



## Clean energy in Vietnam after COP21 – Workshop

# Institutional change and market conditions for low-carbon electricity transition in Vietnam

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Hoang Anh NGUYEN-TRINH  
Yorgos RIZOPOULOS

CleanED/USTH, Vietnam  
CIRED/CNRS, France  
LADYSS/University Paris Diderot, France

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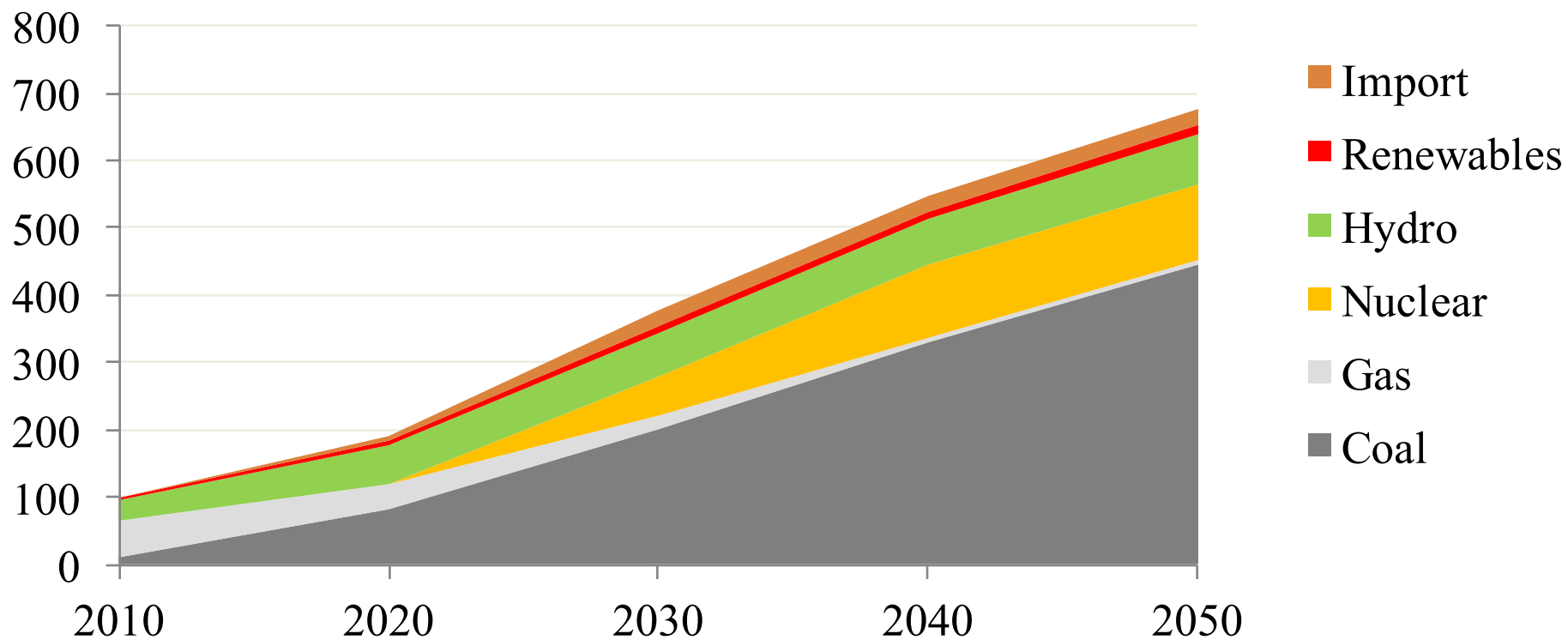
# Agenda

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1. Context and analytical framework
2. Players in the electricity market
3. Structure and functioning of the electricity market
4. The transition to low-carbon electricity as an institutional change
5. Conclusions and policy implications

# Renewable energy is increasing but not much as its potential

Power demand TWh



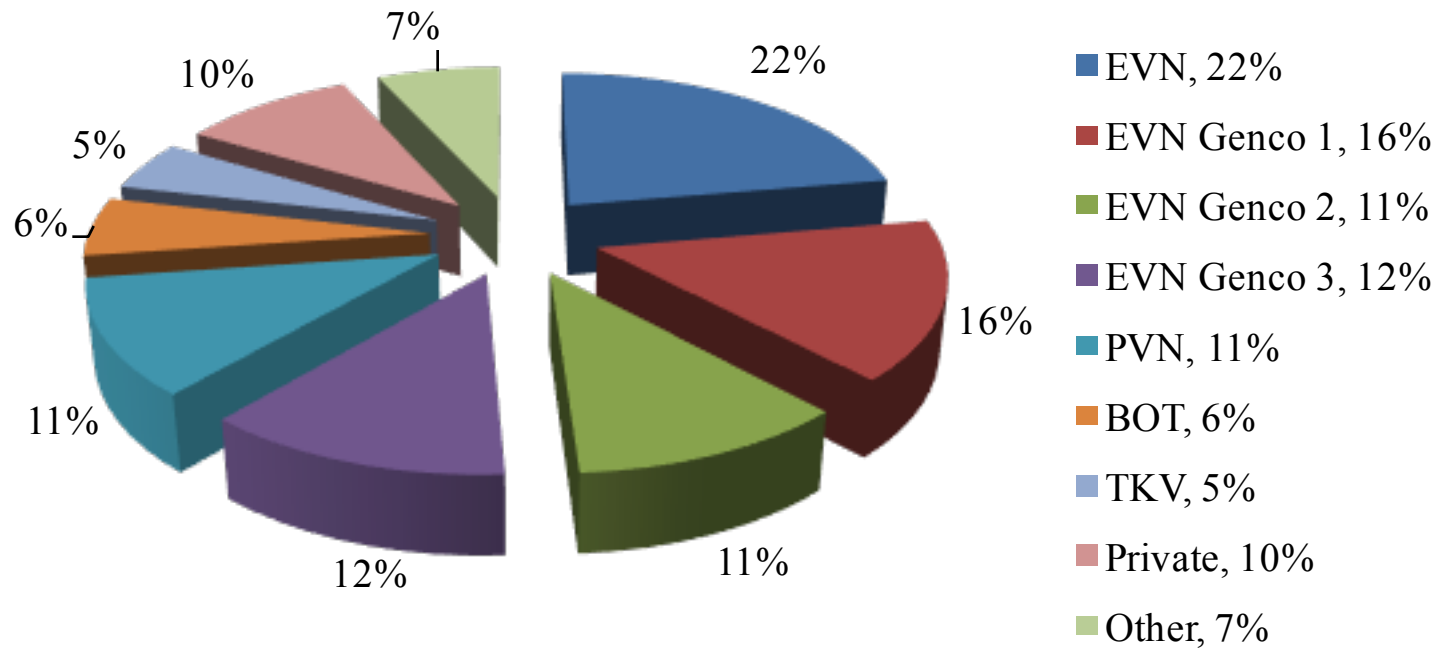
# Analytical framework

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- A mesoeconomic approach of the energy transition process.
- The political will of policymakers is a necessary but insufficient condition for energy transition.
- No sufficient incentives for the development of renewable sources
- A gap between declared goals and facts.
- An evolutionary of the Vietnamese electricity market: four transition phases according to the nature and speed of change: *pre-development*, *take-off*, *acceleration*, *stabilization*. We consider it to be still at the beginning of the take-off phase.

## 2. Players in the electricity market

**Power generation capacity share in the electricity market by ownership (2013)**

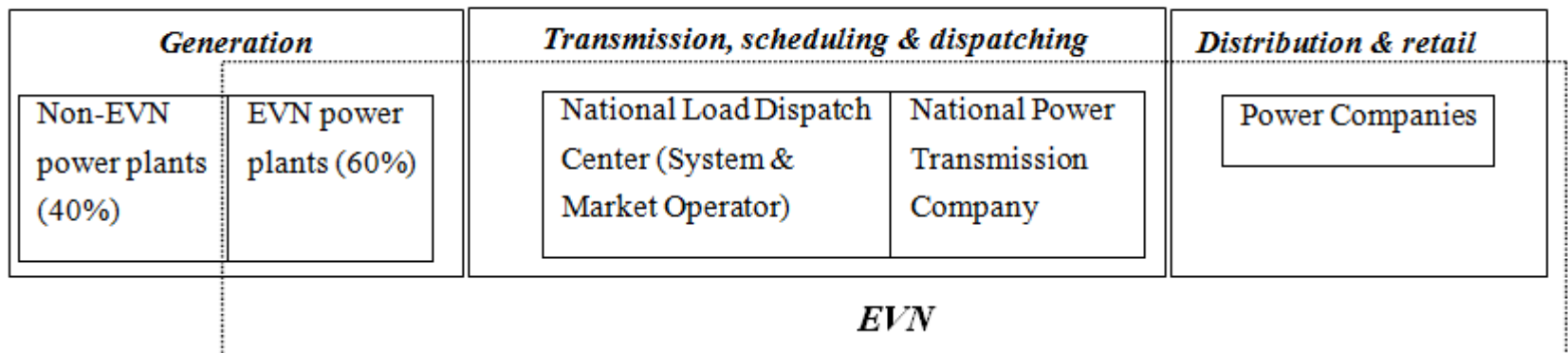


EVN Genco: EVN's subsidiary; PVN: PetroVietnam; TKV: Vinacomin

## 2. Players in the electricity market

### Electricity of Vietnam (EVN): the dominant actor

- managing the production, transmission and distribution activities; achieving better economic and technical results;
- ensuring the safety, continuity and reliability of the national



## 2. Players in the electricity market: Newcomers and challengers

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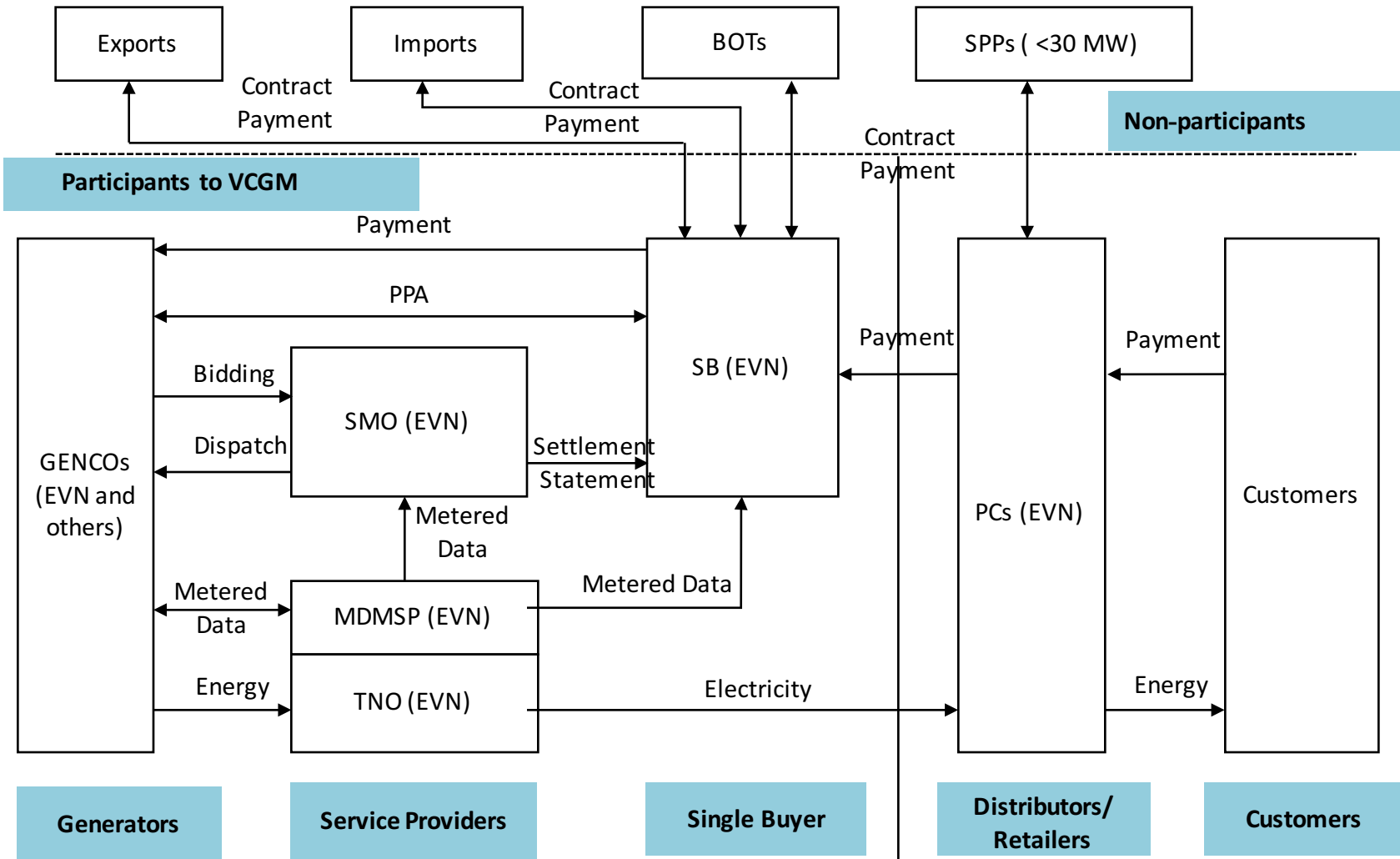
EVN's position has been **challenged** by:

- state-owned enterprises (SOEs): PetroVN, VINACOMIN
- Independent Power Producers (IPPs)
- Operate and Transfer power plants (BOTs).

In 2013, SOEs represent 16% and other IPP/BOT schemes 23% of total installed capacity.

- **Foreign investors are important** new players: Despite the sector's lack of financial appeal, many of them are seeking cooperation with Vietnam in this field with the support of their home governments: **Germany, France, US, Denmark** and some international organizations.

# The Vietnam Competitive Generation Market (VCGM): Structure





# Current institutional framework is not favorable to renewable energy

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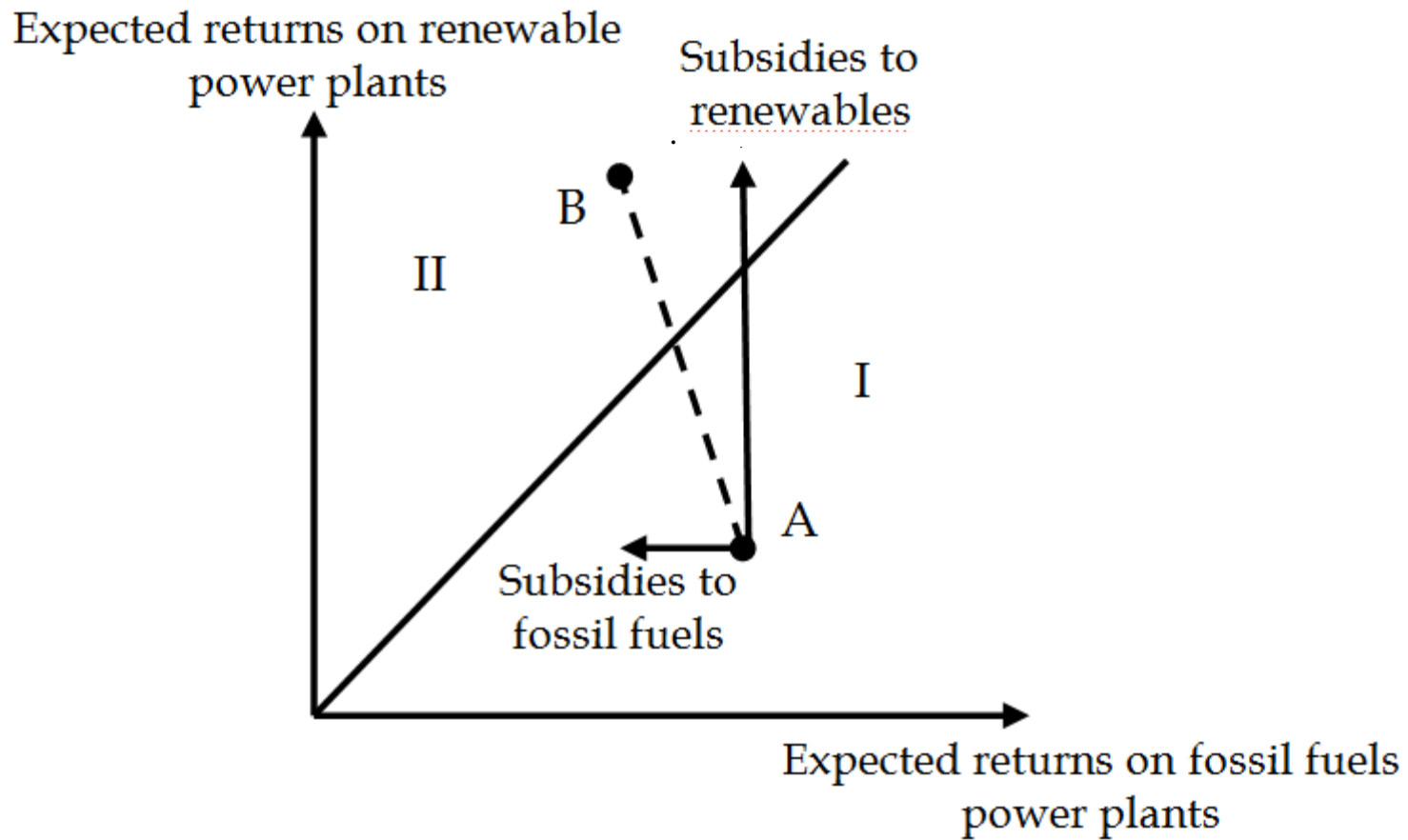
## Carbon lock-in state:

- single-buyer's bargaining power
- discretionary policies: more support for fossil fuel electricity than for renewable electricity
- wind power: feed-in tariff is lower than its total production costs
- interests of fossil-oriented actors and government's concerns about fossil fuels slows down the restructuring of the power market

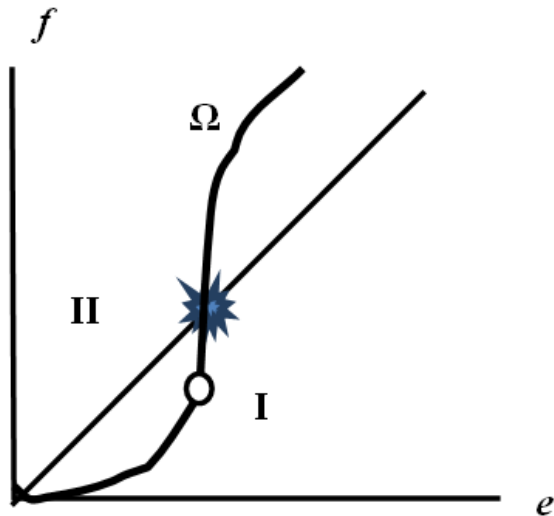
## Institutional change

- Low-carbon transition implies a fundamental transformation of the stakeholders' positions and relations
- The governing framework to **reduce the market power** of dominant players to increase the competitiveness of the power market and to **increase incentives** for renewables

# Change of balance point between fossil fuels and renewable when subsidies change



# Focal variables and change path



\* *Quadrant I: Feed-in tariff paid to wind energy producers (onshore) is less than 11 U.S. cents per kWh → fossil energy-oriented players dominate.*

*Quadrant II: Feed-in tariff paid to wind energy producers (onshore) is higher than 11 U.S. cents per kWh → renewable energy-oriented players improve their position.*

*★ : Feed-in tariff paid to wind energy producers (onshore) is equal to 11 U.S. cents per kWh → balance of power switching point.*

*○ : Current position of the energy transition in Vietnam, 2015*

# Conclusions

1. A mesoeconomic approach enables us to decipher the interests of electricity market actors, their constraints and the mechanisms that could strengthen their commitment to renewable resources and inflect fossil-oriented strategies.
2. The central role of the wholesale market's interrelations and regulation mechanisms is highlighted (the resistance of fossil-oriented actors in relation to the government's concerns about energy security is not favorable to a radical restructuring of the market).
3. Three conditions may ensure the continuation of the energy transition, encourage institutional entrepreneurs and overcome carbon lock-in:
  - *Gradual entry of new players on the competitive market (including international financial supports)*
  - *Increase in the feed-in tariff paid to suppliers of energy produced from renewable sources,*
  - *Increase in subsidies enjoyed by the single-buyer to offset its losses due to the growing share of renewable resources in electricity production.*

# **Thank you for your attention!**

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Hoang Anh NGUYEN-TRINH

hoanganhelec@gmail.com