Maximizing Finance for Development

World Bank's Energy Infra-SAP: The Case of Vietnam

ESMAP Knowledge Exchange Forum,
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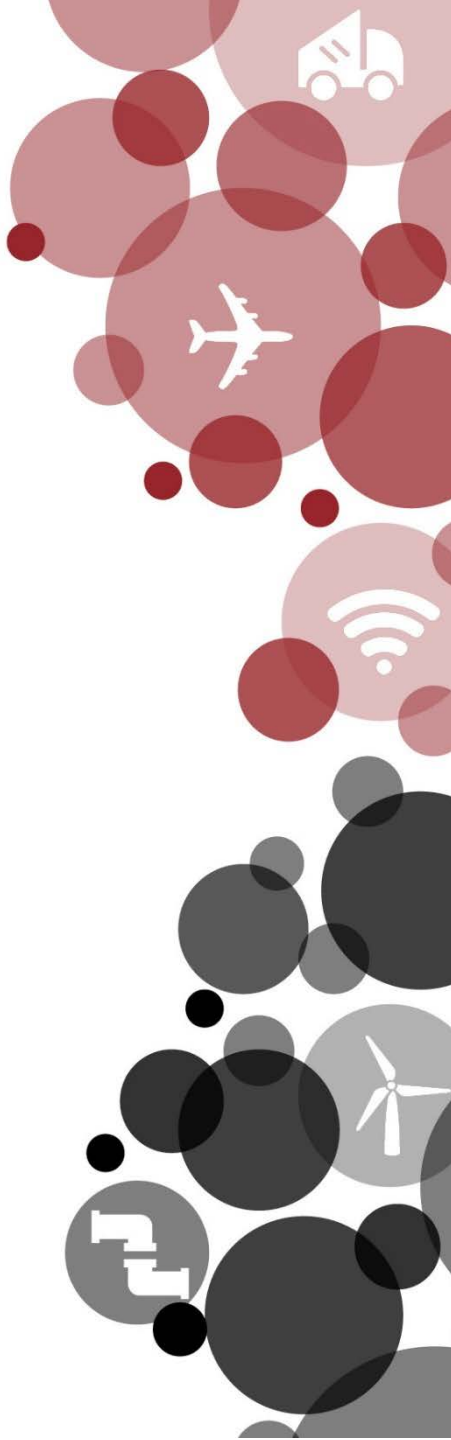
Maximizing Finance for Development: Cascade Algorithm

Q1	Is there a sustainable private sector solution that limits public debt & contingent liabilities?	If yes, then promote such private solutions
Q2	If no, is it because of policy, regulatory gaps?	If so, provide WBG support for policy and regulatory reform
Q3	Or, is it because of risks?	If so, assess the risks and see whether WBG instruments can address them

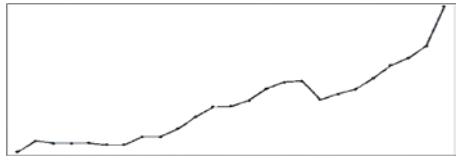
Does the project require public funding?

If you conclude the project requires public funding, pursue that option

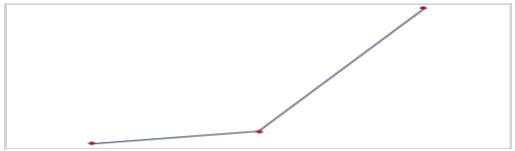


KENYA: Maximizing Finance for Development 1996-2017

Impact
+1576 MW
+44% access



Power Generation
1990: **723 MW**
2000: **1,054 MW**
2016: **2,299 MW**



Electricity Access
1990: **10.9%**
2000: **14.5%**
2016: **~55%**

GoK policy reforms

Electric Power Act
- Created Electricity Regulatory Board
- Restructured and commercialized KPLC, Kenya Power Company and TRDC

- Commitment to introduce private sector participation in generation
- Adoption of least cost investment planning

Energy Act (2006)
- Established single sector regulator (ERC) and Energy Tribunal
- Partially privatize KenGen through an IPO

Rural Electrification Authority (REA) established

- Electricity Transmission Company (KETRACO) and
- Geothermal Development company (GDC) established

- Feed-in Tariff introduced

National Climate Change response strategy passed

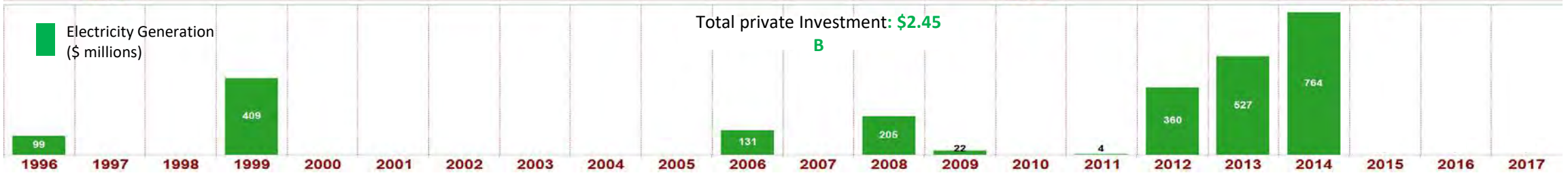
Public Private Partnership Act operationalized

New Energy Bill (in Parliament)
- Role sharing b/w national and county govts. in planning and service delivery
- Transparent and Competitive licensing of renewable energy
- Open Access in T&D

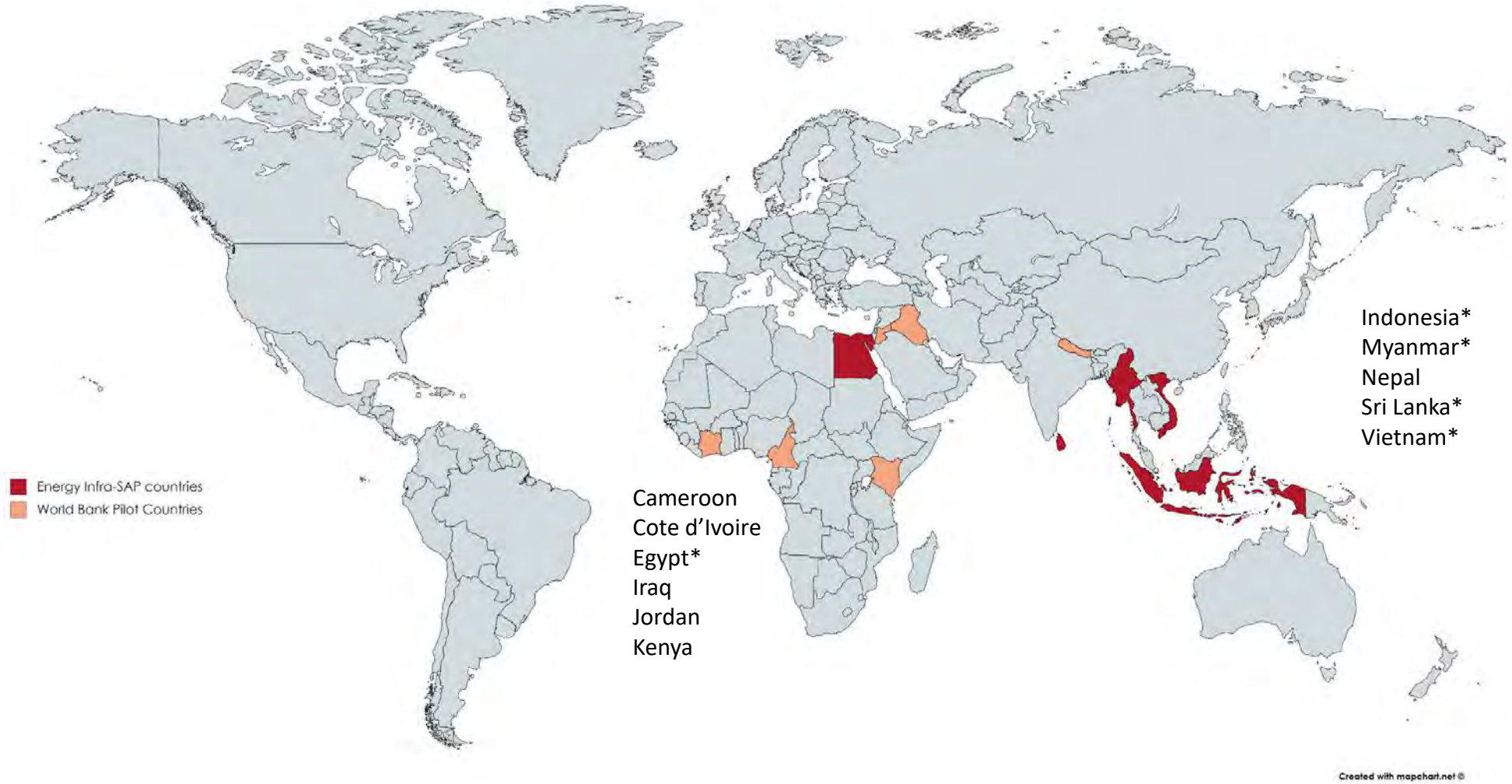
IDA Activity
$1.8 Billion

- **Energy Sector Reform and Power Development** — *Sector reform* — *IDA credit: $125m*
- **Emergency Power Supply Project** — *Electricity generation* — *IDA credit: $80m*
- **Energy Sector Recovery project** — *Policy support, Electricity Generation* — *IDA credit: $80m*
- **Kenya Electricity Expansion Project (KEEP – P103037)** — *Expanding Generation and Grid Access* — *IDA credit: $330m + GPOBA grant $5m*
- **Private Sector Guarantees Project (P122671)** — *Expanding Generation* — *IDA Guarantees: $166m*
- **Kenya-Ethiopia Interconnector (P126579)** — *Regional Integration, trade* — *IDA credit: $441m*
- **Kenya Electricity Modernization Project (KEMP – P120014)** — *Expanding access, Improving KPLC's financial situation* — *IDA credit: $250m + IDA Guarantee: $200m + SREP Grant: $8m*
- **Kenya Off-Grid Solar Access project** — *Expanding off-grid access* — *Improving quality of supply* — *IDA credit: $150m*

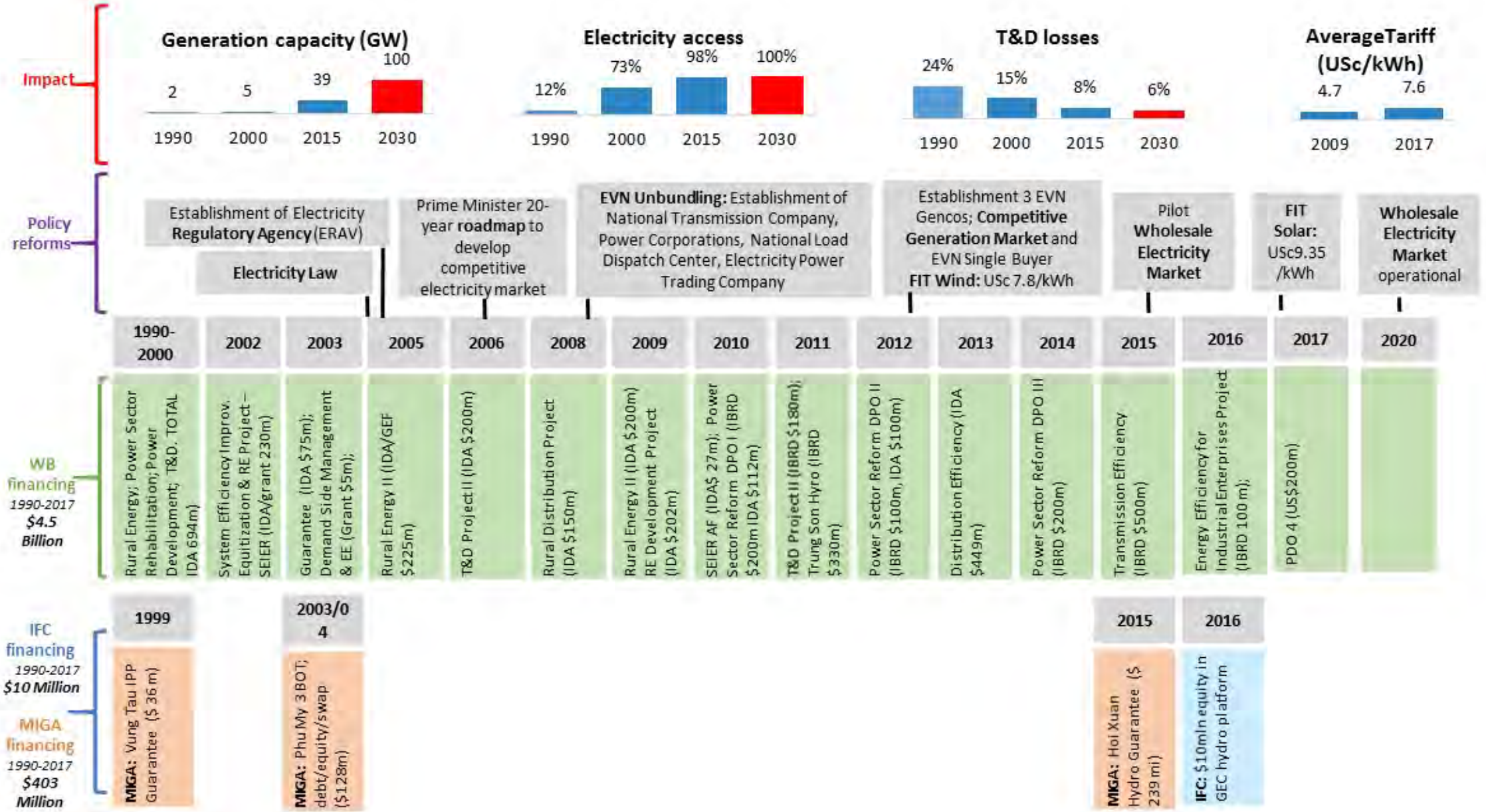
Private Investment
$2.45 Billion



Infra-SAPs: leveraging private sector & optimizing use of scarce public resources

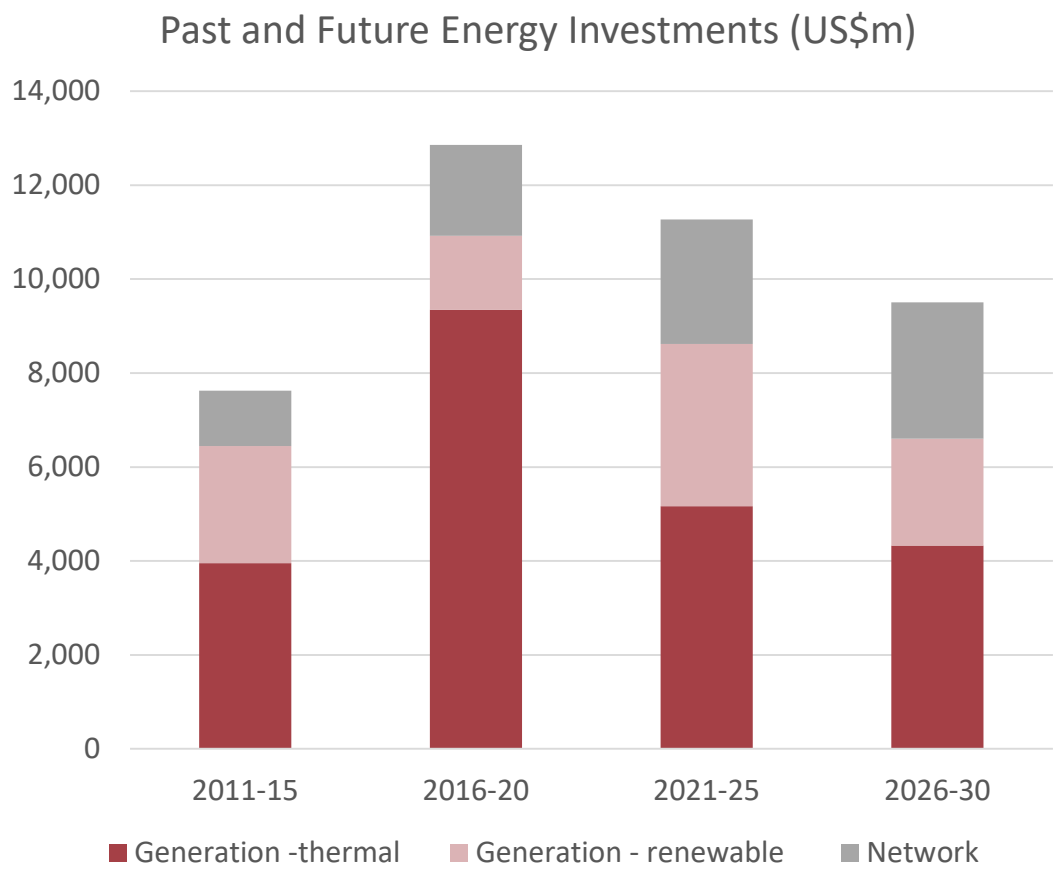


Vietnam: Power Sector Transformation 1990-2017



Vietnam Energy Infra-SAP

- Rapid electricity demand growth
  - 13% pa since 2000
  - 8% pa projected through 2035
- Need to shift energy mix
  - Calls for renewable energy to reach in range of 12GW to 42GW by 2030
  - Target to increase gas-fired generation from 7GW to 19GW by 2030
- Calls for growing investment in transmission and distribution



Historic approach to funding energy infrastructure is no longer tenable

HISTORIC APPROACH

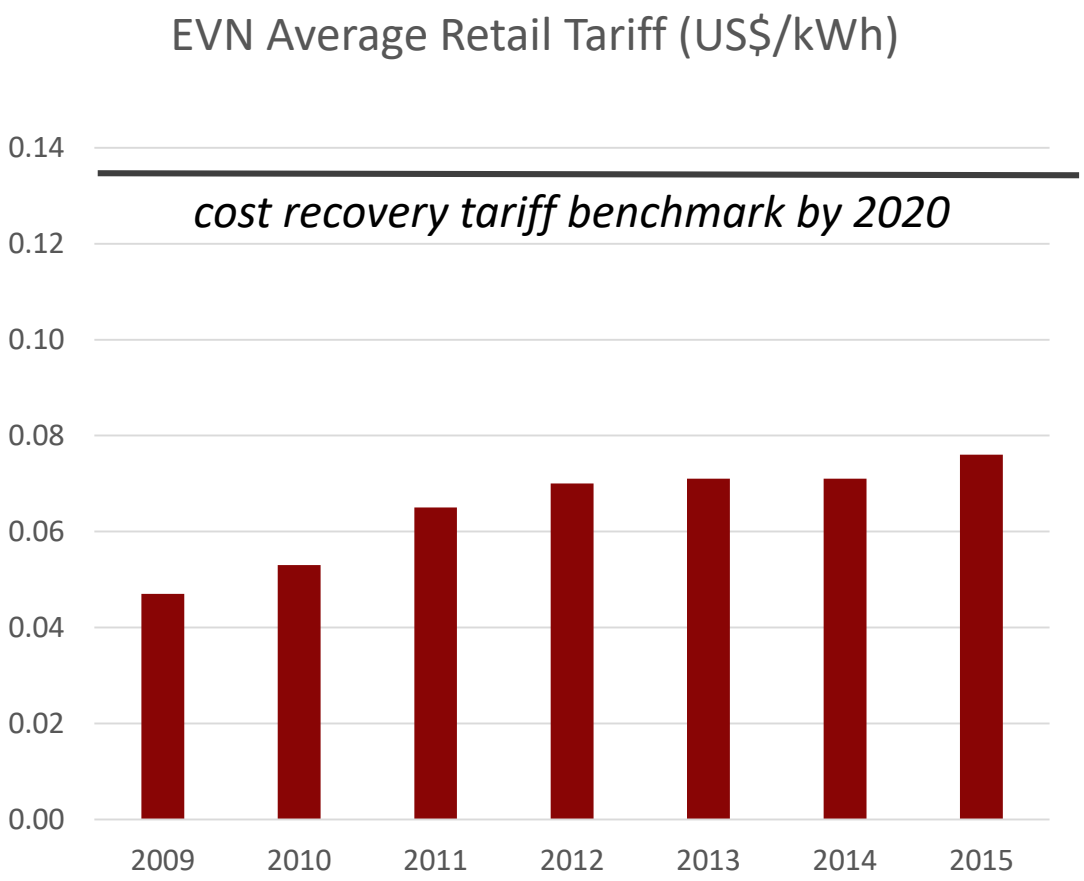
- Most generation and all network investments funded by EVN SOE with state guarantees:
  - Government on-lending of concessional finance from IFIs
  - Government guarantees for commercial bank loans
- 30% of generation funded via IPPs
  - 10GW of thermal projects funded by international investors under BOT
  - 2GW of renewables projects funded by domestic investors via local banks

FUTURE PROSPECTS

- Fiscal crisis
  - Vietnam close to statutory public debt limit of 65% of GDP (4% of which energy)
  - Both traditional approaches to finance count towards statutory limit
- Graduation to MIC status
  - Vietnam is losing eligibility for concessional finance from IFIs

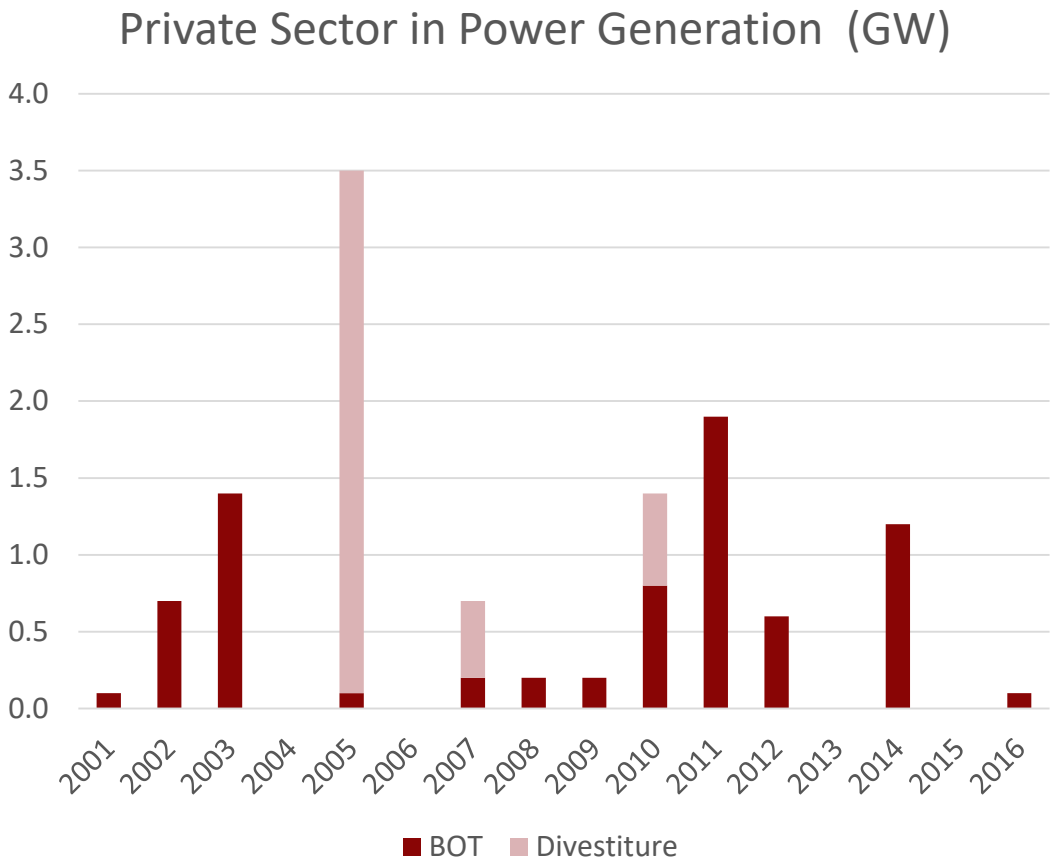
Option 1: Raise unguaranteed corporate finance through SOE balance sheet

- EVN does not currently have a credit-rating but in process
  - Sovereign credit-rating of BB- constrains SOE credit-rating
- EVN is an efficient company, but lacks a cost recovery tariff
  - Tariffs are at approximately half the level needed to fund new investment
- Leads to weak financial performance
  - Zero or negative profit margin
  - Debt service coverage approaching 1.0
- Cost of debt has been falling from 9.3% to 6.1% from 2011-2015



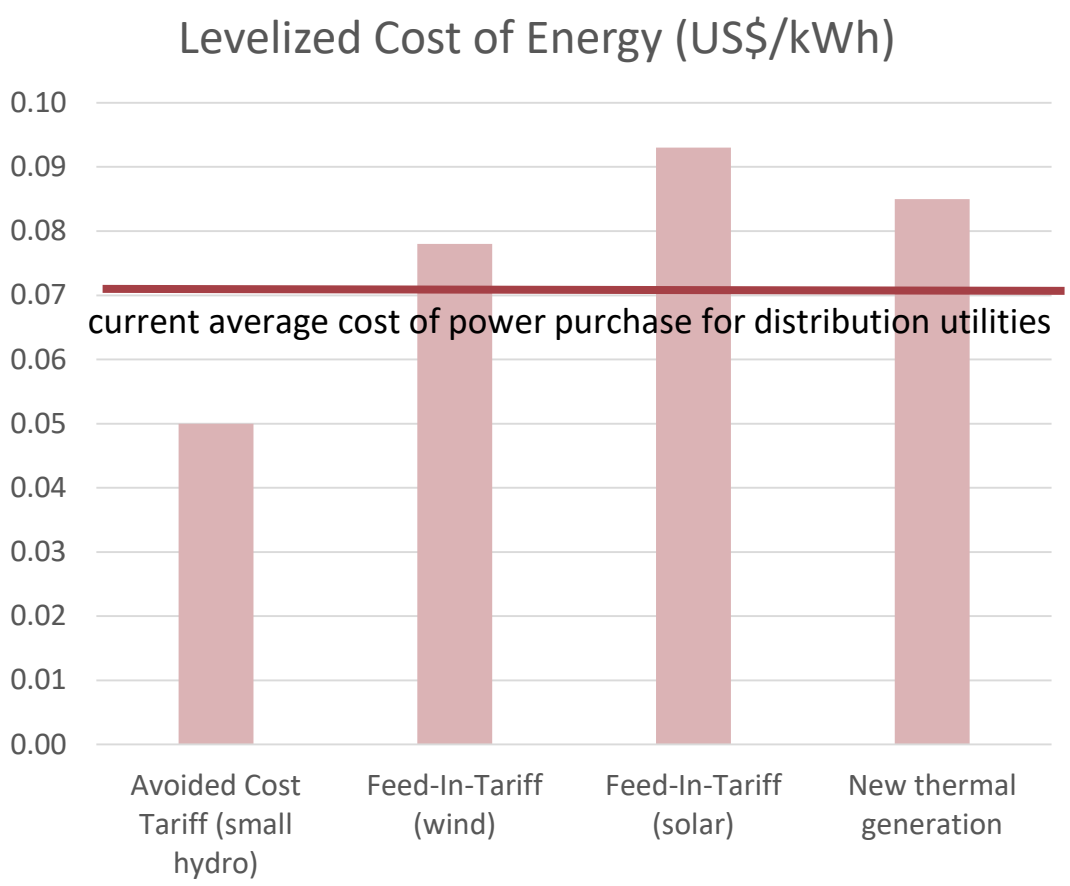
Option 2: Raise additional international capital through PPPs

- Legal framework
  - New PPP Decree requires feasibility studies and competitive procurement
  - Agencies circumvent by procuring under Investment Law
- Government supports
  - Allowed by legal framework and do not count towards public debt limit
  - Protracted bilateral negotiations and lack of a clear policy framework
- FOREX convertibility
  - No controls on foreign exchange, but investors remain concerned about availability and request guarantees



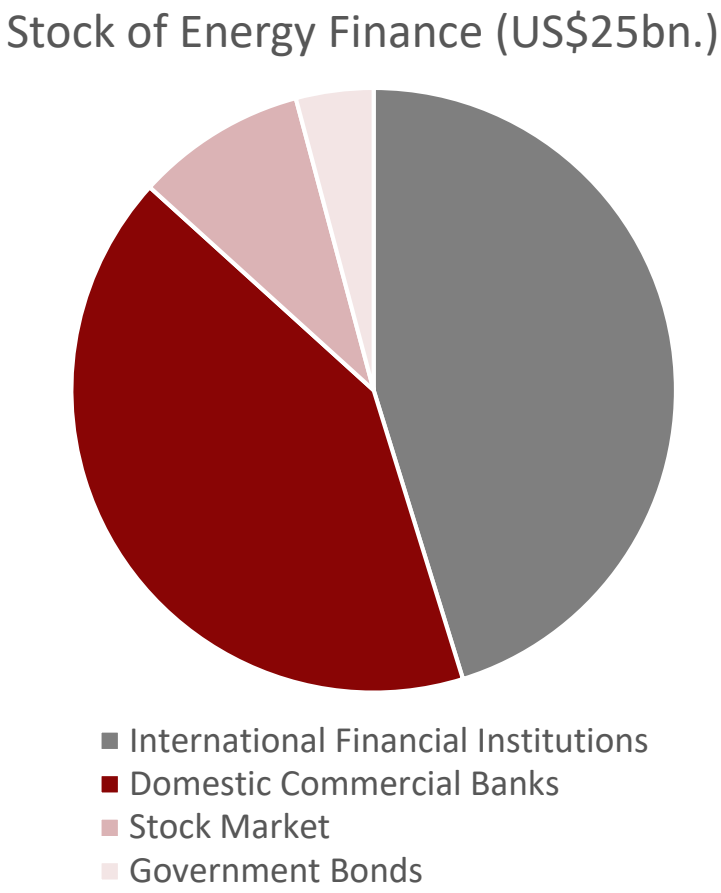
Spotlight on renewable energy IPPs

- Vietnam aims to expand renewables
  - from 2GW 2015 to 27 (or 12) GW by 2030
- Various incentive schemes
  - Avoided Cost Tariff domestic small hydro
  - Higher FIT for wind and solar but still not attractive to international investors due to concerns about bankability of PPA
  - Recent decision to pilot auctions
- Distribution utilities face uneven disincentives to purchase renewables
- LCOE sensitive to financing cost
  - US$ versus LCU financing reduces LCOE by as much as US$0.01/kWh



Option 3: Raise more domestic capital through local capital markets

- Commercial banks (US$250bn.)
  - Lack of long term deposits and flat yield curve by deposit duration limits lending mainly to short maturities (up to 3 yrs)
  - Lack of technical capacity to evaluate energy projects (e.g. renewables)
- Stock exchange (US$72bn.)
  - Liquidity low and dominated by SOEs
- Bond markets (<US$1bn.)
  - Nascent market, shortage of corporates
- Institutional Investors (US$25 bn.)
  - Limited capital directed to bonds



The biggest constraints to private solutions often lie outside the energy sector

- Macro fiscal level
  - Limited fiscal space to provide further public guarantees of commercial borrowing
  - Limited availability of FOREX, convertibility guarantees, and risk hedging instruments
- Domestic capital market level
  - Limited capacity to appraise energy sector projects
  - Rapid exposure to Single Borrower Limits due to small scale
  - Shortage of long-term deposits to underpin lending with longer maturities
  - Under-developed stock exchange and corporate bond market
- PPP/infrastructure policy level
  - Lack of capacity/incentives to perform feasibility studies and competitive procurement
  - Lack of clear and systematic government policy on credit enhancements for PPPs
- Energy sector policy level
  - Tariffs kept below cost recovery level for socio-political reasons

Infra-SAPs are an exercise that integrates multiple perspectives

- Maximizing Finance for Development re-energizes a longstanding World Bank commitment to opening markets for private investment
- Infra-SAP is a new analytical and policy dialogue tool for identifying key bottlenecks to private solutions and commercial finance
- Infra-SAP calls for integrating perspectives across WBG and within WB
  - Joint teams encompass WB, IFC, MIGA
  - WB teams represent various Global Practices
    - Macro-Fiscal Management (MFM)
    - Financial Markets (FM)
    - Public Private Partnerships (PPP)
    - Energy (EEX)
- Several Energy Infra-SAPs are already close to finalization:
  - Egypt, Indonesia, Vietnam