



# Regional Investment Framework and Policy Guidelines for promoting investment in South Asian Power Sector and in Cross-Border Electricity Trade in South Asia

**19<sup>th</sup> July 2017**  
**Pokhara, Nepal**





## Agenda

1

Background

2

Key Findings

3

Investment Framework and Guidelines

4

Implementation Framework



# Background

- Scope of study
- Objective
- Approach





# Scope of study

To develop investment framework and policy guidelines for regional investment framework for South Asia power sector and CBET

**Propose an investment framework and policy guidelines for regional investment framework and regional policy guidelines**

Review **the current investment scenario and trends** in South Asian Power Sector with focus on Cross Border Electricity Trade Projects

Review **the power sector investment related policies, guidelines, regulations and frameworks** prevailing in each South Asian Countries (SACs) country for impact on regional power & CBET Projects

Focus **on energy resources development** particularly relating to Hydro power resource and associated transmission infrastructure (including Cross Border Transmission Links)

Analyze **the international best practices** on investment policies / guidelines/ regulations including innovative mechanisms

Develop a **regional investment framework** and regional investment **policy guidelines** to promote investments in South Asian power sector





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## Key Objectives

### Develop a regional investment framework to support the power sector initiatives in SAC and for CBET amongst South Asian Countries

- Encouraging cross border investments in power requires actions both at the country level and regional level
  - Energy sector investments are time and resource intensive and have to be done with long term view
  - Volatile business environment increases risk and reduces appetite for investment
  - Addressing project development risk requires country specific actions
- Develop a regional level investment framework which addresses project development risks
- Propose financing instruments for the CBET



# Approach

Situation  
Analysis

**Task I**

1. Map domestic & foreign investment trends
2. Sectors covered

**Task II**

1. Map current policy guidelines/ framework
2. Impact assessment

**Task III**

1. Stakeholder consultation
2. SWOT analysis
3. Risk assessment

Benchmarking

**Task IV**

1. Review of International literature
2. Pervious studies

**Task V**

1. Energy resource
2. Transmission infra. development needs

Recommendations

**Task VI**

Policy guidelines and investment framework recommendations on:

- PPP
- Foreign investment
- Investment protection
- Trade policy
- CBET
- Political risk safeguards
- Grid standards
- Resource development
- Financing
- Dispute settlement



# Key Findings from national, regional and international review

- South Asia - Regional investment trends
- Current practices in SAC
- International experience

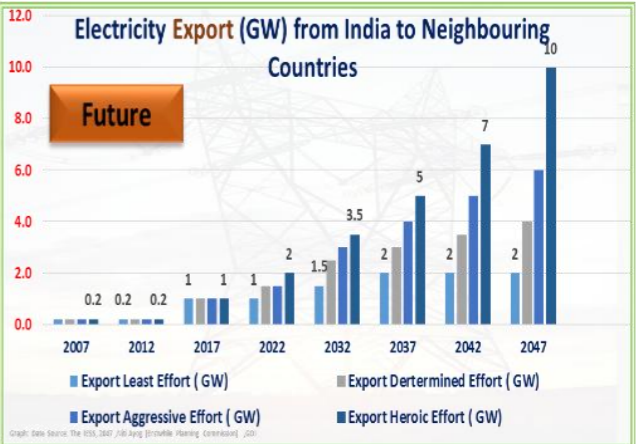
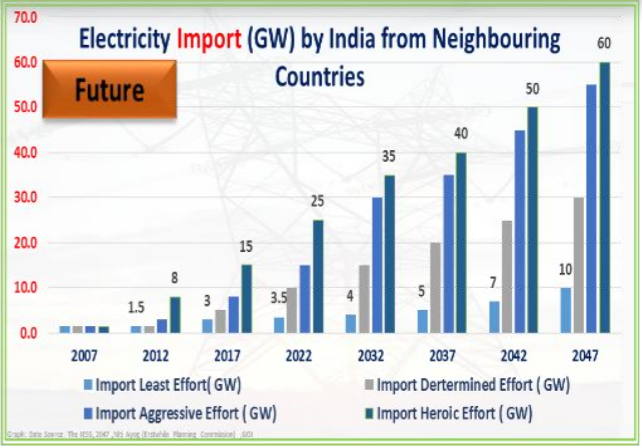
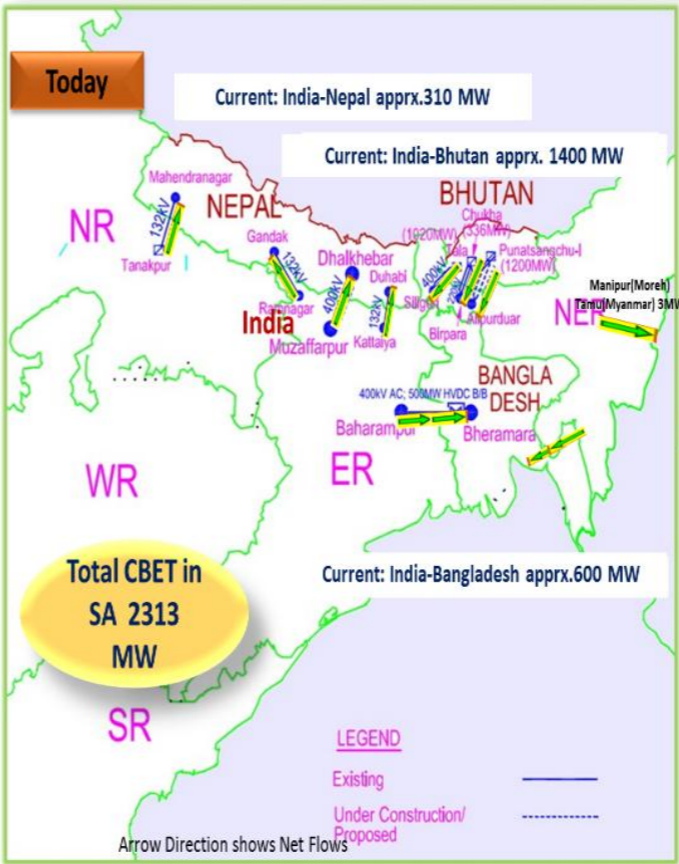


# Cross Border Electricity Trade in South Asia

**Total investment of USD 603 billion is required for SAARC countries for development of electricity infrastructure upto 2020**

- Expected investments by 2020 for electricity infrastructure
  - Bangladesh: US\$ 16.5 Billion
  - India: US\$ 468.8 Billion
  - Nepal: US\$7 billion
  - Pakistan: US\$ 96 Billion
  - Sri Lanka: US \$ 9 Billion
- For integrated regional South Asia power grid, an estimated **US\$ 1,390 billion** would be required during the **2015-2040** period for expanding electricity generation expansion in order to add approximately **750 GW** of electricity generation capacity

## Current Status of Cross Border Electricity Trade (CBET) and Future Trading Scenarios

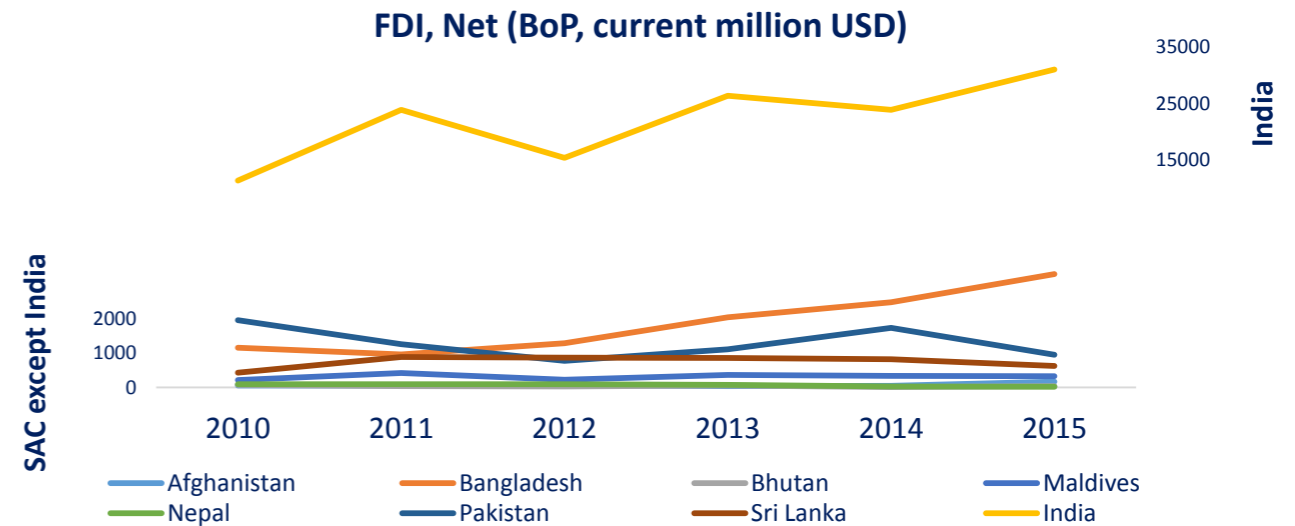




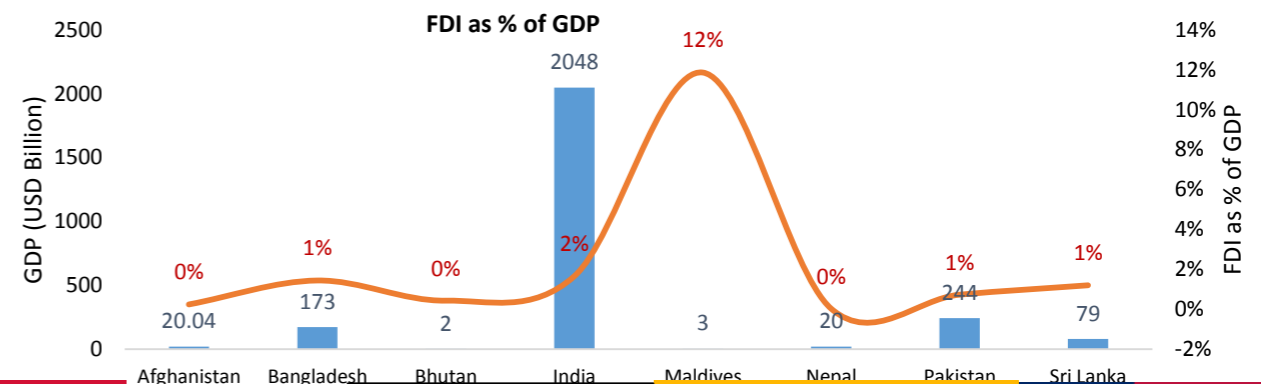
# Investment Scenario in South Asia

## Foreign Direct Investments have been low in the region

- **The region witnessed mixed trends in net FDI inflow across countries during the period 2010-15**
  - Bhutan, Nepal and Pakistan experienced a negative CAGR for net FDI inflow during the period
  - Bangladesh (23%) had one of the highest growth in FDI inflows followed by India
- **India has the highest share of FDI inflow in absolute terms followed by Bangladesh**
- **Remaining countries contribute less than 10% to the net FDI inflows in the region**
- **The FDI contribution to the overall GDP is well below 2% for all the countries in the region except for Maldives**



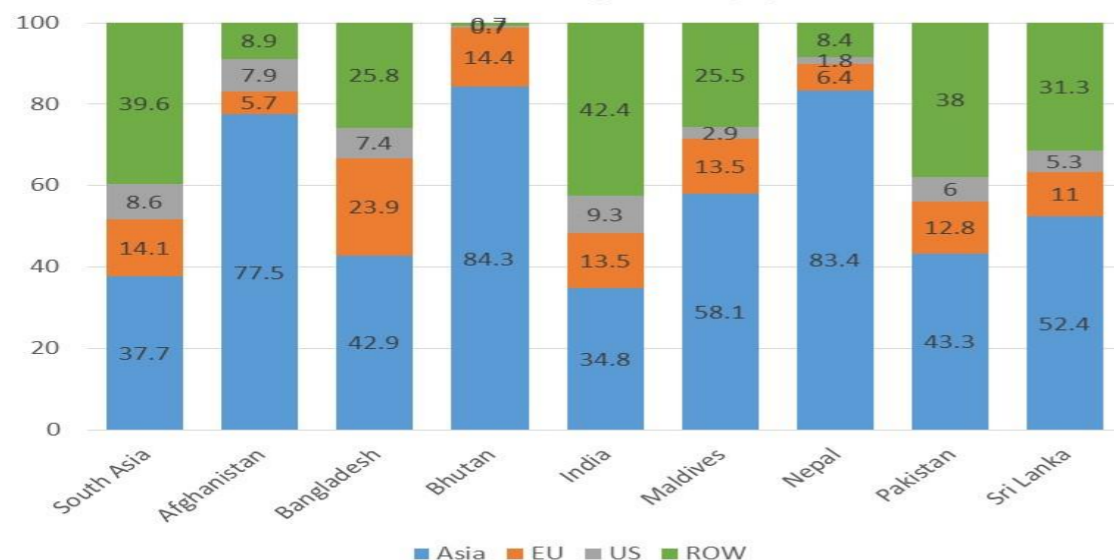
Source: World Development Indicator, The World Bank



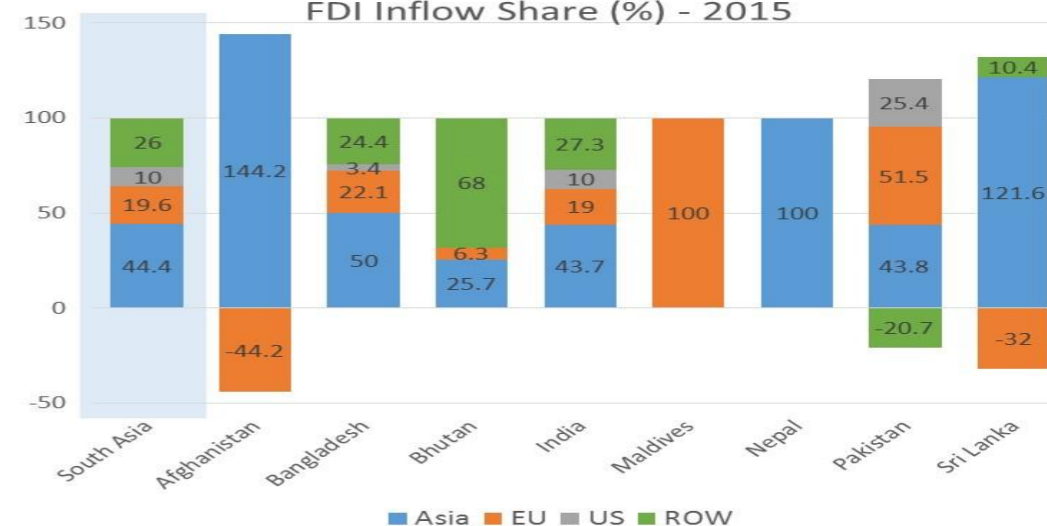
## South Asia – Regional Integration Indicators

South Asia	Movement in Trade & Investment		Movement in Capital		People Holding		
(2015)	Trade	FDI	Equity Holding	Bond Holding	Migration	Tourism	Remittances
Within Sub-region (South Asia)	5.5%	0.6%	0.9%	2.1%	26.2%	12.2%	15.2%
Across Sub-regions (Asia)	32.2%	38.3%	22.7%	10.6%	5.8%	32.7%	5.4%
With the rest of the world	62.3%	61.1%	76.5%	87.3%	68.0%	55.1%	79.4%

Trade Share Country-wise (%) - 2015



FDI Inflow Share (%) - 2015



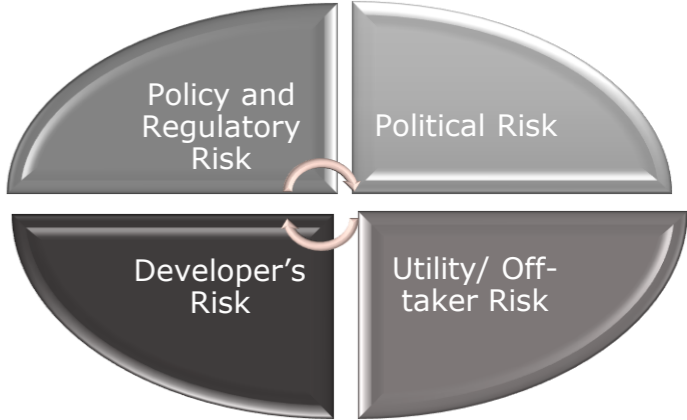
**Low regional flow in trade and investment within South Asia**



# Evaluation framework to mobilize investments



## Risk Evaluation Matrix



# Regional investment framework for CBET is still evolving

## Investment Promotion

### Foreign Direct Investment (FDI) framework

- FDI Policies are quite liberal across all countries
- Lacks regional framework for CBET

### Investment models for CBET

- PPP framework implemented in India, Bangladesh, Bhutan
- Regional investment model yet to evolve for cross border projects

### Taxation Policies and Incentives

- Regional initiatives under SAARC framework
- Domestic policies still to be harmonized

## Investment Protection

### Policy and regulatory frameworks

- Domestic regulatory frameworks at various levels of evolution (Nepal-Min, India-Max)
- Lacks harmonization at regional level

### Legal and Dispute resolution

- Bilateral mechanism and contractual arrangements relied upon
- Lacks regional forum for resolving disputes

### Project Development Support - Land, Environment, R&R

- Most project implementation delays caused due to local issues
- Regulatory frameworks are not very strong in many countries

## Investment Facilitation

### Domestic Capital Markets

- Domestic capital markets in most countries except India lack depth for large investments
- ECB comes with stringent conditions

### Financing Instruments

- Low cost financing instruments (Green bonds) have not been utilized
- Lacking in innovative debt instruments for cross border hydro projects

### Institutional Framework

- Lack of harmonization of technical and commercial frameworks increases risk
- Power trading framework still to be institutionalized in most SAC





# Key Findings – South Asian Countries

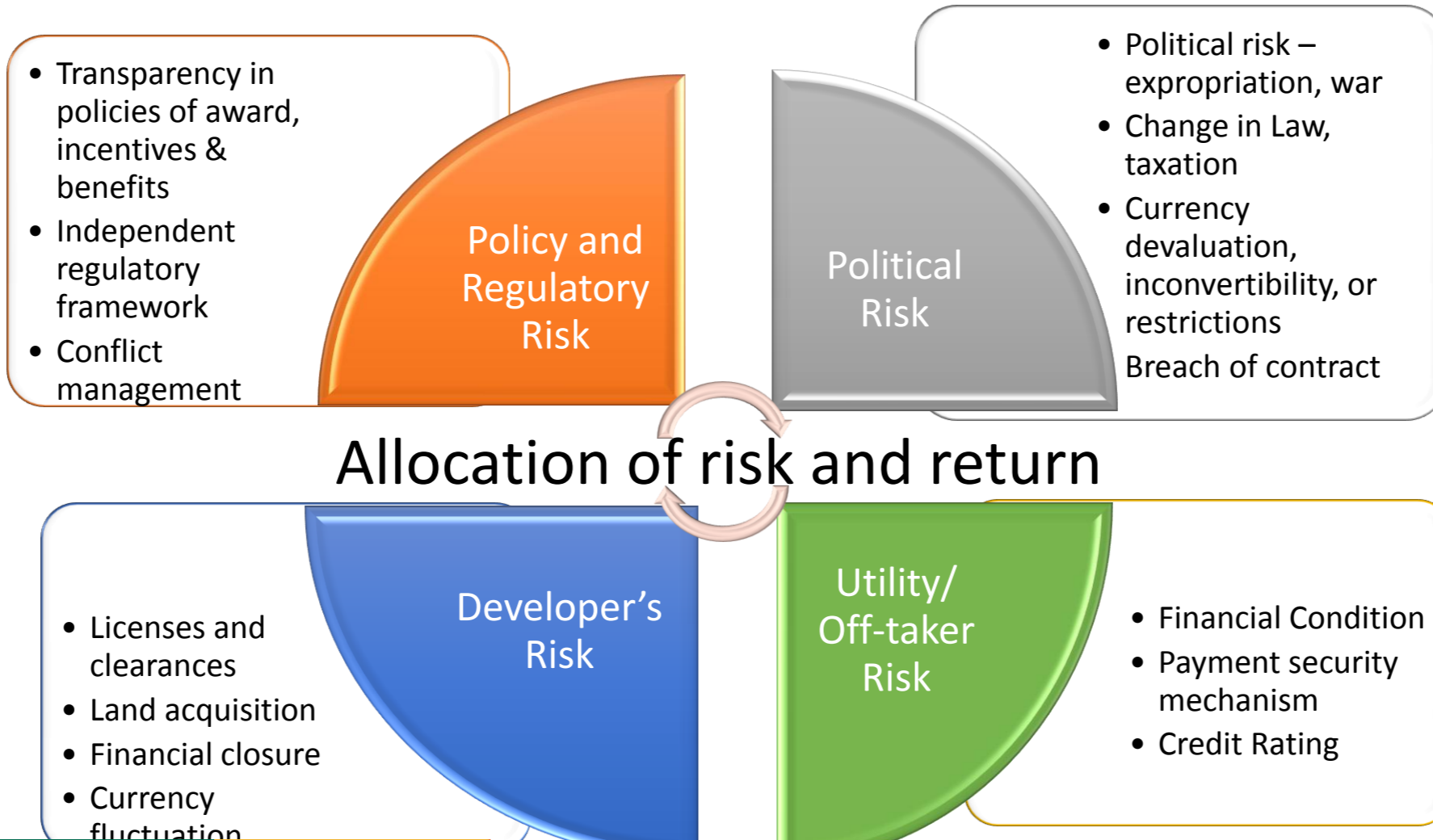
Countries in SA region need to improve on various areas to create strong investment friendly environment

	Afghanistan	Bangladesh	Bhutan	India	Maldives	Nepal	Pakistan	Sri Lanka
<b>Investment promotion</b>								
- FDI facilitation								
- PPP framework								
- Taxation and Incentives								
<b>Investment protection</b>								
- Policy and Regulatory								
- Legal and Dispute Resolution								
- Land, Environment and R&R								

Very weak  
 Weak  
 Moderate  
 Strong  
 Very Strong

- Bangladesh and India have been comparatively successful in attracting FDI in the region India and Maldives have relatively good PPP participation and framework in place
- Land procurement, environmental clearances, R&R for hydropower and transmission projects remains an issue throughout the region

# Project Risk assessment matrix



# Project Risk Mitigation – Key initiatives

## Key Issues and Mitigations

Issues	<ul style="list-style-type: none"> <li>Political instability</li> <li>High transaction cost</li> <li>Transparency &amp; predictability</li> <li>Non-discrimination</li> <li>Change of law</li> <li>Public governance</li> </ul>	<ul style="list-style-type: none"> <li>Contract enforcement</li> <li>Alternate dispute settlement</li> <li>Administrative process</li> <li>Legal stability and predictability</li> </ul>	<ul style="list-style-type: none"> <li>Site identification and resource assessment</li> <li>Land acquisition, environment, R&amp;R</li> <li>Off-taker risk</li> <li>Skilled manpower</li> </ul>	<ul style="list-style-type: none"> <li>Currency risk (exchange rate, convertibility)</li> <li>Tax policies</li> <li>Corporate governance</li> <li>Liquidity issues, debt financing</li> </ul>
	Political and country	Policy and Regulatory	Project Development	Off-taker
Mitigation	<ul style="list-style-type: none"> <li>Political insurances</li> <li>International investment agreements (BIT, FTA)</li> <li>BOO, and BOOT business models under PPP</li> <li>Guarantee against expropriation</li> </ul>	<ul style="list-style-type: none"> <li>Standardize contract documents</li> <li>Alternative dispute resolution mechanisms</li> <li>Regional institution</li> <li>Capacity building</li> </ul>	<ul style="list-style-type: none"> <li>Standard technology specific project development guidelines</li> <li>Single window clearance</li> <li>Regional skill development center</li> </ul>	<ul style="list-style-type: none"> <li>Currency hedging (Currency swaps, options, forward contract)</li> <li>USD denominated PPA</li> <li>Stable tax regime</li> <li>Corporate governance</li> </ul>

# Case Study: Southern African Power Pool

## Investment Promotion framework in Southern African Power Pool

<b>A</b>	Created and empowered regional institutions	<ul style="list-style-type: none"><li>• Regional organization with separate governance structure, and responsible for overall policy matters relating to electricity sector.</li><li>• Project Advisory unit established to advise SAPP</li><li>• Association of Regional Regulators to promote consistency in regulations</li></ul>
<b>B</b>	Coordination & Cooperation across regional boundaries	<ul style="list-style-type: none"><li>• Coordination promoted through a <b>coordination center</b> which also acted as secretariat to SAPP</li><li>• Prepares recommendations based on studies for approval and facilitates meetings and dispute resolution among its members</li></ul>
<b>C</b>	Facilitated sector policies, legislation & regulations	<ul style="list-style-type: none"><li>• Regional Electricity Regulatory Association facilitates harmonized electricity sector policy, legislation and regulations for cross-border trading</li><li>• Focused on terms and conditions for access to transmission capacity and cross-border tariffs</li></ul>
<b>D</b>	Supported infrastructure development	<ul style="list-style-type: none"><li>• Master Plan at the Regional Level identifying export oriented projects</li><li>• Priority projects were identified which could be prepared and implemented</li><li>• Established operating guidelines to address technical and financial matters</li></ul>
<b>E</b>	Transmission system was built on predictable revenue stream	<ul style="list-style-type: none"><li>• Investment cost-related pricing system with standard prices for defined zones or nodes has been adopted to price transmission system</li><li>• Transmission pricing system enables recovery of network charges and losses resulting from trade and helps in resolving congestion in transmission lines</li></ul>
<b>F</b>	Ownership and Finance	<ul style="list-style-type: none"><li>• Most transmission &amp; generation projects are owned by public utilities, but PPP and Private sector ownership is encouraged</li><li>• Financing done at country level but funding from multilaterals agencies</li></ul>



# Investment Framework and Guidelines



# Regional Guidelines for investment framework



# Investment Guidelines

1

## **Policy and Regulatory harmonization**

- Establish a Regional Regulatory body, Regional Electricity Regulatory Association to promote regional regulatory cooperation. This body will merely be an association of national regulatory institutions with no powers to intervene in regulatory matters in the region

2

## **Guarantees against Political and country risks**

- Member countries to have guidelines for mitigating political risks such as nationalization, expropriation etc. for domestic and CBET power projects
- Regional guidelines for leveraging available Instruments for political risks like MIGA

3

## **Regional dispute resolution and settlement mechanism**

- Develop guidelines for CBET projects for resolving disputes
- Evolve regional consensus on conflict management and dispute resolution framework amongst member countries - Dispute resolution procedures, alternate Dispute resolution practices, arbitration in neutral third-country, Inter - Government's agreements

4

## **Streamline project approval and clearance process**

- Prepare inventory of processes to be followed in member countries for CBET project approvals, etc
- Member countries' government to provide single window clearance for necessary approvals and licenses
- Issues related to land, environment and R&R to be dealt with on priority basis



# Investment Guidelines

5

## Standardize contractual framework for CBET

- Standardized contractual documents (PPAs, TSAs, etc) based on commonly agreed regulatory guidelines for the region
- Evolve consensus on providing appropriate payment security mechanisms for cross border projects
- Member countries to have guidelines for foreign currency denominated PPAs to protect against currency risks, allow back to back currency swaps etc

6

## Tariff rationalization for the hydropower projects

- Propose regulatory interventions for rationalization of tariffs for the hydropower projects to make them competitive in cross border transactions
- Long tenure loans with flexibility in repayments needs to be developed for the region

7

## Access to innovative and cheaper sources of funding

- Attract concessional financing, low cost financing from MFIs, etc.
- Develop coordination mechanism for the domestic capital markets in the South Asian countries to promote liquidity and easy access to equity by private players
- Increased role of multi-lateral funding agencies in CBET projects

8

## Develop region specific financing instruments

- Allows broad mass of institutional investors to gain access to green growth projects
- Establish a South Asian Regional Market Fund to offers long and medium term loans with fixed or variable rates to projects in the region
- Green Bonds to raise capital specifically for climate change and green growth related projects. Allow such bonds to be issued as structured notes mechanisms or other underlying derivatives



# Investment Guidelines

9

## Support private participation through innovative models

- Establish a clear, predictable and legitimate institutional framework supported by competent and well-resourced authorities
- Use the budgetary process transparently to minimize fiscal risks and ensure the integrity of the procurement process
- Ground the selection of Public-Private Partnerships in Value for Money

10

## Regional institutional coordination mechanism

- Setting up of coordinating mechanism for the investment promotion in the region under existing SA institutions
- Develop and Implement guidelines for investments, project identification and prioritization, coordinating investments in CBET



**Thank You**



# Key Findings – South Asian Countries

## FDI Policies are quite liberal across all countries

Country	FDI Policy Highlights
<b>Afghanistan</b>	<ul style="list-style-type: none"> <li>• No restrictions on converting, remitting or transferring funds associated with investments</li> </ul>
<b>Bangladesh</b>	<ul style="list-style-type: none"> <li>• Upto 100% foreign equity participation is allowed</li> <li>• 100% repatriation of capital and dividends is allowed</li> <li>• No minimum capital requirement</li> </ul>
<b>Bhutan</b>	<ul style="list-style-type: none"> <li>• 70% foreign equity participation is allowed in all sectors</li> <li>• Min. capital requirement of USD 1 million in manufacturing</li> </ul>
<b>India</b>	<ul style="list-style-type: none"> <li>• 100% FDI is allowed in Indian power sector with exception of 49% in petroleum refining and 49% in power exchange</li> <li>• 100% repatriation of capital, profits and dividend is allowed after payment of tax</li> </ul>
<b>Maldives</b>	<ul style="list-style-type: none"> <li>• 100% foreign equity participation is allowed</li> <li>• No Minimum capital requirement</li> </ul>
<b>Nepal</b>	<ul style="list-style-type: none"> <li>• 100% foreign owned or joint venture in all sectors, except for a negative list industries</li> <li>• No minimum capital requirement</li> </ul>
<b>Pakistan</b>	<ul style="list-style-type: none"> <li>• 100% FDI in all sectors</li> <li>• Minimum capital requirement of USD 0.3 million in infra and EPZ in designated area</li> </ul>
<b>Sri Lanka</b>	<ul style="list-style-type: none"> <li>• 100% foreign equity participation is allowed in all sectors</li> <li>• Min. capital requirement of USD 0.5 million and country-wide EPZ status</li> </ul>



## CBET in South Asia – Interconnections

Almost all the initiatives have been through bilateral arrangements

**Nepal – India**  
(400 kV D/C  
Dhalkebar-Muzaffarpur  
T/L)

US\$ 137  
million (IDA)

- JV companies established for respective countries
- Power Transmission Company Nepal (PTCN) for Nepal - NEA (50%), PGCIL (26%), HIDCL of Nepal (14%), IL&FS (10%)
- Cross Border Power Transmission Company Ltd. for India - IL&FS (38%), PGCILD (26%), SJVNLLtd (26%) and NEA (10%)

**Bhutan – India**  
(Tala T/L)

US\$ 75  
million (IFC)

- First PPP transmission project (PGCIL & Tata Power)
- Five 400 kV and one 220 kV D/Ct lines, ~ 1,200 km, 3,000 MW capacity

**Bangladesh – India**  
(400 kV T/L  
Baharampur –  
Bheramara with HVDC  
B/B stn)

US\$ 332  
Million (ADB)

- 500 MW First phase commissioned in 2013 with ADB support for Bangladesh portion
- Additional 500 MW capacity augmentation of HVDC link likely to be commissioned in 2018
- PGCIL built and financed the India portion





## CBET in South Asia – Generation

Cross border investments have been proposed in generating projects in South Asia

**Nepal**  
(Arun 3 HPP – SJVNL;  
Upper Karnali – GMR)

- Competitive bidding for selection of developers
- PDAs for 900 MW Arun III (\$ 825 Million) and 900 MW Upper Karnali projects (\$ 1.4 Billion) in 2014
- Export oriented projects to India
- Local shares for project affected parties

**Bhutan**

- Bhutan has plans to develop five projects on PPP basis, similar to Dagachhu HPP
- Inter-Governmental Agreement with India in 2014 to develop four hydropower projects of around 2,100 MW capacity through JV route
- Proposed Inter-Governmental assistance for 6 hydropower projects

**Bangladesh**  
(1,320 MW Maitree Super Thermal Power  
Project)

- Equal partnership from Bangladesh Power Development Board and National Thermal Power Company, India
- Bangladesh - Tax exemption to project for the period of 15 years
- India - GOI owned EXIM Bank to provide loan at concessional rate



# Key Findings – South Asian Countries

## Regulations and policy changes have been undertaken at country level

Country	Description
<b>Afghanistan</b>	<ul style="list-style-type: none"> <li>Private investment law, 2005 permits investment in all sectors except nuclear power</li> </ul>
<b>Bangladesh</b>	<ul style="list-style-type: none"> <li>Policy exists</li> <li>Partially unbundled power sector.</li> <li>Energy regulatory commission established</li> </ul>
<b>Bhutan</b>	<ul style="list-style-type: none"> <li>Policy exists.</li> <li>Partially unbundled power sector.</li> <li>Energy regulator exists</li> </ul>
<b>India</b>	<ul style="list-style-type: none"> <li>Comprehensive policy for power sector</li> <li>Energy regulator established at Central and state level</li> </ul>
<b>Maldives</b>	<ul style="list-style-type: none"> <li>No strict policy</li> <li>MEA regulates electricity Sector</li> </ul>
<b>Nepal</b>	<ul style="list-style-type: none"> <li>New legislation for unbundling is under consideration.</li> <li>Consumer tariff fixation</li> <li>Legislation to establish Regulatory Commission Act is under consideration</li> </ul>
<b>Pakistan</b>	<ul style="list-style-type: none"> <li>Policy present for generation, transmission and distribution.</li> <li>Energy regulator present. NEPRA for Electricity sector OGRA for oil and gas sector</li> </ul>
<b>Sri Lanka</b>	<ul style="list-style-type: none"> <li>PUSCL is regulator for electricity and petroleum</li> </ul>





# Key Findings – South Asian Countries

## Investment protection framework has challenges for dispute resolution

Country	Description
<b>Afghanistan</b>	<ul style="list-style-type: none"> <li>Weak legal and dispute resolution framework</li> </ul>
<b>Bangladesh</b>	<ul style="list-style-type: none"> <li>Guarantee against nationalization International convention for settlement of industrial disputes</li> </ul>
<b>Bhutan</b>	<ul style="list-style-type: none"> <li>Entitled to repatriation of the compensation paid on account of nationalization or expropriations of the business in accordance with FDI regulation 2012</li> </ul>
<b>India</b>	<ul style="list-style-type: none"> <li>Settlement of disputes is govern by the Indian Arbitration Act 1940</li> <li>UN Convention for the recognition and enforcement of foreign arbitral awards</li> </ul>
<b>Maldives</b>	<ul style="list-style-type: none"> <li>Legally backed investment guarantee</li> <li>Provision for overseas arbitration of disputes</li> <li>Long term contractual agreements and long term lease of land</li> </ul>
<b>Nepal</b>	<ul style="list-style-type: none"> <li>Guarantee against nationalization Dispute settlement through mutual consultations and in accordance with the arbitration rules of UN Commission on International Trade Law</li> </ul>
<b>Pakistan</b>	<ul style="list-style-type: none"> <li>Guarantee against nationalization Dispute settlement through mutual consultations and in accordance with the arbitration rules of UN Commission on International Trade Law</li> </ul>
<b>Sri Lanka</b>	<ul style="list-style-type: none"> <li>Protection against nationalization under the bilateral investment agreements and constitutional guarantee under International Convention for the Settlement of Investment Disputes</li> </ul>



# Policy and Regulatory Risk

## Policy and Regulatory risk impacts investments

Afghanistan	Changing policy and regulatory landscape
Bangladesh	Regulatory standards lacks global benchmarking
Bhutan	Limited presence of cornerstone institutions
India	Transparent regulations but lacks enforceability
Maldives	Absence of regulatory framework in key areas
Nepal	Absence of regulatory framework in key areas
Pakistan	Lacks enforcement
Sri Lanka	Regulatory system is evolving

Very Low 
 Low 
 Moderate 
 High 
 Very High

- SAC are at varying levels of restructuring
- Regional CBET framework is non-existent
- Bilateral arrangements have evolved and are prime driver of CBET – India-Bhutan, India – Bangladesh, India - Nepal

## International Experience

- SAPP - Laws and Regulations amended in to mitigate risk for private developers and mine owners in Botswana
- Compensation clause in PPAs in Greater Mekong Sub Region provided to negate any adverse impact of change in local laws on operation of the projects
- Pass through of costs allowed on account of change in regulations (USAID recommendation for Turkey – Georgia Trade)









## Recommendations for South Asia






- Establish a consultative body/ forum for managing the investment risks
- Develop regional regulatory guidelines for clarity and consistency
- Strengthen domestic environment to safeguard intellectual property rights
- Undertake measures to enforce contracts and resolve disputes for markets to function properly



# Political and Country Risk

## Political or Country risk is considered to be high

Afghanistan	 Instability leads to high risk
Bangladesh	 Stable Political Regime
Bhutan	 Political system is established
India	 Strong Political & Legal framework
Maldives	 Changing Political System
Nepal	 High Political Risk due to lack of constitutional framework
Pakistan	 Partially unstable
Sri Lanka	 Legal and Political system is established

 Very Low  
  Low  
  Moderate  
  High  
  Very High

- MIGA coverage for hydro projects in Pakistan (Star Hydro, Gulpur), Nepal (Himal)
- Price Stabilization Fund, Nepal to insulated against abnormal price fluctuations

## International Experience

- SAPP: Some African countries have offered sovereign guarantees, e.g. Tanzania for IPTL; Nigeria for AES Barge, Cote d'Ivoire for Azito and Ghana for Takoradi II projects
- Mitigation instruments have been facilitated by USAID for Hydropower Investment Promotion Project in Georgia for export to Turkey
- Nam Theun 2 project (NT2) in Lao PDR delivers energy to Thailand has political risk coverage for the project included IDA US\$ 42 million PRG; US\$20 million credit MIGA US\$ 91 million PRI

## Recommendations for South Asia

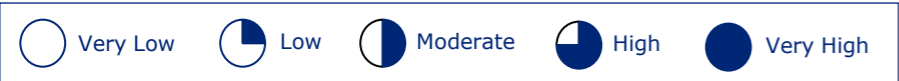
- Ensure government guarantees against:
  - Risk like Expropriation, fiscal incentives etc.
  - Repatriation and currency convertibility
  - Insolvencies and Utility
- Leverage Partial Risk Guarantee schemes to insulate lenders against risk of default, credit risk in public sector projects etc.
- Insurance against force majeure incidents, third party coverage and asset coverage



# Utility/ Offtake Risk

## Off-taker risk is considered to be high

Afghanistan	Subsidized tariff and financial losses for DISCOMS
Bangladesh	Subsidized tariff and financial losses for DISCOMS
Bhutan	Subsidized tariff and financial losses for DISCOMS
India	Subsidized tariff and financial losses for DISCOMS
Maldives	Subsidized tariff and financial losses for DISCOMS
Nepal	Distorted price signals along with subsidized power
Pakistan	Subsidized tariff and financial losses for DISCOMS
Sri Lanka	Subsidized tariff and financial losses for DISCOMS



- LoCs, Escrow accounts for reducing the payment default risk
- Regulatory initiatives to reduce the gap between cost of supply and consumer tariffs

## International Experience

- Structuring of PPAs to reduce offtake risk
  - **Thailand – Cambodia interconnection project:** Quantity of offtake & Price per unit established upfront in PPA
  - **Laos – Thailand interconnection (Theun-Hinboun Hydro):** Take or Pay contract between Laos and Thailand for sale of 95% of output to Thailand for a period of 25 years, with an option to renegotiate tariff after 10 years.
- Addressing transmission constraints:
  - SAPP plans for transmission lines

## Recommendations for South Asia

- Streamline policy and tariff structures to address financial viability and off-take risk
- Encourage appropriate payment security mechanism enforced through regulatory mechanism and contractual framework
- Gradually increase tariff to recover cost of supply
- Promote transparency in the tariff determining process



# Developer's Risk

## Project development risk is relatively higher

Afghanistan	Complex land acquisition process leads to delays
Bangladesh	Lengthy approval process causes delays in completion
Bhutan	Requires government approval
India	Lengthy approval process causes delays in completion
Maldives	Underdeveloped supply chain and approvals process
Nepal	Underdeveloped supply chain causes delays in construction
Pakistan	Complex procedures and underdeveloped supply chain
Sri Lanka	Delays due to approvals and availability of input materials

Very Low  
 Low  
 Moderate  
 High  
 Very High

- Local constraints in the project development
- Land acquisition is difficult

## International Experience

- Connectivity
- SAPP: Timely completion of key transmission projects to support commissioning of generation capacity as a result of the **cooperation opportunities**
- Dispute resolution
  - SAPP, WAPP, GMS: Dispute resolution mechanism is part of the inter-country agreements and treaties as well as bilaterally negotiated PPAs
  - Last resort of settlement through international arbitration

## Recommendations for South Asia

- Facilitate project developers with single window clearance
- Ease norms for land acquisition
- Remove license requirement to set-up projects in generation segment
- Mitigate the connectivity risk by addressing the planning and infrastructure development aspects
- Debottleneck the supply chain to ensure timely availability of raw-materials or input material



## Mitigation measures: Political and country risks

**Instruments available with MFIs can be used to address various risks as political risk, credit risk of governments, public sector projects etc.**

### MIGA

- Political Risk Insurance
- Transfer restriction, Expropriation
- War and civil disturbance
- Breach of contract
- Non-honoring of sovereign financial obligations

### IBRD/IDA

- Partial Risk Guarantee covers lenders against risk of default by governments contractual obligations (payment also) in a private sector project
- Partial Credit Guarantee covers credit risk in public sector projects of governments/public borrowers
- Policy-Based Guarantees covers credit risk of the government

### Government Guarantee

- Guarantee agreement and Counter Guarantee
- Risk like Expropriation, fiscal incentives, tax, Judiciary
- Repatriation and currency convertibility
- Insolvencies and Utility
- Regulation and Regulatory

### Insurance

- Force majeure incidents
- Third party coverage
- Asset coverage



# MFI instruments: Key learnings from South Asia

Investors used various covers ranging from sovereign guarantee to insurance from MFIs to safeguard their investments

Risk	Key measures
Political risks associated with expropriation, war	<ul style="list-style-type: none"> <li>MIGA coverage of \$32.8 million insures equity investments in the 60 MW Himat power plant against currency transfer, expropriation, and war risks (1996)</li> </ul>
Guarantee against Breach of contract	<ul style="list-style-type: none"> <li>MIGA issued a guarantee of \$148.5 million to cover an equity investment in Star Hydro Power Limited Pakistan (2012) for a period of up to 20 years against the risk of breach of contract.</li> <li>MIGA issued guarantees of \$82.7 million covering investments for a period of up to 15 years against the risk of breach of contract for Gulpur Hydro Power project in Pakistan (2015)</li> </ul>
Currency risk	<ul style="list-style-type: none"> <li>Dollar denominated PPAs for cross border energy exchange between India and Bangladesh</li> <li>Price Stabilisation Fund, Nepal: Nepal Oil Corporation Limited (NOCL) will adjust fuel prices on basis of rates forwarded to it every two weeks by the Indian Oil Corporation (IOC), the NOC's sole supplier. GoN has seeded a Price Stabilisation Fund with NRs 500m (around US\$5m). If petroleum product prices rise by more than 2%, the NOC will draw on the fund to moderate the increases passed on to consumers; if prices decrease by more than 2%, the NOC will make deposits into the fund to build it up against future shocks</li> </ul>

# Mitigation measures: Policy and tariff as instruments

Using policy and tariff structure can mitigate risks which are very important for projects such as currency depreciation and financial viability of the off-takers

Parameter	India	Sri Lanka	Bangladesh	Pakistan
Tariffs denominated in Fx or local currency	Local currency	Take or pay capacity charges in US \$	Take or pay capacity charges in US \$	Debt Service & Return on Equity in US \$
Whether Foreign Exchange Rate Variation (FERV) provided in tariffs	Yes	Yes	Yes	Yes
Coverage for				
- Debt servicing	Yes (only to the extent of hedging costs)	Yes	Yes	Yes
- Equity Returns	No	Yes	Yes	Yes



# Key learnings from international CBET case studies

## Thailand-Cambodia interconnection project

Risk addressed	Description
Payment default risk	<ul style="list-style-type: none"> <li>The loan structure included strict controls over the project bank accounts.</li> <li>Bank accounts specifically dedicated to the CPTL project needed to be opened and maintained outside country i.e. country other than Cambodia and Thailand.</li> <li>All amounts payable to the project are required to be paid into the offshore account and may only be withdrawn according to the payment priorities and amount limits specified in the loan document.</li> </ul>
Off-take risk	<ul style="list-style-type: none"> <li>PPA established Contractual arrangements confirming volumes and prices to be paid by EDC for energy received from EGAT and CPTL for Thailand-Cambodia interconnection project.</li> <li>PPA between THPC, Laos and Thailand ensured more than 95% output sale to Thailand on take-or-pay basis for 25 years with an option to renegotiate tariff after 10 years.</li> </ul>

## Key learnings from international CBET case studies

### Laos – Thailand interconnection (Theun- Hinboun Hydro)

Risk addressed	Description
Debt funding using commitment from various parties	<p>Commercial banks were reluctant to provide funding for a JV in Lao PDR. Following methods were adopted to help in securing commercial lending:</p> <ul style="list-style-type: none"><li>• THPC has to set up an offshore escrow account for all payments by EGAT.</li><li>• Initial risk of the project was borne by 2 foreign shareholders as committed in shareholder agreement that they would provide corporate guarantee, with each assuming half responsibility, for remaining financing requirements if, all other efforts fail.</li><li>• For promoting commercial financing for the project ADB has waived its first right to THPC's asset to help THPC in obtaining commercial loans against security of THPC's assets.</li></ul>
Foreign exchange risk	<p>The payment is determined half in US dollars and half in Local Currency (Baht) at a fixed exchange rate. This payment term has both advantage and risks:</p> <ul style="list-style-type: none"><li>• If the US inflation rate increased by more than 1%, the tariff will decrease in real terms</li><li>• The baht exchange rate fixed for a particular time period meant that revenue in US dollars depends on the fluctuations in this rate</li></ul>

# International experience in cross border investments

**Barriers in interconnection projects can be overcome in optimum time by mitigating instruments and participation of right set of stakeholders**

Barriers	Key Observations	CBET Pool	Stakeholders	Outcome
Political and Country	Framework agreements	SAPP	Governments, international institutions	Conducive business environment, legal certainty, more investment, speeding up of project process
	Engage in regional forum	ASEAN	Member states	Trust building, swift coordination
	Joint capacity building at the policy makers' level	SAPP	Education institutions, international institutions	Skilled manpower, employment generation
Policy and regulatory	<ul style="list-style-type: none"> <li>Cooperation on environmental and safety standards</li> <li>Regional cooperation on energy sources, energy efficiency and conservation standards</li> </ul>	ASEAN, SAPP	Governments, international institutions	Common strategy, mutual monitoring

# International experience in cross border investments

**Barriers in interconnection projects can be overcome in optimum time by mitigating instruments and participation of right set of stakeholders**

Barriers	Key Observations	CBET Pool	Stakeholders	Outcome
Project development	Governments to update national transmission grids	GMS	Transmission authorities	Compatible grids capable of connection
Off-taker/ Commercial	Focus on complementarities, construction of transmission lines	SAPP	Governments, Utilities	Increased supply, reliability enhancement
	Conducive investment environment; long term planning	ASEAN	Governments	Foreign (direct) investment, Domestic project completion