

Session III:

MOBILISING GREEN FINANCE

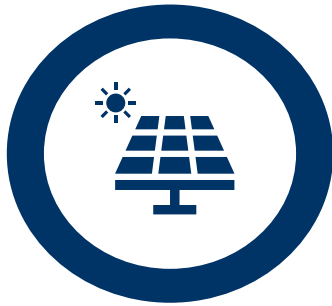
Setting the Scene Investments in Renewables in ASEAN

Balaji MK

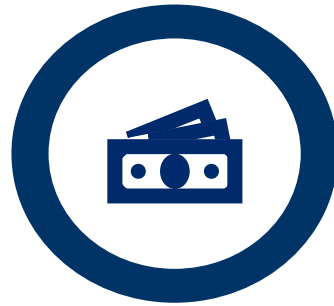
Director for Advanced Energy Systems

USAID SEA Smart Power Program

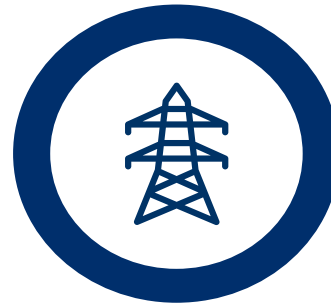
Based in Bangkok, the 5-year program's goal is to help energy sectors in Southeast Asia become more secure and market-driven



Deploy 2 GW of Advanced Energy Systems (AES)



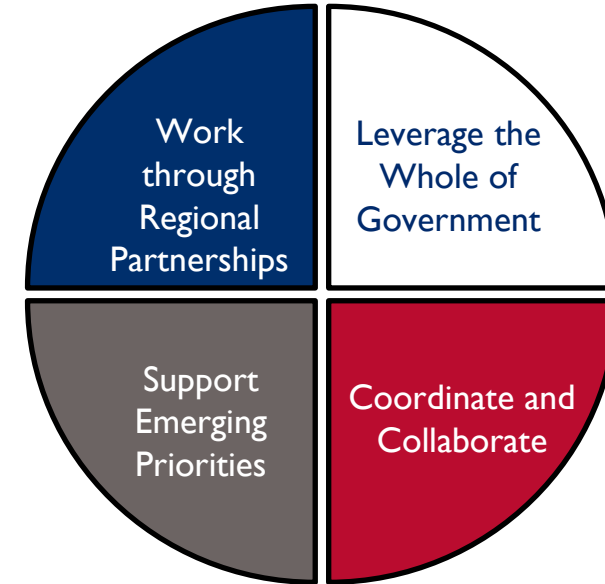
Catalyze \$2 Billion in Financing for AES



Contribute to a 5% Increase in Regional Power Trade

Ambitious Results are Expected by USAID

SPP's APPROACH



SPP's Key Regional Partnerships



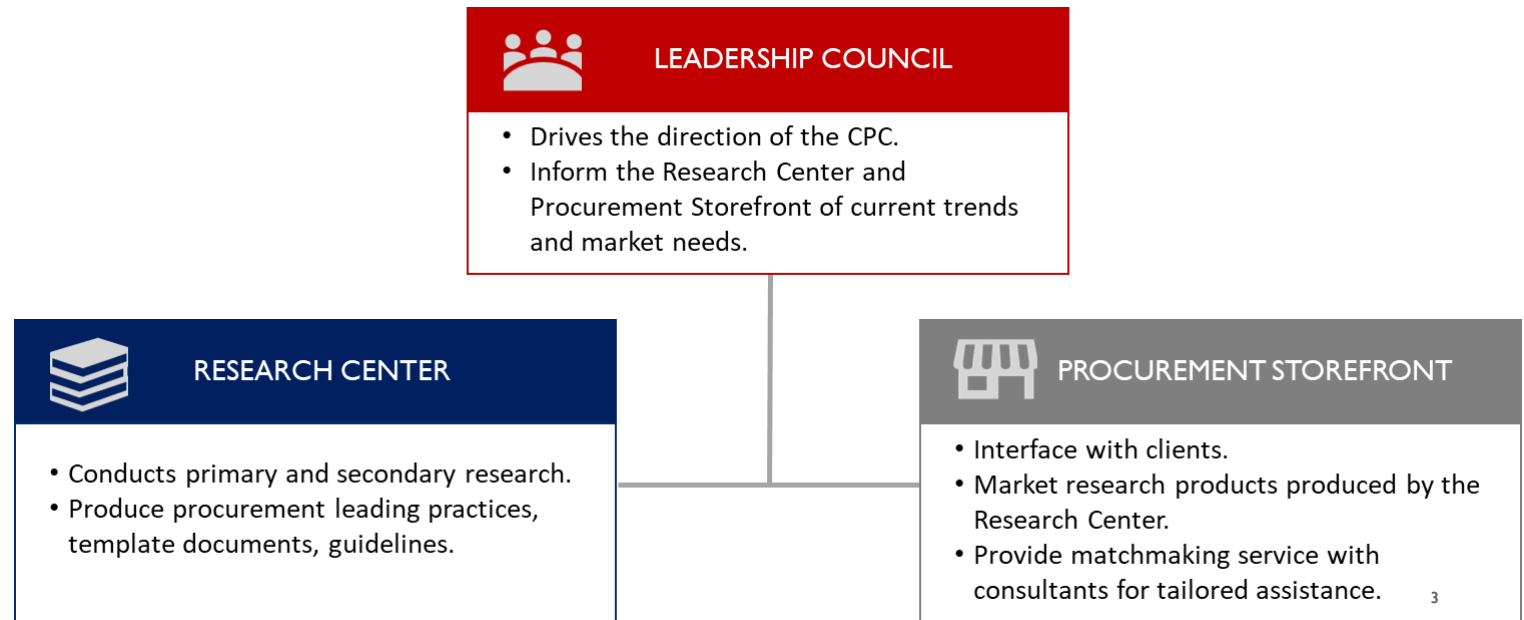
JUMPP



The Competitive Procurement Center (CPC) is a regional one-stop-shop for best practices and technical assistance on procurement of products and services relating to the energy transition.

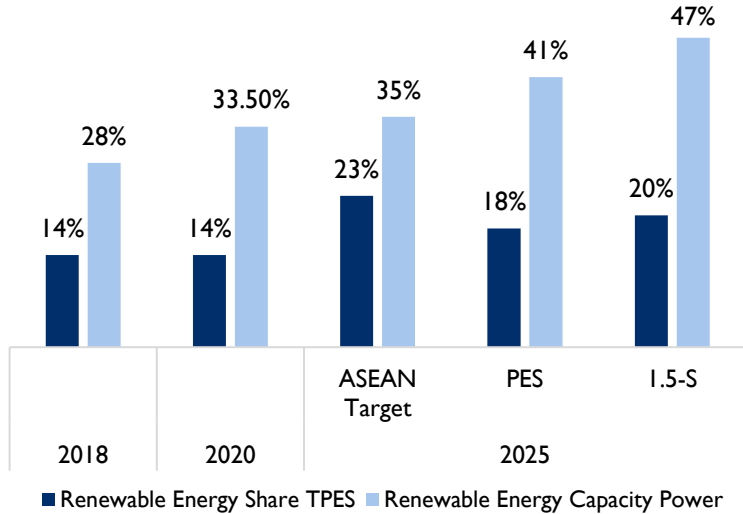
CPC resources and services are developed based on market needs and include:

- Guidelines, Leading Practices, and Case Studies
- Template documents
- Tailored technical assistance and advisory services (e.g. procurement planning, evaluation criteria, and technical standards).



Generation

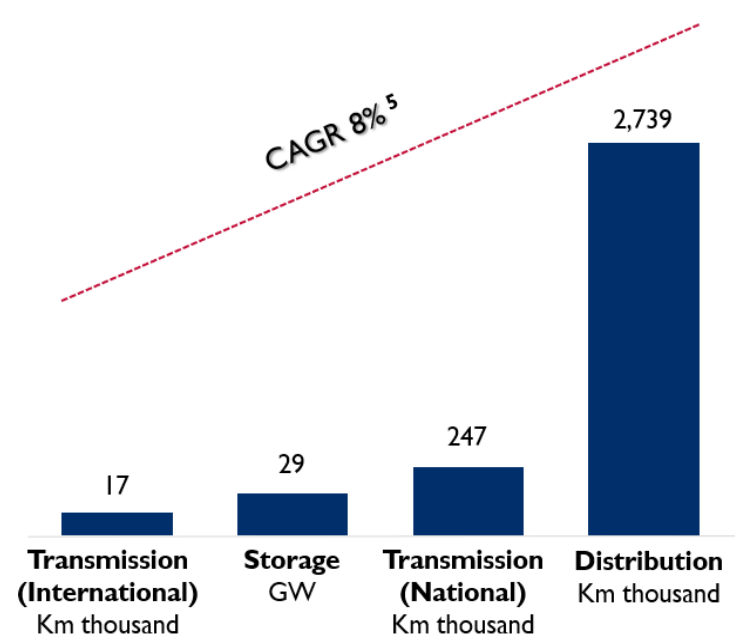
ASEAN Member States' near-term targets ¹



- Climate change threatens a decline in GDP in 5 SEA countries by 2050 ²
- RE revenue opportunity of \$90-100 billion by 2030 ³
- RE 6 million jobs created by 2050 ³
- Reduction of 10-25% in emissions by 2030 ²
- Targets RE share in primary energy to 23% and capacity mix to 35% by 2025 ¹

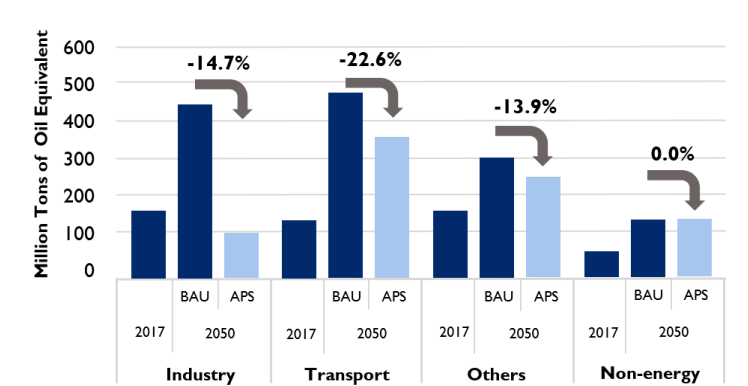
Transmission & Distribution

Transmission and Distribution Needs (2018-2030) ⁴

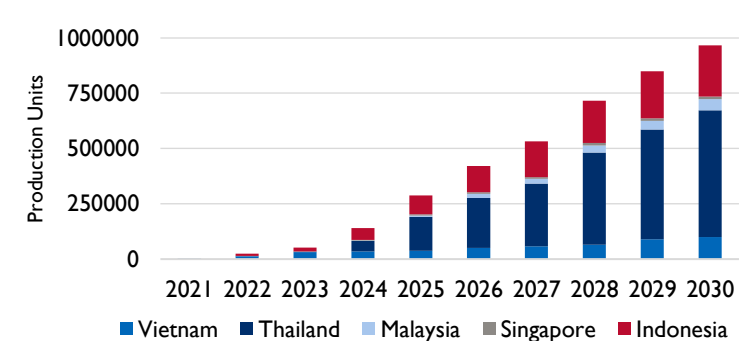


Demand Drivers

Energy Efficiency - Total Final Energy Demand in 2050 ⁶



EV Production Forecast in ASEAN



Other Tech Investments (by 2030)



Grow solar PV manufacturing capacity in modules from 70 GW to 125-150 GW ³



Develop a regional battery manufacturing value chain, producing 140-180 GWh of battery cells ³









Expand assembly capacity for electric two-wheelers (E2W) in SEA to approximately 4 million units ³

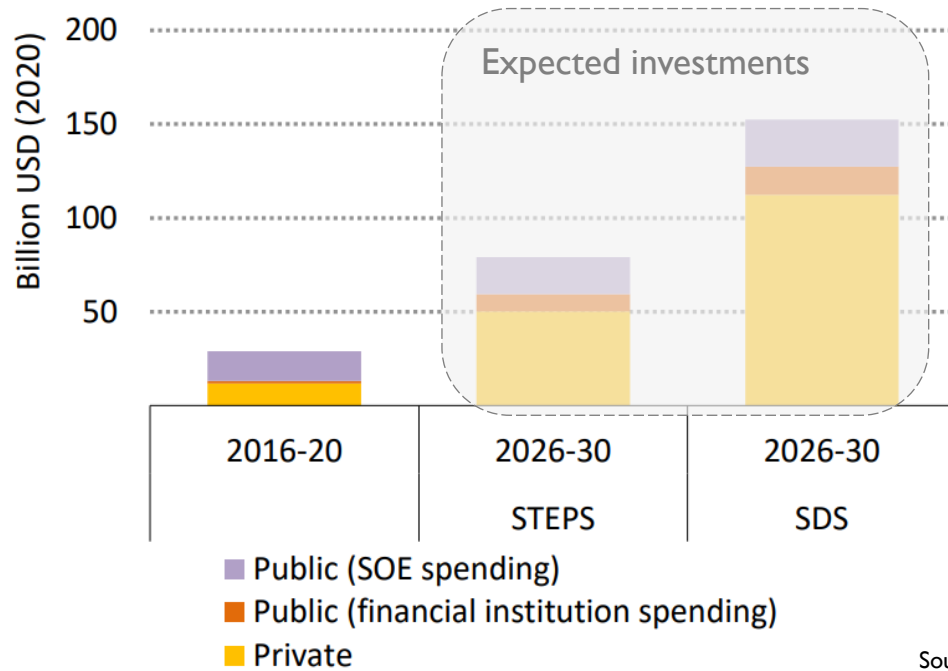
Note: I.5-S (1.5°C Scenario for ASEAN aligned with the WETO targeting net-zero emissions globally by 2050), TPES (Total Primary Energy Supply), PES (Planned Energy Scenario), APS (Alternative Policy Scenario), BAU (business-as-usual)

Source: 1) RE IRENA, 2) SEADS, 3) ADB, 4) T&D IRENA, 5) Mordor Intelligence, 6) ERIA

Key Energy Policy Initiatives in Southeast Asia Other Than PDPs^{1,2,3,4,5}

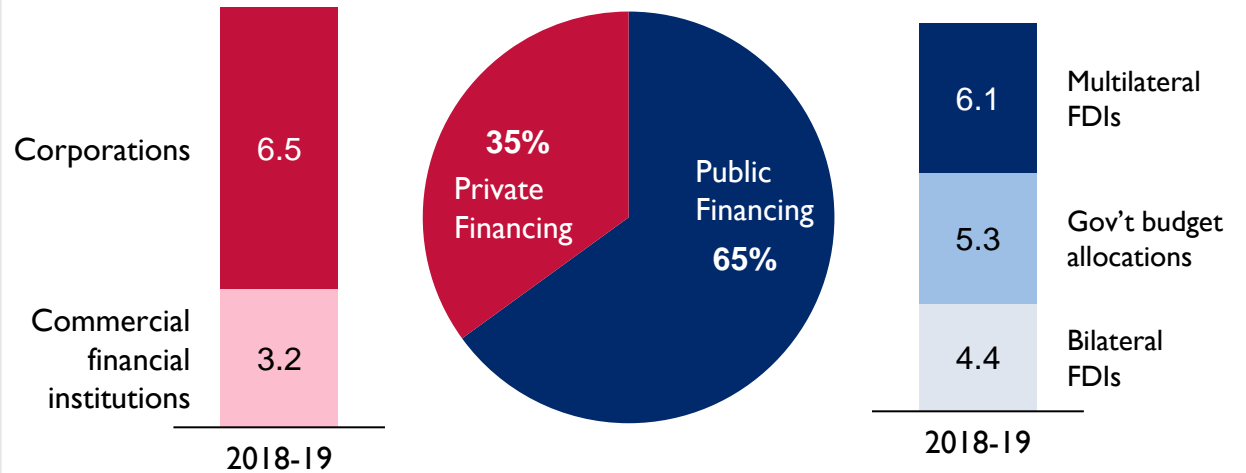
SEA Countries Policies	Evolving Green Taxonomy	Support to EVs	Net Zero Energy Emissions Ambitions	Just Energy Transition Partnership
 INDONESIA	✓	Reduced value-added tax & subsidies	Set up the long-term strategy to reach net zero by 2060	Mobilize USD 20 bn
 MALAYSIA	✓	Tax Incentives for companies renting EVs and subsidies for EV charger manufacturing	Carbon neutrality by 2050	
 THAILAND	✓	Increase EV use to 1.2 mn and 690 charging stations by 2036	Net zero GHG emissions by 2065	
 VIETNAM	✓	Charging stations are available in all provinces	Reach net zero emissions by 2050	Mobilize USD 15.5 bn
 LAOS	✓	Ministry of Energy and Mines plans to work with private sector to promote EV use	GHG emissions reduction target to reach net zero in 2050	
 CAMBODIA	✓	Developed EV roadmap to align with carbon neutrality strategy	Vision of carbon neutral economy by 2050	

Sources of finance for clean energy investment, 2016-2030¹



Source: IEA

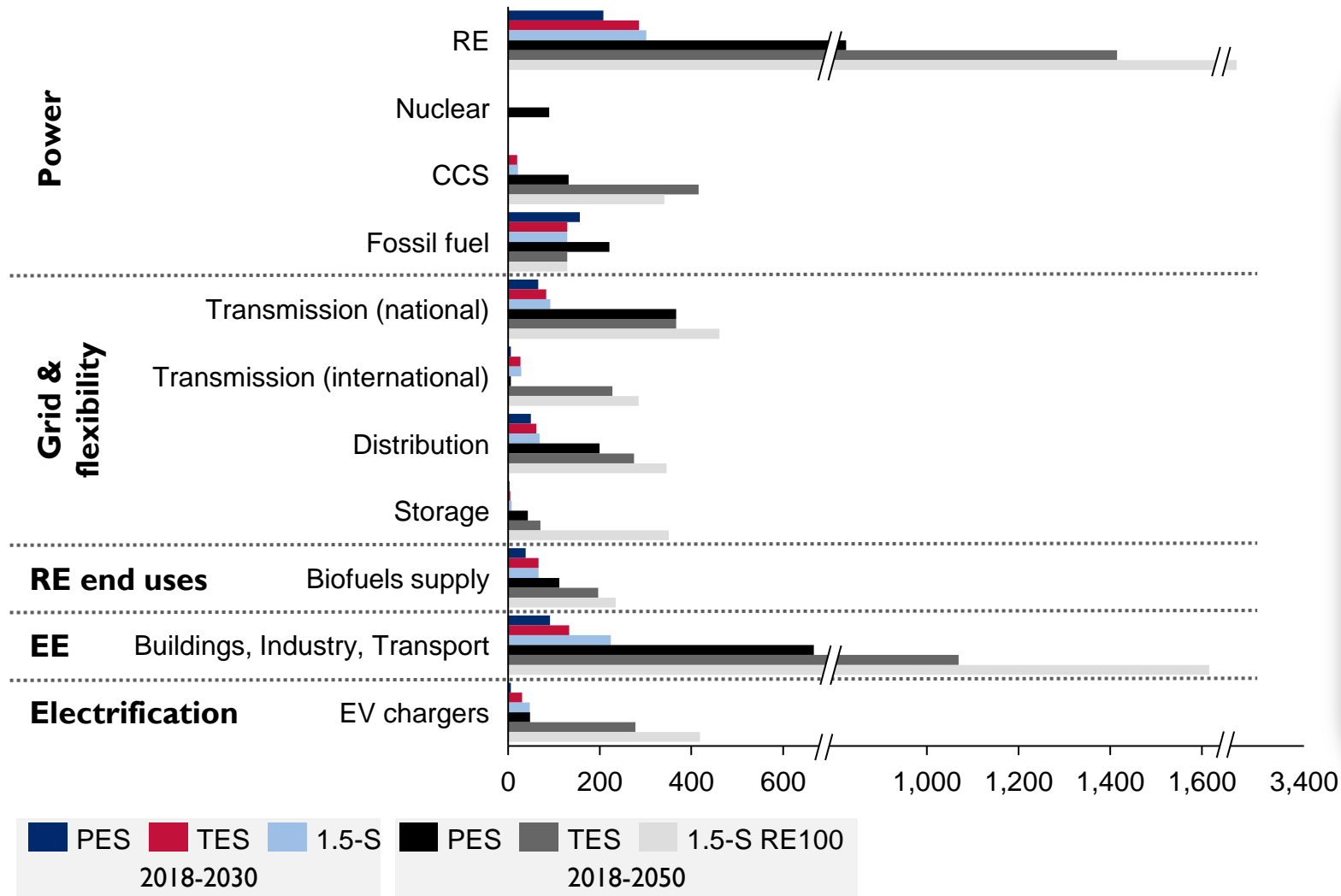
Breakdown of private and public climate financing in SEA²



Note: STEPS (Stated Policies Scenarios), SDS (Sustainable Development Scenario), SOE (State-owned enterprises)

Source: 1) IEA, 2) ADB

ASEAN investment needs (USD bn) 2018-2050, by scenario

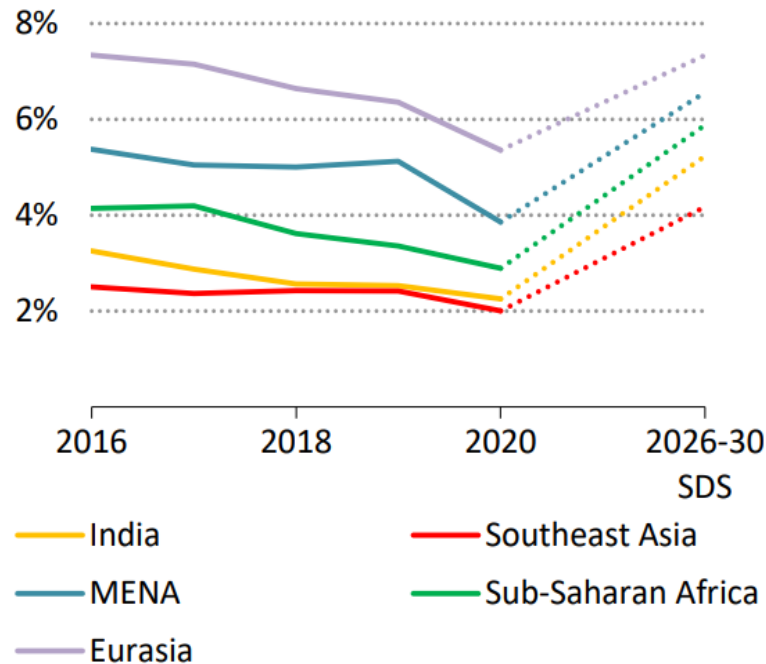


Total investment requirement (USD bn) ¹		
2018-2030		
■	PES	626
■	TES	843
■	I.5-S	989
2018-2050		
■	PES	2,710
■	TES	4,445
■	I.5-S RE100	7,436

Note: PES (Planned Energy Scenario), TES (Transforming Energy Scenario), I.5-S (1.5°C Scenario for ASEAN aligned with the WETO targeting net-zero emissions globally by 2050), I.5-S RE100 (Sensitivity for the power sector with 100% renewable power generation)

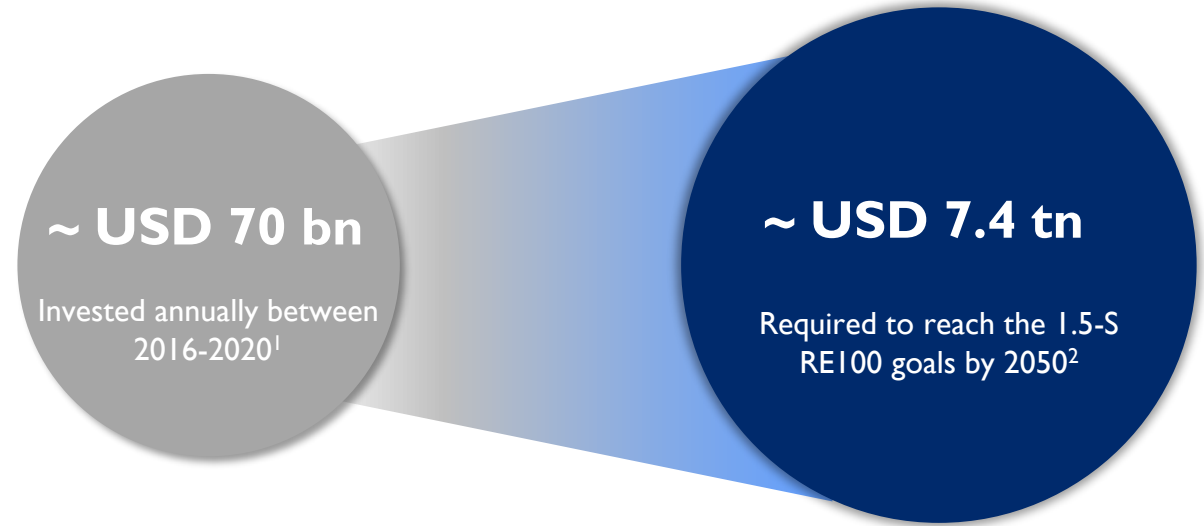
Source: 1) IRENA

Clean energy investment in SEA as a share of GDP is lagging from rest of the world ¹



Source: IEA

~ **USD 232 bn** is needed annually to reach 2050 (1.5-S RE100 scenario) climate goals



Note: Value is based on total investment requirements from 2018-2050

Source: 1) IEA, 2) IRENA



Insufficient Financial Attractiveness

- Limited, but crucial private sector contribution
- Limited availability of financing options (e.g., blended finance)
- Lack of effective incentives



Infrastructure and Energy Challenges²

- Slow deployment of infrastructure
- Fossil fuel dependency, ~80% of SEA energy supply is from fossil-fuel
- Mismatch of RE demand and supply



Regulatory and Policy Uncertainties

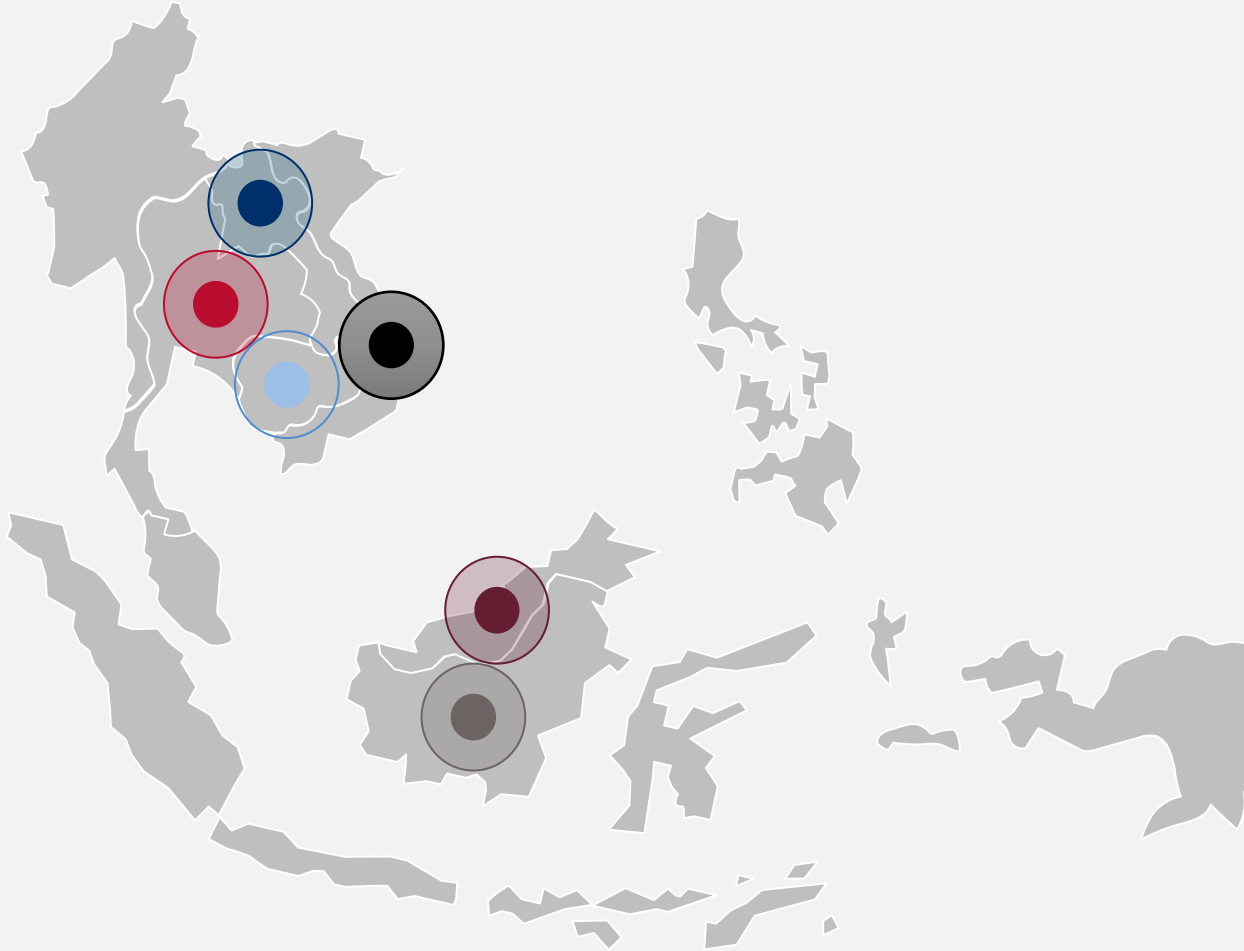
- Weak investment planning in NDCs
- Regulatory/political uncertainties and inconsistencies¹



Challenges in Power Sector³

- Lack of interconnecting power grids leading to grid congestion
- Traditional large-scale power electricity delivery system is centralized and unidirectional

Case Studies from SEA Countries



Laos

Monsoon Wind Power Project

Financed by **concessional capital**, A/B loans, grants, and parallel loans as **de-risking mechanisms**¹

Thailand

Utility Green Tariff (UGT) Program

The **UGT** power purchase contracts and 5.2 GW RE schemes aims to promote clean energy investments³

SDG Indonesia One and Clean Energy Project

Received financing through **SDG One platform**, matches private and public funding from various sources¹

Vietnam

EVNFinance Green Bond

Financed by **concessional capital**, A/B loans, grants, and parallel loans as **de-risking mechanisms**¹

Cambodia

60 MW Solar PV Project

ADB supported the project bidding in Cambodia with EDC through **Public-Private Partnership**²

Malaysia

Government Green Procurement (GGP)

Focuses on role of gov't as key catalyst to create a green market for products and services⁴

Note: EDC (Electricite du Cambodge)

Source: 1) [NGFS report](#), 2) [ADB](#), 3) [Bangkok Post](#), 4) [UNDP](#)



Increase Financial Attractiveness¹

- Leverage private financing and MDB to support RE projects (e.g., adoption of blended finance)
- Introduce financial incentives such as feed-in tariffs, auction pricing, grants, and tax incentives



Efficiency in Regulatory and Policy Processes

- Introduce direct power purchase agreement frameworks
- Streamline and standardized PPA contracts and other procurement processes
- Enhance policies providing regulatory support and financial incentives to boost energy efficiency implementation



Infrastructure and Energy Optimization

- Streamline permitting requirements and approval processes for RE deployment
- Standardize advanced financial instruments such as virtual PPAs to increase market participation and cross-border investment opportunities



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Thank You

Balaji MK

Director for Advanced Energy Systems

USAID SEA Smart Power Program

bank@deloitte.com