

**9TH MEETING OF THE ENERGY CHARTER TASK
FORCE ON REGIONAL ENERGY COOPERATION
IN CENTRAL AND SOUTH ASIA**

ASTANA. KAZAKHSTAN: OCTOBER 7, 2013

**EXPANDING REGIONAL ENERGY
TRADE**

– THE PERSPECTIVE OF SAARC

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SAARC ENERGY CENTRE

ISLAMABAD

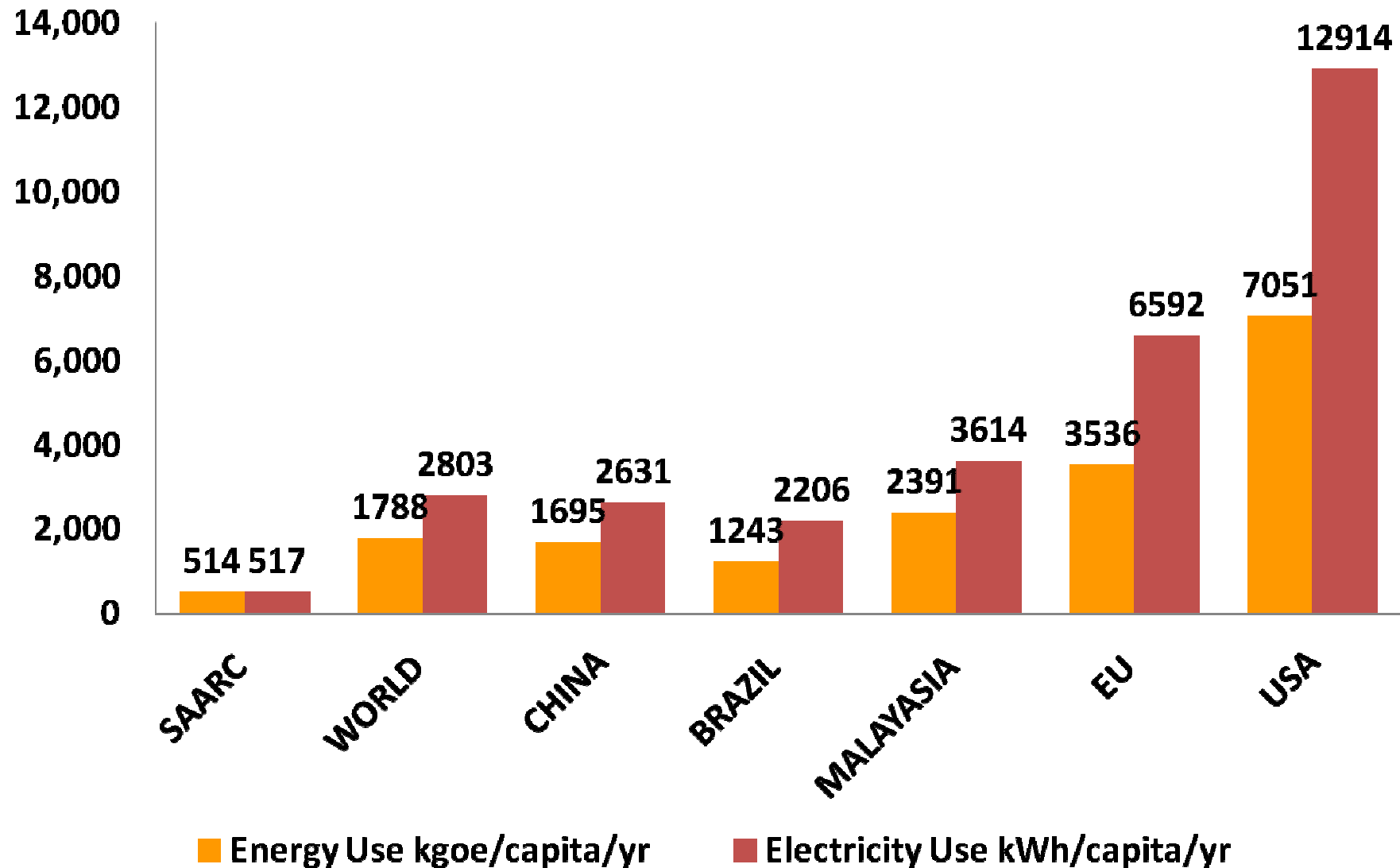
AGENDA

- **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**

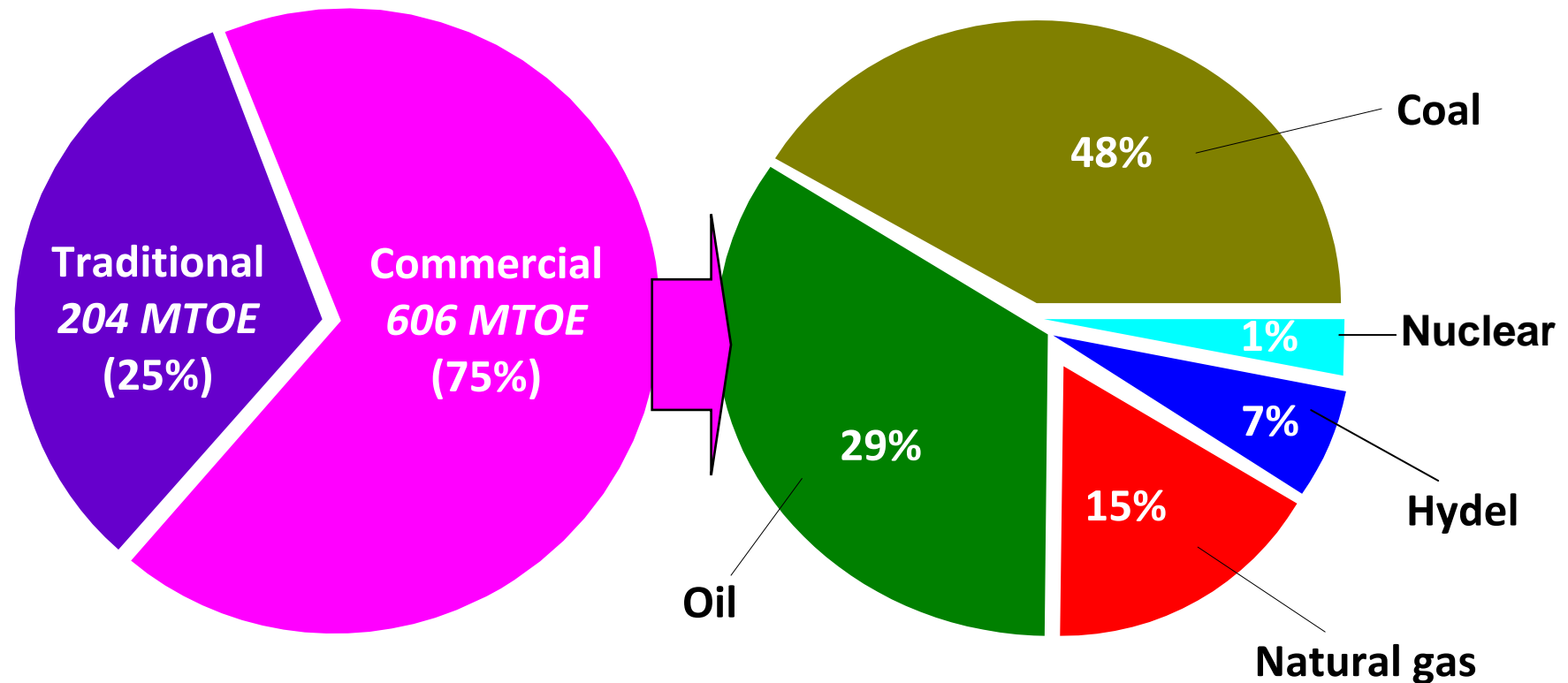
ENERGY POVERTY OF SAARC REGION



ENERGY USE IN SOUTH ASIA

TOTAL ENERGY: 810 MTOE

COMMERCIAL ENERGY: 606 MTOE



(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**

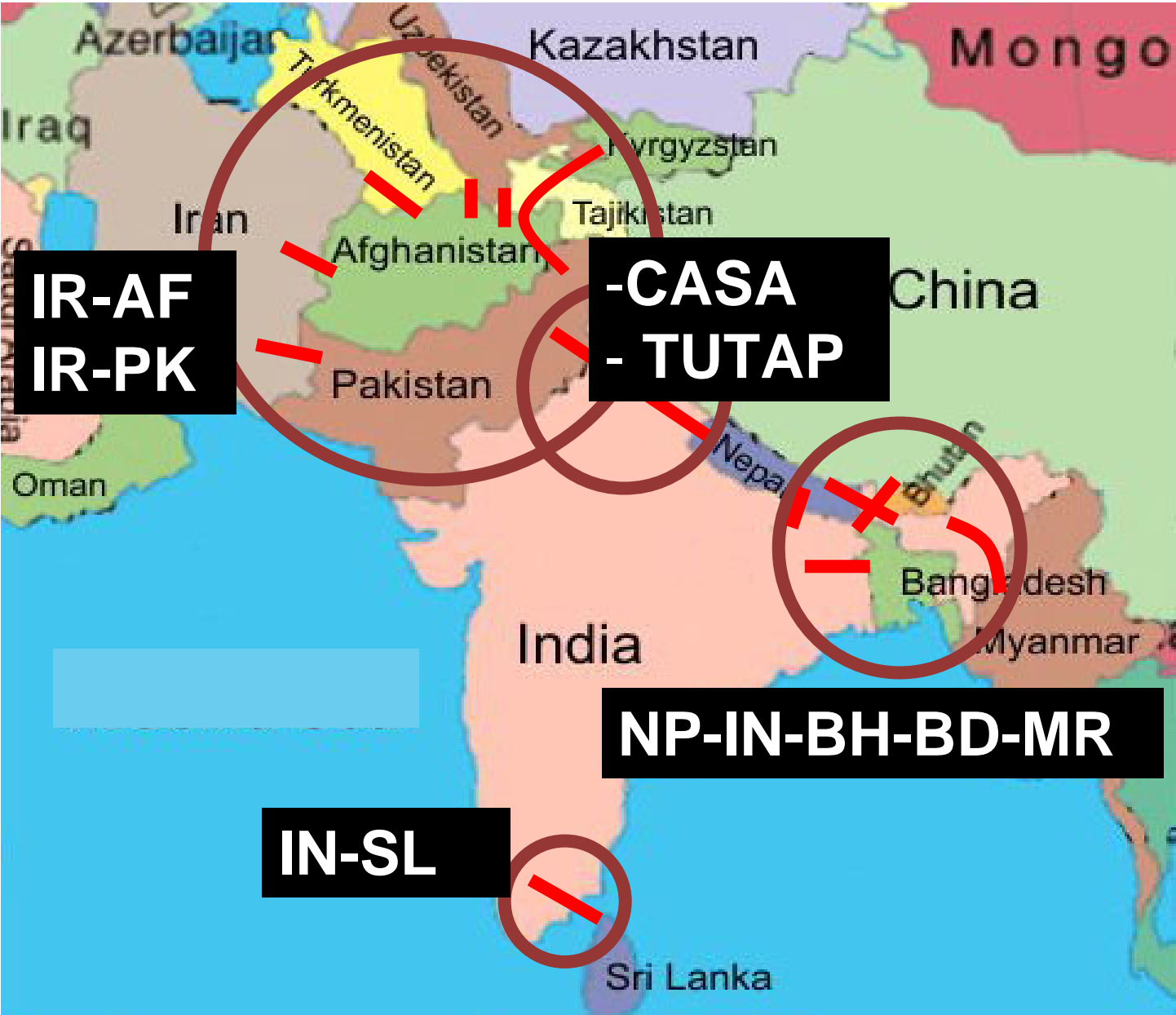
STUDIES ON SAARC ENERGY RING (1/2)

- **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



SAARC ENERGY RING – 2. GAS GRID



Pipelines from the west can further be extended to Nepal and Bangladesh

POTENTIAL POWER GRID INTERCONNECTIONS

	Interconnection	Capacity (MW)	Est. Cost (Million USD)	<u>Annual</u> Benefit (Million USD)
1	India-Bhutan	2,100	160	1840
2	India-Nepal	1,000	190	105
3	India-Sri Lanka	500	600	186
4	India-Bangladesh	500	250	389
5	India-Pakistan	500	150	491
6	CASA-1000	1,000	970	906
	TOTAL	5,600	2,320	3,917



Existing 500 kV AC lines and substations







Planned 500 kV AC lines for CASA-1000

Proposed Delivery Point

Proposed CASA-1000 DC line and converters

Existing 220 kV lines and substations

CASA - 1000 project lines:
 AC - Datka - Khodzhent, Regar - Sangtuda
 DC - Sangtuda - Kabul - Peshavar

-  Existing 500 kV lines and substations
-  Planned 500 kV AC lines for CASA - 1000
-  500 kV substation under construction
-  Proposed CASA - 1000 DC line and converters
-  Existing 220 kV lines and substations
-  Cities

SAARC MARKET FOR ELECTRICITY (SAME)

- **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