EXPANDING REGIONAL ENERGY TRADE

– THE PERSPECTIVE OF SAARC

HILAL A. RAZA
DIRECTOR
SAARC ENERGY CENTRE
ISLAMABAD
AGENDA

• ENERGY SITUATION OF SOUTH ASIA

• ROLE OF SAARC ENERGY CENTRE

• SAARC ENERGY RING

• SAARC MARKET FOR ELECTRICITY
ENERGY SITUATION OF SOUTH ASIA

- 1.6 billion people
- 500 million live below $1 per day poverty line
- All Countries of South Asia
  - Oil importing
  - Energy deficit
ENERGY POVERTY OF SAARC REGION

- **SAARC**: 514,517
- **WORLD**: 1,788
- **CHINA**: 1,695
- **BRAZIL**: 1,243
- **MALAYSIA**: 2,391
- **EU**: 6,592
- **USA**: 7,051

**Legend**:
- Orange: Energy Use kgoe/capita/yr
- Brown: Electricity Use kWh/capita/yr
TOTAL ENERGY: 810 MTOE

COMMERCIAL ENERGY: 606 MTOE

- Traditional: 204 MTOE (25%)
- Commercial: 606 MTOE (75%)

(MTOE - Million tonnes of oil equivalent)
SEC MANDATE

• Initiate, coordinate and facilitate regional, joint and collective activities on energy in the SAARC region

• Provide technical inputs for the SAARC working group on energy, energy ministers’ forum and other SAARC meetings on energy

• Help in the integration of regional energy strategies by providing relevant information and expertise

• Be a catalyst for the economic growth and development of the South Asia region
MAIN PROGRAM AREAS

- Energy Efficiency
- Renewable Energy
- Power and Energy Trade
- Laws, Regulations and Policies
- Energy Resources Exploitation
- Sharing Best Practices
- Capacity Building
- Energy Data Bank
STUDIES ON SAARC ENERGY RING (1/2)

- SAARC Regional Energy Trade Study (SRETS) identified four regional or sub-regional trade options: (i) Power Market, (ii) Petroleum Refinery, (iii) LNG Terminal, (iv) Power Plant
- A Study on South Asia Regional Power Exchange has identified various opportunities in electricity trade
- SAARC Action Plan on Energy Conservation submitted for consideration of all Member States
- A Pre-feasibility Study of SAARC Coal Based Power Plant completed
- A Study completed on harmonizing rules and regulations
STUDIES ON SAARC ENERGY RING (2/2)

• A Seminar just concluded at New Delhi on Role of Private Sector in Regional Power Trade
• A Workshop planned in November 2013 to learn from Indian experience in lignite based power generation
• Another Workshop is planned in early 2014 to learn from Indian experience in LNG
• Several Training Workshops conducted on Energy Efficiency and Energy Audit
SAARC ENERGY RING – 1. POWER GRID

IR-AF
IR-PK

-CASA
-TUTAP

NP-IN-BH-BD-MR

IN-SL
Pipelines from the west can further be extended to Nepal and Bangladesh.
<table>
<thead>
<tr>
<th>Interconnection</th>
<th>Capacity (MW)</th>
<th>Est. Cost (Million USD)</th>
<th>Annual Benefit (Million USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>India-Bhutan</td>
<td>2,100</td>
<td>160</td>
<td>1840</td>
</tr>
<tr>
<td>India-Nepal</td>
<td>1,000</td>
<td>190</td>
<td>105</td>
</tr>
<tr>
<td>India-Sri Lanka</td>
<td>500</td>
<td>600</td>
<td>186</td>
</tr>
<tr>
<td>India-Bangladesh</td>
<td>500</td>
<td>250</td>
<td>389</td>
</tr>
<tr>
<td>India-Pakistan</td>
<td>500</td>
<td>150</td>
<td>491</td>
</tr>
<tr>
<td>CASA-1000</td>
<td>1,000</td>
<td>970</td>
<td>906</td>
</tr>
<tr>
<td>TOTAL</td>
<td>5,600</td>
<td>2,320</td>
<td>3,917</td>
</tr>
</tbody>
</table>
Draft of a “SAARC Inter-Governmental Framework Agreement for Energy Cooperation (Electricity)” endorsed by Energy Ministers Meeting in Dhaka (15th September 2011) is under consideration of SAARC Member States.

Draft IGFA provides to allow for:
- Unrestricted cross-border trade
- Commercial negotiation of PPAs
- Non-discriminatory open access
- Private sector trading
- Participation in power exchanges

Ultimate objective is to create a SAARC Market for Electricity: SAME
NEXT STEPS FOR SAME

- SAARC Inter-Governmental Framework Agreement for Regional Cooperation in Energy (Electricity) to be approved

- Detailed Scenario Analysis on Regional Interconnections to be undertaken

- SAARC Electricity Transmission Master Plan to be prepared
SAARC ENERGY CENTRE

IS THUS MITIGATING ENERGY POVERTY THROUGH CREATION OF SAARC MARKET FOR ELECTRICITY AND MULTILATERAL ENERGY COOPERATION WITHIN AND ACROSS SOUTH ASIA FOR A BETTER TOMORROW
THANK YOU FOR YOUR ATTENTION

www.saarcenergy.org