





Theme Presentation & Context Setting on

"The Role of External Partners in BIMSTEC Energy Cooperation and Way Forward "

Presented by

Rajiv Ratna Panda, Technical-Head, SARI/EI/IRADe

Working Session 4: The Role of External Partners in BIMSTEC Energy Cooperation and Way Forward
Conference on Enhancing Energy Cooperation in the BIMSTEC Region , 25-26 February 2020 , BIMSTEC Secretariat, Dhaka

USAID
FROM THE AMERICAN PEOPLE

SARI/EI

Integrated Research and Action for Development
IRADe

Contents

- *Moving towards Regional Energy Sustainability and Investment Requirements*
- *Future Energy Investment Opportunities*
- *External Support required for BIMSTEC Grid integration & for regional energy projects*
- *Enabling the development of BIMSTEC Regional Grid*
- *De-Risking of Energy Projects: Risk mitigation instruments*
- *Existing Regional initiatives to support regional energy cooperation projects*
- *New Approach-Role of Targeted Technical Assistance and Support*
- *Points for Discussions*

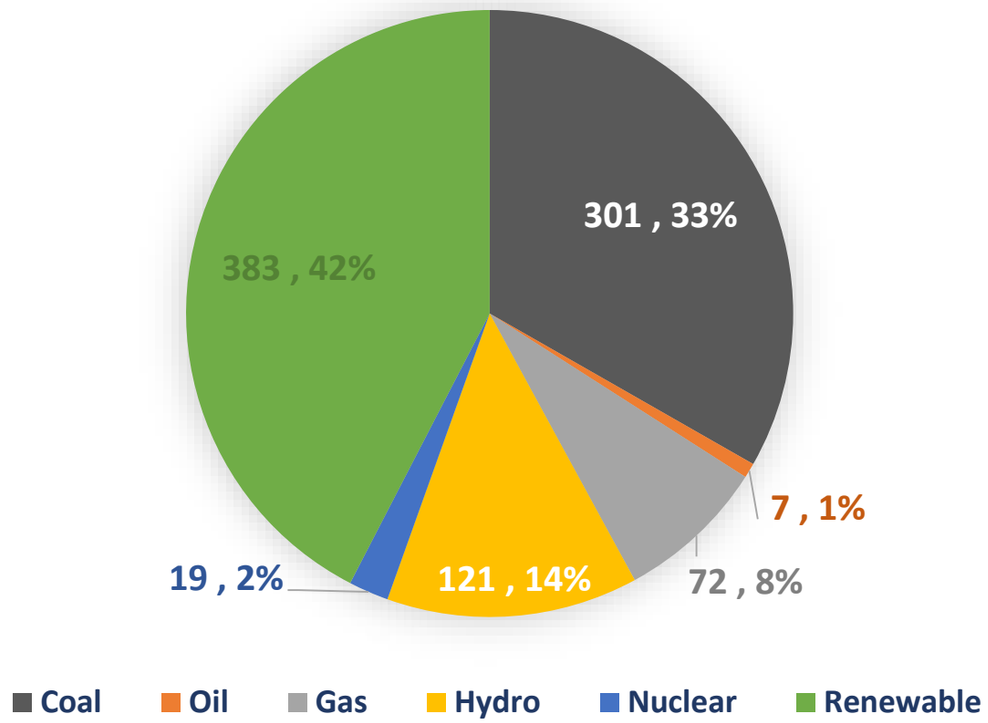
USAID FROM THE AMERICAN PEOPLE

SARI/EI

IRADe Integrated Research and Action for Development

BIMSTEC: Electricity Sector by 2030

Projected BIMSTEC Power Mix by 2030

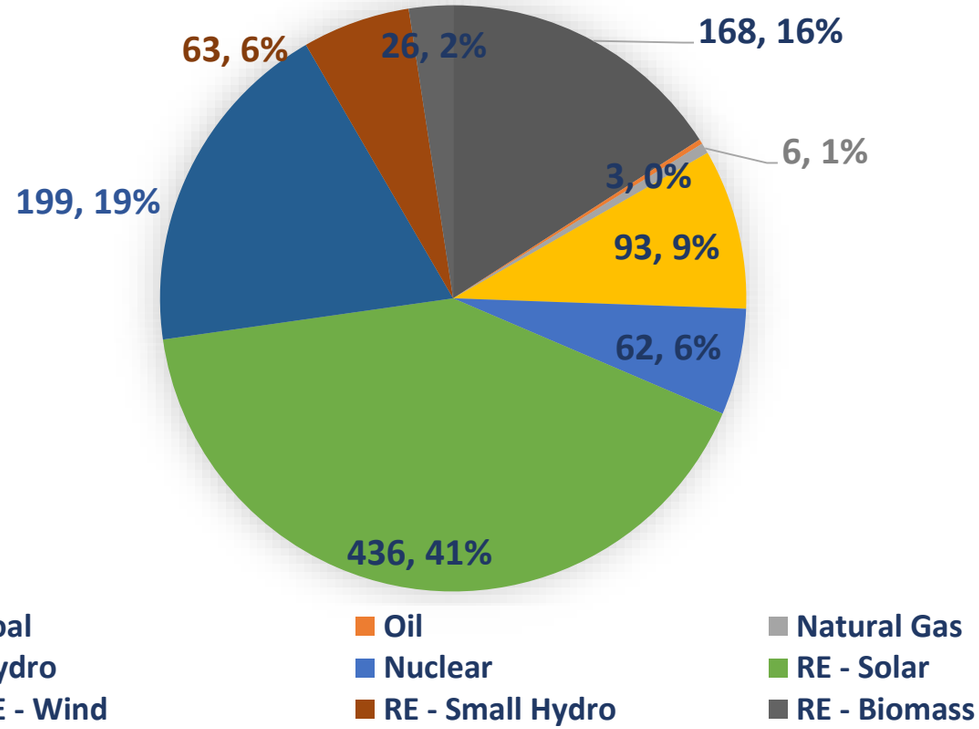


Electricity peak demand 482 GW
Installed Capacity-940 GW (RE-383 GW-42%)

Ssource: BIMSTEC Energy Outlook

Investment Requirement by 2030

BIMSTEC Energy Investment Requirement US $ (Billion) by 2030



Investment need-1056 US$ Billion, RE -Capacity-724 US$ Billion, Hydro-93 US$ Billion

Ssource: BIMSTEC Energy Outlook

Clearly the focus is one Clean energy and Sustainability

BIMSTEC: Future Energy Investment Opportunities

De-carbonising Power Generation

Cleaner and Efficient Public Transport

Renewable Energy

Electric Vehicle & Charging Infrastructure

Natural gas, LNG and Region Gas Grid

Modernising power grid , smart grid, smart utility

Cross Border Hydro Power Projects and Cross Border Power Transmission

BIMSTEC: Role of External Partners

Conceptualize/ Strategize

Promote economic development & Growth through Energy Infrastructure

Facilitate long term Policy thinking and Transition Road Map,

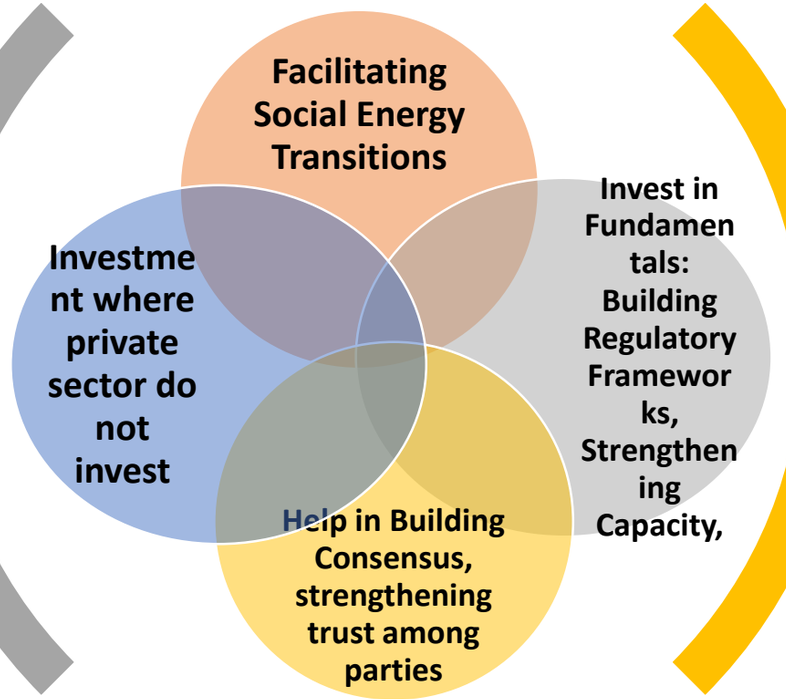
Creating a Conducive Environment, Communicate the Potential Benefits Clearly.

Facilitate in Shaping Thought process & Mindset

Thinking of Change

Develop strategy for Shaping Thought process & Mindset of stakeholders

Facilitate



Build Fundamental Ecosystem for Change

Evolve Ecosystem for Transition to a regional setup

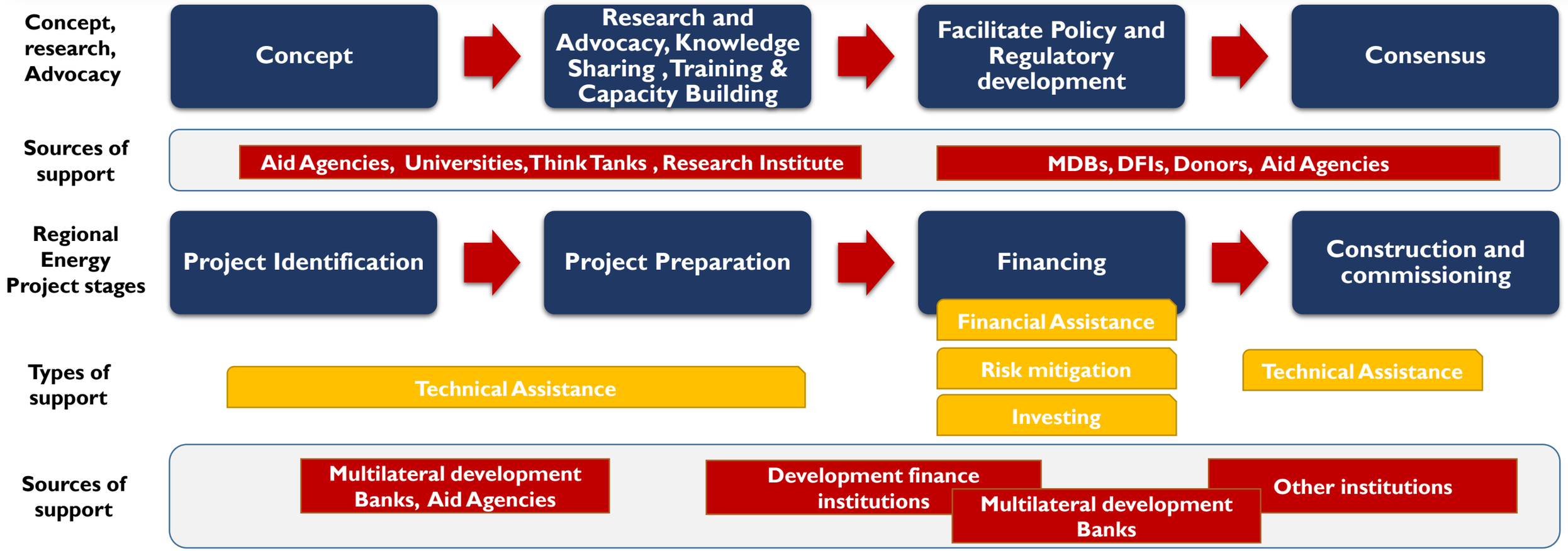
Implement

Risk Capital /Resources

Putting Hard Resources

Investment facilitation, Pilot Projects, Project Financing

External Support required for BIMSTEC Grid integration & for regional energy projects



Development partners need not view such project in isolation. Multiple development agencies can come together to support the projects, thereby utilizing blended financing to reduce the risk to their financial support.

Example: Blended financing to reduce overall risk exposure – 216 MW Upper Trishuli-1 HPP in Nepal

- The $453 million UT-1 project is co-financed with IFC, ADB, AIIB and other institutions - CDC, FMO, Proparco, K-EXIM, KDB, OFID. Along with lending, IFC also acted as the lead arranger for the entire debt package.

Enabling the development of BIMSTEC Regional Grid

400 KV Dhalkebar (Nepal) – Muzaffarpur (India) cross border transmission line

- **World Bank** provided **$136 Million of soft loans** for the 400 KV line and three substations.
- Also provided **technical assistance ;** development of **Transmission System Master Plan &** implementation of ERP in NEA

Multilateral development agencies

400 KV Baharampur (India) - Bheramara (Bangladesh) cross border transmission line

- **ADB** provided **$100 Million soft loans** for the Bangladesh portion of the 400 KV cross border line, 400 KV Back-to-Back HVDC substation, and a 230 KV line.
- ADB also provided technical assistance for the project.

Multilateral development agencies

400 KV New Bhutwal (Nepal) – Gorakhpur (India) cross border transmission line

- Proposed under the $500 Million under the Nepal compact of **Millennium Challenge Corporation**. Entire **$500 Million**, including the cost for 400 KV line with be developed under **grant financing** from MCC.
- The MCC compact includes a **technical assistance** for **Energy Regulatory Commission and NEA**

Development Financial Institutions

De-Risking of Energy Projects: Risk mitigation instruments

Regional energy projects will benefit from access to low cost finance from development partners. However, support is required for regional energy projects, not just for financing, but also for risk mitigation.

		Typical providers of risk mitigation instruments
Political risk insurance	**Risk insurance against events such as nationalization by the Government, breach of contract by the Government, currency transfer restrictions, war, terrorism and civil unrest.**	Multilateral Investment Guarantee Agency
Partial risk guarantee	**Partial risk sharing between the insurer and the Government, typically through a dedicated fund. This lowers the moral hazard associated with 100% insurance.**	The World Bank, Asian Development Bank
Partial credit guarantee	**Covers part of the debt service default by the borrower regardless of the cause of default.**	Asian Development Bank

Examples:

- Bangladesh - Sirajganj 220MW CCPP – MIGA guarantee of $70 million against risk of non-honoring of sovereign financial obligations.
- Bangladesh – Sembcorp 414 MW CCPP – MIGA guarantee for equity, against risk of breach of contract.
- Sri Lanka – ADB's Partial Risk Guarantee for $31 million and Partial Risk Insurance for $21 million for 163 MW diesel plant of AES. The Guarantees provided protection to the local commercial lenders of the project.
- Maldives - $16 million of IDA (World Bank Group) guarantees for solar projects under ASPIRE program. The guarantee provides backstopping for payment delays under PPA and ensures compensation in case of contract termination by Government.

Existing Regional initiatives to support regional energy cooperation projects

USAID	South Asia Regional Initiative for Energy Integration (SARI/EI) - Multi-year program for policy and regulatory harmonization and CBET promotion	Enhancing Growth and Development through Energy (EDGE) - A U.S. government effort to grow sustainable and secure energy markets throughout the Indo-Pacific
Asian Development Bank	Technical assistance through *South Asia Subregional Economic Cooperation Regional Energy Cooperation Project, 2018* Feasibility studies for establishing power trading companies in Bangladesh and Nepal	Technical assistance under "*Harmonizing the Greater Mekong Subregion Power Systems to Facilitate Regional Power Trade*" ADB support GMS Power Integration Funding of Bangladesh portion of 400 KV Baharampur (India) - Bheramara (Bangladesh) line
The World Bank	Financing for the construction of 400 KV Dhalkebar – Muzaffarpur cross border transmission lines under Nepal-India Electricity Transmission and Trade Project	Development of business plan for Power Trading Company of Nepal

USAID
FROM THE AMERICAN PEOPLE

SARI/EI

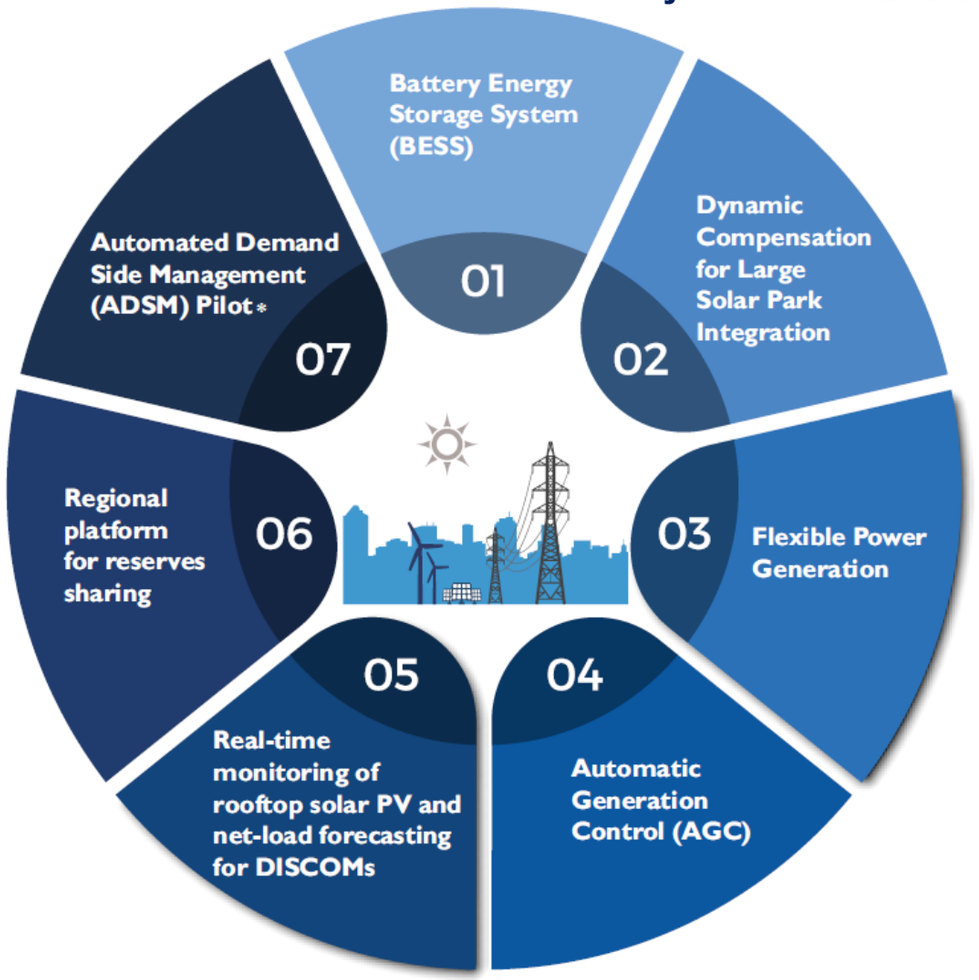
IRADe Integrated Research and Action for Development

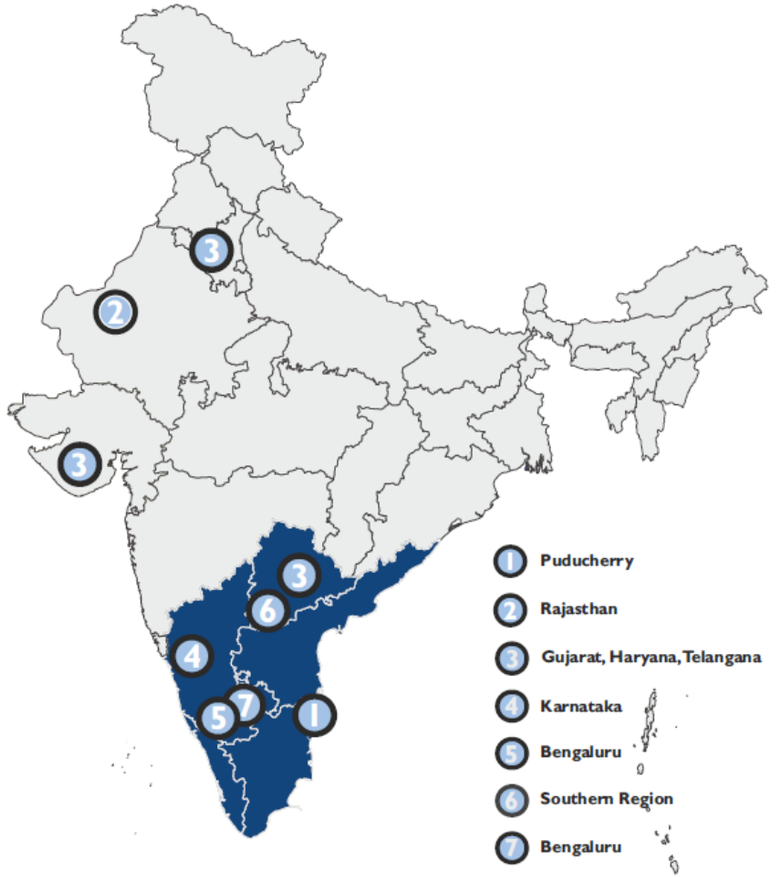
New Approach: Role of Targeted Technical Assistance and Support

Moving from Concepts to Implementation

- The landscape for TA projects are also changing.
- TA is now no more about merely providing advice and support.
- More successful TA projects have some implementation component.
- RISE supported the development and implementation of multiple pilot projects for enhanced renewable energy integration.
- Leads to Adoption of New Technologies and Reforms

USAID's Renewable Integration and Sustainable Energy (RISE) project
Pilot Projects under RISE and Greening the Grid initiatives





* This public private partnership is a direct engagement between USAID/ India and BESCOM under a separate mechanism under GTG

Points for Discussions

1. How crucial is the role of External Partners in moving towards Regional Energy Sustainability and setting the long-term clean energy transition agenda.

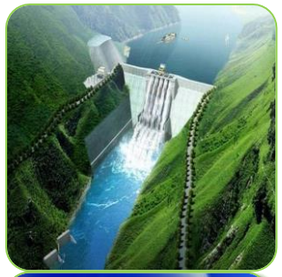
2. Building cross border transmission often challenging. What is the Strategy for Financing Cross Border Transmission Infrastructure: Business/Financing Models?

3. What are the innovative market instruments/ financing mechanisms for financing regional energy cooperation projects?

4. How the development partner can help in focusing on De-risking Regional Energy Infrastructure Projects: Instruments and modalities.

5. The Role of Technical Assistance and Support and pilot project in new energy technologies areas.

6. Role of developmental partners for development of BIMSTEC Comprehensive BIMSTEC Energy Cooperation Plan.



Thank You

Contact

rajivratnapanda@irade.org
rajivratnapanda@gmail.com
+91-9650598697

BIMSTEC: Role of External Partners

Conceptualize/ Strategize

- Create a Conducive Environment
- Identify Common goals/ targets
- Build Consensus
- Overcome political hurdles -
- Help build consensus, trust among parties
- Communicate Benefits

Develop strategy for Shaping Thought process & Mindset of stakeholders

Facilitate

- Develop Policy and regulatory frameworks
- Identify financing instruments
- Create regional platforms for collaboration
- Capacity building and training
- Establish Legal and contractual benchmarks

Conceptualize and evolve Ecosystem for Transition to a regional setup

Implement

- Develop investment/ PPP frameworks
- Undertake pilot projects to establish proof of concept
- Catalyze private investments in creation of infrastructure
- Innovative financing – risk capital
- Advanced technologies
- Replication and scaleup

Investment facilitation

2.2. c) Fully recover the costs and share benefits equitably, resulting from the reductions in investments on generation, transmission systems and fuel cost;

GCC Transmission Interconnection Cost , Principle of Cost Sharing and Funding Modalities

- The capital cost of the three phases of the project was estimated at
  - **US$1.1 billion,**
  - **US$300 million and**
  - **US$137 million**, respectively

- It was agreed among the GCC countries that costs would be shared **in proportion to the net present value of estimated reserve capacity savings**.

- Each country was responsible for **sourcing their share of the capital required, which could be from combinations of debt or equity as decided by each member state.**

	Sharing of Capital Costs	
Country	Phase I	Phase I & III
Kuwait	33.8%	26.7%
Saudi Arabia	40.0%	31.6%
Bahrain	11.4%	9.0%
Qatar	14.8%	11.7%
UAE	-	15.4%
Oman	-	5.6%
Total	100.0%	100.0%