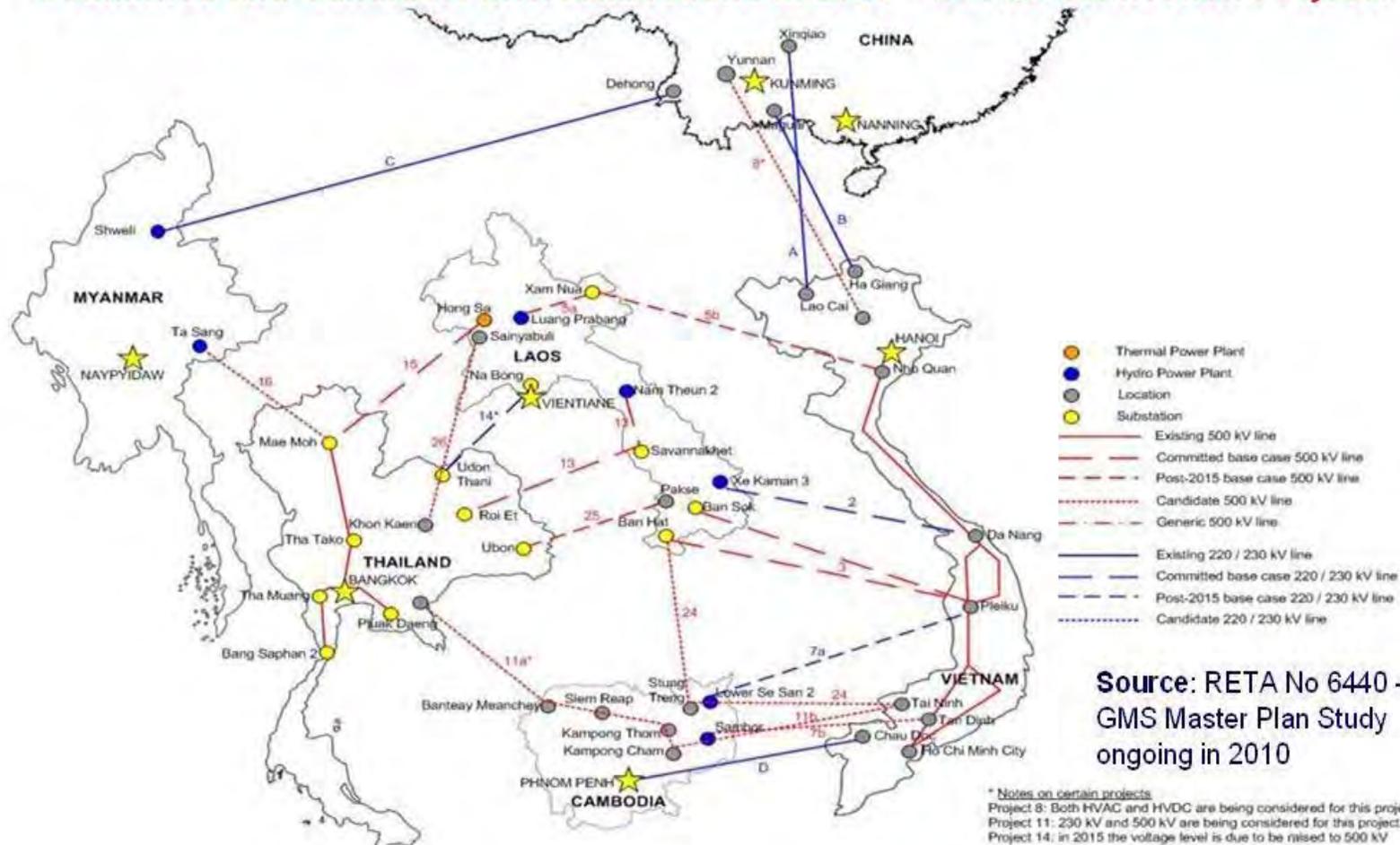


Benefits of regional power markets:

- Enhanced security of energy supply
- Lower capital costs due to lower reserve margins and optimal use of regional resources
- Improved reliability of power supply
- Lower system operating costs
- Lower emission levels

Background: A Common Vision

Committed and Candidate Interconnections in 2025 = 22 Interconnection Projects



Why the regional power market?

- **Energy poverty and low access to electricity is a major challenge for the elimination of poverty and shared prosperity in the GMS**
 - Energy consumption per capita is less than half of the world average;
 - About 60 million people do not have access to electricity (in Myanmar, Laos and Cambodia)
- **Rapid increase in energy demand, uneven distribution of energy resources and underdeveloped infrastructure for electricity trade are root causes of:**
 - Looming power shortages, declining reliability and quality of electricity supply;
 - Increasing sense of energy insecurity.
- **The continuation of past policies (particularly energy subsidies and below-cost electricity tariffs) is likely to:**
 - Deepen concerns about security of energy supply;
 - Increase energy intensity of economy and environmental costs due to increasing reliance on coal across the region.

Regional collaboration

- **Regional Power Trade Coordination Committee (RPTCC):**
 - Established in 2002 under an Inter-governmental Agreement on Regional Power Trade;
 - A unique forum for coordination of development plans in the power sector
- **RPTCC established sound foundations for the future development of regional power market:**
 - GMS Power System Master Plan;
 - Pipeline of regional transmission investment projects valued at \$3.2 billion till 2022
 - Strategic Environmental Assessment (SEA) of the power development plans
- **The key next step is the establishment of the Regional Power Coordination Center (RPCC):**
 - Inter-governmental Agreement on RPCC approved by all GMS countries;
 - Thailand, China and Lao PDR submitted bids to host RPCC; and
 - Two Working Groups established on harmonization of regulatory and grid code issues

Objectives of WBG Support

Support to the GMS countries to:

1. Adopt **open access** to power transmission grids, including common rules for nondiscriminatory treatment of **cross-border electricity trade** and transactions;
2. Establish a regulatory framework conducive for **public and private investments** in the regional power market, including transmission interconnections; and
3. Mobilize long-term financing support for priority investments in **regional power grid**

Challenges: Institutions

- 1. Weak institutional capacity in the power sector (except in Thailand) and lack of regional institutions (Regional Coordination Center)***
- 2. Policy, regulatory and planning functions bundled in government agencies (Laos, Myanmar, China) or partially shared with relatively weak regulatory agencies***
- 3. Governance and transparency***

Challenges: Regulations

1. *Cost recovery tariffs and affordability:*

- **Consumers** (efficiency of subsidies and cross-subsidies)
- **Power industry** (financial viability)
- **Budget** (sustainable subsidies)

2. *Open (third party) access to transmission and common transmission pricing policies*

3. *Grid Code and Guidelines for National Regulators*

- Synchronization of power grids and frequency control;
- Regulation of inadvertent power flows over an interconnected grid and provision of ancillary services;
- Provision of emergency energy, coordination of planned maintenance schedules.

Challenges: Financing

- 1. Large investments and relatively low returns in regional interconnections require long-term financing***
- 2. Cost-sharing agreements for cross-border transmission investments**
- 3. Framework for PPP and private investments in power transmission***

Questions for discussion

- Are the countries ready for deeper collaboration and eventual synchronization of their power grids?
- What the governments should do as a matter of priority to accelerate the regional (cross-border) investments and power trade?
- How much interest the private sector has in transmission investments or is this a public sector obligation?
- What type of support the WBG should provide to help accelerate the regional power market development?