Regional Energy Context

- Rapid energy demand growth throughout the Lower Mekong region
- Significant differences in levels of electricity access and installed capacity
- Rich in resources, but mismatch between urban demand centers and resource locations
Identified Needs

- Power capacity expansion
- Grid buildout
  - Laos, Cambodia, and Myanmar don’t yet have national grids
  - Thailand and Vietnam both aim to expand transmission
  - Interlinks between countries need to be improved
- Grid Management Capacity
  - Smart grid and metering technology
  - Integration of variable renewables
  - Trade agreement terms
Investment Needs

- IEA estimates energy investment needs for Southeast Asia through 2040 are between $2.7 - $2.9 trillion USD
  - $570 billion is for generation
- Average spending per year is currently only $50 billion, or:
  - 40% of all FDI in 2015
  - 3% of regional GDP
- Need to increase both public sector spending and engagement with private sector and IFIs to reach targets
- Capacity building also needed.
Energy Market Shifts

- The price of non-hydropower renewables is globally dropping more quickly than anticipated, changing economics of the energy market.

- Innovations in energy transmission and distributed grid structures are disrupting traditional infrastructure and utilities models.

- China’s excess hydropower could drastically alter investment needs in Lower Mekong, if effectively deployed.
  - 95 TWh in 2015
  - 300 TWh in 2016
How Much Investment is Needed?

- Current plans for hydropower include more than 100 dams in Laos and 40 in Cambodia
- Significant investment, not accounting for the costs of investment to address the environmental and social impacts
- A UC Berkeley electricity capacity expansion study considering energy mix portfolios that there would be a $2.5 billion difference between the BAU scenario and least-cost scenario.
- Type of energy mix and efficiency standards matter significantly.
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Institutional Context

- ADB – GMS
  - Regional Power Trade Coordination Committee
  - Working groups on grid codes and regulatory challenges to energy trade
- World Bank
  - Regional Power Trade Project - Laos
- US Lower Mekong Initiative
- ROK-Mekong Cooperation Fund
- Japan-Mekong Programs
- Lancang - Mekong Cooperation Mechanism
  - Power grid planning, connectivity, and energy trade are all included in the 5-Year Plan
  - Opportunity to coordinate with BRI investments
Thank you!
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